Final Report

Downtown Parking Management Plan for the City of Los Altos

Prepared for the

City of Los Altos

September 2013

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1.1 Introduction

The City of Los Altos is located at the southern end of the San Francisco Peninsula in Santa Clara County, with a population of approximately 30,000. The downtown is characterized by small independently owned shops and professional offices and is an important community destination. Parking access is served by the Downtown Parking District (1,449 spaces) and its surrounding area combining for over 1,600 spaces located on street and in ten public plazas.

Economic revitalization has been an on-going goal for the downtown. A 2009 Opportunity Study of the City's Public Parking Plazas recommended potential development in the north plazas with a public-private-partnership resulting in an overall increase of 200 parking spaces and new land uses including retail, office, and hotel. The economic context in which these opportunities were developed has changed since that time and it will be a goal of this study to get a fresh perspective on the parking demand and supply opportunities in the study area. To that end, the City of Los Altos has identified the following goals for this study:

- To provide access to convenient parking for downtown customers, employees, and visitors;
- To support and encourage continued investment in the downtown core;
- To manage supply efficiently to avoid unnecessary investment;
- To identify, plan, or establish potential reserve of parking supply to facilitate future development; and
- To mitigate spillover parking in residential neighborhoods.

The Parking Management Plan is intended to serve as a framework for the implementation of parking management and supply strategies. Each of the ideas presented in the Plan will need further detailed evaluation prior to implementation. As a result of this detailed evaluation, some ideas in this Plan may be adjusted or may be determined to be not feasible. The document will evolve over time through continued planning efforts and may require updates as unforeseen issues arise or as the community grows and changes. The City Council adopted the Plan at its September 17, 2013 meeting. A summary of the Council's review and prioritization of the proposed strategies is presented in Appendix 1A.

The project area is located in the downtown core between West Edith Avenue, North San Antonio Road, Whitney Street and First Street. Within the study area is the Downtown Parking District, which includes the ten public parking plazas, the on-street spaces along Main and State Street, and the on-street spaces on the numbered side streets between the north and south parking plaza boundaries. These area boundaries are indicated in Figure 1-1.

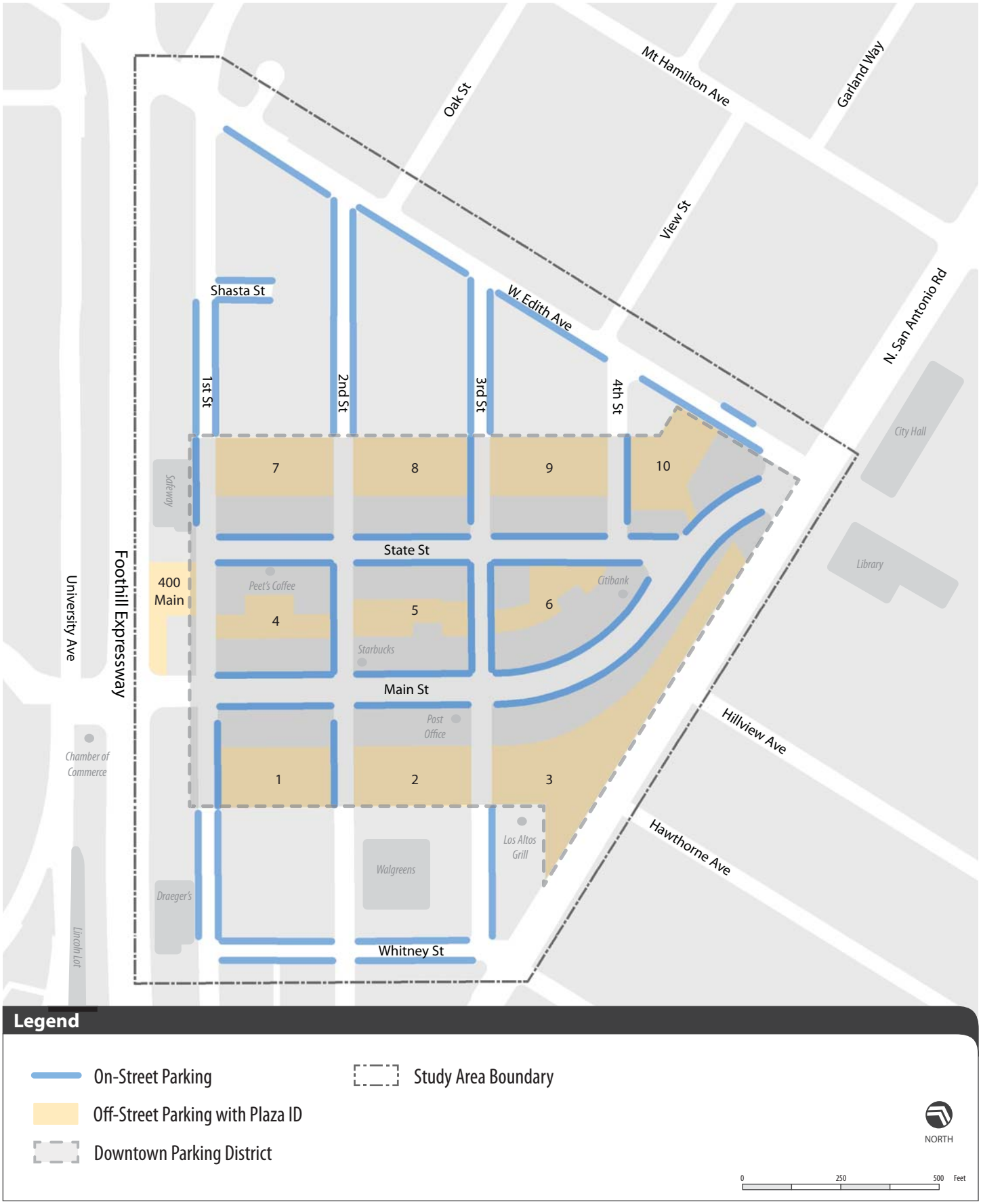

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Figure 1-1: Study Area

1.2 Background Policy and Data Review

1.2.1 Background Policies

1.2.1.1 Downtown Parking District

The Downtown Parking District "Parking District" is defined to include the ten parking plazas, the on-street spaces along Main and State Street, and the on-street spaces on the numbered side streets between the south (Plazas 1, 2, and 3) and north (Plazas 7, 8, 9, and 10) parking plazas.

The Parking District formed in 1955, when the property owners in the core of the downtown petitioned the City to form an assessment district to purchase some of their land and to construct parking plazas for the common use of those owners. The City agreed to form the parking district and, in turn, the property owners agreed to the assessments to fund the purchase and construction project. Unlike many other cities, Los Altos chose not to form a formal parking district under provisions of State law in order to build the plazas. Consequently, no assessments are collected from the property owners to pay for parking plaza improvements or fund their ongoing maintenance and the City has become the owner of the plazas. The City officially completed the construction of the parking plazas in 1957.

When the original Parking District was developed, the City in cooperation with property owners and merchants developed boundaries for the district and calculated how much square footage would be involved. Using this information, they determined how many parking stalls to build. In the end, they built 1,008 parking spaces for approximately 390,000 square feet of building. At the time, this created a parking ratio of 2.6 parking spaces per 1,000 square feet of building. Since 1958, there has been some growth in the square footage of buildings downtown as well as the available parking in the plazas, but the historical parking ratio has remained close at 2.7 spaces per 1,000 square feet of building or approximately 1,400 spaces.

The property owners at 170 State Street elected not to participate in the Parking District at the time of formation. As a result, 69 of the 137 spaces in Plaza 9 remain in private ownership. However, when developing the current building in 1973, a condition of approval for the project was that the private parking spaces remain available for public use in view of the fact that the parking provided was in-lieu of inclusion in the Parking District.

1.2.1.2 Current Parking Code

Currently, the Los Altos parking code prescribes minimum parking requirements for various private developments within certain land use zones of the City. In general, each zoning designation in the downtown triangle has the same parking requirements. The requirements are 3.3 spaces per 1,000 square feet for office uses and 5 spaces per 1,000 square feet for retail uses. Restaurants are required to provide one parking space for every three employees plus one space for every three seats provided for patrons.

For properties located within the Parking District, no additional parking is required unless a property builds above 100% Floor Area Ratio (FAR). This requirement applies to existing two-story buildings that may currently exceed 100% FAR. These buildings may have to provide additional parking when they redevelop, even if the total square footage does not increase.

1.2.1.3 Parking Stall Dimensions

The zoning code sets specific requirements for parking stall dimensions. Parallel stalls are required to be 9 feet wide by 22 feet long. Alternatively, parallel stalls can be 20 feet long if there is at least one 9 foot buffer space adjacent to each stall. Angled and perpendicular parking stalls are required to be 9 feet wide by 18 feet long. The minimum width of a one-way drive aisle is 12 feet and a two-way aisle is 18 feet. Not all parking stalls in the existing plazas conform to this standard. Many plazas still have a portion of their total stalls that conform to prior standards for compact stalls, although the stalls are no longer labeled exclusively for this use. The City has since done away with a compact standard, but the plazas have not been restriped to meet the current standard.

1.2.1.4 Enforcement

General public parking conditions in downtown are that of free, time restricted parking both on- and off-street. Time restrictions are generally 2 hours for on-street and 3 hours for off-street with a scattering of 20-minute spaces (green curb spaces), loading zones and handicapped spaces at various locations. To enforce parking turnover, an enforcement officer currently mark tires with chalk to identify those that park beyond the posted time limits. Parking tickets cost $54.50 and those caught erasing chalk marks receive a $104.50 ticket. It is also possible to receive multiple tickets for not moving a car after receiving an initial violation notice. Table 1-1 below presents the quantity of offenders and number of tickets issued between June 2012 and June 2013.

Table 1-1 Parking Tickets Issued (June 2012 to June 2013)

Number of Citations	Number and Percent of Offenders		Number and Percent of Tickets	
	#	%	#	%
1	1231	88.4%	1231	70.3%
2	69	5.0%	138	7.9%
3	50	3.6%	150	8.6%
4	19	1.4%	76	4.3%
5	9	0.6%	45	2.6%
6	7	0.5%	42	2.4%
7	2	0.1%	14	0.8%
8	1	0.1%	8	0.5%
9	1	0.1%	9	0.5%
11	1	0.1%	11	0.6%
13	2	0.1%	26	1.5%
Total	**1392**	**100.0%**	**1750**	**100.0%**

Source: Los Altos Police Department, 2013.

As the table indicates, over 70 percent of tickets issued by parking enforcement were to first-time offenders. Many of these incidents may potentially be explained by limited familiarity with posted time limits by visitors to the Downtown. Around 30 percent of the tickets went to repeat offenders who had been cited at least two times, with 3 percent of vehicles (those receiving 4 or more tickets for the year) receiving over 13 percent of the tickets issued. Overall, the data shows that while the large majority of offenders (88 percent) were cited only one time, there are still a substantial number of tickets being issued to habitual violators.

At the time of initial data collection, on-street parking enforcement signs and the City's police department website provided conflicting information about parking enforcement hours and days. In

most cases, it appeared on-street enforcement hours were between 9AM and 6PM and enforcement hours for the off-street spaces in the parking plazas were between 8AM and 6PM. Despite this general rule, there are a few locations on-street noted to begin enforcement at 8AM.[1] Additionally, all signs indicate that time limits were enforced Monday through Saturday, excluding holidays. Discussions with the Los Altos Police Department reveal that officers can enforce parking violations on any day, such as improper parking, however there is no parking control officer assigned for enforcement duties on Mondays or Saturdays. During these days, other on-duty officers do enforcement only on a complaint basis.[2]

The time of day inconsistencies for the on-street parking spaces could be points of confusion for visitors and residents of Los Altos parking in downtown. It should be noted, that the inconsistencies with the on-street parking space enforcement hours and signage have been corrected.

1.2.1.5 Employee Parking Permits and All-Day Customer Permits

If employees of properties within the downtown parking district wish to do so all day, they may obtain parking permits from the City. Employees working within the downtown parking district may purchase an annual parking permit for $36 or a quarterly permit for $12.[3] Public parking spaces in the south (Plazas 1, 2, and 3) and north (Plazas 7, 8, 9, and 10) plazas designated with a painted white dot are those set aside to allow all-day employee permit parking. Table 1-2 shows the number of quarterly employee parking permits sold to downtown businesses between 2010 and 2012.

Table 1-2 Employee Quarterly Parking Permits Sold

Fiscal Year	1st Quarter	2nd Quarter	3rd Quarter	4th Quarter	Total
FY 2010	42	0	0	19	61
FY 2011	25	15	33	59	132
FY 2012	24	43	98	111	276

Table 1-3 shows the number of annual employee permits sold to downtown businesses between 2009 and 2012.

Table 1-3 Employee Annual Parking Permits Sold Per Year

Fiscal Year	1st Quarter
FY 2009	789
FY 2010	642
FY 2011	565
FY 2012	779

All day parking is also available to customers of downtown businesses. Books of 25 customer permits are available for $25 from the City and are available for purchase by customers or businesses;

[1] One example includes the north side of State Street, between Second Street and Third Street. One 2-hour parking sign says enforcement starts at 8 AM and another on the same side of the street, on the same block, says it starts at 9 AM. Additionally, the signs on First Street and Second Street indicate that enforcement hours start at 8AM.

[2] According to the City's Parking Control Officer, enforcement only occurs during his actual work schedule: Tuesday through Friday 7AM through 5PM. Other Community Service Officers enforce parking by complaint when the primary PCO is off.

[3] Employees must show proof of employment in the parking district to qualify.

however, businesses are required to provide the permits to customers free of charge. Customers then return to their car, if parked in any plaza space, place the permit in their vehicle and are legally allowed to stay all day.[4] Customer permits are not valid for on-street parking, handicapped stalls, 20-minute zones or loading zones and must be dated and displayed on the bottom corner of the passenger-side front windshield.

The City Council established the Parking Permit Program for downtown in 2003. All revenue from this program has been deposited into the downtown Parking Fund. Between 2007 and 2012, annual revenue for the fund has been between $33,500 and $40,400. The City provides these parking funds to the Los Altos Village Association (LAVA) who uses the funds for beautification of the downtown through maintaining the landscape planters. In June of 2012, the City Council decided to continue to commit parking funds to LAVA for these beautification efforts into the future.

1.2.2 Prior Studies

1.2.2.1 Downtown Parking Garage Report

In 1993, the City, in conjunction with the Los Altos Village Association (LAVA), assembled the downtown Parking Garage Work-Study Committee to explore the potential of each plaza to support development of a parking structure. At the time, the committee concluded "a definite parking problem exists in the downtown area during the mid-day parking peak and it will get worse in the future." The study stated that the logical solution to the problem was to build at least one parking structure in the near term. The commission recommended developing one of the parking plazas in either the north or the south into a 116 to 200 stall parking garage.

1.2.2.2 Downtown-Wide Traffic and Parking Analysis

The City conducted a traffic and parking analysis in 2007 to examine the effects of a rezoning proposal specifically for the downtown parking district. The study included variations of two different development scenarios that could arise from the rezoning. Scenario 1 focused on allowing downtown development to build to two stories while Scenario 2 allows build out to three stories. Each scenario explores an option A or B, the former focuses 100 percent office development in Plazas 6 and 7 while the latter focuses 100 percent residential development in those plazas. The results of the analysis showed that Scenario 2A would draw an additional 3,100 cars during the peak period and the study suggested building a parking structure to meet that additional need. Scenario 1A anticipated about 1,700 additional cars during the peak period while each of the residential options only expected to draw less than 100 more cars during the peak.

The City ultimately decided to adopt changes to their zoning code, which eliminated Floor Area Ratios (FAR) and allowed for two-story building in the downtown core and three-story building in the outer areas of the downtown triangle. It is anticipated that any redevelopment in the downtown core/CRS district/Parking district to be retail with second floor office, or residential uses. Most new residential development is planned along First Street and in the quadrant of downtown between the State Street parking plazas (Plazas 7, 8, 9, and 10) and West Edith.

[4] Customers can park in an unmarked or white dot space.

1.2.2.3 The Downtown Opportunity Study

The Downtown Opportunity Study was initiated in 2008 as a public parking garage study. The study evolved into an analysis of public-private development opportunities for the public parking plazas. The study was completed in 2009 and contained several test cases for providing 200 to 300 additional public parking spaces and for allowing mixed-use development of up to 200,000 square feet. An environmental analysis was also completed to study the potential impacts of the proposed development.

1.2.3 Approved Projects

The following approved projects are either within or are immediately adjacent to the downtown parking district and may have an impact on public parking patterns in the study area.

1.2.3.1 Safeway Redevelopment

The current downtown Safeway store is 22,000 square feet and is flanked by surface parking lots on either side of the building. Safeway received development approvals in January 2012 to construct a 45,000 square foot store with podium parking beneath the footprint of their current store and parking lot. The redeveloped store will provide 154 spaces, 72 spaces less than the City's retail store parking requirement.

Safeway hired an independent consultant to complete a parking demand analysis that showed that the customer parking demand will only exceed available supply 170 hours per year, or 3 percent of the total annual operating hours of the store, primarily during evenings and holidays. Of these hours, 110 of them are in the evenings from 4PM to 6PM when parking capacity is ample in the public plazas. On average, the estimated parking shortage is expected to be only 15 spaces.

In exchange for a reduced parking requirement, Safeway executed a shared parking agreement with the City that will allow for 129 of their 154 spaces to be available to the public for a 90-minute time period. During the peak periods when the Safeway store exceeds the parking demand, customers are expected to park in the adjacent parking plazas. Construction of the new store is estimated to begin in May 2013 and will likely occur over the period of one year.

1.2.3.2 400 Main Street Site

400 Main Street is a City-owned property that has been approved for a 32,000 square foot mixed-use development project. Construction of this project is anticipated to begin in Summer 2013. During development negotiations, and when not needed for construction staging for downtown improvements, the site has been available as a public parking lot. Presently there are 96 parking spaces available on the site and there are no time restrictions enforced on the majority of these spaces. The public parking will no longer be available when the development project begins construction. The development project will be self-parked with 125 private parking spaces.

1.2.3.3 First Street Streetscape Project

The City is moving forward with the continuation of the streetscape improvement on First Street between State Street and Shasta Street. Construction of these improvements started in June 2013. As part of the streetscape design, a total of twelve on-street parking spaces on First Street will be removed including eight parking spaces in front of Safeway which are within the parking district and an additional four spaces between parking Plaza 7 and Shasta Street.

1.2.3.4 San Antonio Streetscape Project

The City is moving forward with the San Antonio Streetscape project, which will expand the sidewalk along San Antonio Road adjacent to parking Plaza 3. In order to accommodate the sidewalk widening, the diagonal spaces in parking Plaza 3, closest to Main Street will be converted to parallel spaces. This conversion will result in a net loss of nine parking spaces in Plaza 3.

1.3 Stakeholder Meetings & Community Surveys

1.3.1 Stakeholder Meetings

Several meetings were held with diverse groups of Los Altos stakeholders to introduce the study and ask for input on parking issues in the downtown. Stakeholder groups included the Los Altos Chamber of Commerce, downtown commercial property owners, merchants and Los Altos residents.

1.3.1.1 Chamber of Commerce

A Chamber of Commerce Business Roundtable meeting revealed that the Chamber of Commerce was interested in understanding parking demand and its impact on economic vitality of the downtown. This group appeared most interested in management and supply solutions, as well as funding options and did not offer comments on current parking issues.

1.3.1.2 Downtown Commercial Property Owners

This group was most concerned about downtown development issues, understanding employee parking usage and needs (particularly of the white dot program) and the potential for sharing parking with the Los Altos Civic Center. Other important issues included the impact of the Safeway development on the downtown parking supply and the limitations of current parking enforcement practices.

1.3.1.3 Merchants

The Los Altos Village Association (LAVA) helped organize a meeting of merchant stakeholders however, not all of the participants were members of LAVA. Participants were primarily concerned about the day-to-day downtown parking issues for their employees and their customers. Many of them were active participants in the employee permit program. The merchants are concerned about part time shift employees that arrive late and are unable to find white dot parking. They believed that a three-hour time limit (provided in plazas) is sufficient for customers for most types of visits. However, current ticketing seems to catch customers unaware and often misses the worst offenders – the employees. A discussion with the Los Altos Police department revealed the opposite as they observe more employees paying citations than visitors. Finally, the merchants rallied around the idea of a holiday seasonal parking valet program similar to the one offered by the Town of Los Gatos.

1.3.1.4 Residents

The residents at the stakeholder meeting mostly lived in or near downtown Los Altos. Many discussed practical issues with current parking and alternative access to the downtown. These included poor circulation in Plazas 3 and 10, poor lighting in the north plazas, limited short term parking serving the Post Office area and the need for more convenient bike parking. In addition, bicyclists expressed concern for parking bicycles at the existing u-shaped racks due to the potential of damaging the bicycle frame. Residents were also generally in favor of electric vehicle charging stations. Opinions

were mixed about increasing the parking supply. Some residents believed a new garage was warranted, while some believed that the City should focus on management tools such as shared parking (with private lots/garages) or satellite parking with a shuttle bus. When asked, several residents voiced support of a proposed seasonal valet parking program.

1.3.2 Community Surveys

1.3.2.1 Downtown Los Altos Community Survey

The City Council worked with Godbe Research to complete a survey in the summer of 2012 to gauge community opinions as the City considers redevelopment options in downtown. Surveyors conducted 414 telephone interviews and found that satisfaction with Downtown Los Altos was high at 68 percent. The most common reason people visited downtown was to eat or drink, followed by grocery and retail shopping. A significant majority of respondents (92.5 percent) drove to access the downtown (60 percent always, 32.5 percent sometimes).

According to survey results, parking was not a major concern for residents visiting downtown. Over 63 percent thought it was at least somewhat convenient to park in downtown.

When asked whether they would be willing to pay 50 cents an hour for more convenient (closer in) downtown parking, over 70 percent responded that they were unwilling. This result is not surprising since a significant majority of participants (66 percent) already found downtown parking to be convenient.

Most surveyed residents (53 percent) felt that there was enough parking in downtown while only 35 percent believed there was not. When asked about preferences for adding future parking supply, most seemed to be in favor of some type of structure, whether aboveground or underground or located on a plaza. Approximately 21 percent of residents polled did not want any kind of structure.

1.3.2.2 Downtown Los Altos Visitor Intercept Survey

EMC Research, in collaboration with the Passerelle Group, conducted an intercept survey of downtown Los Altos visitors from June 7th to June 9th, 2012 (a Thursday, Friday and Saturday). Out of 1,482 approaches, they received 502 completed surveys. This survey had a limited focus with very few in depth questions about visitor parking experiences or preferences. It confirmed general purpose for visiting the downtown (per the Godbe Survey) was to eat or drink, and shop. The most common length of stay for survey participants was between one to two hours with 76 percent staying 2 hours or less. Forty three percent of participants drove alone to get to downtown, 27 percent of people carpooled and 16 percent walked.

When asked about parking, 64 percent of respondents felt that parking availability was either “excellent” or “good,” with eight percent saying it was “poor.” Seventeen percent of those surveyed agreed when asked if they sometimes park in the Civic Center area to visit downtown and vice versa. This indicated most survey respondents preferred to park closer to their destination.

1.4. Parking Inventory

National Data Services (NDS) conducted a parking inventory during the first week of September 2012 to verify downtown parking information provided by the City. NDS also conducted several subsequent inventory recounts to confirm accuracy. For parking areas where spaces were not marked, NDS used

the City's 22 foot parking stall length, which is in accordance with the City's current standard. The inventory included the number of available spaces on- and off-street, the types of regulation and enforcement and the hours of regulation and enforcement. Collection of the inventory also incorporated the defined Downtown Parking District, which includes the ten parking plazas, the on-street spaces along Main and State Street, and the on-street spaces on the numbered side streets between the north and south parking plaza boundaries.

1.4.1 Available Parking Spaces

1.4.1.1 Downtown Parking District Spaces

There are 1,449 parking spaces within the Downtown Parking District; this includes 245 on-street spaces and 1,204 off-street spaces. The off-street spaces include loading zones, short-term parking, handicapped parking, City parking permit spaces and privately owned spaces within Plaza 9. Table 1-4 and Table 1-5 list the number of each type of space on- and off-street respectively; Table 1-6 summarizes the space types and includes the breakdown by plazas. Ninety percent of on-street parking spaces have a 2-hour time limit while there are 15 spaces limited to 20-minute parking. There are also three on-street loading zone spaces spread throughout the district. Off-street parking is limited to a 3-hour time limit on most spaces within the plazas. Figure 1-2 identifies the number of on-street parking spaces per blockface within the Downtown Parking District.

Table 1-4 District On-Street Parking Time Restriction Inventory

Space Type	Study Area	
	#	%
Unrestricted	7	3%
20-minute	15	6%
2-hour	220	90%
3-hour	0	0%
Total Standard Spaces	**242**	**99%**
Handicap	0	0%
Loading	3	1%
All On-Street Spaces	**245**	**100%**

Table 1-5 District Off-Street Parking Time Restriction Inventory[1]

Space Type	Study Area	
	#	%
Unrestricted	0	0.0%
20-minute	6	0.5%
2-hour	1	0.1%
3-hour	472	38.2%
3-hour permit	533	49.3%
Loading Spaces[2]	67	5.7%
Total Standard Spaces	**1,081**	**89.8%**
Handicap	49	4.1%
Loading	7	0.6%
Private Spaces[3]	69	5.6%
All Off-Street Spaces	**1,204**	**100%**

1: Does not include 400 Main Supply

2: Loading spaces revert to standard spaces from 11AM to 3PM.

3: Private spaces are those marked with "170" in Plaza 9.

Table 1-6 District Parking by Space Type

Parking Type/Facility		Total	Space Type			
			Handicap	Restricted Loading[1]	Loading	Standard
On-Street		245	0	0	3	242
Off-Street		1204	49	67	7	1081
	Plaza 1	137	5	10	0	122
	Plaza 2	137	7	12	0	118
	Plaza 3	226	5	18	4	199
	Plaza 4	65	1	0	1	63
	Plaza 5	56	7	0	1	48
	Plaza 6	71	5	0	1	65
	Plaza 7	137	6	11	0	120
	Plaza 8	143	7	12	0	124
	Plaza 9	145	4	4	0	137
	Plaza 10	87	2	0	0	85
Total		1449	49	67	10	1323

1: Restricted loading spaces revert to standard spaces from 11AM to 3PM.

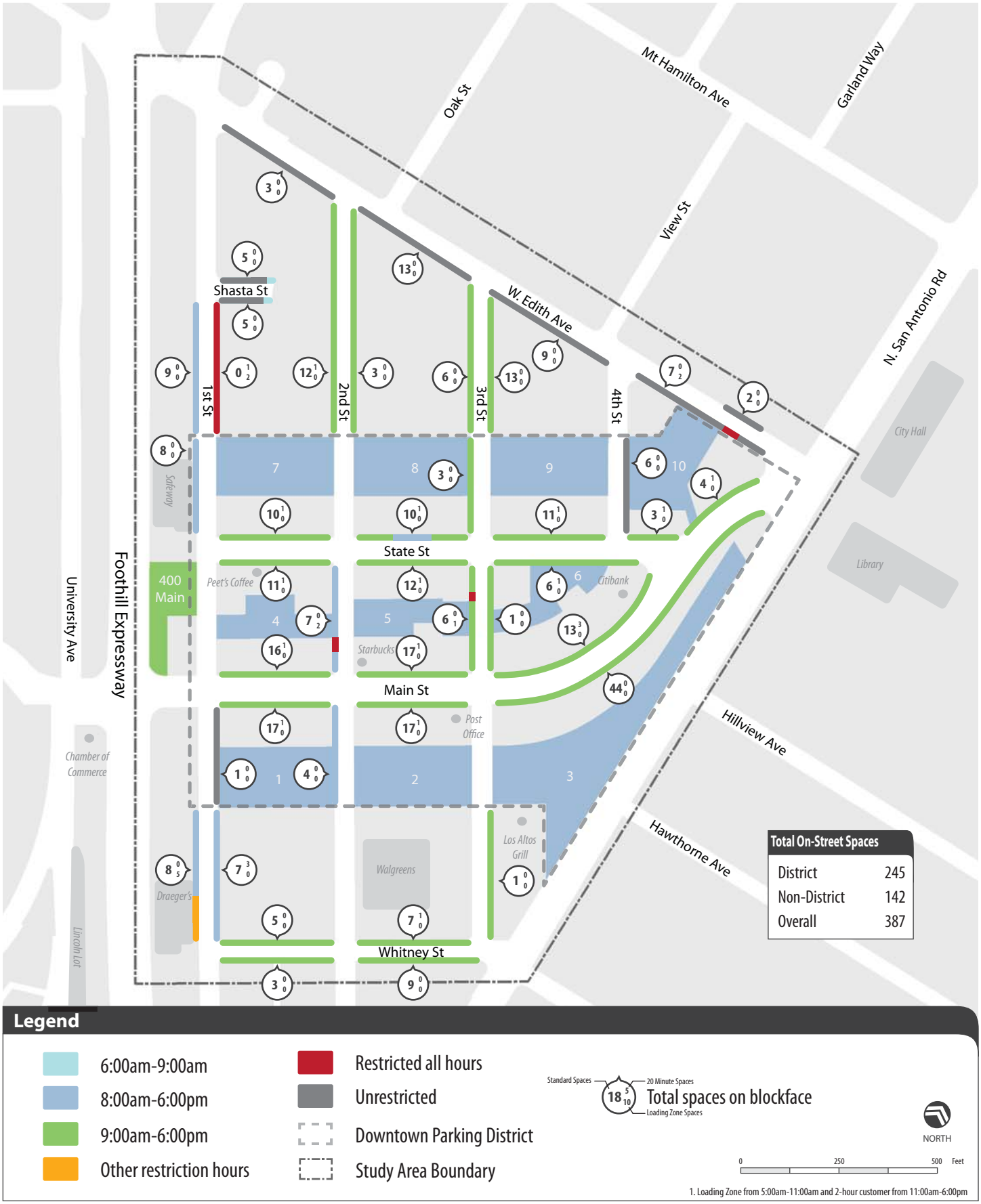

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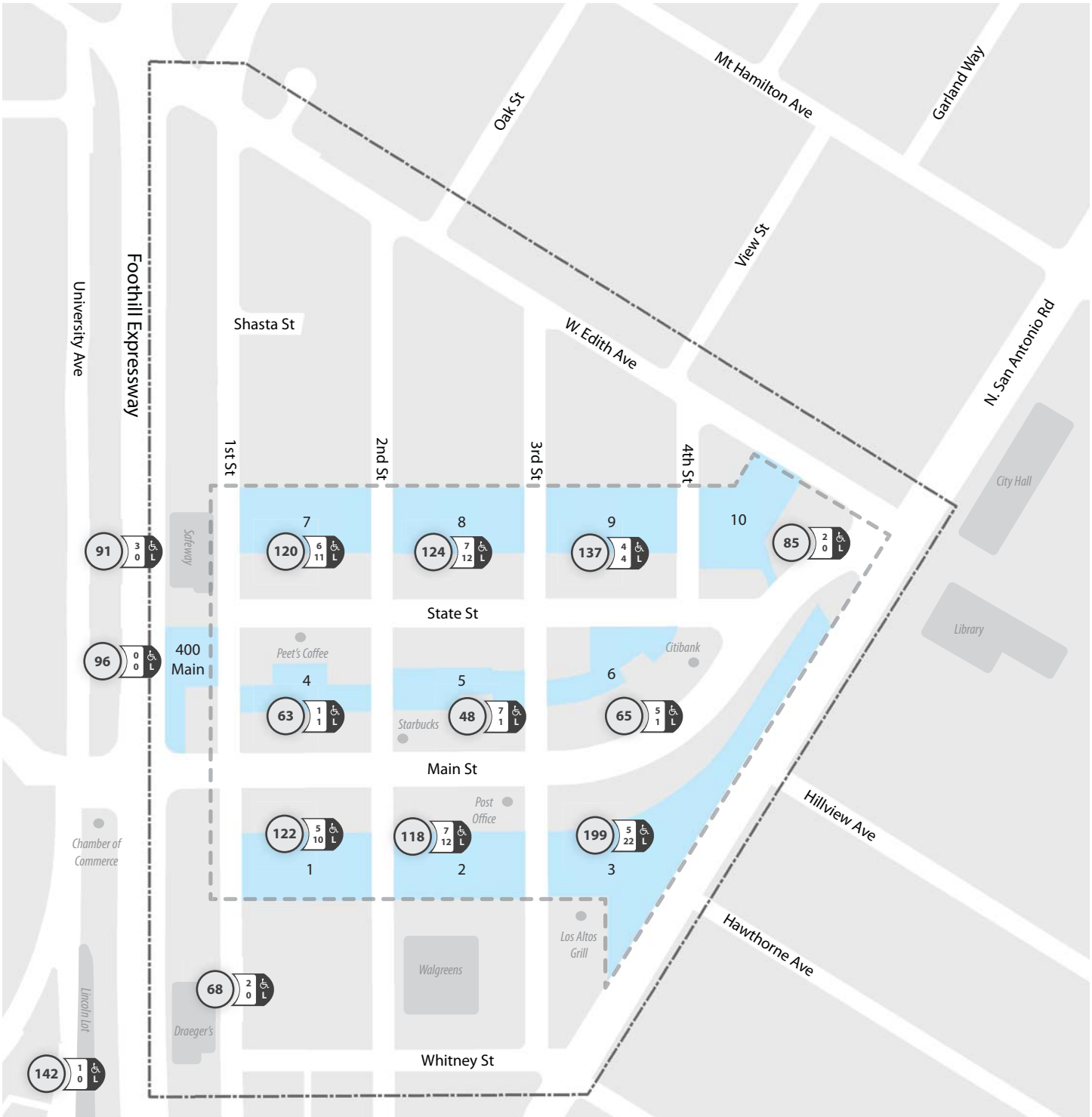
Figure 1-2: On-Street Parking and Enforcement Hours

Figure 1-3 identifies the total number of parking spaces within each off-street plaza including the number of those spaces designated for loading vehicles and vehicles with handicapped placards. There are also two off-street facilities worth noting which include 400 Main and Plaza 9. The 400 Main Site is a temporary public parking lot located just outside of the Parking District that will be eliminated upon the initiation of the 400 Main Street development. This lot was not included in the Downtown Parking District; however, due to its close proximity to the downtown and its eventual elimination, data was collected to assist in determining the demand for parking in the downtown. Unlike the other public parking plazas, Plaza 9 contains 69 privately owned parking spaces and 68 public spaces. However, due to the conformity of Plaza 9 to the surrounding plazas as well as this inter-mixture of parking spaces, most members of the public are not aware of the private nature of these spaces. Although the private spaces are not enforced with time restrictions, the public spaces still adhere to the same regulations as other plazas. Because of their different inventory and enforcement mix, the observed parking duration for these facilities was higher on average than the other plazas. (Refer to Section 1.5.5). The privately-owned spaces in Plaza 9 were included in the Downtown Parking District supply.

