



## Memorandum

*To: Matt Bronson and Julia Klein, City of San Mateo*

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*Date: April 16, 2015*

*Subject: Downtown Focused Parking Utilization Study Memorandum*

### Executive Summary

This memorandum summarizes a focused parking utilization study conducted for the City of San Mateo. It is intended to study parking conditions prior to upcoming office developments located within San Mateo's downtown parking district. This analysis reviews recently collected parking occupancy and vehicle duration and turnover for off-street public parking facilities within Downtown San Mateo. The City of San Mateo also has on-street data available via Streetline, which utilizes real-time parking sensors along four blocks within the downtown; this sensor data provides a finer-grain and more detailed look through all parking events on these blocks. Finally, data from year 2013 conducted as part of the overall San Mateo Downtown Parking Management Plan was compared with data from this study in order to examine any recent changes in parking behavior.

#### Overall Occupancy

##### *Off-Street Occupancy*

Parking occupancy data was collected for nine downtown public off-street parking facilities during various times of the day. Five of the nine garages/lots were further analyzed to study more detailed parking behavior, particularly duration and turnover statistics. Overall downtown San Mateo parking occupancies, shown as percentage of facility being used, as well as the number of available spaces for a typical weekday are shown in **Table E-1** and for a typical weekend in **Table E-2**.

The typical **weekday** exhibits two peaks where demand for parking is highest:

- **88 percent** of facility parking spaces were occupied during the midday (around 12 PM) – this corresponds to **210 available spaces** in the parking district during this time period.
- **60 percent** of early evening (around 6 PM) parking spaces were occupied. This translates to **699 available spaces** in the parking district at this time of day.

Comparatively, 82 percent of midday and 57 percent of early evening parking supply was occupied in 2013. This suggests a modest increase in parking demand over the past two years.

Similarly, for the typical **weekend**, two peaks were observed:

- **59 percent** of off-street district parking spaces are utilized during the early afternoon (around 2 PM); this corresponds to **804 available spaces** during this time period.
- **52 percent** of off-street district parking spaces are occupied during the early evening (around 6 PM), meaning there are **839 available spaces** at this time of day.

During the same time periods in 2013, around 57 percent of midday and 54 percent of early evening supply was occupied, which show that parking occupancies have stayed relatively consistent over the past two years.

**Table E-1: Off-Street Parking Occupancy (Weekday) – 2015**

Garage/Lot	Total Spaces	Morning		Midday		Afternoon		Early Evening	
		Occupancy	Available Spaces	Occupancy	Available Spaces	Occupancy	Available Spaces	Occupancy	Available Spaces
Central Garage	398	17%	330	88%	48	79%	84	79%	84
Tennis Court Garage	127	24%	97	87%	17	76%	30	37%	80
El Camino Real Garage	293	27%	214	99%	3	92%	23	41%	173
Main Street Garage	380	51%	186	89%	42	83%	65	66%	129
Transit Center Garage	226	46%	122	92%	18	95%	11	58%	95
Kinko's Lot*	125	50%	63	95%	6	97%	4	66%	43
Worker Resource Lot	107	14%	92	86%	15	85%	16	61%	42
Talbots Lot	50	4%	48	40%	30	26%	37	32%	34
Ravioli House Lot	41	10%	37	24%	31	32%	28	20%	33
<b>Overall</b>	<b>1,747</b>	<b>32%</b>	<b>1,188</b>	<b>88%</b>	<b>210</b>	<b>83%</b>	<b>297</b>	<b>60%</b>	<b>699</b>

**Note:**

\*A new section of the Kinko's Lot has opened since the July 2013 study, resulting in increased parking capacity.