A summary of the current Downtown District inventory compared to prior study inventories for both on- and off-street facilities are shown below in Tables 1-7 and 1-8. The 1993 Downtown Parking Garage Report is not included in these tables as inventory data was not available; as an alternative, inventory from a 1987 study was used. Inventories for Second and Third Street from the 1987 study are not included as it covered a larger, non-comparable, area.



Legend

8	Off-Street Parking Lot with ID Number
	Downtown Parking District
	Study Area Boundary
1,204	Total Off-Street Parking Spaces [1]

Standard Spaces — 160 (5 Handicap, 2 Loading Zone) — Total spaces in lot

NORTH

0 250 500 Feet

1. Inlucdes district parking plazas only

Table 1-7 Historical On-Street Inventory

On-Street Inventory	1987[1]		2007[2]		Existing[3]	
	Standard Space	Handicap Space	Standard Space	Handicap Space	Standard Space	Handicap Space
State Street	72	0	67	0	70	0
Main Street	140	0	144	0	136	0
1st Street	16[1]	0	16	0	9	0
2nd Street	--	0	13	0	11	0
3rd Street	--	0	12	0	10	0
4th Street	--	--	--	--	6	0
Total	**228**	**0**	**252**	**0**	**242**	**0**

1. Downtown Parking Study, 1987.
2. City of Los Altos Downtown Wide Traffic and Parking Impact Analysis, 2007.
3. Historical data was available for only standard and handicap spaces (not loading). The same data for existing conditions is provided for comparison.

Table 1-8 Historical Off-Street Inventory

Off-Street Inventory	1987[1]		2007[2]		Existing[3]	
	Standard Space	Handicap Space	Standard Space	Handicap Space	Standard Space	Handicap Space
Plaza 1	130	0	127	4	122	5
Plaza 2	128	1	126	6	118	7
Plaza 3	204	0	204	5	199	5
Plaza 4	57	0	61	1	63	1
Plaza 5	58	0	53	6	48	7
Plaza 6	65	0	68	4	65	5
Plaza 7	124	0	123	6	120	6
Plaza 8	126	1	122	9	124	7
Plaza 9	137	0	134	7	137	4
Plaza 10	78	0	90	2	85	2
400 Main[4]	--	--	70	1	96	0
Total District	**1107**	**2**	**1108**	**50**	**1081**	**49**
Total Overall	**1107**	**2**	**1178**	**51**	**1177**	**49**

1. Downtown Parking Study, 1987.
2. City of Los Altos Downtown Wide Traffic and Parking Impact Analysis, 2007.
3. Historical data was available for only standard and handicap spaces (not loading). The same data for existing conditions is provided for comparison.
4. This lot is not included in the Downtown District but is considered in assessing demand for the Downtown.

1.4.1.2 Non-District Parking Spaces

The parking spaces located outside the Downtown Parking District consists of 238 total spaces, which include 142 on-street parking spaces and 96 off-street parking spaces. The breakdown of the space types are shown in Table 1-9. Thirty-five percent of the total non-district spaces have a two-hour time limit and 18 percent is unrestricted; these two space types account for majority of the on-street parking with only six spaces limited to 20-minutes and nine loading zone spaces. The off-street parking, which is comprised of only the 400 Main site, accounts for 40 percent of the total non-district parking spaces with 81 unrestricted and 15 three-hour spaces.

In addition, data for two private lots was collected, both belonging to downtown grocery stores, Safeway and Draeger's Market. The angled parking spaces southwest of the study area (along Lincoln Avenue between Sherman Street and University Avenue) were also inventoried at 143 total spaces, to

determine potential for future downtown satellite supply. These three lots are not incorporated in the district or non-district area.

Table 1-9 Non-District Parking Time Restriction Inventory

Facility and Space Type		Study Area	
		#	%
On-Street			
	Unrestricted	44	18%
	20-minute	6	3%
	2-hour	83	35%
	3-hour	0	0%
	Total Standard Spaces	133	56%
	Loading	9	4%
	All On-Street Spaces	142	60%
Off-Street			
	Unrestricted	81	84%
	20-minute	0	0%
	2-hour	0	0%
	3-hour	15	16%
	Total Standard Spaces[1]	96	40%
	Loading	0	0%
	All Off-Street Spaces	96	40%
Total		238	100%

1: Spaces verified by City.

1.4.2 Parking Regulations

All parking within the study area is free. The City uses time restrictions of two or three hours throughout the area. On-street parking is limited to two hours while off-street parking in the plazas are limited to three hours. As mentioned previously, enforcement hours are generally Monday through Saturday 8AM to 6PM in the parking plazas or 9AM to 6PM on-street, according to signage. There are also 20-minute parking spaces and yellow curb loading zones that are available for customer parking between 11AM and 3PM. Figure 1-2 graphically depicts the types of regulations throughout the study area.

1.5 Parking Occupancy

Parking utilization was measured on one weekday and one weekend day in September of 2012 and one weekday in December 2012. September weekday utilization data was collected on Wednesday, September 12th and weekend data was collected on Saturday, September 15th. These dates were selected to avoid any parking fluctuations due to summer vacations, the Labor Day holiday and the weekly farmers market. The December utilization data was collected on Wednesday, December 12th.

Data was collected hourly between 8AM and 7PM for all days; the two private lots of Safeway and Draeger's, as well as the remotely located Lincoln Park lot was collected at 12 PM and 6 PM. Saturday occupancy in September was recorded simply as the number of vehicles present every hour. Vehicle license plate data was recorded on the Wednesday in September as part of a weekday occupancy measurement and reparking analysis. In order to determine the number of cars that may move throughout downtown in a given day, known as reparking, data collectors gathered the last four digits of vehicle license plates and made note if the car had an employee permit, a customer permit or a disabled placard. The December occupancy data was also recorded simply as the number of vehicles present every hour, similar to the Saturday collection in September.

This data paints a detailed picture of how public parking is currently used in downtown Los Altos. Prior to a discussion of the major findings of this effort, it is important to briefly define a number of terms that are used when discussing parking utilization.

- **Occupancy:** The number of cars parked in a specific area, lot, or blockface during one period of observation. Often expressed as the percentage of the total physical supply that is occupied by parked cars.
- **Practical Capacity:** The occupancy level or number of vehicles that can be parked in a facility or area before it becomes difficult for a driver to find a space without having to circle or "cruise" for parking. Practical capacity is typically set at an 85 percent occupancy level. For on-street parking this equates to roughly 1 vacant space per blockface.
- **Peak:** The time period associated with the highest observed level of occupancy in a specific area or parking facility. In downtown Los Altos, two overall peaks in parking activity were observed; one on Wednesday from 12 PM to 1 PM, and one on Saturday from 1 PM to 2 PM.
- **Duration of Stay:** Refers to the length of time a vehicle is parked in a specific parking space.
- **Parking Event:** A parking event refers to each instance where a single, unique vehicle is observed parked in a single, unique space.

1.5.1 Overall Occupancy Trends

Parking occupancy data for the study area includes the Downtown Parking District and the non-district area (parking located within the entire downtown study area but outside of the Downtown Parking District).

1.5.1.1 September Occupancy

Downtown Parking District

The Downtown Parking District includes the ten parking plazas, the on-street spaces along Main and State Street, and the on-street spaces on the numbered side streets between the north and south parking plaza boundaries.

Figure 1-4 shows the amount of parking occupancy for the Downtown Parking District throughout the day for both Wednesday and Saturday. The Parking District exhibits one overall mid-day parking occupancy peak during the weekday and weekend days. The weekday peak occurs from 12PM to 2PM reaching 82 percent and the weekend occurs from 1PM to 2PM reaching 69 percent. Weekday overall occupancies for the Parking District begin as low as 23 percent in the morning, reaching up to 82 percent during the midday peak, and reducing to 42 percent going into the evening; weekend occupancies follow the same trend but at lower levels. Afternoon occupancy is higher than morning occupancy likely due to restaurant and shopping patrons arriving and adding to employee demand. Saturday occupancy stays at about 40 percent going into the evening likely due to evening diners as well.

Figure 1-4 also depicts the behavior of both on- and off-street parking separately for both weekday and weekend. Weekday on-street occupancy reaches a high of 91 percent during the midday peak and experiences a secondary peak between 3PM and 4PM. Weekday off-street parking reaches a maximum of 81 percent during the midday peak.

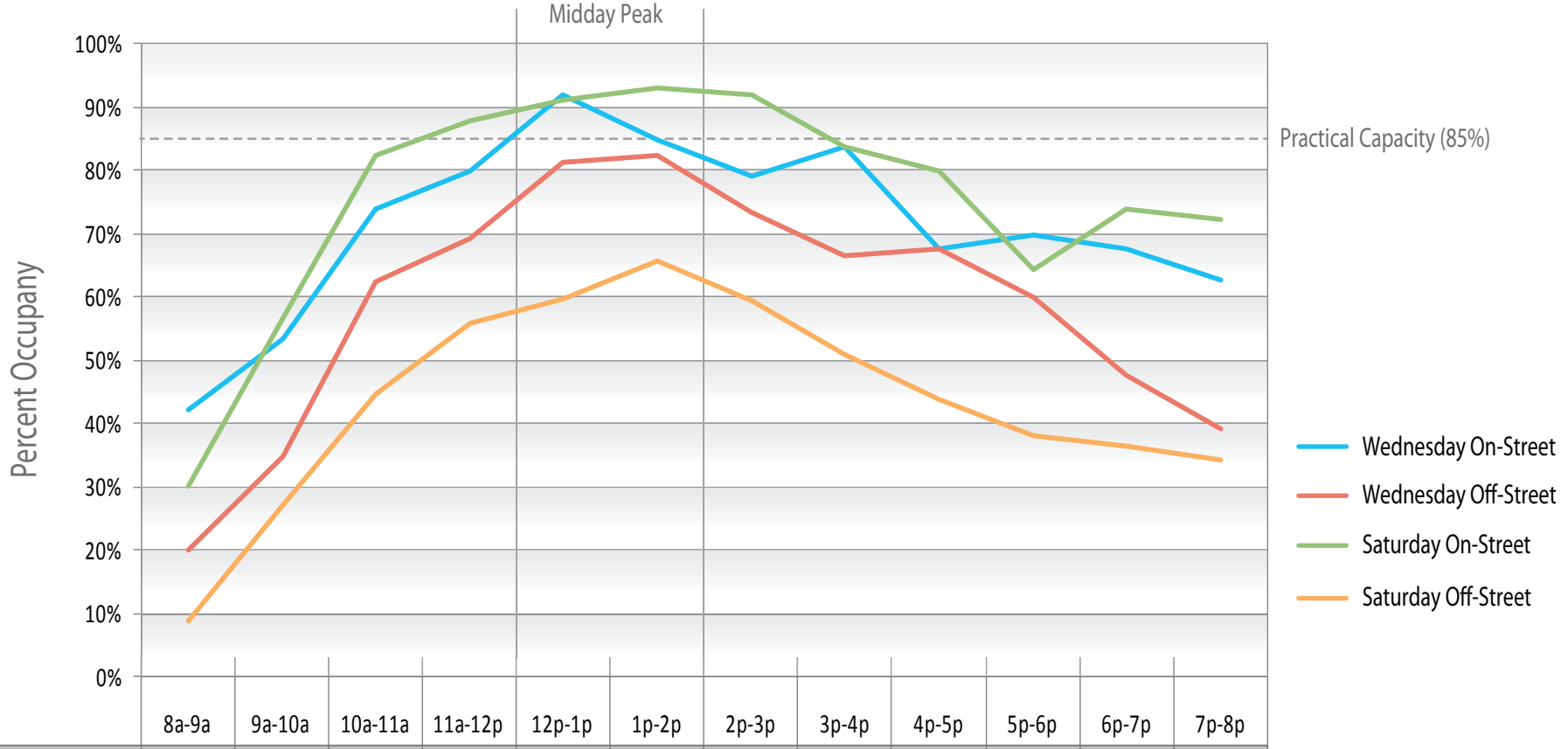
Saturday on-street parking has two peaks, one midday and one in the evening. Between 5PM and 6PM parking occupancy goes from 64 percent to 73 percent. As several of the studies discussed above, dining is a popular reason why people visit downtown; this increase in demand is likely due to evening restaurant patrons.

There is a large difference between on- and off-street parking occupancies on Saturday. A lack of enforcement on weekends may be encouraging on-street parking all day. Off-street weekend parking was the comparatively least used parking of the four types identified in Figure 1-4. During the weekend midday peak, overall off-street occupancy reaches 65 percent.

Non-District Area

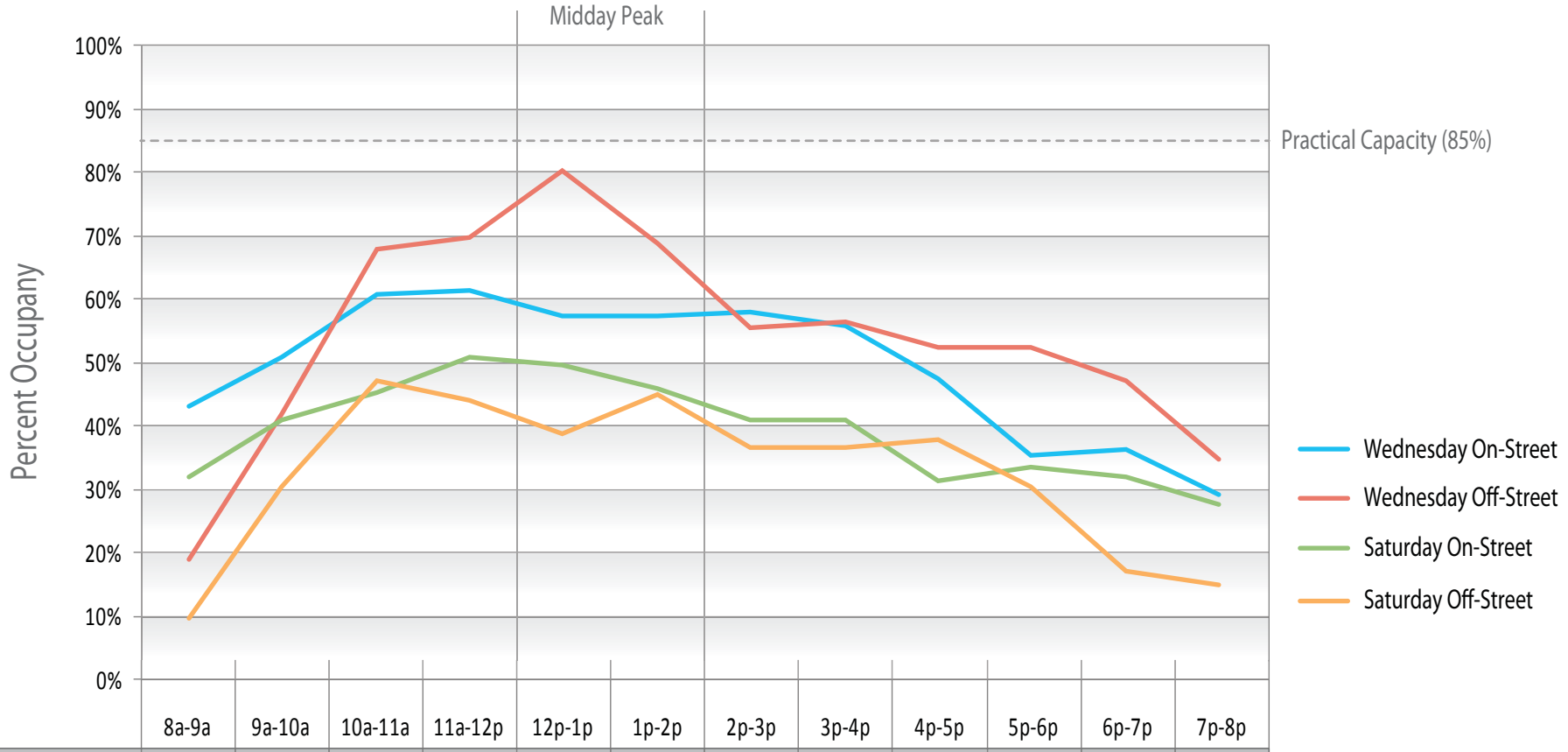
On average, the parking supply in the non-district area appears to be much less affected by downtown commercial activity, shown in Figure 1-5. It should be noted that the off-street non-district area is comprised of only the 400 Main site; no other off-street facilities are present in the non-district area. The non-district area maintains an even level of on-street parking occupancy all day with a moderate peak on both weekday and weekend days. This peak occurs earlier in the day between 11 AM and 12 PM, as compared to the Downtown Parking District, reaching 61 percent on the weekday and 51 percent on the weekend.

A summary of the types of parkers (handicapped, employee, etc) throughout the day for the combined area of the District and non-district areas is shown in Table 1-10. Approximately 25 percent of the users were identified using an employee permit, which was consistent throughout the day until 6PM when it dramatically drops off. Very few vehicles were identified as using all-day customer parking permits with the peak being between 10AM and 11AM.



	8a-9a	9a-10a	10a-11a	11a-12p	12p-1p	1p-2p	2p-3p	3p-4p	4p-5p	5p-6p	6p-7p	7p-8p
Wednesday												
On-Street	42%	53%	73%	79%	91%	84%	78%	83%	67%	69%	67%	62%
Off-Street	19%	34%	61%	68%	80%	81%	72%	66%	67%	59%	47%	38%
Overall	23%	37%	63%	70%	82%	82%	73%	69%	67%	61%	50%	42%
Saturday												
On-Street	29%	56%	82%	87%	90%	92%	91%	83%	79%	64%	73%	71%
Off-Street	8%	26%	44%	55%	59%	65%	58%	50%	43%	37%	36%	34%
Overall	12%	31%	50%	60%	64%	69%	64%	56%	49%	42%	42%	40%

Figure 1-4: September Overall District Occupancy by Parking Type and Time of Day



	8a-9a	9a-10a	10a-11a	11a-12p	12p-1p	1p-2p	2p-3p	3p-4p	4p-5p	5p-6p	6p-7p	7p-8p
Wednesday												
On-Street	43%	51%	61%	61%	57%	57%	58%	56%	47%	35%	36%	29%
Off-Street	19%	42%	68%	70%	80%	69%	55%	56%	52%	52%	47%	34%
Overall	33%	47%	63%	65%	66%	62%	57%	56%	49%	42%	40%	31%
Saturday												
On-Street	32%	41%	45%	51%	49%	46%	41%	41%	31%	33%	32%	27%
Off-Street	9%	30%	47%	44%	39%	45%	36%	36%	38%	30%	17%	15%
Overall	23%	37%	46%	48%	45%	45%	39%	39%	34%	32%	26%	22%

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Figure 1-5: September Overall Non-District Occupancy by Parking Type and Time of Day

Table 1-10 Summary of Parker Types

User Type	AM				PM							
	8	9	10	11	12	1	2	3	4	5	6	7
	9	10	11	12	1	2	3	4	5	6	7	8
Handicap	0.7%	0.9%	1.0%	1.0%	1.6%	1.4%	1.3%	1.2%	1.2%	1.0%	0.6%	0.1%
Permit	21.0%	26.7%	29.3%	29.4%	25.9%	25.5%	28.0%	27.2%	28.1%	23.0%	14.9%	9.1%
All-day permit	0.0%	0.0%	0.3%	0.0%	0.0%	0.1%	0.1%	0.1%	0.2%	0.2%	0.0%	0.0%
General	78.3%	72.4%	69.4%	69.5%	72.5%	73.0%	70.7%	71.6%	70.5%	75.8%	84.4%	90.7%

1.5.1.1 December Occupancy

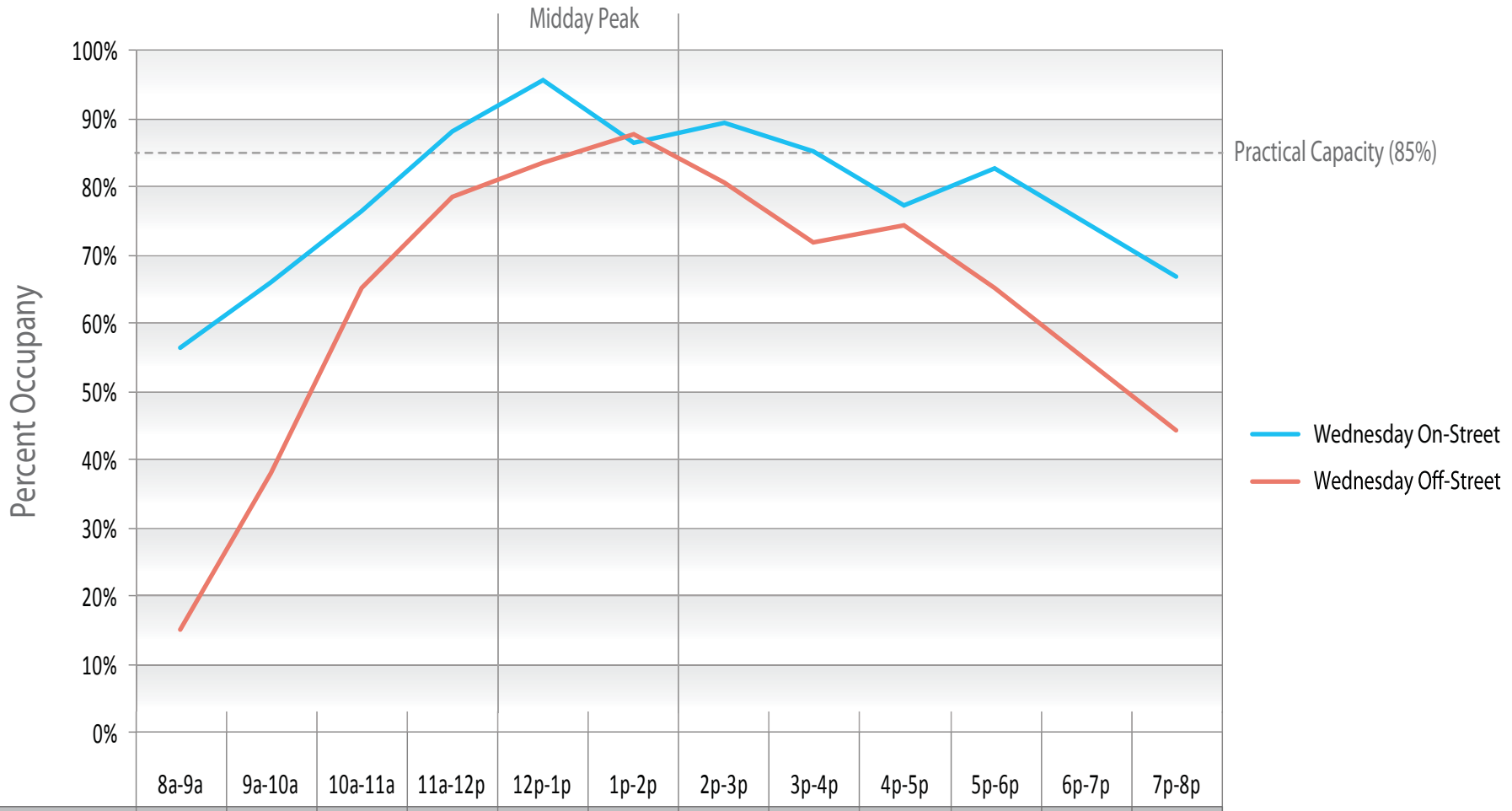
Downtown Parking District

The overall parking occupancy for the Downtown Parking District (shown in Figure 1-6) throughout the day reveals an overall mid-day peak between 12PM and 2PM.[5] The on-street parking reaches its peak at 12PM with 95 percent occupancy while the off-street parking reaches its peak of 87 percent between 1PM and 2PM. Overall, the occupancies begin as low as 21 percent at 8AM, reaches its peak at 87 percent at 1PM, and decreases to as low as 47 percent at 7PM. In general, the overall occupancies are at a higher percentage than the September counts but maintain a similar overall trend throughout the day.

Non-District Area

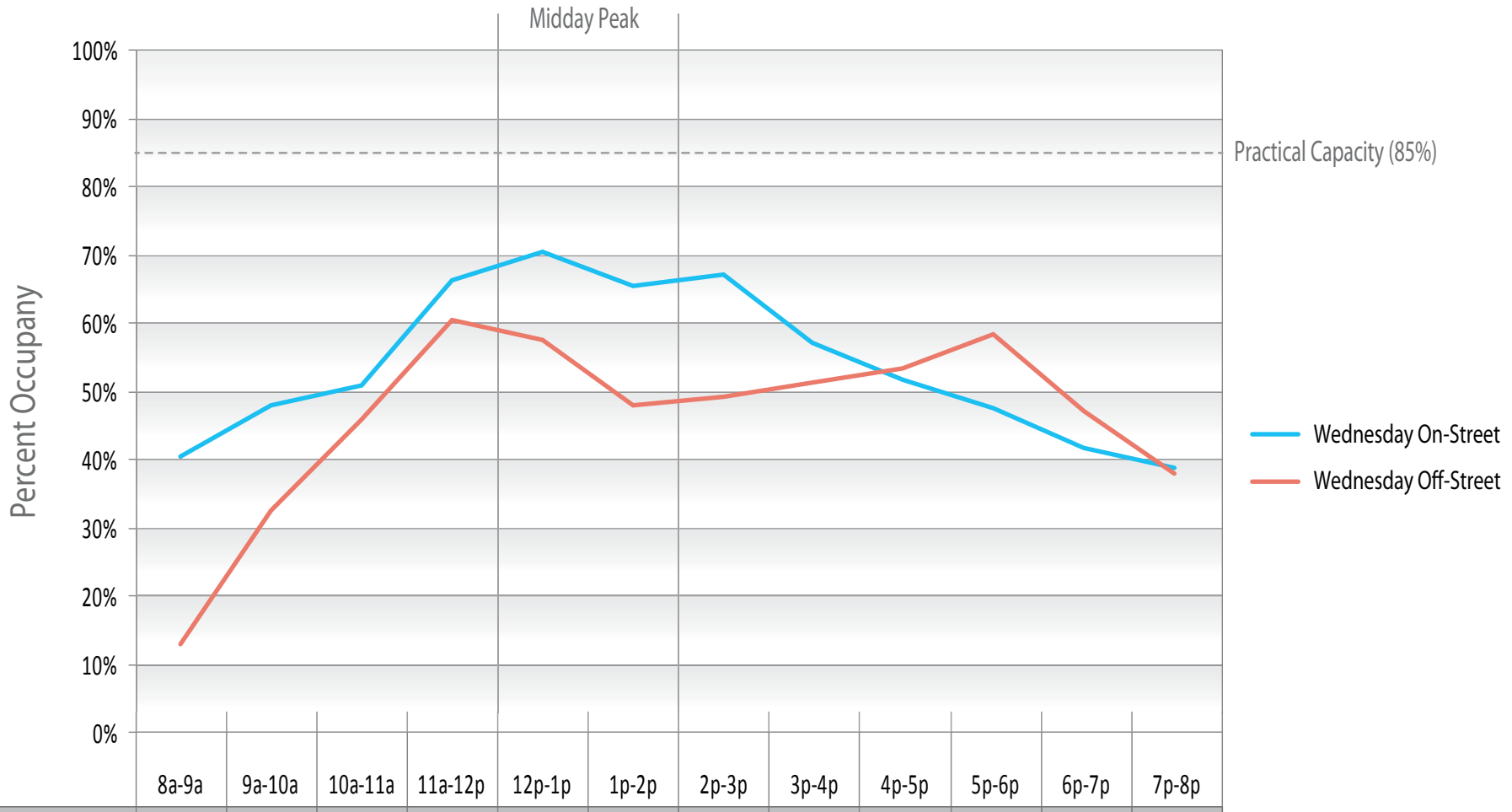
Figure 1-7 shows the parking occupancy for the non-district area throughout the day. In general, occupancies are significantly lower than the Downtown Parking District and exhibit a single overall peak earlier in the day. The on-street parking reaches a peak of 70 percent between 12PM and 1PM while the off-street (comprised only of 400 Main) occurs at 11AM with 60 percent occupancy. Although the overall occupancies appear similar to the September data, the on-street occupancies are higher and the off-street occupancies are lower in December during the midday hours.

[5] The 400 Main Street Parking lot (96 spaces) is not part of the parking district and, therefore, was not included in the December occupancy analysis for the district.



Wednesday	8a-9a	9a-10a	10a-11a	11a-12p	12p-1p	1p-2p	2p-3p	3p-4p	4p-5p	5p-6p	6p-7p	7p-8p
On-Street	56%	65%	76%	88%	95%	86%	89%	85%	77%	82%	74%	66%
Off-Street	14%	37%	64%	78%	83%	87%	80%	72%	74%	65%	54%	44%
Overall	21%	42%	66%	80%	85%	87%	82%	74%	74%	68%	58%	47%

Figure 1-6: December Overall District Occupancy by Parking Type and Time of Day



Wednesday	8a-9a	9a-10a	10a-11a	11a-12p	12p-1p	1p-2p	2p-3p	3p-4p	4p-5p	5p-6p	6p-7p	7p-8p
On-Street	40%	48%	51%	66%	70%	65%	67%	57%	51%	47%	42%	39%
Off-Street	13%	32%	46%	60%	57%	48%	49%	51%	53%	58%	47%	38%
Overall	29%	42%	49%	64%	65%	58%	60%	55%	52%	52%	44%	38%

Figure 1-7: December Overall Non-District Occupancy by Parking Type and Time of Day

1.5.2 Historical Parking Occupancy

A comparison of historical parking occupancy data for the Downtown Parking District with current occupancy data reveals a downward utilization trend in downtown over time. Data used for comparison came from the 1993 Downtown Parking Garage Report and the Downtown-Wide Traffic and Parking Analysis conducted in 2007.

Figure 1-8 illustrates the historical changes in parking occupancy for off-street facilities. Since 1993, off-street occupancy has maintained the same overall midday peak pattern, but has decreased over time. The midday peaks in 1993 and 2007 both exceeded the 85 percent practical capacity limit, but existing off-street occupancies in September do not exceed 82 percent. The existing December data follow the same trends as the existing September data but at a higher occupancy rate throughout the day, exceeding the 85 percent practical capacity during the midday peak.

Figure 1-9 depicts on-street occupancies throughout the day revealing higher overall occupancies since 2007. In addition to the higher occupancies there are also two new peaks taking place between 2PM and 3PM and at 5PM. Similar to the off-street data, the existing December data follow the same trend as the existing September data with the exception of the afternoon peaks occurring at slightly different times; September shows a 3PM peak while December has a 2PM peak.

Although on-street occupancies have increased since 2007, the overall occupancy trend for the Downtown Parking District has decreased. The relatively small amount of on-street parking supply compared to off-street (17 percent and 83 percent, respectively) means that the on-street occupancies have little effect on the overall district parking occupancy.

Sales tax data is a good metric to gauge the change in economic activity over time. The sales tax data over the past ten years, between 2002 and 2012, showed an increase of about three percent in adjusted tax revenue. However, between 2007 and 2012 there was a drop of approximately nine percent in revenue from businesses in the downtown triangle. This drop in revenue is in line with the general drop in parking occupancy over the same period.

Figure 1-8 Historical Off-Street Occupancy

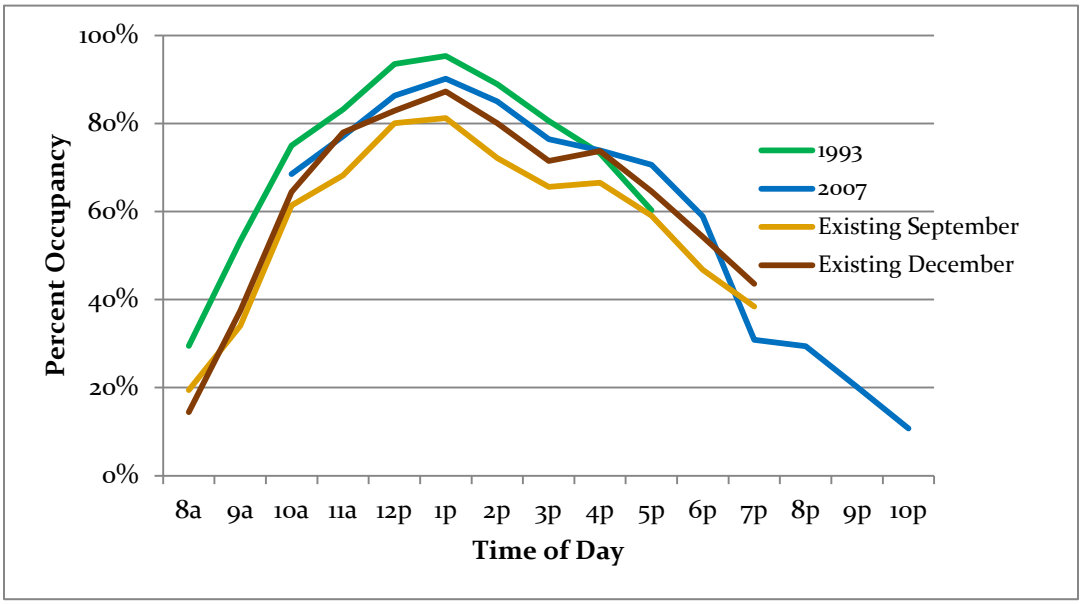
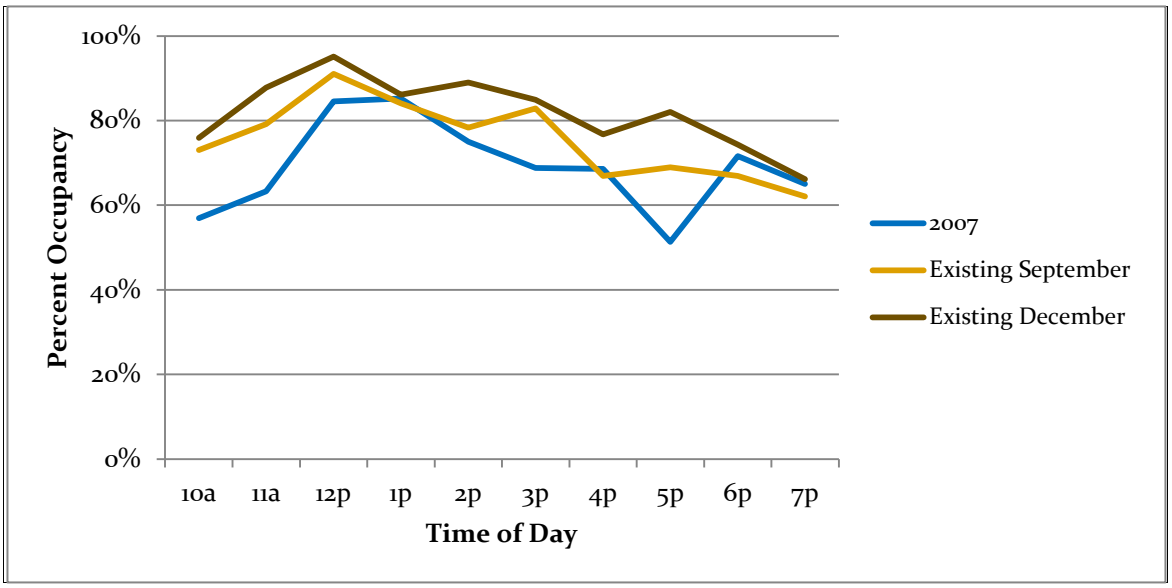


Figure 1-9 Historical On-Street Occupancy



1.5.3 Peak Hour Occupancies by Location

Peak hour occupancy levels are an important focus for analysis because they provide a glimpse of the parking supply at its most impacted. The overall weekday peak for the Downtown Parking District in September was observed between 12PM and 1PM when the parking facilities were 82 percent occupied and the weekend peak was observed between 1PM and 2PM when the overall occupancy level reached 69 percent. December experienced its overall peak period between 12PM and 2PM when the on-street facilities reached its maximum of 95 percent occupancy between 12PM and 1PM and the off-street facilities reached its maximum of 87 percent occupancy between 1PM and 2PM.

1.5.3.1 September Occupancy

Weekday Peak Hour Occupancy

Occupancies are graphically shown in Figure 1-10 for the Downtown Parking District during the weekday peak period between 12PM and 1PM. It is important to note that two blockfaces have only one available parking space which leads the map to show either zero or 100 percent occupancy; these blockfaces are located on the eastern side of First and Third Street between State Street and Whitney Street.

Figure 1-10: September Midday Peak Hour Parking Occupancy, Wednesday 12:00PM - 1:00PM

Several of the Downtown Parking District parking facilities reach or exceed practical capacity during the peak hour. The majority of on-street facilities reached 91 percent occupancy with only six blockfaces below practical capacity. Three of these blockfaces were less than 50 percent occupied and located at the edge of the Downtown Parking District along First Street and Main Street. The remaining three blockfaces had occupancy between 70 and 85 percent and were located along Second, Fourth, and Main Street. The off-street facilities reached 80 percent occupancy during the peak hour. Among the parking plazas, Plaza 5 is near full capacity during the peak while Plazas 6, 7, and 10 are slightly above practical capacity; the remaining plazas are all between 70 and 85 percent occupancy.

The non-district area was in much less demand than the Downtown Parking District reaching only 66 percent occupancy between 12 PM and 1 PM, shown in Figure 1-10. Only one blockface to the north of the Downtown Parking District reached above 70 percent occupancy while three of four blockfaces along Whitney exceeded practical capacity.

Weekend Peak Hour Occupancy

The peak hour occupancies between 1PM and 2PM for the Downtown Parking District are shown in Figure 1-11. In general, the Downtown Parking District weekend occupancy is lower than the weekday with 70 percent occupancy. The on-street spaces along Main and State Street exhibit similar occupancies to the weekday peak hour with 92 percent occupancy. The parking plazas, however, generally have lower occupancies (65 percent) with half of the ten plazas under 70 percent occupancy. Plaza 5 remains above 95 percent occupancy and Plaza 6 increases from the weekday peak hour, exceeding 95 percent. With the exception of Plaza 5 and 6, the on-street spaces are utilized more heavily than the plazas. Patrons are likely wanting to park closer to their destinations showing a higher demand for on-street parking during the peak hour. Permit plazas are also used less as compared to the weekday, which is likely due to less employees needing parking. The parking plazas to the north of State Street are all below 70 percent occupancy while Plazas 9 and 10 to the east are underutilized at less than 50 percent occupancy.

Similar to the weekday peak, the non-district area is used less than the Downtown Parking District reaching 45 percent occupancy, shown in Figure 1-11. In general, the weekend peak hour experienced the opposite of the weekday peak in which the non-district area to the north of the Downtown Parking District, adjacent to the residential developments, was in higher demand than the non-district area to the south which is adjacent to office uses. Three of the four blockfaces along Whitney were less than 50 percent occupied, while blockfaces in non-district area to the north exceeded 95 percent occupancy.

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Figure 1-11: September Midday Peak Hour Parking Occupancy, Saturday 1:00PM - 2:00PM

1.5.3.2 December Occupancy

December occupancies are illustrated in Figure 1-12 for the Downtown Parking District and the non-district areas between 12PM and 1PM. This hour displays the on-street facilities during its highest demand hour. Compared with September data, occupancy in December for both on- and off-street facilities are in higher demand. All blockfaces, except for three, within the Downtown Parking District exceed the 85 percent practical capacity. In addition, seven of the ten parking plazas are above practical capacity during the peak period with Plaza 8 being the only plaza below 70 percent occupancy.[6]

The non-district area as a whole had less occupancy (65 percent) during the same hour with available parking to the north of the Parking District. However, due to the high occupancy within the Parking District overflow parking spilled into the non-district area as evident by the high occupancy on-street spaces immediately adjacent to the District. The spaces along W. Edith Avenue continued to be underutilized just as they were in September.

1.5.4 Occupancy Levels throughout the Day by Location

Peak hour parking conditions are important because they show the downtown parking supply at its most "stressed" and represent the time when an individual attempting to park would likely encounter the greatest amount of delay or frustration. It is also important, however, to consider how occupancies at individual parking facilities fluctuate throughout the day. The following sequence of tables presents hourly occupancy rates for all spaces, including loading and handicap spaces, at all downtown parking plazas within the Downtown Parking District. Although not part of the Downtown Parking District, the 400 Main Site as well as the Safeway, Draeger's, and Lincoln lots are also included in the tables. The public parking at the 400 Main Site, located adjacent to the district, is scheduled to be removed and provides important information for determining the demand of the downtown area. The Safeway and Draeger's lots currently do not provide public parking, and while the Lincoln lot does provide public parking, it is remotely located from the downtown; occupancy data for these lots took place twice throughout the day.

[6] The 400 Main Street parking lot (96 spaces) is not part of the Downtown Parking District and therefore was not included in the December occupancy analysis for the district.

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Figure 1-12: December Midday Peak Hour Parking Occupancy, Wednesday 12:00PM - 1:00PM

To provide better visual definition, tables have been highlighted to indicate periods of low or high usage. Cells highlighted in green indicate hours when a facility was below 50 percent occupied, pink cells are those over the 85 percent practical capacity level, and cells shaded in dark red indicate times when a facility was observed to have reached a critical occupancy level of 95 percent or higher.

1.5.4.1 September Occupancy

Table 1-11 presents the off-street occupancies by parking plaza and the overall occupancy of all off-street facilities throughout the day for a weekday. Plazas 5, 6, 7, and 10 all exceed practical capacity for three hours around the midday peak period. Plaza 5 experiences 2 hours of 95 percent or greater occupancy between 12PM and 2PM while Plaza 10 experiences the highest occupancy of any plaza between 1PM and 2PM. Plazas 1 and 2 are just below practical capacity during the peak period with Plaza 2 at practical capacity between 1PM and 2PM. Plazas 6 and 10 both exhibit a second peak later in the afternoon that brings them both above practical capacity. After 5PM, all plazas drop below 70 percent occupied except for Plazas 4 and 5 that do so after 6PM. Aside from the parking plazas, the Safeway lot was found to slightly exceed practical capacity (86 percent) at 12PM while Draeger's and the Lincoln lot remain below practical capacity; these lots stayed under 76 percent occupancy at 6PM.

Table 1-11 Off-Street Occupancies by Facility (Wednesday)

		AM				PM							
		8	9	10	11	12	1	2	3	4	5	6	7
Facility	Spaces	9	10	11	12	1	2	3	4	5	6	7	8
Plaza 1	137	12%	28%	58%	67%	83%	82%	75%	69%	67%	69%	59%	46%
Plaza 2	137	21%	31%	60%	64%	82%	85%	80%	68%	62%	57%	40%	30%
Plaza 3	226	15%	23%	51%	53%	74%	72%	59%	59%	65%	66%	64%	64%
Plaza 4	65	43%	69%	60%	68%	71%	77%	52%	52%	60%	72%	69%	63%
Plaza 5	56	25%	50%	82%	89%	95%	96%	91%	88%	82%	79%	68%	50%
Plaza 6	71	20%	37%	72%	87%	89%	85%	82%	90%	82%	62%	39%	39%
Plaza 7	137	19%	39%	74%	88%	87%	91%	74%	72%	74%	60%	44%	26%
Plaza 8	143	15%	30%	63%	67%	72%	73%	71%	62%	57%	50%	37%	19%
Plaza 9	145	19%	27%	48%	55%	72%	77%	65%	48%	54%	41%	26%	28%
Plaza 10	87	29%	49%	74%	79%	92%	97%	94%	76%	86%	47%	24%	15%
Overall	**1204**	19%	34%	61%	68%	80%	81%	72%	66%	67%	59%	47%	38%
400 Main	96	19%	42%	68%	70%	80%	69%	55%	56%	52%	52%	47%	34%
Safeway	94					86%						76%	
Draeger's	70					80%						60%	
Lincoln	143					28%						17%	

Table 1-12 displays the same occupancy data as table 1-10 but for a weekend instead of a weekday. Only three facilities, all located between State Street and Main Street, exceed practical capacity during a typical Saturday and it occurs between 9AM and 4PM. Plaza 5, between 11AM and 12PM reaches 98 percent occupancy, the most occupied facility measured for either day; it stays the most occupied later into the day as well. Plazas 9, 10 and the 400 Main lot never break 50 percent occupancy all day. Overall, off-street occupancy is 8 percent at 8AM on Saturday morning. The Safeway, Draeger's, and Lincoln lot do not exceed 70 percent occupancy at 12PM and stay under 45 percent at 6PM.

Table 1-12 Off-Street Occupancies by Facility (Saturday)

		AM				PM							
		8	9	10	11	12	1	2	3	4	5	6	7
Facility	Spaces	9	10	11	12	1	2	3	4	5	6	7	8
Plaza 1	137	11%	24%	53%	64%	73%	78%	74%	66%	59%	48%	55%	57%
Plaza 2	137	6%	16%	43%	52%	55%	72%	65%	52%	45%	31%	25%	23%
Plaza 3	226	5%	19%	37%	49%	62%	63%	58%	50%	47%	45%	56%	53%
Plaza 4	65	38%	77%	82%	91%	78%	75%	85%	71%	69%	63%	57%	45%
Plaza 5	56	14%	88%	93%	98%	91%	93%	91%	91%	84%	54%	46%	63%
Plaza 6	71	8%	44%	77%	92%	93%	94%	70%	58%	34%	27%	20%	21%
Plaza 7	137	4%	20%	34%	53%	52%	58%	50%	53%	42%	34%	22%	22%
Plaza 8	143	8%	22%	44%	54%	57%	64%	57%	46%	44%	45%	24%	17%
Plaza 9	145	5%	12%	19%	30%	36%	46%	36%	21%	12%	19%	26%	20%
Plaza 10	87	2%	14%	17%	23%	24%	30%	24%	24%	15%	13%	16%	15%
Overall	**1204**	8%	26%	44%	55%	59%	65%	58%	50%	43%	37%	36%	34%
400 Main	96	9%	30%	47%	44%	39%	45%	36%	36%	38%	30%	17%	15%
Safeway	94					68%						35%	
Draeger's	70					61%						44%	
Lincoln	143					69%						34%	

Handicap Parking Occupancy

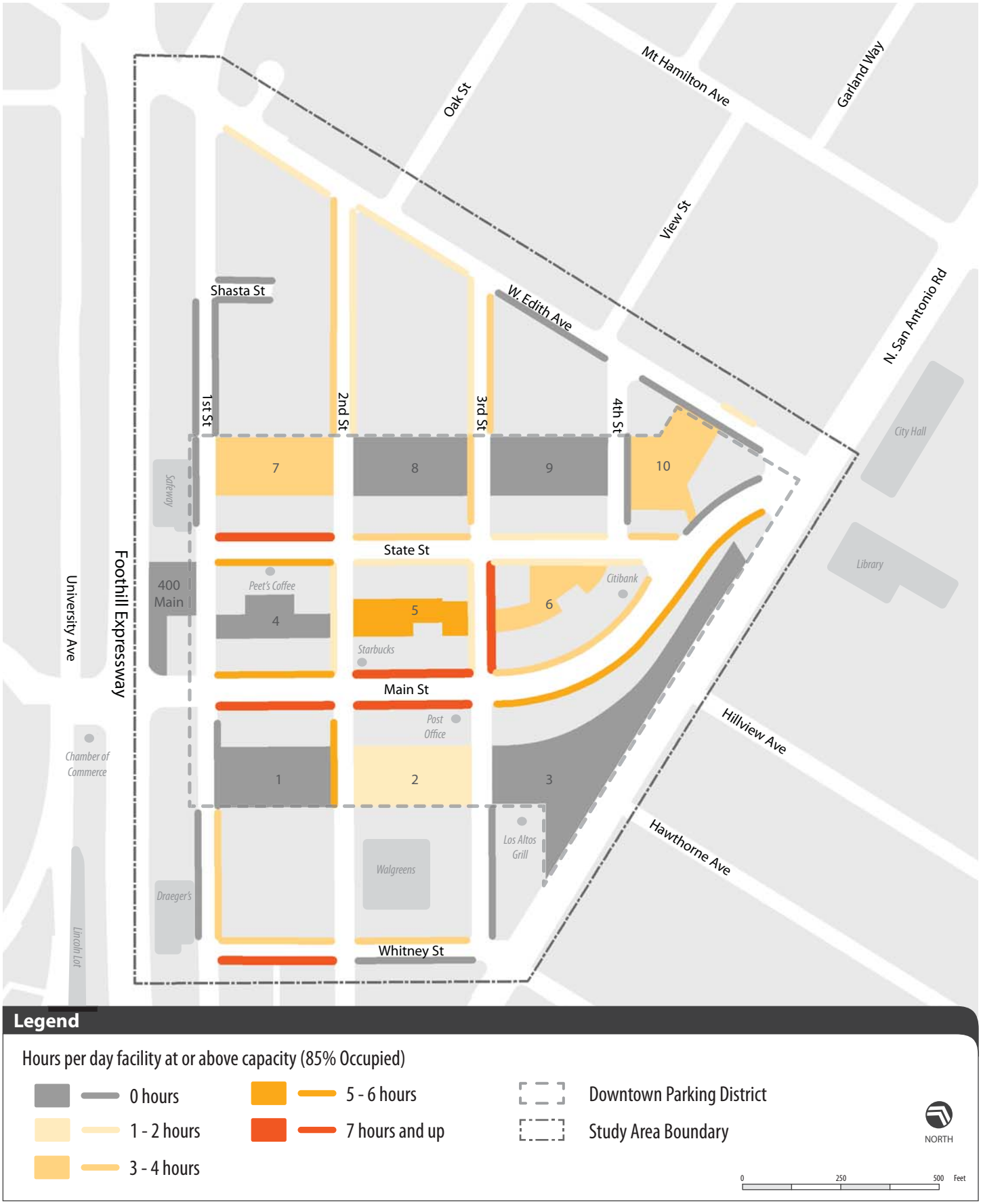
Occupancies of handicap spaces for the parking plazas are shown in Table 1-13. It is important to note that Plaza 4 has only one handicap space and appears as either zero or 100 percent occupied. In general, there appears to be adequate spaces among all parking plazas reaching a maximum occupancy of 37 percent during the weekday peak (12PM and 1PM) and 33 percent during the weekend peak (1PM and 2PM). Plaza 5 contains seven available handicap spaces, among the higher capacity plazas, and exceeds or reaches full capacity during the midday. The occupancy for Plaza 4 is difficult to assess, however, the table does indicate when Plaza 4's handicap spaces are used which occurs between the hours of 1PM and 7PM on the weekday and between 11AM and 1PM on the weekend. Aside from Plaza 5, Plaza 2 is the only other plaza to exceed practical capacity of handicap spaces at 86 percent between 1PM and 2PM; all other plazas remain under practical capacity throughout the day for both weekday and weekend days.

Table 1-13 Handicap Space Occupancy by Facility

Facility	Spaces	AM				PM							
		8	9	10	11	12	1	2	3	4	5	6	7
		9	10	11	12	1	2	3	4	5	6	7	8
Wednesday Occupancy													
Plaza 1	5	0%	0%	0%	0%	20%	0%	0%	0%	0%	0%	0%	0%
Plaza 2	7	14%	14%	29%	14%	57%	86%	29%	43%	43%	57%	14%	0%
Plaza 3	5	0%	20%	20%	0%	60%	20%	0%	0%	40%	0%	0%	0%
Plaza 4	1	0%	0%	0%	0%	0%	100%	100%	100%	100%	100%	100%	0%
Plaza 5	7	14%	43%	57%	71%	86%	86%	100%	57%	29%	14%	14%	0%
Plaza 6	5	0%	0%	0%	20%	40%	20%	40%	60%	60%	20%	20%	0%
Plaza 7	6	0%	0%	0%	0%	17%	50%	0%	17%	0%	17%	0%	0%
Plaza 8	7	0%	0%	14%	14%	14%	0%	0%	0%	0%	0%	0%	0%
Plaza 9	4	0%	0%	0%	0%	0%	0%	0%	25%	0%	0%	0%	0%
Plaza 10	2	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Overall	**49**	4%	10%	16%	16%	37%	37%	24%	27%	22%	16%	8%	0%
Saturday Occupancy													
Plaza 1	5	0%	0%	0%	0%	20%	20%	0%	0%	20%	0%	0%	0%
Plaza 2	7	0%	0%	0%	0%	43%	71%	14%	0%	14%	0%	0%	0%
Plaza 3	5	0%	0%	20%	20%	0%	20%	20%	20%	40%	20%	0%	0%
Plaza 4	1	0%	0%	0%	100%	100%	0%	0%	0%	0%	0%	0%	0%
Plaza 5	7	0%	43%	71%	100%	71%	57%	43%	43%	57%	29%	0%	0%
Plaza 6	5	0%	0%	0%	40%	60%	80%	0%	20%	0%	0%	0%	0%
Plaza 7	6	0%	0%	0%	33%	33%	0%	0%	17%	0%	17%	17%	0%
Plaza 8	7	0%	0%	0%	0%	0%	0%	14%	14%	0%	0%	0%	29%
Plaza 9	4	0%	0%	0%	0%	0%	25%	50%	0%	0%	0%	0%	0%
Plaza 10	2	0%	0%	0%	0%	0%	0%	50%	0%	0%	0%	0%	0%
Overall	**49**	0%	6%	12%	27%	31%	33%	18%	14%	16%	8%	2%	4%

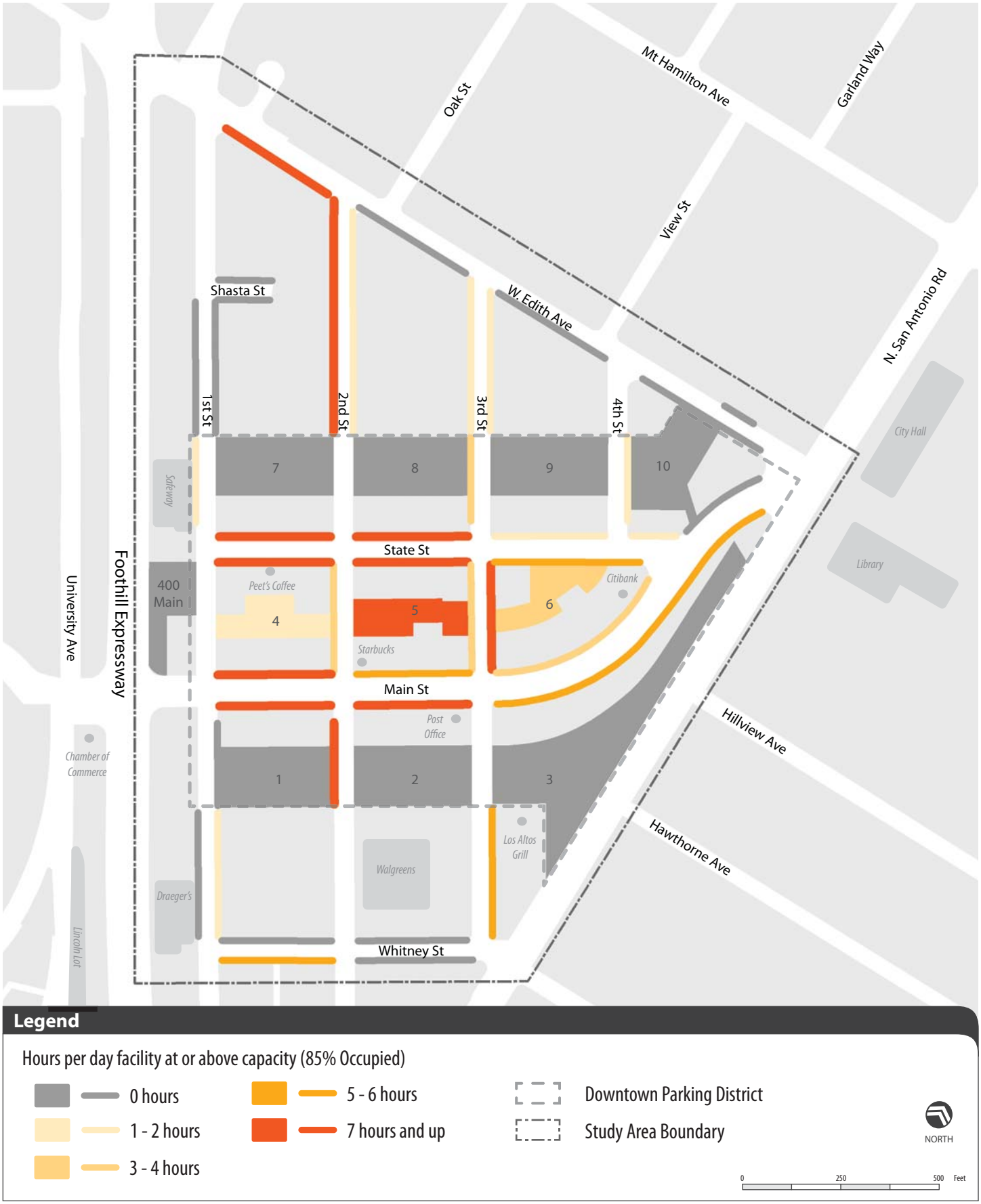
Parking Hotspots - Weekday

Figure 1-13 graphically depicts the occupancy information and reveals those areas where parking demand is sustained at high levels throughout the day. In the figure, lots and blockfaces are colored based on the number of hours during the day that each was observed to be at or above the practical capacity (85 percent full). As the figure suggests, weekday parking in the Downtown Parking District sees a relatively high number of hours where parking is at or over practical capacity along Main and State Street. Three blockfaces on Main Street and one on State Street and Third Street each are over practical capacity for more than seven hours. Two more additional blockfaces on Main Street and one on State Street and Second Street each are over practical capacity between five and six hours. Five of the ten plazas are never over practical capacity with Plaza 5 being the only plaza over capacity for more than five hours.