**Table E-2: Off-Street Parking Occupancy (Weekend) – 2015**

Garage/Lot	Total Spaces	Morning		Midday		Afternoon		Early Evening	
		Occupancy	Available Spaces	Occupancy	Available Spaces	Occupancy	Available Spaces	Occupancy	Available Spaces
Central Garage	398	9%	362	88%	48	82%	72	60%	159
Tennis Court Garage	127	9%	116	46%	69	64%	46	17%	105
El Camino Real Garage	293	3%	284	29%	208	29%	208	22%	229
Main Street Garage	380	12%	334	52%	182	71%	110	88%	46
Transit Center Garage	226	4%	217	19%	183	24%	172	41%	133
Kinko's Lot*	125	37%	79	94%	8	96%	5	56%	55
Worker Resource Lot	107	18%	88	44%	60	46%	58	29%	76
Talbots Lot	50	2%	49	44%	28	72%	14	72%	14
Ravioli House Lot	41	5%	39	44%	23	46%	22	24%	31
<b>Overall</b>	<b>1,747</b>	<b>10%</b>	<b>1,572</b>	<b>54%</b>	<b>804</b>	<b>59%</b>	<b>716</b>	<b>52%</b>	<b>839</b>

**Note:**

\*A new section of the Kinko's Lot has opened since the July 2013 study, resulting in increased parking capacity.

**On-Street Occupancy**

On-street occupancies for Streetline-monitored on-street spaces continued to exceed practical capacity throughout many times of the day, but particularly after enforcement ends at 6 PM on both weekdays and weekends; occupancies on the four observed blocks regularly exceed 95 percent occupancy. Please refer to **Tables E-3** and **E-4** within the memo for tables displaying hourly occupancies and number of available spaces for the four Streetline-observed blocks.

**Table E-3: On-Street Parking Occupancy (Weekday) – 2015**

Space Type	Total Spaces	AM				PM										
		8	9	10	11	12	1	2	3	4	5	6	7	8	9	10
		9	10	11	12	1	2	3	4	5	6	7	8	9	10	11
24 Min	13	31% (8)	46% (7)	46% (7)	46% (7)	69% (4)	46% (7)	46% (7)	46% (7)	54% (6)	54% (6)	54% (6)	85% (2)	77% (3)	62% (5)	46% (7)
4 Hour	120	38% (74)	49% (61)	54% (56)	88% (14)	97% (4)	94% (8)	88% (14)	80% (24)	89% (13)	94% (7)	99% (1)	98% (2)	97% (4)	78% (26)	48% (62)
<b>Total</b>	<b>133</b>	<b>38%</b> <b>(82)</b>	<b>49%</b> <b>(68)</b>	<b>53%</b> <b>(63)</b>	<b>84%</b> <b>(21)</b>	<b>94%</b> <b>(8)</b>	<b>89%</b> <b>(15)</b>	<b>84%</b> <b>(21)</b>	<b>77%</b> <b>(31)</b>	<b>86%</b> <b>(19)</b>	<b>90%</b> <b>(13)</b>	<b>95%</b> <b>(7)</b>	<b>97%</b> <b>(4)</b>	<b>95%</b> <b>(7)</b>	<b>77%</b> <b>(31)</b>	<b>48%</b> <b>(69)</b>

**Note:**

Data is sourced from Streetline, for four blocks within the core downtown of San Mateo.

**Table E-4: On-Street Parking Occupancy (Weekend) – 2015**

Space Type	Total Spaces	AM					PM									
		8	9	10	11	12	1	2	3	4	5	6	7	8	9	10
		9	10	11	12	1	2	3	4	5	6	7	8	9	10	11
24 Min	13	31% (8)	46% (7)	54% (6)	54% (6)	62% (5)	54% (6)	46% (7)	54% (6)	46% (7)	62% (5)	77% (3)	85% (2)	85% (2)	69% (4)	62% (5)
4 Hour	120	28% (86)	57% (52)	87% (16)	94% (7)	98% (3)	98% (2)	95% (6)	91% (11)	90% (12)	98% (3)	100% (0)	99% (1)	98% (2)	100% (0)	84% (19)
<b>Total</b>	<b>133</b>	<b>29% (94)</b>	<b>56% (59)</b>	<b>83% (22)</b>	<b>90% (13)</b>	<b>94% (8)</b>	<b>94% (8)</b>	<b>90% (13)</b>	<b>87% (17)</b>	<b>86% (19)</b>	<b>94% (8)</b>	<b>98% (3)</b>	<b>98% (3)</b>	<b>97% (4)</b>	<b>97% (4)</b>	<b>82% (24)</b>

**Note:**

Data is sourced from Streetline, for four blocks within the core downtown of San Mateo.