CDM Smith

Figure 1-13: September Total Hours At or Above Capacity (Wednesday)



CDM Smith

Figure 1-14: September Total Hours At or Above Capacity (Saturday)

Non-District

The non-district area has a much lower number of hours where parking facilities are at or over practical capacity as compared to the Downtown Parking District. One blockface along Whitney Street exceeds practical capacity for more than seven hours while all others remain under four hours.

Parking Hotspots - Weekend

Figure 1-14 presents weekend occupancy data within downtown Los Altos. Within the Downtown Parking District the central plazas are the only off-street facilities that reach practical capacity at all throughout a typical Saturday. Similar to a weekday, the blockfaces within the District experience a high number of hours at or above practical capacity; only two blockfaces never reach 85 percent occupancy.

Non-District

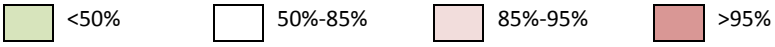
In general, the non-district area has a lower number of hours where parking facilities are at or above practical capacity as compared to the Downtown Parking District on a Saturday. Two blockfaces found to the north of the District along Second Street and West Edith Street are at or over capacity for seven or more hours and two more additional blockfaces found to the south of the District along Whitney Street and Third Street are at or over capacity for more than five hours. These are the only blockfaces outside of the District which exceed five hours at or above capacity.

1.5.4.1 December Occupancy

The off-street occupancies for each parking plaza throughout the day for December are shown in Table 1-14. All but two plazas exceed practical capacity at some point throughout the day. The central plazas (Plazas 4, 5, and 6) exceed 85 percent occupancy for several hours with Plaza 5 reaching the highest occupancy of any plaza at 98 percent between 1PM and 2PM. Plaza 4 experienced a sharp drop in occupancy from 91 percent at 12 PM to 77 percent at 1 PM, but steadily increased back to 91 percent by 5PM. After 5PM most plazas drop below 70 percent occupancy except for Plaza 3, which does so after 7PM, and Plazas 4 and 5, which remain above 70 percent until 7PM. Compared to the September data, the December occupancy for the parking plazas all exceed practical capacity for extended hours over the September occupancy, with the exception of Plazas 3 and 8 which continue to maintain low to moderate occupancies throughout the day. However, the Safeway, Draeger's, and Lincoln Park lots exhibited lower occupancies than the September weekday data at 12PM and 6PM.

Table 1-14 December Off-Street Occupancies by Facility

		AM				PM							
		8	9	10	11	12	1	2	3	4	5	6	7
Facility	Spaces	9	10	11	12	1	2	3	4	5	6	7	8
Plaza 1	137	13%	40%	61%	80%	88%	90%	84%	81%	82%	81%	64%	58%
Plaza 2	137	20%	42%	81%	90%	91%	93%	88%	80%	77%	60%	53%	34%
Plaza 3	226	7%	26%	57%	67%	73%	76%	68%	59%	65%	74%	80%	69%
Plaza 4	65	32%	72%	75%	89%	91%	77%	77%	83%	89%	91%	82%	71%
Plaza 5	56	25%	50%	84%	93%	89%	98%	96%	89%	93%	75%	77%	73%
Plaza 6	71	14%	55%	93%	92%	94%	94%	93%	85%	90%	58%	35%	46%
Plaza 7	137	14%	26%	61%	91%	85%	88%	88%	79%	82%	72%	44%	36%
Plaza 8	143	11%	29%	54%	66%	69%	82%	68%	60%	60%	43%	33%	12%
Plaza 9	145	12%	29%	40%	58%	81%	94%	74%	54%	55%	45%	41%	28%
Plaza 10	87	16%	53%	85%	87%	94%	97%	93%	80%	82%	57%	26%	20%
Overall	**1204**	14%	37%	64%	78%	83%	87%	80%	72%	74%	65%	54%	44%
400 Main	96	13%	32%	46%	60%	57%	48%	49%	51%	53%	58%	47%	38%
Safeway	94					64%						44%	
Draeger's	70					47%						36%	
Lincoln	143					10%						2%	

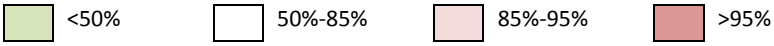


Handicap Parking Occupancy

Occupancies for handicap spaces of the parking plazas are shown in Table 1-15. It is important to note that Plaza 4 only has one handicap space and appears as either zero or 100 percent occupied. Overall, it appears that adequate handicap parking is available among all parking plazas as the overall occupancy reaches a maximum of 59 percent during the peak period (12PM and 2PM). Plazas 3 and 7 both reach capacity during the peak period with Plaza 5 being the only other plaza to exceed practical capacity throughout the day. The table also indicates that for Plaza 4, the single parking space was utilized between the hours of 11AM to 1PM and 3PM to 6PM. All other parking plazas remain under practical capacity throughout the day.

Table 1-15 December Handicap Space Occupancy by Facility

		AM				PM							
		8	9	10	11	12	1	2	3	4	5	6	7
Facility	Spaces	9	10	11	12	1	2	3	4	5	6	7	8
Plaza 1	5	0%	0%	0%	0%	20%	40%	20%	20%	20%	60%	20%	0%
Plaza 2	7	0%	14%	14%	43%	71%	43%	71%	57%	71%	29%	14%	0%
Plaza 3	5	0%	0%	40%	40%	100%	60%	0%	20%	20%	20%	40%	0%
Plaza 4	1	0%	0%	0%	100%	100%	0%	0%	100%	100%	100%	0%	0%
Plaza 5	7	14%	14%	14%	57%	29%	86%	86%	57%	71%	14%	29%	0%
Plaza 6	5	0%	0%	40%	20%	60%	80%	40%	40%	40%	40%	20%	20%
Plaza 7	6	0%	17%	17%	17%	100%	100%	83%	33%	67%	17%	17%	33%
Plaza 8	7	0%	0%	29%	29%	29%	29%	29%	14%	14%	0%	0%	0%
Plaza 9	4	0%	0%	0%	0%	0%	75%	75%	0%	0%	25%	0%	0%
Plaza 10	2	0%	0%	0%	50%	0%	0%	50%	0%	0%	0%	0%	0%
Overall	**49**	2%	6%	18%	31%	51%	59%	51%	33%	41%	24%	16%	6%



Parking Hotspots

Figure 1-15 graphically depicts the areas where parking demand is sustained at high levels throughout the day for the Downtown Parking District. Within the Downtown Parking District majority of on-street facilities remain at or above practical capacity for more than five hours with only six of the block faces experiencing these conditions for less than two hours. More than half of the off-street facilities experience occupancies at or above capacity for three or more hours with Plazas 3 and 8 never at or exceeding practical capacity throughout the day. Plaza 6 is the most heavily used plaza, which was at or above capacity for seven hours.

Non-District

In general, the non-district area experienced less hours at or above capacity than the Downtown Parking District. Only one blockface experienced high demand for seven or more hours which was located along the western side of Second Street between West Edith Avenue and State Street. Aside from this single blockface, two additional blockfaces, one along Whitney Street between First and Second Street and another along Third Street between Main Street and Whitney Street exhibited high demand for five to six hours.

Figure 1-15: December Total Hours At or Above Capacity (Wednesday)

1.5.5 Parking Duration

While occupancy data is a key metric describing how parking in the downtown is used, occupancy percentages provide only a series of snapshots of how "full" different parking facilities are at different points in time. To truly understand current parking usage in the downtown, it is equally important to develop an insight into how long individual parkers stay, how employee permits are used, and to what extent "reparking" of cars may be occurring. Because license plate data was collected on an hourly basis in September for a Wednesday, it is possible to track these metrics in a variety of ways. Most of the following duration data is presented in terms of the observed distribution of "parking events" by length. This section examines beyond the Downtown Parking District and includes all parking events within the study area.

Over the 12 hours of data collection, a total of 4,655 "parking events" were observed for both on and off-street parking. A parking event is when a single unique vehicle is observed in a single unique space. Table 1-16 below summarizes these parking events by parking type based on their observed length in hours. The data presented in the following tables are categorized by on- and off-street parking types in which a single vehicle can appear in both on- and off-street categories. This is important to note as the actual overall total number of unique vehicles for the entire study area is less than the 4,655 parking events. A total of 4,406 unique vehicles were identified in the downtown with some of these vehicles observed to have more than one parking event, resulting in a total of 4,655 parking events. In contrast, the reparking analysis in the next section takes all on and off-street parking events in total resulting in a complete picture of unique parking events.

The majority of on-street parking events, 65 percent, was one hour or less with only three percent lasting more than six hours. The off-street parking had a more distributed duration with 45 percent of parking events being one hour or less and 15 percent lasting more than six hours. Overall, the average length of a typical parking event was 2.53 hours for both on and off-street parking.

Table 1-16 Parking Duration by Percent (Wednesday)

Parking Type	Parking Event	Parking Duration (Hours)										
		1	2	3	4	5	6	7	8	9	10 +	Avg Length (hrs)
On-Street	1,653	65%	22%	6%	2%	1%	1%	1%	1%	0%	1%	1.74
Off-Street	3,002	45%	19%	8%	6%	4%	4%	4%	4%	4%	3%	2.96
Overall	**4,655**	**52%**	**20%**	**7%**	**5%**	**3%**	**3%**	**3%**	**3%**	**3%**	**2%**	**2.53**

Vehicles parking within the downtown were assumed to be customers, employees, or others based on their usage of a permit, duration of stay, and reparking characteristics. Table 1-17 summarizes these likely vehicle types. Likely customers were defined as having a parking duration of four hours or less. Likely employees were identified as permit users or having parked for a total of five hours or more, while "other" users were defined as vehicle observations which did not fall into the customer or employee category; in particular, these users displayed a long gap between reparking observations and were assumed to be local residents leaving or returning from home or potential delivery vehicle working for a downtown business.

Table 1-17 Likely Vehicle Type

Vehicle Type	Total Vehicles	% of All Vehicles	Description
Likely Customer	3,380	76.7%	Vehicles that are parked for a total of 4 hours or less. Any gap between license plate observations was less than 3 hours.
Likely Employees	923	21.0%	Vehicles that display permits OR vehicles that are parked for a total of 5 hours or more. Any gap between license plate observations was less than 3 hours.
Other	103	2.3%	Any other non-permit vehicles that exhibited long gaps between vehicle license plate observations of 4 hours or more.
All Unique Vehicles	**4,406**	**100.0%**	

Table 1-18 illustrates hourly split among these likely vehicle types. Likely employees are accounting for just under half of the vehicle types hour by hour until 5 PM, when likely customers begin to increase. More than three times as many unique customer vehicles were observed than employees because more customers park for shorter periods of time (3 hours or less) in fewer parking spaces while employees park longer (5 hours or more) making spaces unavailable for others to use. As an example one off-street parking space enforced from 8AM to 6PM can be used by up to three customers or one employee in a 10 hour period.

Table 1-18 User Split by Likely Vehicle Type

Vehicle Type	AM				PM							
	8	9	10	11	12	1	2	3	4	5	6	7
	9	10	11	12	1	2	3	4	5	6	7	8
Customer	42%	40%	41%	41%	48%	47%	42%	42%	42%	49%	58%	64%
Employee	53%	55%	55%	57%	51%	51%	57%	56%	56%	48%	38%	29%
Other	5%	5%	4%	2%	2%	2%	1%	2%	2%	3%	4%	7%
Total												

In addition to the breakdown of vehicle types, the likely employees were further split based on permit usage. Table 1-19 presents the hourly split of permit and non-permit users among the 923 likely employees. The split remains relatively even between 9AM and 6PM, but with a much higher ratio of non-permit users before 9AM and again after 6PM. The rise in the latter portion of the day is likely because parking is no longer enforced after 6PM and therefore permits no longer provide any benefit.

Table 1-19 Likely Employee Permit and Non-Permit User Split

User Type	Total Unique Vehicles	AM				PM							
		8	9	10	11	12	1	2	3	4	5	6	7
		9	10	11	12	1	2	3	4	5	6	7	8
Permit	504	40%	49%	53%	52%	50%	49%	49%	49%	50%	48%	40%	33%
Non-Permit	419	60%	51%	47%	48%	50%	51%	51%	51%	50%	52%	60%	67%
Total	**923**												

A breakdown of the duration by parking type and likely users are shown in Table 1-20 for likely customers and Table 1-21 for likely employees; similar to Table 1-16, these tables present parking events as opposed to unique vehicles. Likely customers throughout the day parked on-street for an average length of 1.40 hours and off-street for 1.61 hours, while likely employees parked on-street for 5.44 hours and off-street for 6.24 hours. Likely employees without permits are parked in the same space for approximately 7.5 hours indicating that a large amount of these users are risking a parking citation.

Table 1-20 Likely Customer Parking Duration

Parking Type	Parking Event	Parking Duration (Hours)										
		1	2	3	4	5	6	7	8	9	10 +	Avg Length (hrs)
On-Street	1,452	69%	23%	6%	2%	0%	0%	0%	0%	0%	0%	1.40
Off-Street	2,061	60%	25%	9%	6%	0%	0%	0%	0%	0%	0%	1.61
Overall Total	**3,513**	**64%**	**24%**	**8%**	**4%**	**0%**	**0%**	**0%**	**0%**	**0%**	**0%**	**1.59**

Note: This table refers to total observed parking events by likely customers, not unique number of observed vehicles. There can be more than one parking event per unique vehicle.

Table 1-21 Likely Employee Parking Duration

Parking Type and User	Parking Event	Parking Duration (Hours)										
		1	2	3	4	5	6	7	8	9	10 +	Avg Length (hrs)
On-Street												
Permit	5	60%	0%	20%	20%	0%	0%	0%	0%	0%	0%	2.00
Non-Permit	126	13%	9%	7%	6%	14%	7%	17%	13%	5%	10%	5.57
Total	131	13%	9%	7%	7%	14%	7%	17%	13%	5%	9%	5.44
Off-Street												
Permit	500	16%	5%	6%	9%	8%	9%	12%	12%	15%	8%	5.80
Non-Permit	355	3%	3%	2%	3%	18%	17%	13%	16%	13%	13%	6.86
Total	855	2%	4%	5%	7%	12%	13%	12%	14%	14%	10%	6.24
Overall												
Permit	**505**	**17%**	**5%**	**6%**	**9%**	**8%**	**9%**	**11%**	**12%**	**15%**	**8%**	**5.78**
Non-Permit	**481**	**5%**	**4%**	**4%**	**4%**	**17%**	**15%**	**14%**	**15%**	**11%**	**12%**	**7.49**
Total	**986**	**11%**	**4%**	**5%**	**7%**	**12%**	**12%**	**13%**	**13%**	**13%**	**10%**	**6.56**

Note: This table refers to observed parking events not unique number of observed vehicles, by likely employees. There can be more than one parking event per unique vehicle.

Table 1-22 presents data on the duration of parking events observed at the individual off-street parking plazas. The permit plazas are highlighted in orange and were found to generally have higher average parking durations than the non-permit plazas. At least ten percent of parking events were for more than six hours for each permit plaza indicating that these lots are being used for longer periods of time. The northern permit plazas (Plazas 7, 8, 9, and 10) each had a noticeably higher average duration of roughly three hours. 400 Main contains unrestricted parking spaces, which explains the highest average length of four hours. Despite having the fewest permit spaces (21) of the plazas,

Plaza 9 is among the plazas with higher average duration. This is likely due to the fact that the privately owned spaces are used by employees of the adjacent building.

Table 1-22 Parking Duration by Off-Street Facilities (Wednesday)

Parking Facility	Total Unique Vehicles	Parking Duration (Hours)										
		1	2	3	4	5	6	7	8	9	10 +	Avg Length (hrs)
Plaza 1	362	50%	19%	7%	7%	2%	3%	2%	3%	4%	2%	2.67
Plaza 2	388	58%	15%	7%	6%	2%	2%	3%	4%	2%	2%	2.39
Plaza 3	543	47%	19%	9%	6%	5%	3%	4%	3%	4%	1%	2.74
Plaza 4	253	57%	24%	8%	4%	2%	2%	2%	0%	1%	0%	1.94
Plaza 5	236	54%	22%	9%	6%	2%	2%	1%	3%	0%	1%	2.12
Plaza 6	223	46%	24%	9%	4%	5%	6%	2%	4%	1%	0%	2.47
Plaza 7	332	42%	21%	9%	5%	4%	4%	3%	5%	4%	3%	3.08
Plaza 8	282	49%	16%	6%	3%	4%	3%	5%	7%	5%	2%	3.08
Plaza 9	232	34%	23%	9%	3%	4%	6%	3%	4%	7%	5%	3.51
Plaza 10	185	43%	11%	5%	7%	5%	4%	9%	5%	6%	4%	3.63
400 Main	154	42%	14%	4%	4%	5%	4%	3%	5%	8%	12%	4.03

1.5.6 Employee Permits

Employee permits were also observed as part of the weekday data collection in September. Employee permits allow users to park for extended periods of time in specified facilities throughout downtown. The facilities identified as having permit spaces include the southern (Plazas 1, 2, and 3) and northern (Plazas 7, 8, 9, and 10) parking plazas; overall, there are a total of 533 spaces where permit holders are eligible to park. Table 1-23 compares the parking duration data for permit and non-permit users for plazas where permits are valid; a total of 504 unique permit users were observed throughout the day, however, four permit users were observed outside of the permit plazas and are not included in the table.

Table 1-23 Parking Duration for Permit Plazas by User Type

User Type	Total Unique Vehicles	Parking Duration (Hours)										
		1	2	3	4	5	6	7	8	9	10 +	Avg Length (hrs)
Permit Users	500	16%	5%	6%	9%	8%	9%	12%	12%	15%	8%	5.80
Non-Permit Users	2,502	51%	22%	9%	5%	3%	3%	2%	2%	2%	2%	2.39
All Users	**3,002**	**45%**	**19%**	**8%**	**6%**	**4%**	**4%**	**4%**	**4%**	**4%**	**3%**	**2.69**

Note: Permit users observed outside of the permit plazas are not included

As expected, Table 1-23 shows that permit holders park for substantially longer than non-permit holders at the permit facilities. Although a significant percentage of permit holders park for one hour or less (16 percent), over 70 percent of permit users are parking for four hours or more.

The occupancy data for the permit parking facilities by space type is presented in Table 1-24. All permit spaces for all plazas, with the exception of Plazas 8 and 9, exceed practical capacity at some point throughout the day. Plaza 9 maintains less than 50 percent permit space occupancy throughout the day; this plaza also has the smallest permit space capacity of the permit plazas. In addition to the permit spaces being above practical capacity, Plazas 1, 2, 7, and 10 also have non-permit spaces above practical capacity around the midday peak. The permit spaces of Plazas 7 and 10 were in particularly high demand, either at or slightly under full capacity between 11AM and 3PM.

Table 1-24 Employee Permit Space Occupancy (Wednesday)

Space Type & Location	From	AM				PM							
	To	8	9	10	11	12	1	2	3	4	5	6	7
		9	10	11	12	1	2	3	4	5	6	7	8
Permit Spaces	Qty	Percent Occupied Out of Total Permit Spaces by Facility											
Plaza 1	78	15%	32%	63%	73%	90%	91%	82%	74%	69%	63%	54%	36%
Plaza 2	75	32%	45%	79%	81%	92%	91%	85%	75%	61%	57%	51%	41%
Plaza 3	94	26%	33%	71%	77%	89%	86%	85%	77%	82%	93%	89%	91%
Plaza 7	97	21%	47%	89%	100%	97%	100%	86%	80%	88%	68%	45%	27%
Plaza 8	99	14%	37%	75%	76%	81%	83%	80%	74%	61%	52%	35%	17%
Plaza 9	21	5%	5%	14%	14%	24%	38%	38%	14%	43%	24%	14%	5%
Plaza 10	69	32%	57%	75%	84%	97%	99%	99%	86%	91%	55%	22%	13%
Overall	**533**	**22%**	**40%**	**73%**	**79%**	**88%**	**89%**	**84%**	**75%**	**74%**	**64%**	**49%**	**37%**
Non-Permit Spaces	Qty	Percent Occupied Out of Total Non-Permit Spaces by Facility											
Plaza 1	49	8%	27%	59%	69%	90%	78%	76%	69%	71%	86%	73%	69%
Plaza 2	50	10%	18%	44%	54%	88%	88%	82%	68%	78%	70%	34%	20%
Plaza 3	110	8%	16%	41%	41%	70%	67%	46%	53%	62%	55%	52%	52%
Plaza 7	29	21%	24%	55%	76%	79%	86%	66%	69%	55%	55%	55%	34%
Plaza 8	32	19%	19%	47%	63%	69%	59%	66%	47%	63%	63%	56%	31%
Plaza 9	120	23%	32%	56%	64%	83%	85%	71%	55%	58%	45%	28%	33%
Plaza 10	18	17%	22%	67%	61%	72%	89%	78%	39%	67%	17%	33%	22%
Overall	**408**	**15%**	**23%**	**50%**	**58%**	**79%**	**78%**	**66%**	**57%**	**63%**	**56%**	**45%**	**40%**

While the permit spaces in the majority of permit plazas are shown to be utilized above practical capacity for several hours throughout the day (Table 1-24) this is due to demand from both visitors and employees.

Table 1-25 reveals that during enforcement hours, between 50 and 60 percent of likely employees are parking in permit spaces. While observed in permit spaces, up to 10 percent of these employees did not have or use permits. Also, up to 5 percent of permit users were observed parking in non- permit spaces during enforcement hours. While these tables only explain hourly occupancy, the reparking analysis in the following section helps to explain the parking behavior of different user groups by linking re-parking events through-out the day. (e.g. an employee that moves their vehicle to find a permit space).

Table 1-25 Occupancies by Space Type for Likely Employees (Wednesday)

Space Type and User Type	AM				PM							
	8	9	10	11	12	1	2	3	4	5	6	7
	9	10	11	12	1	2	3	4	5	6	7	8
Number of Likely Employees												
Permit Spaces												
Permit User	81	154	280	315	320	307	310	277	272	197	107	48
Non-Permit User	20	27	46	51	54	58	58	54	42	44	33	25
Total Likely Employees	**101**	**181**	**326**	**366**	**374**	**365**	**368**	**331**	**314**	**241**	**140**	**73**
Non-Permit Spaces												
Permit User	4	16	23	20	10	18	13	19	21	22	13	15
Non-Permit User	107	148	220	257	274	278	278	260	248	196	147	103
Total Likely Employees	**111**	**164**	**243**	**277**	**284**	**296**	**291**	**279**	**269**	**218**	**160**	**118**
Overall												
Permit User	85	170	303	335	330	325	323	296	293	219	120	63
Non-Permit User	127	175	266	308	328	336	336	314	290	240	180	128
Total Likely Employees	**212**	**345**	**569**	**643**	**658**	**661**	**659**	**610**	**583**	**459**	**300**	**191**
Percentage of Likely Employees												
Permit Spaces												
Permit User	38%	45%	49%	49%	49%	46%	47%	45%	47%	43%	36%	25%
Non-Permit User	9%	8%	8%	8%	8%	9%	9%	9%	7%	10%	11%	13%
Total Likely Employees	**48%**	**52%**	**57%**	**57%**	**57%**	**55%**	**56%**	**54%**	**54%**	**53%**	**47%**	**38%**
Non-Permit Spaces												
Permit User	2%	5%	4%	3%	2%	3%	2%	3%	4%	5%	4%	8%
Non-Permit User	50%	43%	39%	40%	42%	42%	42%	43%	43%	43%	49%	54%
Total Likely Employees	**52%**	**48%**	**43%**	**43%**	**43%**	**45%**	**44%**	**46%**	**46%**	**47%**	**53%**	**62%**
Overall												
Permit User	40%	49%	53%	52%	50%	49%	49%	49%	50%	48%	40%	33%
Non-Permit User	60%	51%	47%	48%	50%	51%	51%	51%	50%	52%	60%	67%
Total Likely Employees	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**

1.5.7 Reparking

Observed license plate data was also used to track instances of reparking throughout the entire study area for September weekday data collection. Reparking was determined to have occurred whenever a vehicle (via license plate) was observed to have moved from one parking lot or blockface to another within the study area.

Table 1-26 presents information on the number of users that were observed reparking throughout the day. As the table shows, ten percent of customers were seen reparking, but the majority only reparked once, likely to another part of downtown or to avoid a time restriction. While customer reparking was relatively uncommon, slightly less than 40 percent of employees were observed reparking throughout the day. Although many of these employees may be running errands or going to lunch (reparked once), a significant number of them likely occurred because they were moving their vehicles to avoid time restrictions.

Table 1-26 Vehicle Reparking by Likely Vehicle Type

Vehicle Type	Total	Parked Once	Reparked (Total)	Reparked					
				1 time	2 times	3 times	4 times	5 times	6 or more
Likely Customer	3,380	3056	324	295	29	0	0	0	0
% of all likely customers	100.0%	90.4%	9.6%	8.7%	0.9%	0.0%	0.0%	0.0%	0.0%
Likely Employee	923	563	360	262	78	16	2	1	1
% of all likely employees	100.0%	61.0%	39.0%	28.4%	8.5%	1.7%	0.2%	0.1%	0.1%
Other	103	0	103	9.	8	2	0	0	0
% of all other cars	100.0%	0.0%	100.0%	90.3%	7.8%	1.9%	0.0%	0.0%	0.0%
All Unique Users	**4,406**	**3619**	**787**	**650**	**115**	**18**	**2**	**1**	**1**
% of all unique users	**100.0%**	**82.1%**	**17.9%**	**14.8%**	**2.6%**	**0.4%**	**0.0%**	**0.0%**	**0.0%**

Reparking incidents present an important data point for parking management. While reparking related to a customer deliberately driving to another store or an employee going out for lunch would occur under any circumstance, reparking events related to time limit avoidance show how current downtown users are interacting with time restrictions. While an employee moving their vehicle from one two-hour time restriction space to another every few hours would be captured as a series of "two-hour" parking events, they actually represent an unfulfilled demand for a single eight-hour parking event. Similarly, a customer who parks in a two-hour space, goes to lunch, and then reparks in a neighboring space prior to shopping for an hour would be captured as "one-hour" and "two-hour" parking events but really represents an unfulfilled demand for a single three-hour parking event.

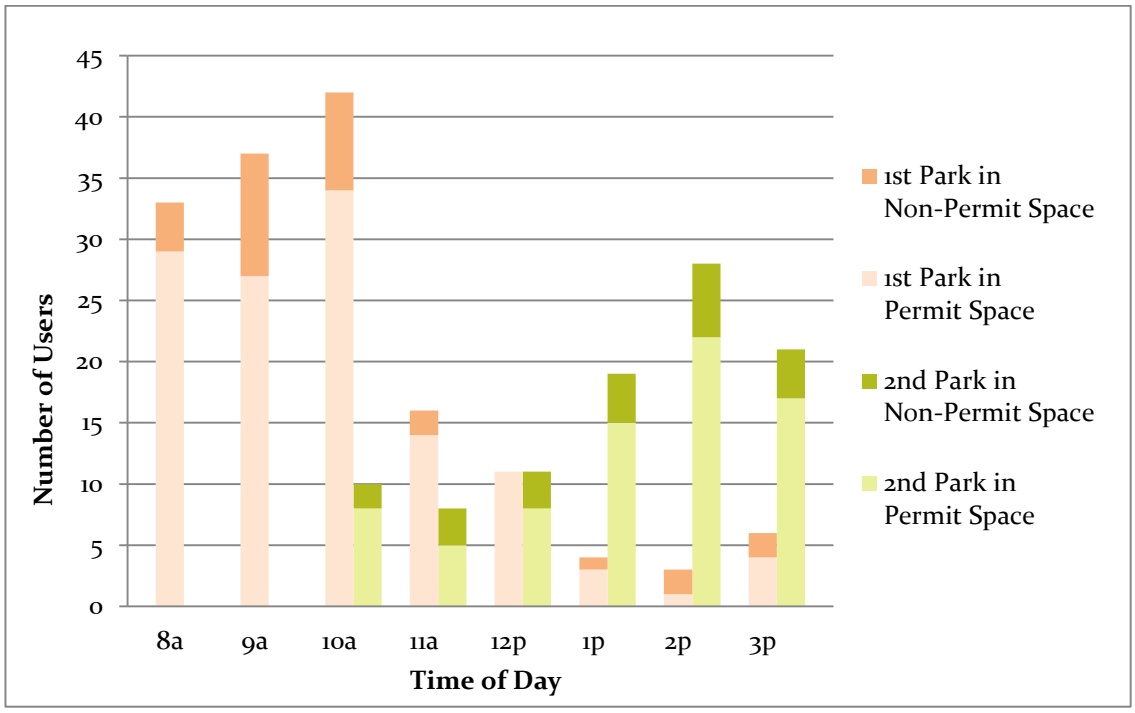
Table 1-27 presents a breakdown of the reparking data for the likely employees who have and do not have parking permits; approximately 54 percent of this population (504) are permit users. Among likely employees with permits, just over 30 percent of these users (154) reparked, while approximately half of the non-permit users reparked. Those permit holders who reparked likely had a reason to leave the downtown during the day and return at a later point such as: running an errand, going to a meeting/appointment, and/or making a delivery.

Table 1-27 Vehicle Reparking for Likely Employees

User Type	Total	Parked Once	Reparked (Total)	Reparked					
				1 time	2 times	3 times	4 times	5 times	6 or more
Permit User	504	350	154	131	20	2	1	0	0
% of permit users	100.0%	69.4%	30.6%	26.0%	4.0%	0.4%	0.2%	0.0%	0.0%
Non-Permit Users	419	213	206	131	58	14	1	1	1
% of non-permit users	100.0%	50.8%	49.2%	31.3%	13.8%	3.3%	0.2%	0.2%	0.2%
All Employees	923	563	360	262	78	16	2	1	1
% of all employees	100.0%	61.0%	39.0%	28.4%	8.5%	1.7%	0.2%	0.1%	0.1%

Figure 1-16 looks at the same population of permit users that reparked (154) from above. Generally, permit holders were able to find permit spaces the first or second time they parked. The figure only shows data up to 3PM, due to the three hour time limit and regulation ending at 6 PM rendering permit spaces unenforceable.

Figure 1-16 Parking Location for Reparked Employee Permit Users



1.6 Bicycle Parking

Public bicycle parking facilities were also observed as part of the parking utilization analysis. Observations of the bicycle parking facilities took place on Saturday September 22nd throughout the study area between the hours of 8AM and 5PM. In general, bicycle parking events took place primarily along Main and State Street.

Morning observations revealed a significant number of bicycling enthusiasts using the downtown area as a meeting place. These users were observed to have little need of bicycle facilities as they primarily stayed with their bicycle. However, upon returning from their trips (beginning at 10 AM), the demand for parking facilities, located around Peet's Coffee (southern blockface on State Street between First and Second Street), exceeded the supply as several bicycles were observed leaning against park benches, newspaper stands, trees, buildings, etc. These bicycles were not locked as their owners were observed staying nearby. The extreme of these observations included the blocking of the sidewalk and occupying an on-street parking space. Similar, but less extreme observations were noted at the Starbucks located at the corner of Main and Second Street.

Family bicyclists, parents and children arriving at the downtown together, were observed parking their bicycles at the public racks if it was convenient to their destination. More of these users were seen locking their bicycles as compared to the bicycle enthusiasts; however, in general few bicycles were observed locked. When bicycle racks were not present, owners parked their bicycles against available structures including trees, poles, buildings, etc. A large number of these observations took place on the corner of Main and Second Street (Shown in Figure 1-18) where the highest activity occurred between 12PM and 2PM. Although bicycle racks were present, perhaps a block or two away, these informal parking events still took place. Users may have found that the nearest available rack was inconvenient to their destination.

Figure 1-18 Informal Bicycle Parking at Main and Second Street

Bicycles that were observed in the plazas behind storefronts were typically locked and remained locked for several hours. These bicycles were assumed to be employee bicycles (Shown in Figure 1-19). A lack of bicycle facilities behind the storefronts could be the cause of these informal bicycle parking events.

Figure 1-20 graphically illustrates the observed location of bicycle racks throughout the study area. The majority of the bicycle racks along Main Street and the racks in front of Pete's Coffee were heavily

used, particularly at the corner of Main and Second Street. The racks located at this intersection were used throughout the day by various users. The rack located along First Street between Main and State Street was observed having the same bicycle parked throughout the day, which was assumed to be an employee; aside from this single bicycle, no other bicycles used this rack. The two racks north of State Street along First and Fourth Street were not observed to have heavy usage; similarly the racks along Third Street were also not heavily used. The racks located on the block with parking Plaza 6 (surrounded by Main, State, and Third Street), were also used throughout the day, similar to the racks on the corner of Main Street and Second Street, but were used less heavily.

Figure 1-19 Informal Employee Bicycle Parking

Overall bicycle users were observed using the public bicycle facilities if available. Frequent informal parking observations took place during the peak hours of approximately 10AM to 2PM while adequate parking was observed during off-peak hours. Observations revealed that two locations, Peet's Coffee and the corner of Main Street and Second Street, had a high number of informal bicycle parking which used trees, poles, buildings, etc. to lean their bicycles. Bicycle enthusiasts seldom used the parking facilities prior to departing on a ride, but were observed to occupy the entire supply of the parking facilities upon returning from their trip. Due to the absence of parking facilities in the parking plazas behind storefronts, employees were found to informally lock their bicycle to trees and/or poles.

Legend

- Number of Existing Bicycle Racks
- Off-Street Parking Plaza
- Downtown Parking District
- Study Area Boundary

NORTH

0 250 500 Feet

CDM Smith

Figure 1-20: Bicycle Parking

1.7 Key Findings

1.7.1 Current Policies & Practices

- In several places throughout the Downtown, enforcement hours on-street are 9AM to 6PM and off-street are 9AM to 6PM. However, several on-street signs show enforcement hours of 8AM to 6PM. The signs also indicate parking is enforced Monday through Saturday, but it is not actually in practice every day of the week. The time of day and day of week enforcement inconsistencies can be points of confusion for visitors and residents. This issue has been corrected.

- Enforcement patterns are well known by employees who are able to anticipate and avoid ticketing. Merchants are unhappy that employees are parking in the convenient central high-demand spaces (on and off-street) and moving their vehicles with little consequence.

1.7.2 Community Preferences

- Surveys confirmed the most common reason people go downtown was to eat or drink, followed by grocery and retail shopping. The survey indicated a significant majority of respondents found current Downtown Los Altos parking was convenient (63 percent) and were not supportive of paying a nominal price ($0.50/hour) for closer parking (70 percent). The latter data point could use more in-depth study.

- Merchants believe a three-hour time limit in the plazas is sufficient for customers for most types of downtown visits. However, they believe current ticketing seems to miss the worst offenders – the employees who park in the prime locations and move their cars.

- Residents are generally in favor of electric vehicle charging stations to be in line with the community's sustainability goals. There were mixed opinions about increasing parking supply. Some residents believed a new garage was warranted, while others believed that the City should focus on management tools such as shared parking (with private lots/garages) or a satellite parking with a shuttle bus.

1.7.3 Occupancy & Parking Behavior

Historical Parking Data

- Since 1987, the Downtown Parking District on-street parking inventory has steadily declined from 228 spaces along State, Main and First Street to 214 existing spaces as a result of various streetscape improvements. Streetscape improvements since have led a reduction in available spaces. Off-street inventory has stayed mostly steady through 2007 and was reduced by 28 spaces to the time of the September 2012 inventory.

- A comparison of historical parking occupancy data with current occupancy data shows a downward utilization trend in downtown over time. Although sales tax data from the City, over the past ten years, has increased by about three percent, the last five years have showed a drop of approximately nine percent in sales tax revenue from businesses in the downtown triangle. This drop is in line with the general drop in parking occupancy over the same period.

District vs. Non-District

- There are a total of 1,449 total spaces located within the Downtown Parking District and 238 spaces in the outer non-district area. Overall, the Parking District spaces are in higher demand than those in the outer non-district area. Based on the maximum occupancy of 82 percent for the Parking District and 66 percent for the outer non-district area (September weekday data).

Hotspots

- **Weekday**: Parking in downtown Los Altos on a weekday is scattered among on and off-street parking with blockfaces in high demand (practical capacity for more than five hours) located along Main, State, Whitney, Second, and Third Streets. Plazas 6, 7, and 10 exceed capacity for more than three hours while Plaza 5 exceeds capacity for more than five hours.

- **Weekend**: Weekend parking demand is centered around Plaza 5 and the on-street facilities. Multiple blockfaces along Main, State, Second, and Third Street are over practical capacity for more than seven hours; the only plazas to exceed practical capacity are the central plazas (Plazas 4, 5, and 6).

December Occupancy

- Occupancies throughout the Downtown Parking District were slightly higher than September for all hours of the day. Occupancy trends within the Parking District remain fairly consistent to the September trends with the on-street secondary afternoon peak occurring earlier in the day (1PM as opposed to 2PM).

Parking Behavior/User Types

- **Employee Permits/All-Day Customer Permits**: Approximately 25 percent of users were identified using an employee permit, which was consistent throughout the day until 6PM when it dramatically dropped off. Very few vehicles were identified as using all day customer permits.

- **Duration**: Parking duration in each plaza averaged three hours or less for non-permit parkers and averaged between five and six hours for permit holders. Plazas 7, 8, 9, 10 with a higher percentage of white dots had a higher average duration (greater than three hours). This included Plaza 9 with the 69 private (unenforced) private spaces. The 400 Main site was observed to have the longest parking events of the non-permit facilities, averaging over four hours, likely because it is unrestricted/unenforced.

- **Reparking**: While customer reparking was relatively uncommon at ten percent, slightly less than 40 percent of employees were observed reparking throughout the day. Among likely employees with permits, just over 30 percent of these users (154) reparked, while approximately half of the non-permit users (206) reparked. Although many of these employees may be running errands or going to lunch (re-parked once), a significant number of them likely occurred because they were moving their vehicles to avoid time restrictions.

- **Employee Permit Program**: While permit spaces in permit plazas are utilized above practical capacity for several hours throughout the day, this is due to demand from both visitors and employees. During enforcement hours, between 50 and 60 percent of likely employees were parking in permit spaces, and up to 10 percent without permits. Up to 5 percent of permit users were observed parking in non- permit spaces during enforcement hours.

1.7.4 Bicycle Parking

- The Los Altos bicycling community is varied and ranged between serious enthusiasts to more casual and family riders.
- During times of peak bicycle parking, any nearby structure was used to park/lean bicycles and owners stayed nearby. Casual bicyclists (including employees and families) were more likely to lock their bicycles. Bicyclists have also express concern of the existing u-shaped bicycle racks having the potential to damage their bicycle frame.
- Bicycle enthusiasts seldom used the parking facilities prior to departing on a ride, but were observed to occupy the entire supply of the parking facilities upon returning. Due to the absence of parking facilities in the parking plazas behind storefronts, employees were found to informally lock their bicycles to trees and/or available poles.
- Throughout the day majority of bicycle parking observations took place along Main and State Street between First and Third Street, particularly at the corner of Main and Second Street. Bicycle racks not located within this area (along Main and State Street between First and Third Street) were seldom used, with the racks located on the block surrounded by Main, State, and Third Street used more heavily.

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Chapter 2

Parking Management Recommendations

The Los Altos Downtown Parking Study touches on many different aspects of the downtown parking system. Ultimately, the focus of this study has been to provide a detailed picture of how parking currently functions in the downtown, to provide insight into how parking needs may change in the future, and to discuss policy and program options the City could pursue to ensure that parking continues to support the growth and success of the downtown. The following recommendations are targeted towards helping the City develop a parking management strategy for the downtown that aligns goals, policies, and specific programs.

At this time, the City has a well developed parking management program. The strategies developed in this document draw upon data, stakeholder outreach and best practices and are designed to help Los Altos systematically and thoughtfully respond to both the issues identified in this report and to future challenges that are as yet unknown.

2.1 Parking Management Strategies

2.1.1 Goals

The City has identified the following goals to be addressed in the development of parking management strategies for the downtown.

- To provide access to convenient parking for downtown customers, employees and visitors
  - To prioritize and preserve on-street parking and Central Plaza parking (Plazas 4, 5, and 6) for downtown customers
  - To shift long term parkers (employees) to North and South Plazas (1, 2, 3, 7, 8, 9, 10)
- To support and encourage continued investment in the downtown core
- To manage supply efficiently to avoid unnecessary investment
- To identify, plan or establish potential reserve of parking supply to facilitate future development
- To mitigate spillover parking in residential neighborhoods

2.1.2 Issues

The following significant issues were uncovered during the study through stakeholder meetings and during analysis of parking conditions and in Downtown Los Altos and merit further consideration for the development of future management strategies:

- Downtown parkers observed established time limits. This compliance and stakeholder feedback indicates that current time limits are generally meeting needs of downtown users. As expected,

the parking plazas with the significant number of spaces marked with white dots had longer average durations than those with none, since permit parkers are not time-limited. However, there have been some comments regarding a need for more short term parking near the US Post office, which may be accommodated in Plaza 2.

- The highest sustained demand for permit parking was observed in Plazas 7 and 10. Permit demand was also generally high during the midday peak for Plazas 1, 2 and 3.
- Employee parking was observed on-street and in Central Plazas 5 and 6, based on the reparking analysis and permit observations.
- Despite high permit usage in Plazas 7 and 10 and the other plazas during the midday peak, there was still permit capacity in most plazas throughout the day. There was also significant general public parking available in Plaza 3 and Plaza 8 all day and at most other plazas outside of the midday peak.
- Based on stakeholder feedback, there appears to be limited interest by some employees (beyond the current permit holders) to purchase permits and/or greater interest in parking in more convenient Central Plazas despite the low price and ease of access for permit holders today.
- While permit spaces in permit plazas are utilized above practical capacity for several hours throughout the day, this is due to demand from both visitors and employees. During enforcement hours, between 50 and 60 percent of likely employees were parking in permit spaces, and up to 10 percent without permits. Up to 5 percent of permit users were observed parking in non- permit spaces during enforcement hours.
- Analysis of permit/white dot space usage indicated significant usage with heaviest utilization in north plazas. However, we found that 154 permit holders engaged in reparking one or more times, either because they were unable to find a permit space or because they needed to leave for whatever reason and come back later. We believe that some of these employees would be able to avoid reparking if more permit spaces were created in the existing plazas.
- We also found there were a number of employees (parking 5 hours or more) that didn't hold permits (206) that were reparking during the day. We believe these employees can be served by more permit spaces.
- Currently, based on parking observation and stakeholder feedback, many employees choose to take their chances with enforcement by parking in the central plazas or on-street and reparking every two to three hours rather than pay for an annual permit. While this practice may not be violating the letter of the law, it undermines the City's desire to reserve the most convenient parking for downtown visitors/customers.
- Parking occupancy increased in the parking district plazas in December vs. September by more than six percent. The midday parking peak shifted slightly from noon to 1PM. The most significant demand increases were exhibited in plazas with the most available parking supply (Plazas 1, 2, 3, 8 and 9). Central Plazas 4, 5 and 6 exhibited occupancies of over 90 percent between noon and 1PM.

- There was very limited use of the all day customer parking permits observed. It is possible this program is underused due to limited marketing of the program. This is a low cost program with potential customer service benefits. It could be worth trying an additional marketing effort to see if utilization improves. If this effort fails, then the program in its current form should probably be discontinued. However, based on stakeholder feedback, there may be some visitors that would benefit from the ability to park longer than three hours in the plazas. In particular, those customers that make multiple stops in the downtown and would not be inconvenienced with a trip back to their vehicle on the way to their subsequent destinations.
- Reparking data indicates there may be a market for a more convenient on-line all-day parking permit option since there were many non-permit holders observed parking 5 hours or more on and off street in the downtown (355 off-street and 126 on-street).
- Downtown parking activity was observed to be confined primarily within the district block faces and plazas. There appears to be no near term or short term risk for spillover into residential areas.
- The City of Los Altos is in the process of developing a wayfinding and signage program. It is important that the parking program be integrated into this plan to help customers find parking quickly and orient themselves in the downtown. The parking plazas are threaded throughout the downtown at key locations. Visitors arriving by vehicle should be quickly provided their destination options at key entry points and parking plazas at key turning points. In addition to directional signage, patrons will need parking information and location maps in each plaza to help them understand parking rules and to further guide them to their destination.
- Bicycle parking observations revealed a significant amount of users unable to find bicycle parking near their desired destination. Existing bicycle racks were either unused, due to an inconvenient location for users, or at full capacity due to a limited supply of racks at a specified location. High demand locations were identified along State Street between First and Second Streets and the corner of Main and Second Street.
- Enforcement of the current construction vehicle parking policy has been difficult because there are often several concurrent projects going on making it difficult to pinpoint which vehicles belong to which projects.
- Community stakeholders have requested access to electric vehicle charging stations in the Downtown. They are concerned that Los Altos is currently being bypassed by other communities in the Peninsula and believe it will attract visitors to the community.

2.1.3 Strategy Recommendations

There are a number of ways to address and protect the downtown parking supply while ensuring adequate parking for employees.

- For employees that insist on parking in central plazas due to convenience – modify enforcement policies to impose graduated violation fees, which increase with the number of offences for the central plazas and on-street parking to discourage this practice.

- Violation to Permit program incentive to convert employees into permit holders (employees that have received a parking overtime violation are given the ability to obtain a free annual employee permit)
- Distribute parking permits as part of a parking assessment district or BID.
- Increase permit parking supply in north and south plazas retaining some existing preferred (front row) customer parking in each plaza.
- On-line all day visitor parking permits.
- Enhanced enforcement with technology –mobile license plate recognition (LPR)/vehicle recognition (VR) or in ground sensors in the downtown parking district (to regularly identify spaces that have overstays and directly message PCO. Eliminates need for manual chalking and predictable enforcement rounds.
- Seasonal Valet Program.

These strategies are discussed in greater detail in the following subsections.

2.1.3.1 Graduated Fines

The City of Los Altos currently charges $54.50 for parking over the posted time limit on- or off-street. The fine is doubled if a violator is observed removing chalk marks from their vehicle. Merchants have complained that the worst offenders (employees) often anticipate enforcement and move their vehicles prior to their arrival.

Table 1-1 in Section 1.2.1.4 showed that 88 percent of vehicles issued tickets by the Los Altos Police Department (LAPD) were first-time offenders for the year from June 2012 to June 2013, suggesting that these are primarily visitors unaccustomed to Los Altos parking regulations and enforcement patterns. However, there are also a substantial amount of repeat offenders. In particular, 3 percent of the overall number of cited vehicles ultimately received 13.2 percent of the issued tickets for the year, indicating that there is a small subset of parkers that habitually overstay posted time limits. These users are most likely employees within downtown Los Altos who are willing to risk not moving their vehicles due to their knowledge of LAPD parking enforcement patterns.

Graduated fines would allow the City to provide warnings to first time offenders while escalating fine amounts for repeat offenders. Since customers are less familiar with the City's parking rules, it would be helpful to be more lenient to these visitors. A customer will appreciate a warning ticket after having chosen to spend money in Downtown Los Altos instead of receiving an actual ticket, which could deter these customers from visiting the area again. The provision of first-time warning tickets could allow for businesses downtown to continue gaining customers, since parking enforcement would not be perceived as targeting visitors to the area. While these warnings would probably decrease the City's parking enforcement revenue, it would enhance the City's image to visitors as a business and customer-friendly downtown.

For employees who are ticketed more than once using the graduated fine system, they will be incentivized to park off street or purchase parking permits as a result of the continued increase in parking fines they would be required to pay. In order to be most effective, the steps between each

offense must be noticeable and significant enough such that violators will be motivated to change their behavior.[7] Overtime parking violation fee scales are provided in Table 2-1 for several cities that currently use graduated fines.[8] In the increase between the first and second violation, the rate is increased 67 percent to 100 percent. From the second to third violation the rate is increased between 40 percent to 67 percent. A proposed graduated fine scale is suggested for Los Altos based on these ranges.

Table 2-1 Violation of Parking Time Limits

Offense #	Claremont, CA	Fredericksburg, VA	Williamsburg, VA	Los Altos, CA (Proposed)
First Offense	$35	$0	$10	$0
Second Offense	$75	$15	$30	$54.50
Third Offense	$105	$25	$50	$90.80 (67%)
Fourth and Subsequent Offense	$105	$35/$45	$50	$151.40 (67%)
Violation Period	12 months	6 months	60 days	12 months

The parking enforcement equipment vendor that the City contracts with (Clancy Systems International) would need to be modified to incorporate this system but it may be possible to implement. Most cities that have graduated fines reset the clock every twelve months. Cities that have instituted escalating fines such as Claremont, CA, and Fredericksburg, VA have seen a marked decrease in repeat offenses.

2.1.3.2 Increase Employee Permit Adoption

Despite the low cost and ease of use of the annual employee permits,[9] there still remain a number of employers and employees that decline to participate in the white dot program. Reasons have included that some employers have too many short term employees with irregular schedules to justify the expense[10] and/or when employees arrive, permit spaces are no longer available. Finally, many employees/employers continue to prefer to park where it is most convenient for them, although this parking should be prioritized for customers. The following policies should be considered to help the City increase permit adoption.

2.1.3.2.1 Violation to Permit Incentive

One approach to increasing permit adoption is to allow employees that have received a parking overtime violation the ability to obtain a free annual employee permit. The employee would be required to show proof of citation payment and parking district employment at City Hall to obtain the permit. The option can be advertised by flier issued alongside the ticket, issued by the parking control officer (PCO). A free permit in combination with proposed graduated fines should begin to encourage employees to shift their vehicles to white dot spaces.

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[7] According to the Parking Control Officer, one vehicle that parks regularly in Plaza 3 has not been deterred from the standard fine having been cited over 35 times.

[8] It should be noted that the Santa Clara County and the State of California assess additional fees for every paid parking violation to cover several state and county court facility costs. The current fee is $12.50 but will be reduced to $9.50 on July 1st, 2013 per SB 857.

[9] Neighboring cities Mountain View, Palo Alto, charge $240, and $420 respectively for employee permits annually. Sunnyvale rolls permit costs into business assessment fees. Refer to Appendix 2A Parking Comparables.

[10] Los Altos employee parking permits are transferrable, so an employer would only need the number of permits to cover employees that are on site. As an example, if an employer had twenty part time employees, but only 5 were on site at one time, only five parking permits would be needed.

2.1.3.2.2 Parking Assessment District

Another approach that may lead to greater employee participation in the permit program is to provide permits as a special benefit through a parking assessment district. The City of Los Altos formed an Assessment District in 1955 to develop the ten parking plazas. An assessment was agreed upon to fund the purchase and development of the plazas, but a formal assessment was not continued to fund improvements or on-going maintenance for the parking district. Since this time Proposition 218 "the Right to Vote on Taxes Act" was passed that had a major impact on how assessment districts could be formed and what they could fund. As long as the City follows the Proposition 218 guidelines and garners 50% support of the property owners, this could be a viable option. More detailed information regarding this process is provided in Chapter 5.

2.1.3.2.3 Business Improvement District (BID)

Similar to a Parking Assessment District, a Business Improvement District (BID) enables a city to levy annual assessments on businesses within its boundaries. The implementation of a BID has a specific law: the Parking and Business Improvement Area Law of 1989 (Streets and Highway Code 36500 et seq) that authorizes the formation of a district.[11] Improvements may include parking fees and other district amenities. More detailed information regarding this process is provided in Chapter 5. Review of the current law by the City Attorney would be required to determine the most viable approach for the district.

2.1.3.3 Employee Permit Program Expansion

The City should consider converting the remaining unpermitted spaces in the South Plazas (1, 2, and 3) and North Plazas (7, 8, 9, and 10) plazas to "white-dot" permit spaces to help accommodate employees that need long term parking and reduce/eliminate the need for reparking in the downtown. The total number of employees observed parking in the downtown during the peak hour (12PM) was 664. The total permit spaces available are 533. The total permit spaces needed based on September observations was 131. There are just over 300 unpermitted spaces in all of the north and south plazas which if converted could provide a comfortable supply buffer.

Another option would be to retain the most of the first row as preferred customer parking (approximately 196 spaces) and direct employee parking to the rear. Under the existing configuration, this would create 110 additional white dot spaces. This approach is shy of the total employee permit usage by 20 spaces. To maintain the buffer for employee/long-term parking, the City may consider marking an additional three to four spaces in the front row of each permit plaza with white dots.

All parking would continue to have the same three-hour time limit and be accessible to all patrons. In the event that a visitor is unable to find a preferred customer parking space and parks in the further white-dot spaces, the patron will still be within a five-minute walk to the central downtown as shown in Figure 2-1. In addition, employees parking in the white-dot spaces will also still be within a five-minute walk to their destination.

The City of Los Altos painted approximately 110 additional white spot spaces in August 2013, maintaining the first row of parking as preferred customer parking spaces. The City plans to continue monitoring employee parking demand to determine if additional spaces are needed.

[11] http://www.californiataxdata.com/pdf/BusinessImprovement.pdf

2.1.3.4 On-Line All Day Permits

Another option the City of Los Altos may consider to serve the needs of visitors that need long term parking and reduce reparking and is to sell daily visitor permits. Clancy Systems International was the original vendor for BART's parking reservations program and currently manages on-line permits for the Hercules Transit center.[12] A sample permit is shown in Figure 2-2 below. A similar on-line program could be developed to sell daily visitor permits. The BART program allows customers to purchase a parking pass for a designated date and station if space is available. The customer prints out a permit, parks in the designated parking spaces and displays the permit on their dashboard. The system could be designed and adjusted such that all day permit reservations are directed to the plazas with the most available parking.[13]

[12] http://www.herculestransitcenter.com/

[13] A customer may buy multiple daily permits, but their credit card will only be charged once per month based on total permits purchased. Clancy adds a small processing fee (est. 10%) on top of the daily permit cost based upon the percentage of the permit cost. This minimizes processing costs.

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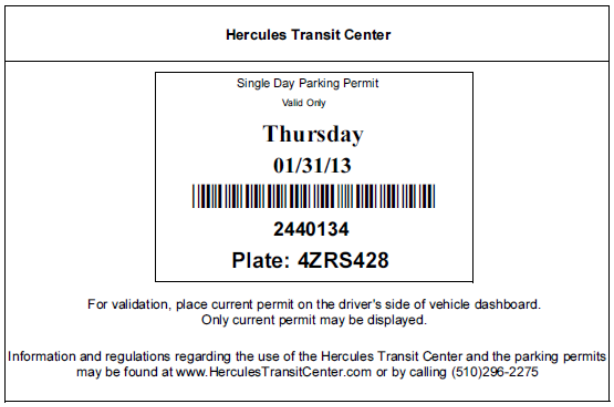
Figure 2-1: Walkshed

Figure 2-2 Sample All Day Parking Permit, Hercules Transit Center



2.1.3.5 Parking Enforcement Technology

The City of Los Altos currently relies on a single parking compliance officer (PCO) that conducts manual chalking from a Segway and follows up with regular enforcement rounds, issuing parking citations with a handheld device.[14] Other Santa Clara County cities such as Sunnyvale and Campbell still conduct enforcement using manual chalk and handwritten tickets.

Downtown merchants have indicated that many employees are able to anticipate enforcement rounds and move their vehicles. Technology applications would be able to help make enforcement less predictable and more targeted, leading to greater compliance. Employees would not be able to simply move their vehicles every two or three hours to avoid fines.

The technologies discussed below would be paired with the proposed graduated fine program and integrated hotlist to discourage repeat offenders. Ultimately, this could make the downtown shopping and dining experience more friendly and convenient parking more accessible. A comparison of technology costs (capital and operation) are summarized in Appendix 2B. Based on the analysis presented in Appendix 2B, Mobile License Plate Recognition technologies are presently the most cost-effective option for the City of Los Altos.

2.1.3.5.1 Sensors

There are two major types of in-ground parking sensors that are currently being used for parking enforcement, magnetometer-based sensors and radar-based sensors. The City of San Francisco has implemented magnetometer-based sensors to limited success and is currently piloting radar-based sensors. Standard magnetometer-based sensors have proven less effective for parking applications than for general traffic applications. Magnetometer-based sensors are most effective at measuring movement of large magnetic objects (i.e. traffic flow). They have been less effective in detecting the presence or absence of objects (i.e. parked vehicles) and can be hampered by interference and communications signals and overhead lines. A field test would be necessary to determine if Los Altos could anticipate the same issues that plagued the SFPark program with the Streetline sensor installation.[15, 16]

[14] Neighboring cities, Los Gatos, Mountain View, and Palo Alto also use handheld ticketing devices. Refer to Appendix 2A Parking Comparables.

[15] http://www.examiner.com/article/critical-vendor-replaced-before-sfpark-launch

Modified Magnetometer Sensors

Since their initial roll-out with the SF Park program, Streetline Technologies has retooled their sensors, adding a light sensor to enhance the vehicle detection capability. When a parking event is detected the information is sent to a gateway (one gateway per 150 spaces) via cellular communication. The gateway communicates to the data center via wireless communication. Streetline offers a service called assisted chalking. With the first pass, sensors identify vehicles and provide a baseline map. As time limits are exceeded, the map is highlighted with spaces in violation. Streetline claims a 150 percent increase in enforcement effectiveness. In addition to assisted chalking, 'Parker' is included as a free consumer application which shows consumers where available parking is located.

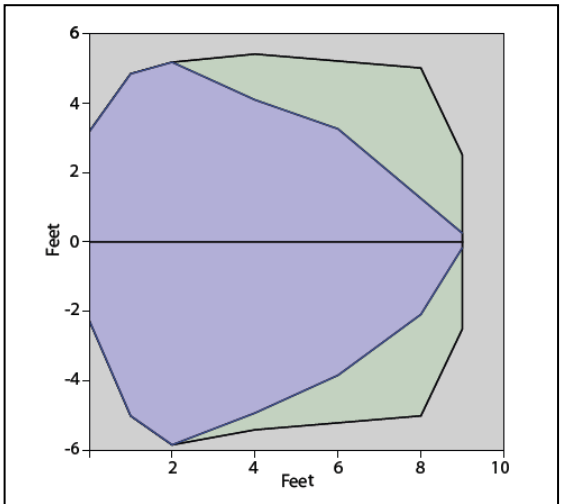
The Park Sight portal provides real-time situational awareness and historical analytics.

Streetline is currently operating pilots in Los Angeles, San Carlos, San Mateo and Redwood City.

MicroRadar Sensors

Radar-based sensors are a newer application for the parking field. MicroRadar sensors developed by Sensys Technologies are designed to send out targeted signals which bounce off large objects (i.e. vehicles). This technology is capable of easily distinguishing stationary objects from those in motion and large objects from small objects. At this time based on the issues that magnetometer-based sensors have experienced and the promise of radar-based sensors, the City could consider a pilot test of the radar sensor system. Sensys is currently partnering with several existing application developers for data storage and reporting and interface with handheld enforcement devices. Figure 2-3 illustrates the MicroRadar detection zone.

Figure 2-3 Sensys MicroRadar Sensor Detection Zone[17]



Note: Adjustable radar detection zone. Representative

[16] It should be noted that Streetline will be piloting their Parker System in San Mateo and Redwood City in the upcoming months, so there may be field new data to evaluate soon.

[17] Radar Image provided by Sensys Networks. www.sensysnetworks.com

2.1.3.5.2 Mobile License Plate Recognition (LPR) and Digital Chalking

Mobile license plate recognition (LPR) (e.g. Genetec AutoVu) uses two fixed cameras on a City enforcement vehicle[18] as shown in Figure 2-4 to record license plates and affixes a time stamp. In following passes, when a plate is registered, it is flagged for an overstay penalty alerting the PCO to stop and issue a ticket. This method allows the PCO to drive at the normal speed of traffic and stop only when alerted to a violation. Supplemental rear facing cameras allow photos to be taken of the vehicle's tire valve stem to confirm the vehicle (before and after) has not moved. This is also known as digital chalking. This system is also compatible with permit systems. The LPR goes by license plates of permitted vehicles. Registered vehicle must be parked in permitted zones, otherwise ticketing will apply. According to Genetec, it is possible to run an entire parking lot with the LPR system, flag violations, pull over in an open parking space or loading zone and then generate the citations. It is not necessary to stop at each violation, especially if there is limited space to maneuver.

Figure 2-4 Mobile License Plate Recognition on Enforcement Vehicle[19]

Source: Genetec AutoVu LPR, City of Aspen, CO

The Cities of Aspen, CO and Monterey, CA both use this technology but had different goals from the outset. The City of Monterey was hoping to reduce the incidents of repetitive stress injuries (RSI) of their PCO's from manual chalking. The City of Aspen was hoping to us LPR to increase the efficiency of their parking enforcement program. The City of Aspen reports that their LPR system has enabled a 900 percent increase in coverage with less staff and has reduced their scofflaw list to nearly zero.

The City of Napa, CA also adopted this technology with the hope to increase compliance. They do not charge for parking in their downtown, only enforcing time limits. According to their enforcement officer Aaron Medina, they were able to double their citations in the first six months of using the system since PCO's moved more quickly and had less predictable routes.