**Permit Occupancy**

Five of the City’s facilities have 10-hour metered parking spaces where long-term employee permit parking is allowed. Of the three facilities where license plate data was collected, a total of 130 permit users were observed in the downtown throughout the typical weekday. Of these users, most parked in the El Camino Real Garage (35 percent) and the Tennis Court Garage (32 percent). The number of permit users in the system was somewhat lower than compared with 2013 study data. The complete distribution of permit users across all surveyed facilities is shown in **Table 10** within the technical analysis.

**Parking Duration**

The average weekday duration times for surveyed off-street parking facilities remain similar to 2013 data; 4-hour space durations ranged from 2.66 to 3.18 hours, while 10-hour space durations ranged from 5.78 to 7.06 hours.

## Technical Analysis

### Study Area and Methodology

The focus of the utilization study was concentrated on off-street parking facilities within downtown San Mateo. There are nine of these facilities within a ¼ mile radius of the downtown core; additionally, four on-street block segments provided by Streetline were also included.

Three separate methods were used for data collection: bi-hourly vehicle plate counts, four times per day spot occupancy checks, and the Streetline hourly on-street data. In order to conduct a comprehensive review of parking conditions in downtown San Mateo, one complete weekday of parking data was collected on Wednesday, February 25<sup>th</sup>, 2015, while one complete set of Saturday data was collected on March 7<sup>th</sup>, 2015 to understand weekend conditions.

Bi-hourly vehicle plate counts occurred between 8 AM and 10 PM for the following five of nine off-street facilities:

- El Camino Real Garage
- Ravioli House Lot
- Talbot's Lot
- Tennis Court Garage
- Transit Center Garage

These facilities were included for license plate data collection because they did not typically reach the 85 percent practical capacity threshold<sup>1</sup> during most times of the day based on surveyed occupancies from the July 2013 Parking Management Plan (PMP), indicating that it is likely that these garages have parking availability. As such, it was important to identify parking patterns at these facilities due to the relative amount of available parking capacity. Analysis for these facilities included occupancy, duration (length of stay), and turnover (how frequently a space changes vehicle occupancy). In addition, vehicle license plate counts included permit and handicap placard usage which for permit occupancy and permit duration analysis.

The remaining four garages/lots (listed below) were selected for spot occupancy checks because they are under similar parking conditions (substantially exceeding 85 percent practical capacity) as described in the July 2013 Downtown PMP:

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<sup>1</sup> Practical capacity is defined as 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 additional times or “cruise” for parking. Pragmatically, practical capacity is typically set at an 85 percent occupancy level, which for on-street parking equates to roughly one vacant space per blockface.

- Central Garage
- Kinko's Lot
- Main Street Garage
- Worker Resource Center Lot

These occupancy checks took place at four (4) points during the day: the morning (8-9 AM); midday (12 noon); afternoon (2-3 PM); and early evening (5-6 PM). The presence of a permit and/or handicap placard on vehicles were also identified.<sup>2</sup> Analysis for these facilities included general occupancy and permit occupancy.

On-street data was provided for four 1-block segments in the core of Downtown San Mateo, listed below:

- 3<sup>rd</sup> Avenue, between San Mateo Drive and Ellsworth Avenue
- 3<sup>rd</sup> Avenue, between Ellsworth Avenue and B Street
- B Street, between 2<sup>nd</sup> Avenue and 3<sup>rd</sup> Avenue
- B Street, between 3<sup>rd</sup> Avenue and 4<sup>th</sup> Avenue

Hourly statistical data from Streetline was provided in order to analyze existing parking conditions for these block segments. Analysis for these block segments include occupancy and duration.

## **Parking Occupancy**

The parking occupancy analysis provides a detailed picture of how public parking is currently utilized in Downtown San Mateo. The following section presents occupancy data for the bi-hourly license plate counts, spot occupancy, and on-street data within the study area.

To provide visual definition, the tables are highlighted to indicate periods of high parking use. Cells highlighted in light pink indicate hours when a parking facility meets or exceeds practical capacity (85 percent) but remains below 95 percent, while cells shaded in dark pink indicate times when occupancy was observed to have reached a critical occupancy level of 95 percent or higher. Cells shaded in red indicates times when occupancy at the facility was observed to reach full capacity.