2.1.3.5.3 Mobile Vehicle Recognition and SmartTrack

Mobile Vehicle Recognition (VR) is similar to LPR and digital chalking in that it uses cameras to recognize vehicles and vehicle movement, but it does not rely upon matching license plates. Instead it performs image matching. The before and after images are also used as evidence to determine if a vehicle has moved. Tannery Creek Systems' VR platform is called AutoChalk. They also provide a

[18] LPR Cameras/System can be installed on any city vehicle.

[19] City of Aspen, CO.

supplemental software called SmartTrack that tracks reparking. Similar to LPR, the VR system drives at full speed lays down the digital chalk (i.e. records GPS location and photographs of parked vehicles) During the following runs previous cars are checked and new ones are added to the check list (i.e. chalked). Several cities have adopted this technology including: Santa Rosa, CA, Santa Barbara, CA, Madison, WI, and Calgary, Canada.

The City of Fredericksburg, VA similar to Los Altos, has one PCO, who chalked the downtown three times per day. The downtown had two hour time limits and did not charge for parking. Fredericksburg adopted this technology with the hope to increase compliance and avoid the need to hire three additional parking enforcement staff. With the adoption of this program one PCO is able to complete the entire City's enforcement in 30 minutes per run and chalking and issuing citations takes a total of three to four hours per day.

Vehicle recognition was adopted in addition to program of graduated fines. They found that about 92 percent of people never reoffended once receiving a warning ticket, six percent received typically two or three citations. The last two percent received numerous tickets. Other system benefits included:

- Increase in enforcement revenue by 40 percent
- A 20 percent increase in downtown parking availability due to enforcement based turnover
- Permits integrated via LPR

2.1.3.6 Clancy Systems International Services

The City of Los Altos currently contracts with Clancy Systems International for unlimited use of its citation processing system as well as wireless support a handheld enforcement-ticketing device.[20] Clancy makes all custom reports requested by any municipality (now numbering over 300) available to current customers. In addition to the front end enforcement service, Clancy provides back end support, including ticket issuance, notice letters and interface with the California Department of Motor Vehicles.

However, based on discussions with Los Altos police staff, the City has been experiencing difficulties in their contracting relationship and service provided by Clancy Systems. They are able to generate citations, and the costs of tickets are generated automatically, but they report contrary to what Clancy has stated that they do not actually have full access to all of Clancy's Systems. The handheld is unreliable and has poor camera quality, despite being replaced in 2011, connectivity to the cloud is not provided and a custom report for DMV holds that Clancy developed for the City that has not worked properly.

Since the Los Altos enforcement team is not confident in the services of the current vendor, it would make sense to consider other back office vendors for enforcement ticketing and processing systems. The final vendor selection may rely heavily upon the final technology that the City ultimately selects for enforcement. For example, both Autochalk VR and the Genetec LPR are fully integrated with T2 Systems.

[20] This service does not include payment processing. Manual payment processing would cost $2/ticket for data entry. On-line payments would be processed for no additional fee. Access would be provided to a payment website and transactions would be cleared through the third party vendor "1st Data".

For any potential vendor, it would be important to specify the need to generate a hotlist/scofflaw list to support the graduated fine program and if the City was interested in developing a more detailed violation by payment by location report additional data such as block face IDs and Plaza numbers would need to be recorded during the development of citations.

The City would need to provide the specification for this report including the data the PCO is expected to record in the field.

2.1.3.7 Seasonal Valet Parking

Based on past experience with parking demand during the holiday season, downtown merchants requested that the City explore implementing a holiday valet parking program similar to the one that is run by the Town of Los Gatos in order to alleviate customer concerns about finding parking.[21] In response to this request, the City initiated a trial holiday valet parking program.

Holiday valet parking service was provided between December 14 and 24 in Central Parking Plaza 5 (excluding Sundays). The hours of operation were from 10 AM until late afternoon. The exact end time varied from day to day based on customer demand. For the first two days of the program, the entire 55-space plaza was reserved for valet use. In response to limited initial demand, only the northern-most drive aisle was reserved (a total of 35 spaces) on subsequent days. The reserved parking area was barricaded off every morning at 7:30 AM to ensure availability for the valet operators. In the late afternoon, after the valet was through with its operations, the parking was made available for general use.

During the first few days of the program (December 14 through 18), demand for the valet program was limited. Demand for the valet service significantly picked up on December 20th and 21st, the Thursday and Friday prior to Christmas, when 60 to 65 cars per day used the valet service. Demand was very light on Christmas Eve day. The peak demand period was from 11AM to 2PM. At the absolute peak, between 12:30PM and 1PM on December 20th and 21st, there were periods when the lot was filled above regular capacity. Demand declined significantly after 3PM, even on the busiest days.

The program was advertised widely via City press release, fliers and LAVA newspapers and radio advertisements. Signs and banners were placed throughout the downtown to direct customers to the valet lot. All signs noted the program was free. The final cost of the valet program, including fees to the valet operator and printing expenses for flyers and banners was $4,900.

The Town of Los Gatos has operated a holiday valet program for over ten years which has been well received by residents and visitors. The service is free and open to everyone, both employees and visitors. One parking lot is used for valet and typically doubles that lot's capacity. On average, the City will valet park 1,500 cars during one season. Valet service provision is annually put to bid and the contract is often established to not exceed $18,000. The 2011 shopping season cost approximately $16,000. The Town of Los Gatos, stated that demand was slow to build for the first few years of their program. If the City of Los Altos repeats the valet experiment next year, they will consider increasing advertising and running the program for a shorter timeframe, maybe just the week immediately prior to Christmas, and reducing the hours of the program from 10AM to 4PM.

[21] Refer to Appendix 2A Parking Comparables.

2.1.3.8 Strategies Considered but Rejected

2.1.3.8.1 Time Limit Reduction

As part of the parking utilization analysis it was determined that the average stay of on-street parkers in the district was approximately 1.75 hours. Throughout the ten hour observation period over 1600 individual vehicles or parking events were observed. These parking events were accommodated by 245 on-street parking spaces. Approximately 88 percent of these parkers were determined to be customers based upon their parking behavior. Customers were identified as parking three contiguous hours or less, and employees were identified as parking five hours or more, with less than a three hour gap between events.

The data indicates the current system is well balanced and stakeholder outreach further indicated that the two-hour time limit was sufficient to meet customer needs. Of the almost 1,650 parking events, 86 percent (1,417) were observed at two hours in duration, the remaining 14 percent (264) of events were observed at three hours or more.

The "abusers" of the system are those that frequently re-park their vehicles and will not be influenced with a shorter time limit, merely slightly inconvenienced. Other recommended management tools detailed in Sections 2.1.3.1 through 2.1.3.4 may be more effective in modifying the behavior of these parkers without also inconveniencing most customers. These include:

- Expansion of the employee permit program to allow more long-term parking
- On-line day pass – to make all day parking more convenient for customers that need it.
- Graduated fines – escalate fines to motivate a change in parking location/behavior.

2.1.3.8.2 Pricing

As discussed in section 2.1.2, the current system is well balanced and the majority of patrons are obeying enforced time limits.

Paid parking may shift remaining employees out of on-street parking to the permit program (or all day permit), but it may also create a secondary spillover problem into residential streets, by those that absolutely refuse to pay. The same will happen with visitors who prefer not to pay. The City may then need to consider measures to protect residential parking.

It is clear that a paid parking program would not supported by the downtown community, based on results from the recent community surveys. Furthermore, paid parking would require significant capital outlay that would require at least $1/hour rate to bring in steady operating revenue.[22]

Many of Los Altos' neighboring downtown communities do not charge for parking at this time. These include Palo Alto, Menlo Park, Mountain View, and Sunnyvale, and Los Gatos. These communities continue to rely on time limits, employee permits, and all-day permits to meet their community's needs.

[22] This estimate requires further detailed analysis based on equipment selection and specification for the parking district. At this time multi space parking meters cost from $10,000 to $12,000 and one meter would be required every 7 to 10 spaces. Depending upon how the equipment is acquired/ financed, there may be more affordable/favorable options for the city (e.g. leasing vs. owning, or payments vs. lump sum) to make on-street metering more viable.

2.1.3.8.3 Permit Purchase Requirement with Business License

This management strategy would require all businesses within the downtown parking district to purchase parking permits for all of their employees when they obtain or renew their business license. The City Attorney determined that the purchase of parking permits could not be made a condition of a business license unless it is approved by the voters as a special tax.

The City of Sunnyvale provides employee parking passes as benefit of their Downtown Parking Assessment District which is an alternate approach that may be considered (See Appendix 2A).[23]

2.1.4 Other Parking Recommendations

As part of developing a comprehensive parking management strategy for downtown Los Altos the following section covers various other parking recommendations outside from what has been discussed previously.

2.1.4.1 Bicycle Parking

The City of Los Altos currently provides bicycle parking facilities throughout the downtown area. Bicycle parking observations have shown that majority of parking take place along Main and State Street. Distributing bicycle racks where demand is at its highest would increase the use of bicycle racks throughout the Downtown. Figure 2-6 on the following page illustrates the locations of proposed U-shaped bicycle racks within the study area that would best serve the existing demand. Increasing the capacity of on-street bicycle parking along Main and State Street will assist in serving bicycle users arriving in the downtown area; which would reduce the amount of informal bicycle parking taking place.

A bicycle corral, which replaces a single 22-foot parking space, can provide enough space for seven U-shaped racks; approximately 14 bicycle parking spaces. Figure 2-5 shows an example of U-shaped bicycle racks occupying a parking space in the City of Palo Alto.

Figure 2-5 On-Street Bicycle Parking

In addition, two potential locations for bicycle corrals have been identified in the central core of the downtown. The first location is along State Street, which could replace an existing parking space between First and Second Street, and the second could be incorporated into parking Plaza 4. These corrals would primarily serve the observed

[23] Employee permits are distributed to employers based on the number of employees listed on their business license. Employers eligible for this program are located within the downtown parking assessment districts.

high demand for bicycle parking in this area. While one corral would be sufficient to address the existing demand of the area, a second corral could address potential future increase in demand. Locating a corral in a parking space along State Street, where the bicycle enthusiasts tend to congregate, would be the preferred location as it would provide the most convenient parking for visitors and free up sidewalk space. Providing convenient bicycle parking for these users, while they may not lock their bicycles, would allow them to utilize the parking facilities more effectively.

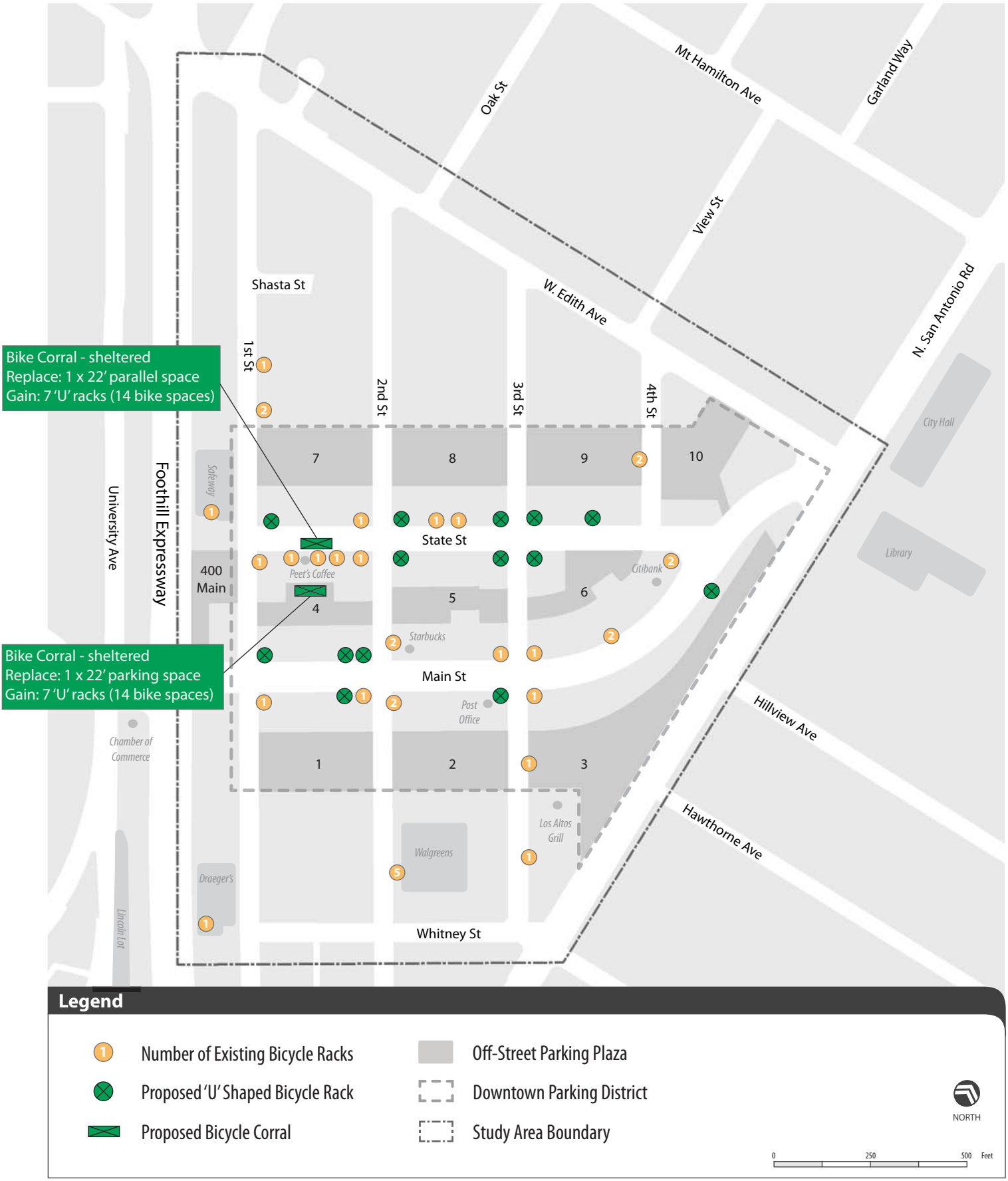


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Figure 2-6: Bicycle Parking Possibilities

An alternative option from the U-shaped bicycle racks is the use of the Bike Arc products. Several stakeholders have expressed concern of U-shaped racks having the potential to damage the frame of their bicycles. Bike Arc offers modular bike parking in a unique design for parking and organizing bicycles, shown in Figure 2-7. The Rac Arc provides parking for a single bicycle and in a 22-foot parking space the Rac Arc can provide parking for up to twelve bicycles (three rows of four Arcs). Other Rac Arc products include the Half Arc, which provides weather coverage for Rac Arcs, and Umbrella Arcs, which provides covering for eight Rac Arcs in a circular design.

Figure 2-7 Bike Arc's Rac Arc[26]

[26] www.bikearc.com/homepage.html

2.1.4.2 Electric Vehicle Parking

The City of Los Altos was granted three double electric vehicle charging stations from ChargePoint America encompassing a total of six charging stations.[27] The program is sponsored by Coulomb Technologies and funded by the American Recovery and Reinvestment Act (ARRA). The charging stations are part of on the ChargePoint network which allows drivers to find and reserve unoccupied stations. One dual-headed charging station was installed at the Civic Center lot and two were installed in Plaza 3. Plaza 3 was selected because it had the lowest occupancy levels based on September parking observations; it has a large inventory of spaces, and also is close to San Antonio so is easiest to navigate to for visitors arriving from out of town. In order to encourage turnover, the City is enforcing the current time limit in Plaza 3. No time limits are being applied to the chargers in the Civic Center area. The City is charging $1.00/hour fee for parking at the charging stations to recover electricity and annual service fees. The fee is collected by ChargePoint and remitted back to the City.

Figure 2-8 ChargePoint America Charging Station

2.1.4.3 Construction Parking Management

The City currently experiences problems with overflow construction vehicle parking in the downtown parking plazas. Simply enforcing existing code with respect to development projects with a few additional enforcement tools should help to minimize this issue.

Construction vehicles are subject to the same time limits as all vehicles that park in the downtown and are not eligible for the employee permit program. The City of Los Altos currently requires all construction projects to submit a parking plan with their permit application. The parking plan requires an off-site parking area such as private property or Lincoln Park removed from the downtown. Each project should require an overall parking mitigation plan, which includes provision of an employee parking shuttle and carpool plan. The curb space in front of the construction site may also be used for employee carpool parking and drop off space if there is no other appropriate space on the construction site to facilitate these activities. The project curb space may also be appropriate for regular construction vehicle parking if appropriately included in the plan.

In order to improve compliance with construction parking rules, the City should consider requiring all vehicles related to a construction project be registered to that project. With the current Clancy enforcement technology, a construction vehicle list can be developed and a hangtag can be issued with the project's permits. When the parking control officer (PCO) is running an overtime violation during normal rounds, the plate will be compared against a construction vehicle list and if a match is made an extra fine will be assessed.[28] The current construction parking fee may be used to defray the administrative costs of issuing hangtags. All active construction project parking management plans should be assigned to and administered by one staff person in the City to ensure compliance.

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[27] http://www.chargepoint.com/home.php

[28] Advanced technology such as mobile LPR or mobile vehicle recognition would be needed to run an automatic query to flag violators otherwise obeying parking rules during normal rounds.

2.1.4.4 Parking Enforcement Time Inconsistencies

In several places throughout the Downtown, enforcement hours on-street are 9AM to 6PM and off-street are 9AM to 6PM. However, several on-street signs show enforcement hours of 8AM to 6PM. The signs also indicated parking is enforced Monday through Saturday, but it is not actively enforced every day of the week. The time of day and day of week enforcement inconsistencies can be points of confusion for visitors and residents.

The City of Los Altos conducted a complete inventory of parking regulation signage in the Downtown Parking District and replaced all the signs that were inconsistent with the current enforcement times:

- A two-hour time limit is enforced for all on-street parking between 9AM to 6PM.
- A three-hour time limit is enforced for all parking plazas between 8AM to 6PM.

Chapter 3

Demand Analysis

This chapter documents and summarizes the demand-based parking model created by CDM Smith for the downtown parking district located within the City of Los Altos, the primary commercial district of the City. The following are discussed in the remainder of the report as independent sections:

- The current land uses and the calculated demand-based parking rates based on existing on-street space and off-street plaza lot occupancies;
- The anticipated future short-term, mid-term, and long-term future scenarios for land uses located in the downtown parking district of Los Altos;
- A summary of the customized shared parking model, based on the Urban Land Institute's Shared Parking Manual, and how the model was calibrated to reflect demand-based conditions in the Los Altos downtown parking district;
- The projected peak parking demand in each future scenario; and
- The impacts of and strategies to address a potential increase in future parking demand within the downtown parking district.

Supplemental discussion of the effect of the proposed expanded Safeway's shared parking supply to the parking district is also discussed within the future demand analysis section.

3.1 Existing Land Uses and Parking Occupancies

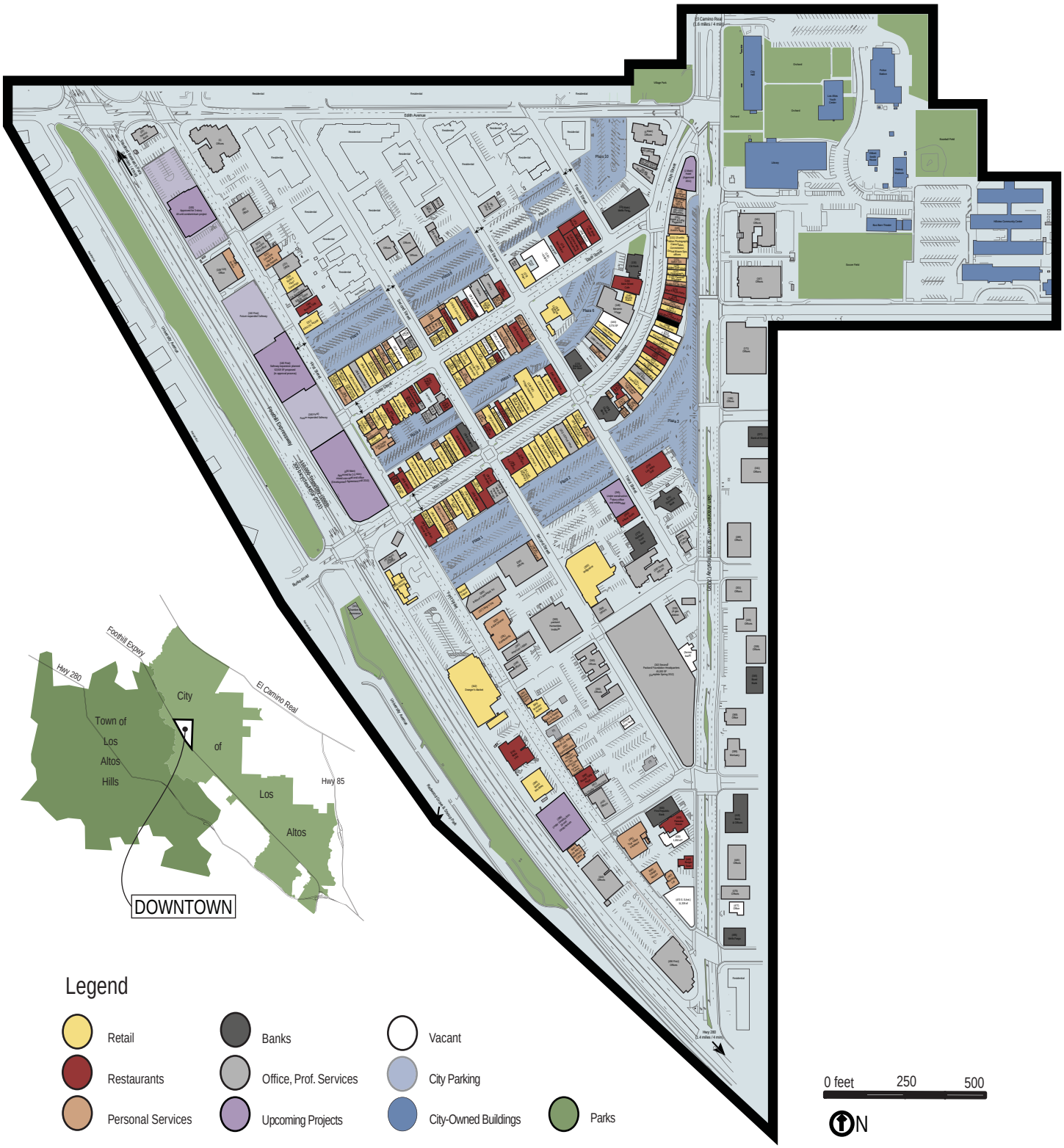
This section summarizes the current land uses within the downtown parking district as well as parking occupancies based on data collection from September and December 2012.

3.1.1 Land Uses

Figure 3-1 shows the existing land uses as well as the overall square footage estimates corresponding to each respective land use type within the Los Altos downtown parking district. This information was provided by the City of Los Altos based on prior land use analysis in the downtown and was updated to reflect the current mix of tenants.

Table 3-1 Existing Downtown Los Altos Land Use Information

Land Use	Existing Square Footage (sq. ft.)
Boutique Retail	158,000
High Demand Retail	-
Personal Services/Salons	35,000
Banks	27,000
Office	140,000
Take-out Restaurants and Cafes	25,000
Fine/Casual Dining	45,000
Bar/Pub	5,000
Total	**435,000**



Source: City of Los Altos

Figure 3-1: Existing Downtown Los Altos Parking District Land Uses

As Table 3-1 above shows, the City of Los Altos currently has approximately 435,000 square feet of retail and office space within the bounds of the downtown parking district. The City has estimated that approximately 27,000 square feet of available retail and office space was available or vacant during the study time period, or around a 5.8 percent vacancy rate.

3.1.2 Parking Inventory and Occupancy

As part of the existing conditions analysis, parking district inventory and hourly occupancy counts were collected during the months of September (Wednesday, September 12th and Saturday, September 15th, 2012) and December (Wednesday, December 12th, 2012). Table 3-2 provides the existing Downtown Parking District inventory as well as occupancy during the parking peak hour, in addition to parking spaces at the 400 Main development directly adjacent to the downtown parking district. This parking lot was included in existing conditions for the demand model because it serves as an additional parking facility for patrons and employees going to the downtown parking district, due to its proximity.

For the purpose of calculating future demand in downtown Los Altos, the current parking facility available at 400 Main, which includes 96 parking spaces, was added to the Downtown Parking District parking supply, which is comprised of 1,449 total parking spaces, based on Chapter 1.4.1.1. This total was considered to encompass the baseline parking supply for the demand-based parking model. Blended parking occupancy rates were calculated based on this combination of parking facilities. Overall, the existing Downtown Parking District, along with the 400 Main parking lot, provide a total of 1,545 available parking spaces. This includes all types of spaces, including permit, short-term, and handicap spaces.

Table 3-2 On-Street and Off-Street Parking Inventory and Occupancy

Land Use	Time Period	Day of Week	Inventory	Peak Hour Occupancy
On-Street	September 2012	Wednesday	245	223 (91%)
		Saturday		226 (92%)
	December 2012	Wednesday		211 (86%)
Off-Street	September 2012	Wednesday	1,204	964 (80%)
		Saturday		779 (65%)
	December 2012	Wednesday		1,051 (87%)
400 Main	September 2012	Wednesday	96	77 (80%)
		Saturday		43 (45%)
	December 2012	Wednesday		46 (48%)
Total	**September 2012**	**Wednesday**	**1,545**	**1,264 (82%)**
		Saturday		**1,048 (68%)**
	December 2012	**Wednesday**		**1,308 (85%)**

The total combined on-street and off-street occupancies at the peak hour ranged from 82 percent occupied in September to 85 percent in December, with a peak hour of 12PM for September and 1PM in December. September weekend occupancy peaked at 68 percent.

3.2 Future Scenarios

This section discusses the assumptions and expected changes in land uses in the Downtown Parking District of Los Altos. These changes were evaluated on a short-term, medium-term, and long-term basis, resulting in changes in land use intensities and types as a result of changing assumptions regarding future developments within downtown Los Altos.

3.2.1 Short-Term Future Scenario

The short-term scenario forecasts parking demand in the immediate future, approximately two years from now.

3.2.1.1 Anticipated Land Uses

The City anticipates that no changes in land use type or intensity will occur under this scenario. Land use types and square footages within the downtown parking district under this scenario are shown in Table 3-3.

Table 3-3 Short-Term Future Scenario – Anticipated Downtown Los Altos Land Use

Land Use	Estimated Square Footage (sq. ft.)
Boutique Retail	158,000
High Demand Retail	-
Personal Services/Salons	35,000
Banks	27,000
Office	140,000
Take-out Restaurants and Cafes	25,000
Fine/Casual Dining	45,000
Bar/Pub	5,000
Total	**435,000**

In addition to the existing land uses that are expected to be maintained under the short-term scenario, the existing 400 Main location that is currently used as supplementary public parking for the downtown will be replaced by a proposed development. A remodeled and expanded Safeway grocery store at 160 First Street, located north of the 400 Main development and immediately northwest of the downtown parking district, will also be constructed in the short-term future.

3.2.1.2 Anticipated Parking Facility Changes

Several parking changes are expected to occur for the short-term future scenario. As a result of the 400 Main development, the existing parking lot would be eliminated for public use; however, the City expects the development to be self-parked. As previously mentioned, while it is not physically located within the downtown parking district boundaries, the lot currently provides additional temporary public parking for people working or visiting downtown Los Altos.

Within the downtown parking district, minor changes are expected in the short-term future scenario. The City expects that 12 on-street parking spaces along First Street and nine (9) spaces located in the Plaza 3 lot would be eliminated as part of the City's streetscape improvement work along First Street and San Antonio Road. Eight (8) of the 12 spaces along First Street and all 9 spaces in Plaza 3 are

located within the Downtown Parking District. The removal of these 17 total spaces along with the elimination of the 96 spaces at 400 Main would result in a total of 1,432 remaining parking spaces in the Downtown Parking District.

3.2.1.3 Future Safeway Shared Parking Adjustment

The City of Los Altos entered into a shared parking agreement with Safeway in March 2012. A copy of this agreement is included in this report as Appendix 3A. In addition to the previously mentioned parking changes to the downtown parking district, the adjacent Safeway grocery store, as part of its redevelopment, will double in size from 22,584 square feet to 45,265 square feet. The parking supply serving it would increase from 94 existing spaces, none of which are officially available to the general public, to 154 spaces, 129 of which would be shared Safeway and public parking, in accordance with an agreement with the City.[29] As part of the agreement, Safeway would maintain these 129 spaces for Safeway use as well as make available these spaces available to the public for up to 90 minutes.

As a result of the agreement, there is a potential increase of parking spaces in the downtown parking supply. Based on a recent parking study memorandum conducted for the City projecting Safeway parking demand[30], an 85th percentile parking demand estimate of 138 spaces was calculated for the store. The report also projects that during three (3) percent of store hours, particularly on weekday (specifically Monday and Tuesday) early evenings and holidays, parking demand would exceed the available 154-space Safeway parking supply (129 spaces of which are shared). This suggests that during the peak demand times at Safeway, limited, if any, amounts of the shared parking supply will be available for public use.

The overall weekday midday parking district occupancy was 82 percent while the overall weekday early evening district occupancy was 67 percent. The Safeway report projected that weekday early evening parking demand would be at peak on Mondays and Tuesdays. Weekday parking counts for downtown Los Altos were collected on a Wednesday and therefore do not correlate directly with the Safeway report. However, based on the Safeway parking analysis and existing occupancy observations for the downtown parking district, it is possible to conclude that peak parking demand for the Safeway development and the downtown parking district would occur at different times, which supports the shared parking concept. Existing parking occupancies at the dedicated Safeway parking lot were 86 percent occupied (or 81 spaces) during the 12PM weekday midday and 76 percent occupied (or 71 spaces) during the 6PM weekday evening, based on counts collected in September 2012. This shows that while weekday peak parking at Safeway occurs in the evening, there is a secondary parking demand peak observed during the weekday midday time period.

Although the remodeled Safeway is anticipated to double in size based on store square footage, parking demand would not expected to increase in a linear fashion. This is because the Safeway would be maintaining their existing customer base and offering similar food products in a more spacious storefront. Therefore, in order to estimate the effect of the secondary Safeway parking demand peak on the available supply for downtown parking district public use, the following calculation steps were applied:

[29] Downtown Shared Parking Agreement between Safeway, a Delaware Corporation, and City of Los Altos, a California Municipal Corporation, March 21, 2012.
[30] Los Altos Safeway – Parking Demand Estimates, Fehr & Peers, August 2nd, 2011.

1. The current occupancy rate of the dedicated existing Safeway parking lot was multiplied by the proposed 154-space future Safeway lot to estimate overall parking demand at that time of day.
2. The total number of spaces representing the net increase in demand was reduced by a factor of 25 percent to account for the non-linear relationship between increased store size and increased demand.
3. It was assumed that the 25 dedicated Safeway spaces at the future store would be occupied first by Safeway employees.
4. Calculate the difference between the 129 shared spaces and the overall, minus 25 spaces, calculated parking demand. This is the expected available shared Safeway supply for public use, dependent on time of day.
5. Add the expected available shared Safeway supply to the downtown parking district supply to result in an ultimate time-dependent available parking supply for downtown patrons and employees.

It was assumed, based on the Safeway memorandum, that weekday early evening parking demand would utilize all available Safeway parking supply. Since there are currently several hundred parking spaces in the downtown parking district available during that time period, any parking spillover from Safeway would be adequately managed by the available evening parking supply. As such, only the weekday midday, weekend midday, and weekend evening Safeway supply availability was calculated.

Based on the above calculation steps, the resulting total available supply from the Safeway shared parking supply, dependent on time, ranges from 34 spaces during the weekday midday to 105 spaces on weekend evenings.

Safeway provided an additional memorandum to the City of Los Altos from December 8th, 2011[31], responding to comments on the store expansion transportation study. This document stated that approximately 44 spaces would be available between 11AM and 3PM on a typical weekday midday time period. However, the Safeway memo did not contain the background information on how the 44 space calculation was determined. As such, in order to remain conservative in the short-term future, the 34 spaces calculated to be available during the weekday midday was used as the available public parking supply at Safeway.

3.2.1.4 Short Term Future Parking Supply

Table 3-4 shows the expected short-term future parking inventory during the weekday and weekend midday peak hour, including the time-adjusted available parking spaces from the shared Safeway lot, as well as the eliminated spaces at the 400 Main development and from streetscape improvements. The estimated 1,466 parking spaces during the weekday midday and 1,432 weekend midday spaces represents a decrease of 79 spaces and 113 spaces, respectively, from existing conditions.

[31] Responses to Transportation Comments on the Los Altos Safeway Expansion Initial Study/Mitigated Negative Declaration, Fehr & Peers, December 8th, 2011.

Table 3-4 Short-Term Future Scenario – Parking Inventory

Parking Location	Inventory (spaces)			
	Weekday Midday	Weekday Evening	Weekend Midday	Weekend Evening
Existing				
On-Street	245	245	245	245
Off-Street	1,204	1,204	1,204	1,204
400 Main	96	96	96	96
Subtotal	*1,545*	*1,545*	*1,545*	*1,545*
Added				
Safeway[1]	34	0	59	105
Removed				
400 Main	-96	-96	-96	-96
On-Street[2]	-8	-8	-8	-8
Off-Street[3]	-9	-9	-9	-9
Total	**1,466**	**1,432**	**1,491**	**1,537**

[1] The Safeway parking lot includes 25 additional spaces solely for store use. Of the 129 shared Safeway/public spaces, only the spaces shown are estimated to be available during the inventoried time periods.
[2] Spaces along First Street within the Downtown Parking District to be removed due to streetscape improvements.
[3] Spaces within Plaza 3 within the Downtown Parking District to be removed due to streetscape improvements.

3.2.2 Mid-Term Future Scenario

The mid-term scenario forecasts parking demand that is expected to occur over the next 5 to 10 years.

3.2.2.1 Anticipated Land Uses

Since any new developments or redevelopments of existing buildings are required to be self-parked under the zoning code, the City only provided estimates projecting potential changes in the mix of businesses occupying the existing space that could occur under this scenario. Compared to the short-term future scenario, the City does anticipate possible conversion of some existing retail to a higher demand retail store, such as national chains, as well as an increase in the number of restaurants. These uses would replace a portion of the existing boutiques and personal services. Overall, the City of Los Altos expects that total land use would remain at 435,000 square feet. All land use types, including any new land uses, and square footages within the Downtown Parking District under this scenario are shown in Table 3-5. The differences between this scenario and existing conditions are also shown.

Table 3-5 Mid-Term Future Scenario – Anticipated Downtown Los Altos Land Use

Land Use	Existing Square Footage (sq. ft.)	Mid-Term Estimated Square Footage (sq. ft.)	Net Change
Boutique Retail	158,000	145,000	(13,000)
High Demand Retail	-	8,000	8,000
Personal Services	35,000	30,000	(5,000)
Banks	27,000	27,000	0
Office	140,000	140,000	0
Take-out Restaurants and Cafes	25,000	28,000	3,000
Fine/Casual Dining	45,000	52,000	7,000
Bar/Pub	5,000	5,000	0
Total	**435,000**	**435,000**	**0**

3.2.2.2 Anticipated Parking Facility Changes

No major changes in terms of the parking supply are expected to occur between the short-term and mid-term scenarios. It was assumed that any new developments that would occur within or adjacent to the Downtown Parking District would be accommodated by self-provided parking.

3.2.3 Long-Term Future Scenario

The long-term scenario would occur over the next 20 or so years.

3.2.3.1 Anticipated Land Uses

As with the mid-term scenario, the City only provided estimates projecting potential changes in mix of businesses occupying the existing space that could occur under this scenario. Any new developments or redevelopments of existing buildings would be required to be self-parked under the zoning code, Compared to the mid-term future scenario, the City anticipates further conversion of existing retail to high demand retail, such as national chain retailers, and further increases in restaurants in the long-term scenario. In addition, the City foresees some decrease in bank locations, office space, and personal service land uses. As with the mid-term scenario, the City of Los Altos expects that total land use would remain at 435,000 square feet. Land use types and square footages within the Downtown Parking District under this scenario are shown in Table 3-6, including any new land uses and the differences between this scenario and existing conditions are also shown.

Table 3-6 Long-Term Future Scenario – Anticipated Downtown Los Altos Land Use

Land Use	Existing Square Footage (sq. ft.)	Long-Term Estimated Square Footage (sq. ft.)	Net Change
Boutique Retail	158,000	138,000	(20,000)
High Demand Retail	-	15,000	15,000
Personal Services	35,000	25,000	(10,000)
Banks	27,000	22,000	(5,000)
Office	140,000	135,000	(5,000)
Take-out Restaurants and Cafes	25,000	30,000	5,000
Fine/Casual Dining	45,000	60,000	15,000
Bar/Pub	5,000	10,000	5,000
Total	**435,000**	**435,000**	**0**

3.2.3.2 Anticipated Parking Facility Changes

No major changes in parking supply are expected to occur between the mid-term and long-term scenarios. It was assumed that any new developments that would occur within or adjacent to the downtown parking district would be accommodated by self-provided parking.

3.3 Parking Model Development

This section reviews the methodology and assumptions associated with created of the demand-based parking model for forecasting parking demand for future scenarios.

3.3.1 Shared Parking Model

A shared parking model was developed for the Los Altos Parking District based upon the Urban Land Institute (ULI) spreadsheet model which includes case studies, data collection, and other observations regarding multi-land use developments and shared parking alternatives to segregated parking requirements[32]. Shared parking is used in order to improve efficiencies for parking facilities, particularly due to time of day differences for differing land uses' parking demand. The spreadsheet model uses principles identified in the Shared Parking manual to find the time of day where the cumulative parking demand would be at its peak in order to define the maximum parking demand and thus the proposed parking supply, rather than totaling each land use's parking demand individually, which results in an oversupply of parking and additional costs if parking is built but not needed.

3.3.2 Demand-Based Model Development

The ULI shared parking model was used as the starting point for the parking demand estimation analysis. However, as the City of Los Altos is forecasting potential future scenarios within the downtown parking district and not creating a new development, existing data including current downtown land uses and parking occupancies instead can be used to develop a parking demand-based model. A demand-based model bases estimated parking demand from existing conditions data, which can be used in lieu of ULI default values, which are mainly derived from suburban mixed-use developments and may not suit all types of shared parking developments such as an existing downtown like Los Altos. In addition, existing data from the site itself is accurate and unique to that site alone, resulting in demand forecasts that take local conditions into account. As a result, a customized demand-based parking spreadsheet model was tailored particularly for the City of Los Altos and its unique split of land uses.

As the model is demand-based, the actual parking supply is not a key input in the model, since demand is assumed to occur independently from supply. Instead, the demand is used to predict the need for increased supply in the future. The Shared Parking manual reports that the "effective parking supply" of a facility is usually in the range of 85 to 95 percent of the total parking supply, since it becomes increasingly more difficult to find parking spaces quickly beyond the effective parking supply. Therefore, the resultant supply needed to meet the effective demand was increased by a factor of 15 percent to account for the effective parking supply needed to meet the demand.

3.3.2.1 Existing Data Input

The City of Los Altos provided existing land use square footage estimates to CDM Smith as inputs into the customized shared parking model, in order to derive the baseline expected parking demand from 12PM to 2PM for the peak midday time period.

[32] Shared Parking, 2nd Edition, Urban Land Institute, 2005.

The estimated square footage associated with each land use was incorporated and modified into the custom CDM Smith demand model using assumptions regarding land use intensity, customer/ employee turnover, and other factors.

It is important to note that land uses outside of the defined downtown parking district, particularly the newly remodeled Safeway and the 400 Main development, were excluded as inputs into the model. No parking demand associated from these land uses were included because they would typically have sufficient parking self-contained at its own parking facilities based on City code, and would not be anticipated to substantially affect parking demand at plaza lots and on-street parking primarily serving the downtown parking district, given the relative distance that the land uses are from the downtown parking district parking facilities. Peak operating scenarios when overflow parking at Safeway would potentially occur was not included in the demand model since the scenarios are expected to occur outside of the peak midday time period modeled in this analysis. The parking supply availability assumptions for the Safeway Shared Parking Agreement during different times of the day are addressed in Section 3.2.1.3.

After applying these land uses into the spreadsheet model, the shared parking maximum using default recommended parking ratios (i.e., parking spaces required per unit land use) was then calculated.

3.3.2.2 Temporal Adjustments and Calibration

The baseline demand determined by the default parking ratio values did not match what was counted under existing conditions within the downtown parking district. This is due to the type of recommended rates for the particular assigned land uses, which do not take into account the unique local conditions associated with downtown Los Altos. The downtown parking district of the City is an older, denser, and more stable type of district than a suburban shopping center or newer development. Since CDM Smith had already collected parking occupancy counts for the months of September and December 2012, adjustments were made to the spreadsheet model to better fit the projected parking occupancy with actual counts. These adjustments included:

1. Applying and converting the City's existing and anticipated future land use scenarios to model land uses. These land uses were adjusted to correspond and match closely with Los Altos' particular land use mix.

2. Modifying and customizing base land use parking rates, in order to match all modeled land uses with the existing data, to create customized parking demand profiles corresponding to Los Altos-specific land uses. These modifications were made so that the model's peak hour shared parking demand would be similar to what was collected for existing conditions. Rates were modified using the month of September in the model, with further calibration for counts collected in December.

3. Using the reparking analysis completed in September 2012, the employee/customer split was identified and applied to the model. Employee and customer parking rates were evaluated for their cumulative effect on shared parking during the peak hour.

4. Calibrating time-of-day factors to adjust for the unique nature of the downtown parking district in Los Altos. Adjustments were made based on the types of businesses open during different times of day. Most of the adjustments to the model were made with this step, in order to fine tune the model to match the hour-by-hour parking data received in existing conditions. Assumptions such as low mid-afternoon restaurant occupancy and

low office visitor demand were largely maintained, while the unique nature of the downtown was accounted for using professional judgment, such as the fact that downtown parking occupancy in the evening in both September and December was calculated to be lower than midday for Los Altos.

5. Following receiving counts for the month of December, monthly adjustments for individual land use demand, such as retail and restaurants, were modified to have the model more closely match existing counts, accommodating for differences due to holiday shopping.

Land use rates and parking demand profiles were compared with the nearby City of Burlingame, which is anticipated to have a similar future land use profile to downtown Los Altos (with respect to high demand retail and restaurants), to determine the similarities and differences between their expected parking profiles and rates versus the calibrated Los Altos model. CDM Smith determined that several land uses from the Burlingame parking study had parking demand characteristics similar to the Los Altos demand model (future scenarios). These parking profiles were confirmed to be accurately reflected within the Los Altos demand model.

Following final calibration of the existing conditions model, the same model and underlying assumptions were applied to all three future scenarios to determine expected parking demand. These results are reported in Section 3.5.

3.5 Parking Model Results

This section reports the results from the demand-based parking model that was developed for the City of Los Altos' Downtown Parking District based on existing land uses and parking occupancy counts. This analysis specifically focuses on peak hour midday parking demand generated by land uses within the District. Table 3-7 exhibits the model's results for the peak midday parking demand for all scenarios. In addition, a calculation of the estimated amount of additional parking supply necessary to reduce projected September weekday parking occupancies to 85 percent was performed, in order to account for the effective parking supply that the Shared Parking manual describes as the perceived parking supply capacity. Additional supply calculations take into account the future expected parking supply, which eliminates the public spaces that will no longer be available when the 400 Main lot is redeveloped as well as the spaces that will be removed when the streetscape projects are completed, but adds in the shared Safeway parking facility.

Table 3-7 Future Scenario Peak Hour Parking Demand Results

	Scenario			
	Existing	Short-Term	Mid-Term	Long-Term
Parking Supply				
Weekday – Midday Peak	1,545	1,466	1,466	1,466
Weekend – Midday Peak	1,545	1,491	1,491	1,491
Peak Parking Demand Scenarios				
September (typical) – Weekday	1,264 (82%)	1,264 (86%)	1,315 (90%)	1,366 (93%)
September (typical) – Weekend	1,048 (68%)	1,048 (70%)	1,132 (76%)	1,256 (84%)
December (peak) – Weekday	1,308 (85%)	1,308 (89%)	1,351 (92%)	1,393 (95%)
Peak Parking Supply at 85% Occupancy				
September Weekday	-	1,488	1,547	1,607
Additional Parking Supply Needed	-	*21*	*81*	*141*
Resultant Peak Parking Occupancies at Other Times				
September Weekend	-	1,048 (70%)	1,132 (73%)	1,256 (78%)
December Weekday	-	1,308 (88%)	1,351 (87%)	1,393 (87%)

Note:
*Existing scenario parking demand results are derived from shared parking model; existing and short-term parking demand is the same, since land use inputs are the same in both scenarios.

3.5.1 Peak Parking Demand Scenarios

Based on Table 3-7, assuming no changes are made to the anticipated parking supply in the future, several scenarios would experience parking demand very close to the available downtown parking supply. These include the mid-term and long-term September and December weekday midday parking demand scenarios, which exceed 90 percent occupancy.

Due to the layout and circulation of the current parking system in downtown Los Altos, existing parking occupancies vary highly between plazas and on-street parking block faces, while the overall system reaches a weekday peak between 82 to 85 percent (September vs. December), including the 400 Main parking facility. Some individual plazas had sustained high occupancies during peak hours, particularly Plazas 5, 7, and 10.

Tables 3-8, 3-9, and 3-10 show each scenario's peak parking demand separated by Los Altos land use dependent on time of day. As mentioned in Section 3.4, the calibrated parking demand rates and factors were derived from existing conditions data collection for the downtown parking district and applied to all three projected scenarios. Refer to Appendix 3B for detailed parking demand outputs by scenario.

Table 3-8 Future Scenario Peak Hour Parking Demand by Land Use – September Weekday

Los Altos Land Uses	Scenario			
	Existing	Short-Term	Mid-Term	Long-Term
Boutique Retail	244	244	224	213
High Demand Retail	0	0	23	42
Personal Services/Salons	79	79	68	56
Banks	63	63	63	51
Office	426	426	426	411
Take-out Restaurants and Cafes	200	200	224	240
Fine/Casual Dining	229	229	265	306
Bar/Pub	24	24	24	47
Total	**1,264**	**1,264**	**1,315**	**1,366**

Table 3-9 Future Scenario Peak Hour Parking Demand by Land Use – September Weekend

Los Altos Land Uses	Scenario			
	Existing	Short-Term	Mid-Term	Long-Term
Boutique Retail	287	287	263	250
High Demand Retail	0	0	26	49
Personal Services/Salons	35	35	30	25
Banks	28	28	28	23
Office	52	52	52	50
Take-out Restaurants and Cafes	225	225	252	270
Fine/Casual Dining	382	382	442	510
Bar/Pub	40	40	40	79
Total	**1,048**	**1,048**	**1,132**	**1,256**

Table 3-10 Future Scenario Peak Hour Parking Demand by Land Use – December Weekday

Los Altos Land Uses	Scenario			
	Existing	Short-Term	Mid-Term	Long-Term
Boutique Retail	303	303	278	265
High Demand Retail	0	0	25	47
Personal Services/Salons	92	92	79	66
Banks	63	63	63	51
Office	423	423	423	407
Take-out Restaurants and Cafes	198	198	222	238
Fine/Casual Dining	208	208	240	277
Bar/Pub	22	22	22	43
Total	**1,308**	**1,308**	**1,351**	**1,393**

Short-term and existing parking demands are expected to remain identical, since modeled land uses within the parking district will remain the same, with the only changes being to developments outside of downtown and some changes to available public parking facilities, resulting in occupancy

differences between the two scenarios. The medium and long-term scenarios estimated by the City would increase parking demand anywhere from 3 to 17 percent based on the scenario forecasted, with several scenarios expected to approach the provided parking. Projected typical weekend midday peak parking demands are expected to reach a maximum of 84 percent occupancy during the long-term scenario. These scenarios have increased parking demand primarily due to the exchange of lower demand land uses with higher intensity land uses that experience higher parking turnover, such as the inclusion of national chain retail and increase in restaurants versus a reduction in office and boutique land uses.

With the Los Altos spreadsheet demand model, mid-term scenarios reach 90 percent and 92 percent in September and December respectively. Long-term scenarios would reach 93 and 95 percent in September and December. While not exceeding the overall supply, this indicates the downtown supply will be very tight and certain areas will likely exceed demand during peak times. This increase in parking volume can be attributed to the intensity of the projected mid-term and long-term land use changes, in addition to the lack of foreseeable changes in downtown Los Altos parking supply.

3.5.1.1 Effective Parking Supply

A parking facility or system is often perceived as full when it has not yet reached its capacity. This is usually in the range of 85 to 95 percent occupancy. Effective parking supply is the number of occupied spaces at optimum operating efficiency.

This range has to do with the familiarity of users with the all of the details of the parking system, (i.e., what spaces are likely to be available at a certain time of day and thus a lower cushion) versus a parking system that serves more unfamiliar users. A small supply cushion would be appropriate during the anticipated system peaks to help reduce search time during the peak. It also provides additional cover for operating and seasonal fluctuations in occupancy.

In order to estimate the effect of effective parking supply on the Los Altos downtown parking district, calculations were made during the peak demand period to determine the amount of additional parking supply needed to reduce parking occupancy for a typical September weekday to 85 percent of the supply during the midday time period. This calculation best estimates, conservatively, how much supply would be needed to account for operational inefficiencies as a result of the effective parking supply principle. These calculations assume that the impact of a dedicated and fixed amount of parking supply does not substantially deter or alter visitor or employee parking behavior (such as switching to a different mode choice or time of day to visit).

Table 3-7 above shows the expected parking supply necessary to reduce occupancies to 85 percent during the September weekday midday peak hour as well as the resulting peak hour parking occupancies for a typical weekend and a peak December weekday. In order to maintain 85 percent parking occupancy for a typical weekday during peak parking demand , parking supply would need to be increased anywhere from 21 to 141 spaces over the anticipated 1,466 space parking supply, resulting in a new supply ranging from 1,488 to 1,607 spaces. Resulting parking occupancies for a typical weekend range from 70 to 78 percent, while a peak December weekday would have occupancies around 87 to 88 percent.

3.6 Parking Demand Conclusions

As discussed in Section 3.5, several scenarios are projected to near or have a parking supply deficit in the Los Altos Downtown Parking District at peak parking demand. In particular, the medium-term and long-term weekday scenarios show that parking demand during the peak hour approaches the available capacity of parking facilities within the parking district. As occupancies edge close to the expected available parking capacity, parking behavior would begin to be affected, including increased vehicle cruising and a perception of a shortage of capacity due to the lack of available spaces. It should be noted that parking demand was developed for the entire district and therefore does not highlight the individual hot spots, which are known to be a management issue.

The application of an effective parking supply buffer to achieve 85 percent occupancy on a typical weekday would require an additional 21 to 141 spaces; this additional supply would also lower the peak weekend and December weekday parking demand to near existing occupancy levels, and provides cover for other operational and seasonal fluctuations. Peak December demand would be managed via various tools and strategies (discussed under Parking Recommendations) aimed at limiting the impact of this higher parking demand on traffic circulation and supply availability.

The City of Los Altos has a thriving downtown, in large part due to its high-end boutiques, retail shops, and restaurants. In addition, patrons and employees currently enjoy free and convenient parking in a well-maintained area in close proximity to nearby attractions. The Downtown Parking District is not isolated from the surrounding portions of downtown; while the shared parking model developed for Los Altos focuses primarily on the available supply within the district as well as the nearby-redeveloped Safeway, additional supply is available on-street immediately outside the district. It is expected that increased spillover into these areas would occur.

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Chapter 4

Parking Supply Augmentation Analysis

This chapter examines two possible methods for expanding the public parking supply in Downtown Los Altos. One option is to redesign/restripe the existing parking plazas to improve their overall efficiency and increase the number of available spaces. The second option which was considered is the construction of a new parking garage on one of the parking plazas.

4.1 Restriping Analysis

An analysis of each of the parking plazas was performed to explore the potential to add additional parking and perhaps improve overall circulation. The analysis looked at both 9'-wide spaces (the current City standard) and 8.5' foot wide spaces. The use of a 45-degree, 60-degree, and 90-degree parking angle or layout was explored. Currently the plazas are laid out for 45-degree parking. Typically, a 60-degree or 90-degree parking layout would yield a higher number of spaces than a 45-degree configuration.

All of the parking plazas have landscaped islands, which were constructed to match the 45-degree parking space layout. Consequently, simply repainting the parking spaces at either the 60-degree or the 90-degree parking angles will not work with the 45-degree angle landscaped islands. To achieve the desired increase in the number of spaces in each parking plaza, each parking plaza would need to be reconstructed with new landscaped islands at the appropriate angle for the parking layout, so all of the landscaping including the mature trees would need to be removed. In some cases power poles and other physical features would also have to be relocated. There was no one restriping design (i.e. angle of spaces) that was best for all the plazas, so to maximize the number of added spaces, one would need to have a different type of striping in each plaza. Another issue is that many of the reconfiguration options eliminate the loading zones for the adjacent commercial buildings.

The analysis determined that reconfiguring the City's parking plazas could result in creating an additional 75 City-standard 9'-wide parking spaces in all ten of the parking plazas combined, or an average of about 8 spaces per plaza. If the City modified its standard parking space width to 8.5', an additional 134 parking spaces, or about 14 spaces per plaza, could be created. These additional parking spaces would be realized by changing the existing 45-degree parking layout to either a 60-degree or a 90-degree parking layout.The cost to reconstruct each of the parking plazas is approximately $20.90 per square foot. As shown in Table 4-1 the smaller parking plazas (Plazas 4 or 5) would cost about $450,000 to reconstruct and the larger parking plazas (Plazas 1, 2, 7, 8, or 9) would cost about $900,000 to reconstruct. Parking Plaza 6 would cost about $590,000 to reconstruct and Parking Plaza 3, being the largest plaza, would cost about $1.7 million to reconstruct.

Table 4-1 also shows the cost for each new space. These costs vary dramatically, ranging from $41,000 up to almost $450,000 per new space depending on the characteristics of each of the parking plazas. It is clear from the analysis that reconfiguring the plazas as a means to gain parking will be quite expensive even if the most cost effective plazas solutions (Plazas 4 and 5) are chosen. Detailed layouts and cost analysis of the parking plazas are provided in Appendix 4A.

Table 4-1 Parking Plaza Reconfiguration Costs (9.0' wide stalls)

Plaza #	Area (SF)	Total Cost	Cost/Space	Cost/Additional New Space	Net New Spaces
1	42,600	$890,000	$6,700	$148,300	6
2	42,900	$897,000	$6,900	$179,400	5
3	82,200	$1,718,000	$11,000	$101,100	17
4	21,700	$454,000	$6,200	$41,300	11
5	21,900	$457,700	$7,200	$59,900	9
6	28,600	$597,700	$8,800	$199,200	3
7	43,200	$902,900	$6,800	$100,300	9
8	42,800	$894,500	$6,600	$149,100	6
9	43,900	$917,500	$6,500	$458,750	2
10	29,200	$610,300	$6,400	$87,200	7
Total	399,000	$8,339,600	$7,367	$111,195	75

The pavement in the parking plazas are currently in reasonable condition. The existing landscaping is in good health and is not creating any major problems for the pavement areas adjacent to the landscaped islands. The parking plazas could be maintained for at least another ten years with a routine slurry seal of the pavement areas and repainting the parking spaces markings. The cost for this maintenance effort would be significantly less than reconstructing even one of the parking plazas.

Assuming there are no major issues with the pavement structure (asphalt and/or base material under the asphalt) or the underground utilities that pass through the parking plazas which would require a major reconstruction of part or all of a parking plaza and the few number of additional parking spaces that could be realized in each plaza, it would be best to continue the annual maintenance of the parking plazas and not reconstruct the parking plazas until such time that a major issue (pavement failure or underground utility replacement) requires a major reconstruction of a significant portion of a parking plaza.

4.2 Parking Garage Estimate

The second approach to adding additional public parking supply would be to construct a parking structure in the downtown area on one of the parking plaza sites. The Downtown Los Altos Public Parking Plazas Opportunity Study took an extensive look at the options for expanding parking via construction of a parking structure. This analysis draws upon information from that study as well as more recent parking structure construction cost information for the Bay Area.

4.2.1 Cost of Parking Construction

The cost of supplying parking either in an above ground structure, below grade lot, or as part of a mixed use development will vary around a wide range of factors. If the structure is enclosed or underground then it must be ventilated, which is a major construction and operating expense. While this section focuses primarily on determining the actual costs of parking construction, it is important to consider how construction costs relate to the more general set of factors that comprise the total cost of providing parking. Table 4-2 describes the full range of costs associated with providing parking in a structure or underground garage and details some of the different factors that contribute to each.

Table 4-2 Components of Parking Facility Cost

Cost Component	Notes
Land Acquisition Costs	Land costs for a parking facility include the cost of acquisition as well as the costs of securing any easement or additional property necessary to build the parking facility.
Construction	Construction costs will include demolition and site preparation, basic construction costs, and substantial additional costs for improved architectural finishes and landscaping. Construction costs will also increase through contingency costs, contractor's overhead, and cost escalation during the course of construction. Actual construction costs will vary enormously depending on the facility's location, size, whether it is below or above grade, and how many levels it has. The level of aesthetic finishes on the exterior of a parking structure can also significantly increase construction costs.
Planning and Design	Planning and design "soft costs" can include initial demand and planning studies as well as surveying and soils engineering and architectural and structural engineering fees.
Financing Costs	Financing costs will vary depending on the mechanism used to finance construction but can include legal fees, the cost of securing and repaying bonds, the interest on construction loans. Between financing costs and planning and design expenses, Todd Litman of the Victoria Transportation Planning institute estimates that "soft costs" can increase the cost of a parking facility by as much as 30-40% for a standalone project.[33]
Equipment and Furnishings	The level of equipment and furnishings provided within the structure including barrier gates, elevators, ticket spitters, and payment stations can range into the hundreds of thousands of dollars and can affect both the initial cost of a parking facility as well as upkeep and maintenance costs.
Maintenance and Operations	Maintenance and operation costs include cleaning, lighting, maintenance, repairs, security, landscaping, fee collection, enforcement, insurance, labor and administration. Typical costs per space can run anywhere between $200 for basic maintenance of a surface lot to as high as $800 per space for a facility with attendants and additional security and lighting needs.[34]

As indicated in Table 4-2, several components can affect the cost of a parking structure. Based on previous studies by CDM Smith, construction cost ranges for various types of parking structures are shown in Table 4-3. These studies examined the cost of providing additional parking to existing lots and/or garages, the cost per space (hard cost only) are provided. It is important to note that these are not actual cost estimates for the City of Los Altos and are given to provide insight into the costs of parking construction.

[33] Litman, Todd, "Transportation Costs and Benefit Analysis: Techniques, Estimates and Implications: Parking Costs." Victoria Transport Policy Institute. www.vtpi.org/tca/tca0504.pdf

[34] Victoria Transport Policy Institute. Parking Cost, Pricing, and Revenue Calculator. www.vtpi.org/parking.xls

Table 4-3 Cost Estimates of Parking Structures

Facility Structure Type	Cost Per Space (Construction Cost Only)
Surface Lot	$6,000 -$9,000
Above grade open parking structure (3-4 levels)	$20,000 - $28,000
Above grade ventilated parking structure (3-4 levels)	$24,000 - $35,000
Below grade ventilated parking structure (2-3 levels)	$42,000 - $58,000

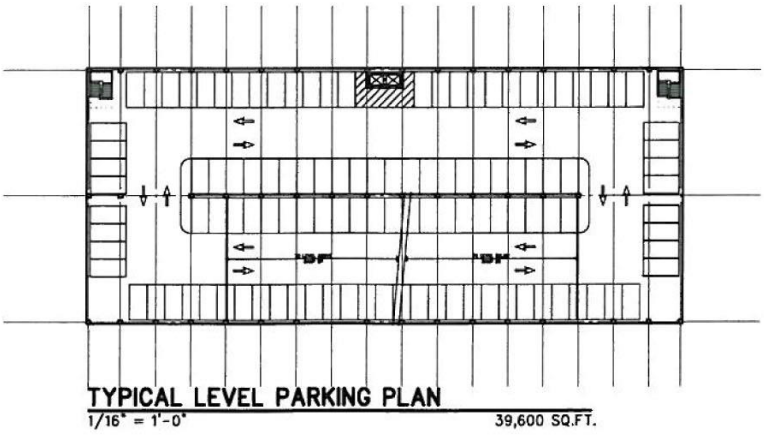
Sources : Los Altos Parking Supply Analysis (2013), Burlingame Parking Structure Analysis (CDM Smith, 2013), Mountain View Downtown Parking Study (2011), Watry Parking Garage Estimator.

4.2.2 Estimate for New Parking Garage

The parking demand analysis indicated that there would be a need for long term supply of an additional 141 spaces in the downtown parking district in order to maintain an overall district occupancy of 85 percent.

Table 4-4 summarizes the estimated costs for a hypothetical above ground garage to be constructed on either Plaza 2 or Plaza 7 to meet the needs of the parking deficit projected in the long term parking demand analysis. Figure 4-1 illustrates the typical level parking layout which these estimates were based upon. This structure which has a very efficient floor plan would have 396 total spaces representing a net of 276 spaces if built on Plaza 7, or 278, if built on Plaza 2. It should be noted that the garage that was estimated has three levels of parking in a two-story above ground structure: ground floor, second floor, and one rooftop floor. This structure would be approximately 25 to 28 feet in height.

Figure 4-1 Typical Level Parking Layout[35]



[35] Downtown Los Altos Public Parking Plazas Opportunity Study, Figure 21: Public Private Test Cast C.

The total estimated cost for the garage is just over $10.5 million, with an annualized cost of $1.170 million over a 30 year estimated financing period. The cost per net new parking space would be $38,000.

Potential financing mechanisms and funding sources are discussed in sections 5.2 and 5.3.

Table 4-4 Hypothetical 3-Level Parking Garage Cost Estimate

	Cost Element	Cost/Details/Rates		
Garage details	Description:	Ground level parking plan from Opportunity Study (Plazas 2 or7)		
	Spaces/floor			132
	Site Area (SF)			39,600
	New Structure Levels			3
	Total spaces			396
	Ground Floor Ceiling Height			15
	Existing Spaces			120
	Total floor area			118,800
	Total parking spaces			396
	Net Added new spaces			276
	SF/space			300
Construction Costs	Base Construction Costs		$	5,906,475
	Base construction cost/SF		$	50
	Overhead, contingency, bond, and insurance costs (45%)	45%	$	2,657,914
	Design and Engineering (18%)	18%	$	1,541,590
	Escalation (4%)	4%	$	404,239
	Total Construction Cost		$	10,510,268
	Cost/SF		$	88
	Cost/Stall		$	26,541
	Cost/Net new stall		$	38,081
Annualized Costs	Annual maintenance cost for entire structure ($537.62 annual operating cost/space) 2012 dollars	$ 537.62	$	212,897.52
	Maintenance cost at 30 years	30	$	516,758.16
	Annual operating cost per parking space		$	1,304.94
	Average annual maintenance cost for 30 year lifecycle (3%)	3%	$	364,827.84
	Average Annual Debt Service for Capital Cost for 30 Years (6.5%)	6.50%	$	454,507
	Annualized capital cost (30 years)		$	350,342.25
	Annualized total cost (30 years)		$	1,169,677.25
Funding Gap	Anticipated additional annual revenue ($0 per space/year)			0
	Current annual downtown parking revenue (employee permits)		$	31,350.00
	Annual Funding gap		$	(1,138,327.25)
	Percent increase in parking revenue necessary to fund parking structure			3731%

Notes:

1. Plazas 2 and 7 sites originally analyzed for 2009 Opportunity Study.
2. 3 level structure, with 3rd floor of parking on roof.
3. Long Span Structural System and Dual Frame and Wall Support system.
4. High Quality Façade Design

4.3 Parking Supply Recommendations

In comparing the two options for parking supply augmentation a number of considerations need to be taken into account. These are indicated in Table 4-5 below:

Table 4-5 Comparison of Parking Supply Augmentation Options

Factor	Plaza Reconfiguration	Parking Structure Construction
New Parking Spaces Gained	75	276
Construction Cost per New Space	$111,000	$38,000
Location of Parking	Dispersed throughout the Downtown	All in one location
Impacts on Business Loading Access	Impact in several plazas	Impacts in one plaza
Impacts on Landscaping	Requires removal and replanting in all plazas	Impacts in one plaza
Construction Impacts	Plaza reconstruction would have to be phased	Impacts would be all in one plaza
Maintenance Costs	Limited annual expense	Significant annual cost of operations and maintenance

The parking structure option is far more cost effective than the plaza reconfiguration approach and it would yield substantially more new parking spaces. The disadvantages of the parking structure approach is that all the new parking would be in one location. This would mean the benefit would not be spread equally throughout the Downtown. The impacts of the structure in terms of maintaining business loading access, impacts on landscaping and construction impacts would all be confined to one plaza, and mitigations could be developed to focus on those specific issues. A disadvantage of a parking structure is that there are significant cost of annual operation such as utilities, added insurance costs, security costs, and building maintenance costs.

The advantage of the reconfiguring the plazas is that the new parking would be dispersed throughout the Downtown, although most of the additional parking would be in Plazas 3 and 4. The total amount of added parking would be small and would come at a very large cost. The construction impacts of reconfiguring the plazas would be very significant. It would not be practical to do them all at once, so there would be a very long period of construction to complete them all, or even just a few of them. Similarly, the other types of impacts related to plaza reconstruction, such as loading access to business and removal/replacement of landscaping would be felt throughout the Downtown, rather than just in one location.

Consideration of all these factors suggests that the best approach to expanding the parking supply in the Downtown would be to develop structured parking, rather than attempting to gain parking by reconstructing the parking plazas.

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Chapter 5

Financing Strategies & Implementation

5.1 Capital and Operating Estimates

This chapter summarizes the capital and operating/maintenance cost estimates for the recommended parking management plan.

5.1.1 Operating Expense Estimate

As part of the analysis of the existing parking program, costs of operating and maintenance were estimated. These costs included enforcement, ticket and permit processing and capital (Segway) and vendor expenses (Clancy Systems). The City of Los Altos' current expenditures related to the parking program are summarized in Table 5-1.

Table 5-1 Current Parking Program Expenses and Revenues

Line Item	Annual (Equivalent)
District Maintenance	($ 16,200)
Citations & Permits:	
PCO (0.09 FTE)	($ 8,800)
Records (0.4 FTE)	($ 36,400)
Enforcement PCO (0.8 FTE)	($ 103,710)
Clancy Systems	($ 2,520)
Segway	($ 1,050)
Total Costs	($ 168,680)
Annual Permit Revenue	$ 31,400
Annual Overtime Parking Citations (Revenue)	$ 75,000
Net Program (Cost)/Revenue	($ 62,280)

Note: Detailed Labor rates, FTEs and base costs provided by the City of Los Altos, 2012.

Current parking program expenses total $168,680. Additionally the parking program is pulling in approximately $31,400 in permit revenue and $75,000 in anticipated overtime parking violation revenue. The estimated net cost of the parking program is $62,280.

Table 5-2 summarizes the estimated costs for the recommended parking management program outlined in Chapter 2. The capital, maintenance and operating costs for the next ten years reflect the anticipated labor, capital and potential revenues should the City of Los Altos elect to adopt the recommended management solutions. The costs include an annual escalation assumption to address increases in labor, capital and expense costs. Some of the existing parking program costs have been maintained and some have been integrated and adjusted based upon the program specifications.

Table 5-2 Ten Year Parking Management Program Costs and Revenue Proforma

Recommended Management Program	Calculation Detail			Estimated Costs & Revenues		Program Year										
Existing Costs				**Annual Cost**	**Annual Revenue**	**2013**	**2014**	**2015**	**2016**	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**
District Maintenance Costs				$ (16,200)	0	$ (16,200)	$ (16,605)	$ (17,020)	$ (17,446)	$ (17,882)	$ (18,329)	$ (18,787)	$ (19,257)	$ (19,738)	$ (20,232)	$ (20,737)
Segway Depreciation				$ (1,050)		$ (1,050)	$ (1,050)	$ (1,050)	$ (1,050)	$ (1,050)	$ (1,050)	$ (1,050)	$ (1,050)	$ -	$ -	$ -
Total Costs						$ (17,250)	$ (17,655)	$ (18,070)	$ (18,496)	$ (18,932)	$ (19,379)	$ (19,837)	$ (20,307)	$ (19,738)	$ (20,232)	$ (20,737)
Graduated Fines				**Annual Cost**	**Annual Revenue**	**2013**	**2014**	**2015**	**2016**	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**
Anticipated Costs (Labor/PCO)			4	$ (103,709)		$ (103,709)	$ (107,857.15)	$ (112,171.44)	$ (116,658.30)	$ (121,324.63)	$ (126,177.61)	$ (131,224.72)	$ (136,473.71)	$ (141,932.65)	$ (147,609.96)	$ (153,514.36)
Anticipated Costs (Labor/Citations)				$ (56,500)		$ (56,500)	$ (58,760.00)	$ (61,110.40)	$ (63,554.82)	$ (66,097.01)	$ (68,740.89)	$ (71,490.52)	$ (74,350.15)	$ (77,324.15)	$ (80,417.12)	$ (83,633.80)
Anticipated Tickets Issued		1,700	100%													
County Court Fee	$	12.50														
Warnings		-	70%		$ -											
2nd offense	$	54.50	8%		$ 5,712											
3rd offense	$	90.80	9%		$ 11,980											
4th plus offense	$	151.40	13%		$ 30,697											
Anticipated Fines Issued (normal)	$	75,000			$ 48,389	$ 75,000	$ 48,872.69	$ 49,361.41	$ 49,855.03	$ 50,353.58	$ 50,857.12	$ 51,365.69	$ 51,879.34	$ 52,398.14	$ 52,922.12	$ 53,451.34
Net(Cost)/Revenue						$ (85,209)	$ (117,744)	$ (123,920)	$ (130,358)	$ (137,068)	$ (144,061)	$ (151,350)	$ (158,945)	$ (166,859)	$ (175,105)	$ (183,697)
Increased Permit Adoption & Permit Supply				***Annual Cost***	***Annual Revenue***	***2013***	***2014***	***2015***	***2016***	***2017***	***2018***	***2019***	***2020***	***2021***	***2022***	***2023***
Paint & Signs				$ (4,000.00)		$ (4,000)	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Permit Labor				$ (4,620.00)		$ (4,620)	$ (4,804.80)	$ (4,996.99)	$ (5,196.87)	$ (5,404.75)	$ (5,620.94)	$ (5,845.77)	$ (6,079.60)	$ (6,322.79)	$ (6,575.70)	$ (6,838.73)
Current Permit Fees	$	31,350	0%		$ 33,618.00	$ 33,618.00	$ 33,618.00	$ 33,618.00	$ 33,618.00	$ 33,618.00	$ 33,618.00	$ 33,618.00	$ 33,618.00	$ 33,618.00	$ 33,618.00	$ 33,618.00
Estimated New Permit Sales		100	$ 36.00		$ 2,268.00	$ 2,268.00	$ 2,313.36	$ 2,359.63	$ 2,406.82	$ 2,454.96	$ 2,504.06	$ 2,554.14	$ 2,605.22	$ 2,657.32	$ 2,710.47	$ 2,764.68
Net(Cost)/Revenue						$ 27,266	$ 31,127	$ 30,981	$ 30,828	$ 30,668	$ 30,501	$ 30,326	$ 30,144	$ 29,953	$ 29,753	$ 29,544
All Day Permits				***Annual Cost***	***Annual Revenue***	***2013***	***2014***	***2015***	***2016***	***2017***	***2018***	***2019***	***2020***	***2021***	***2022***	***2023***
Permit Education (labor)				$ (4,000.00)		$ (4,000.00)	$ (4,160.00)	$ (4,326.40)	$ (4,499.46)	$ (4,679.43)	$ (4,866.61)	$ (5,061.28)	$ (5,263.73)	$ (5,474.28)	$ (5,693.25)	$ (5,920.98)
Permit Education (materials)				$ (1,000.00)		$ (1,000.00)	$ (1,029.00)	$ (1,058.84)	$ (1,089.55)	$ (1,121.14)	$ (1,153.66)	$ (1,187.11)	$ (1,221.54)	$ (1,256.96)	$ (1,293.42)	$ (1,330.93)
Transaction fee (cost) (10%)	10%				$ (30.00)	$ (30.00)	$ (30.00)	$ (30.00)	$ (30.00)	$ (30.00)	$ (30.00)	$ (30.00)	$ (30.00)	$ (30.00)	$ (30.00)	$ (30.00)
All-Day Permit Fee (Revenue)	*$1.00*		*0%*		$ 300.00	$ 300.00	$ 300.00	$ 300.00	$ 300.00	$ 300.00	$ 300.00	$ 300.00	$ 300.00	$ 300.00	$ 300.00	$ 300.00
Estimated All Day Permits	125		300													
Net(Cost)/Revenue						$ (4,730)	$ (4,919)	$ (5,115)	$ (5,319)	$ (5,531)	$ (5,750)	$ (5,978)	$ (6,215)	$ (6,461)	$ (6,717)	$ (6,982)
LPR Enforcement Technology				***Capital Cost***	***Annual Revenue***	***2013***	***2014***	***2015***	***2016***	***2017***	***2018***	***2019***	***2020***	***2021***	***2022***	***2023***
LPR w/digital chalk	$ (50,000.00)			$ (80,000.00)		$ (8,000.00)	$ (8,232.00)	$ (8,232.00)	$ (8,232.00)	$ (8,232.00)	$ (8,232.00)	$ (8,232.00)	$ (8,232.00)	$ (8,232.00)	$ (8,232.00)	$ (8,232.00)
Enforcement Vehicle	$ (30,000.00)															
PCO Efficiencies (240%)	240%				$ 48,388.80	$ 48,388.80	$ 72,583.20	$ 84,680.40	$ 96,777.60	$ 106,455.36	$ 116,133.12	$ 116,133.12	$ 116,133.12	$ 116,133.12	$ 116,133.12	$ 116,133.12
Net(Cost)/Revenue						$ 40,389	$ 64,351	$ 76,448	$ 88,546	$ 98,223	$ 107,901	$ 107,901	$ 107,901	$ 107,901	$ 107,901	$ 107,901
Seasonal Valet Parking Program				***Annual Cost***	***Annual Revenue***	***2013***	***2014***	***2015***	***2016***	***2017***	***2018***	***2019***	***2020***	***2021***	***2022***	***2023***
Valet Operator	*4000*			$ (2,800.00)		$ (2,800.00)	*$ (2,870.00)*	*$ (2,941.75)*	*$ (3,015.29)*	*$ (3,090.68)*	*$ (3,167.94)*	*$ (3,247.14)*	*$ (3,328.32)*	*$ (3,411.53)*	*$ (3,496.82)*	*$ (3,584.24)*
Marketing Materials	*900*			$ (1,200.00)		$ (1,200.00)	*$ (1,230.00)*	*$ (1,260.75)*	*$ (1,292.27)*	*$ (1,324.58)*	*$ (1,357.69)*	*$ (1,391.63)*	*$ (1,426.42)*	*$ (1,462.08)*	*$ (1,498.64)*	*$ (1,536.10)*
Net(Cost)/Revenue				$ (4,000.00)		$ (4,000)	$ (4,100)	$ (4,203)	$ (4,308)	$ (4,415)	$ (4,526)	$ (4,639)	$ (4,755)	$ (4,874)	$ (4,995)	$ (5,120)
Total Net Program (Cost)/Revenue						**$ (43,534.00)**	**$ (48,940.70)**	**$ (43,879.25)**	**$ (39,106.73)**	**$ (37,054.09)**	**$ (35,313.86)**	**$ (43,576.27)**	**$ (52,176.49)**	**$ (60,077.99)**	**$ (69,394.77)**	**$ (79,091.36)**

Note: See Detailed Calculation Notes on following page.

The assumptions for each of the parking management program elements detailed in Table 5-2 are summarized below.

Growth Factors

1. City Labor is based on 2012 Employment Cost Index (BLS) 2.9% and 1% salary growth.
2. Capital is based on Construction Cost Index, 2.9% (http://enr.construction.com/economics/)
3. Fees/Expenses is based on Consumer Price Index, 2012, 2-3%.

Existing Parking Program

1. Assumes all other costs will be absorbed into the recommendations costs.
2. Assumes the City's Segway will be depreciated over the remainder of its useful life.
3. Assumes the continuation Clancy fee to cover on-line daily permit.

Graduated Parking Fees

1. Assumes 4 days/week enforcement to keep PCO labor costs the same.
2. Annual citation labor increased by 25% due to increase in protests.
3. Anticipated tickets based on 2012 ticket revenues.
4. Graduated ticket offenses assumed to decrease sharply after 2nd offense based on city's current parking ticket history (70% first ticket 8% 2nd ticket 9% 3rd ticket, 13% 4 plus tickets).

Permit Expansion & Adoption

1. Assumes $4,000 cost to paint and install signs for expanded permit supply.
2. Records labor estimated by City, will remain the same for Permits (0.1269 FTE).
3. Estimated fees are based on the sale of permits to all employees that are currently reparking, plus current 2012 permit revenue.
4. 110 additional spaces will be added to the permit supply, more than 200 vehicles were observed reparking off street for over 5 hours total duration and were 100 identified as potential candidates to purchase annual/quarterly permits.

All Day Permits

1. Assumes an average of one hour a week effort – 50 weeks/year, $80/hr.
2. Assumes 10% transaction fee from the operator (e.g. Clancy)
3. 481 vehicles were observed reparking both on and off street for over 5 hours total duration and were identified as potential employees (long term parkers), 26% (125) park on street and are more likely to purchase daily permits as needed.
4. Assumes conservatively that 300 permits are purchased per year.

LPR Technology

1. LPR with Digital Chalk and Vehicle Cost ($50,000 + $30,000) and depreciated over the 10-year operational estimate.
2. 2. Based on a similar prior implementation (Napa, CA) it is estimated that the PCO should gain efficiency by becoming more targeted and spending less time ticketing overall.

Seasonal Valet

1. Costs for seasonal valet were developed from a City estimate of 7 days of valet operation and marketing materials.

With labor and benefit cost escalations over the next ten years the program costs would continue to grow even without the added benefit of optimizing the district supply with an improved parking program. It should also be noted that many of the new programs have added very little in the way of projected revenue to the program but do add more labor and capital because the City is adding more services and more employee permit parking. As a result, the City may need to consider some additional sources of funding to support this program. Potential funding sources and financing mechanisms are detailed in section 5.2.

5.2 Financing Mechanisms

The following summarizes potential financing mechanisms for parking improvements and additional parking supply within the parking district.

5.2.1 In-Lieu Fee Program

The cost of providing, operating and maintaining parking can be an expensive task for the City. One way of addressing these costs is to have an in-lieu fee mechanism, which would offer property owners the option of paying a fee to the City in-lieu of providing the required amount of parking on site. The fee would be based on the number of parking spaces required. In-lieu fee programs require balancing the cost of fees and the City's policy goals. An in-lieu fee program can discourage development if the costs are too high. Similarly, setting the costs too low can impede the City's ability to provide adequate parking. The specifics of an in-lieu fee program depend upon what the City's goals are for new development and the need for constructing new spaces. Since Los Altos' goal is for long range planning to fund a parking structure then an appropriately designed in-lieu fee program could represent a good funding source.

If the City wants effectively use in-lieu fees to support the development of parking, the fee must be low enough that developers are willing to pay the fee, but high enough that it is a significant source of funds to towards a new structure. A lower fee would not fully cover the cost of providing parking. A higher fee could potentially turn away development interest in the downtown also limiting the source of funds. A highly effective approach is when the City is able construct new parking in advance of the development. Then the developers essentially use the in-lieu fee to purchase their parking from the City, and the City receives full or partial reimbursement for its investment. Some cities have actually mandated that new development must participate in the program, as they don't allow new on-site parking. This is very effective where parcel sizes are small and on-site parking is not practical. The Town of Danville used this approach in its historic downtown district.

When adopting an in-lieu fee policy it is also important to ensure that all City requirements are followed. The City of Campbell adopted an interim in-lieu fee program in hopes of making it a

permanent policy. However, after three years the interim policy was instead abandoned, since the parking demand study, which was to act as a nexus to support the policy, was never completed.[36]

5.2.1.1 Method of Collection

A parking in-lieu fee can be collected in one of two ways, charging a lump sum payment or an annual fee. Deciding between these options are dependent on several factors such as expected future development patterns, land use mix, policy goals, expenditures allowed, and whether the fee is charged to tenants or property owners.

In-lieu fees can be difficult to manage for small businesses and restaurants as they may have difficulties making a full lump sum in-lieu fee payment, which may deter new businesses, therefore allowing payments in installments may be the best option. However, if the fee is charged to tenants, from a collection standpoint, it may be riskier to charge the in-lieu fee annually because of the potential that they could break the lease and sever the cash flow.

In the case of purely new developments that have longer tenancy types, the goal of an in-lieu fee program would be to raise funds for parking construction, maintenance, and management. For these situations a lump sum payment would be the best approach as it provides funds for immediate use by the City.

5.2.1.2 In-Lieu Fee Rates

Setting the in-lieu fee rate is also dependent on some of the same factors as determining which method of collection to utilize and is generally based on a per square footage rate or a per space rate. The cities of Campbell and Redwood City have low fees of $6,000 and $10,000 respectively, which are used for district improvements not parking construction. Other nearby cities such as Mountain View, and Palo Alto, also utilize an in-lieu fee program, Mountain View charges $26,000 per space, slight more than half the cost of a parking space and Palo Alto charges the highest of the cities at $67,100 per space and collects the fee in a lump sum.[37]

If Los Altos wants to use in lieu fees to both help provide new parking and encourage new development, the fee must be low enough that developers are willing to pay the fee, but high enough that it is a significant source of funds to towards a new structure. A reasonable fee would be about half the cost of construction of a parking space (e.g. Mountain View) and would be most likely to generate a reliable source of funds. A lower fee would not provide enough money to build an appreciable amount of parking (e.g. Campbell and Redwood City). A higher fee could potentially turn away development interest in the downtown, also limiting the source of funds (e.g. Palo Alto[38]).

5.2.2 Parking Assessment District

As discussed in the parking management recommendations, an assessment could be used to fund parking related benefits in the parking district.

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[36] Refer to Appendix 2A Parking Comparables.

[37] Refer to Appendix 2A Parking Comparables.

[38] The City of Palo Alto has not reported any participation in its in-lieu fee program at this time, Naszigar, M. (February 2013) Telephone Interview.

5.2.2.1 Assessments and Proposition 218

The passage of California Proposition 218 in 1996 had a major impact on assessment districts throughout the state. The tenet of Proposition 218 was that assessments needed the approval of the property owners through an actual voting process where over 50% of the property owners vote in support of the district, with their vote being weighted by the assessed valuation of their property. For the City to develop an assessment that is in compliance with Proposition 218, the following specific calculation provisions must be undertaken:

1. ***Determine if a project or service provides Special Benefits.*** The City would need to determine whether property owners would receive a special benefit, as a particular benefit to land and buildings, not a general benefit to the public or increase in property values. If a special benefit is not demonstrated, an assessment would not be allowed by Proposition 218.

2. ***Estimate the amount of Special Benefit***. The City must use a professional engineer's report to estimate the amount of the special benefit property owners would receive from the project or service, as well as the general benefit. The City is only allowed to recoup from assessments only the proportionate share of costs to provide the special benefit.

3. ***Set Assessment Charges Proportionally***. Finally, the City must set individual assessment charges so that no property owner pays more than his or her proportional share of the total cost (based on assessed valuation). This may require the City to set cost on a parcel by parcel basis. Also, government and other public properties would now be subject to the assessment.

An assessment may be developed to apply to all properties in the parking district and may be set up to pay for all parking related expenses in the district. The following benefits/improvements may be funded under the assessment based on review by the City's legal counsel and subsequent analysis in an engineer's report:

- Employee Parking Permits
- Development of new supply
- Improvement/enhancement of existing plazas
- Maintenance of District parking supply (Plaza and on-street)
- District landscaping and streetscape improvements
- Other district improvements
  - Bike racks
  - Pedestrian amenities (lighting, benches, etc.)
  - Wayfinding and information

5.2.3 Parking and Business Improvement Area (PBIA)

BIDs are a revitalization tool for commercial neighborhoods such as shopping malls and regional business districts. BIDs are public/private sector partnerships that promote individual business districts and provide a variety of economic development and promotional services.

The Parking and Business Improvement Area Law of 1989 (Streets and Highway Code 36500 et seq.) authorizes the formation of a district that provides parking related benefits. The law enables a city, county, or joint powers authority (made up of cities and/or counties only) to establish a BID and levy annual assessments on businesses within its boundaries. Improvements, which may be financed, include parking facilities, parks, fountains, benches, trash receptacles, street lighting, and decorations. Services that may be financed include promotion of public events, furnishing music in public places and promotion of tourism.

The law also allows financing of marketing and economic development, and various supplemental municipal services such as security and sanitation. The law does not allow bonds to be issued by the BIDs. PBIAs also termed as PBIDs have been used quite frequently in Northern California Cities such as Palo Alto[39] and Davis and Southern California in the cities of Pasadena, La Mesa, Santa Barbara, El Cajon and San Diego to name but a few to promote and improve the business area. An excerpt of the San Diego BID process is provided in the side-bar.

BIDs within the City of San Diego receive assistance from the City's Office of Small Business in areas such as retail business recruitment, technical assistance, and the City's Storefront Improvement Program. Many BIDs receive funding through City grants and assessment matches and sources such as City Transient Occupancy Tax (TOT) and City parking meter revenues.

BID fees are set by the respective BID organization and are collected on an annual basis via the business tax certificate. Within San Diego, typical fees range from $40 to $500 annually. A few newer BIDs collect $90 to $1200 annually, with limited anchor businesses paying up to $5000.

The process of forming a BID is as follows:

1. The city must propose a new district by adopting a resolution of intention. The types of improvements and activities to be financed are specified at this time.[40]
2. Public notice must be provided and a public hearing held.[41]
3. If not protested by a majority of affected businesses, the BID is established and an advisory board is appointed.
4. A BID may assess property according to zones of benefit, in relation to the benefit being received by businesses within each zone.[42] Assessments must be directly proportional to the estimated benefit being received by the businesses upon which they are levied.
5. Business Improvement Districts assess property annually as long as the special improvements and activities are being financed.

[39] City of Palo Alto BID Annual Report, 2011. (http://www.cityofpaloalto.org/civicax/filebank/documents/29966)

[40] Once formed, the BID is limited to those types of improvements or activities that were specified during formation.

[41] Formation of a 1994 Act BID has stricter requirements including the mailing of individual notices to all business owners affected, in addition to public notices published in local newspapers.

[42] No assessments under this law can be levied on residential properties or on land zoned for agricultural use.

5.2.4 Public Private Partnerships

Public-Private partnerships offer an opportunity for the City to reduce the required contribution to parking solution by leveraging the value of the public land being used for the parking plazas. The Downtown Los Altos Public Parking Plazas Opportunity Study, completed in 2009, studied the possibility of allowing private development on a portion of the parking plazas in exchange for financial contribution towards a structured parking solution.

5.3 Parking Revenues

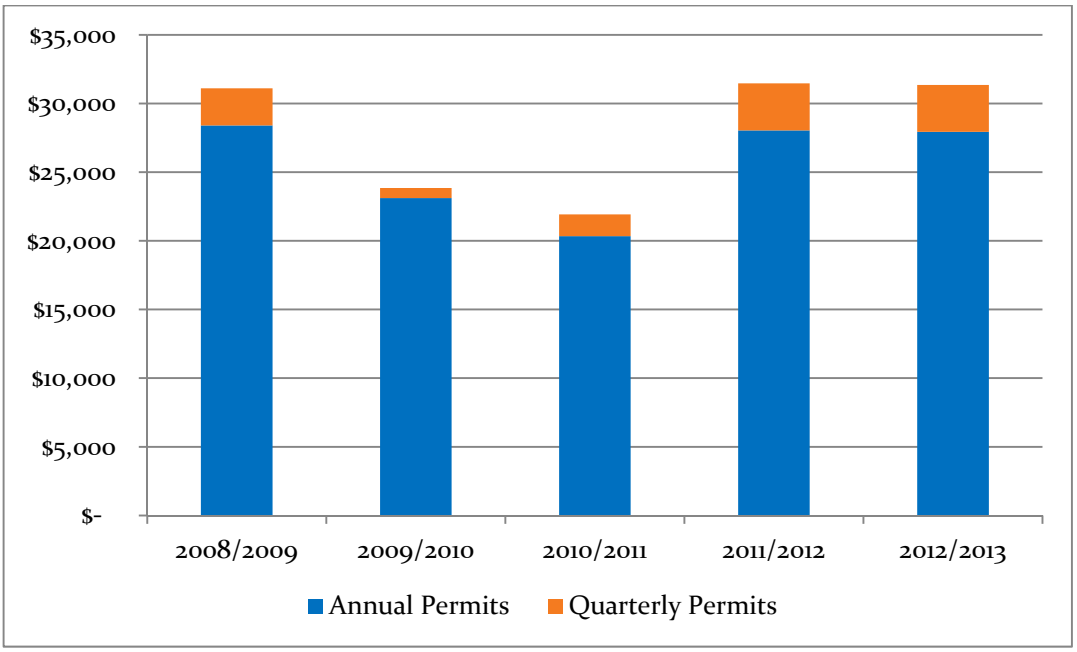
If the downtown businesses are not willing to pay assessments or pay the full amount needed through the BID, and/or in-lieu fees do not raise a significant enough revenue stream, then paid parking is the only other way to raise revenue to close the funding gap for parking improvements. The following sections summarize potential paid parking revenue sources.

5.3.1 Permit Fee Revenue

Currently the City provides the funds from the employee permits to the Los Altos Village Association (LAVA), who has used them in the past year to install and maintain the planters in the parking district.

These funds may be used toward other parking district improvements directed by the City. Revenue from permit fees over the past four years[43] are summarized in the Figure 5-1.

Figure 5-1 Estimated Annual Permit Revenue



[43] Partial permit revenue was provided for FY 2012/2013

5.3.2 All Day Parking Passes

Currently the City sells $1 all day passes in books of 25. The parking management recommendations suggest that this be changed to an on-line all day pass. As part of the ten-year operational analysis, it was estimated that the all-day permits would cost between $4,000 and $6,000 for the City.

5.3.3 Paid Parking Revenue

It is not currently recommended that the City institute paid on-street parking for their current management system due to community opposition. However, it should be noted that paid parking could provide a significant revenue stream toward bridging the parking garage-funding gap. Table 5-3 shows potential annual revenues for a range of on-street parking rates based on existing occupancy levels.[44]

Table 5-3 Estimated Annual Revenue Based on Current Daily Occupancy

Rate ($/hr)	Parking Fees	O&M	Equipment	Net (Cost)/Revenue
$0.50	$250,000	$50,000	$34,800	$166,000
$0.75	$339,000	$50,000	$34,800	$254,000
$1.00	$428,000	$50,000	$34,800	$343,000
$1.25	$517,000	$50,000	$34,800	$432,000
$1.50	$605,000	$50,000	$34,800	$520,000
$1.75	$694,000	$50,000	$34,800	$609,000
$2.00	$783,000	$50,000	$34,800	$698,000

Notes:

1. Assumed 248 weekdays and 52 Saturdays (9AM-6PM) of revenue days per year.
2. Roughly 29 multi-space meters (MSMs) would be needed to cover 235 on-street spaces.
3. Equipment Costs based on 29 - $12,000 MSMs depreciated over 10 years.
4. O& M costs estimated at $50,000 annually.

[44] Equipment, operation, and maintenance costs were estimated assuming the city would own operate and maintain the system. Other options include leasing and contracting with a third party.