## **Bi-Hourly Occupancy**

The following sequence of tables present bi-hourly occupancy data for five of the nine off-street facilities for both weekday and weekend.

**Weekday**

**Table 1** displays the off-street parking occupancy for the five public facilities under bi-hourly license plate counts. To provide comparison, July 2013 data is also exhibited and highlighted to indicate the degree of change in occupancy since that time.

Among the facilities, only the Talbots and Ravioli House Lot were found to consistently have available parking supply, as all other facilities exceeded practical capacity (85 percent) at least once throughout the day. This is likely due to the relative distance of these facilities from the downtown core when compared to other paid parking facilities in the area.

In comparison to the July 2013 occupancy data, new occupancy rates are generally higher, while maintaining the same midday peak at 12 PM. In particular, the El Camino Real Garage and Transit Center Garage experienced the highest increase in occupancies (more than 10 percent during multiple time periods) throughout the day.

**Table 1 Off-Street Occupancy – Bi Hourly (Weekday) - 2015**

Garage/Lot	Total Spaces	8 AM	10 AM	12 PM	2 PM	4 PM	6 PM	8 PM	10 PM
<b>Bi-Hourly Occupancy Facility</b>									
Tennis Court Garage	127	24%	74%	87%	76%	58%	37%	24%	10%
El Camino Real Garage	293	27%	87%	99%	92%	78%	41%	21%	6%
Transit Center Garage	226	46%	81%	92%	95%	81%	58%	53%	26%
Talbots Lot	50	4%	26%	40%	26%	18%	32%	74%	20%
Ravioli House Lot	41	10%	22%	24%	32%	15%	20%	12%	0%
<b>Overall</b>	<b>737</b>	<b>30%</b>	<b>75%</b>	<b>87%</b>	<b>82%</b>	<b>68%</b>	<b>44%</b>	<b>34%</b>	<b>13%</b>
<b>Change in Occupancy since July 2013</b>									
Tennis Court Garage	127	-3%	1%	1%	0%	-7%	1%	-3%	-6%
El Camino Real Garage	293	-12%	3%	16%	17%	11%	16%	7%	2%
Transit Center Garage	226	10%	20%	18%	19%	16%	11%	-5%	0%
Talbots Lot	50	2%	18%	26%	0%	0%	12%	26%	-6%
Ravioli House Lot	41	7%	7%	0%	-5%	-10%	2%	7%	0%
<b>Overall</b>	<b>737</b>	<b>-2%</b>	<b>9%</b>	<b>14%</b>	<b>12%</b>	<b>8%</b>	<b>11%</b>	<b>3%</b>	<b>-1%</b>

**Note:** July 2013 comparisons represent the change in occupancy from July 2013; cells highlighted in blue represent an occupancy decrease of 10 percent or more since the 2013 study, while cells highlighted in orange represent an increase by 10 percent or more since then.

**Weekend**

**Table 2** displays the off-street parking occupancy for the weekend. Overall occupancy remains under practical capacity throughout the day, with a modest afternoon and evening peak. Among the facilities, only the Transit Center Garage and Talbots Lot were observed to exceed practical capacity during the evening hours. The other three bi-hourly surveyed facilities were observed to have available parking supply throughout the day.

Compared with the July 2013 occupancy data, all of the bi-hourly surveyed individual facilities except for the Transit Center Garage had occupancies through the day that occasionally experienced a greater than 10 percent difference in occupancy. While individual facilities observed some fluctuations in occupancies, the new occupancy rates overall remain relatively consistent with the July 2013 occupancy data.

**Table 2 Off-Street Occupancy – Bi-Hourly (Weekend) - 2015**

Garage/Lot	Total Spaces	8 AM	10 AM	12 PM	2 PM	4 PM	6 PM	8 PM	10 PM
<b>Bi-Hourly Occupancy Facility</b>									
Tennis Court Garage	127	9%	27%	46%	64%	48%	17%	16%	8%
El Camino Real Garage	293	3%	19%	29%	29%	20%	22%	32%	13%
Transit Center Garage	226	4%	11%	19%	24%	22%	41%	89%	44%
Talbots Lot	50	2%	28%	44%	72%	46%	72%	96%	28%
Ravioli House Lot	41	5%	20%	44%	46%	22%	24%	34%	10%
<b>Overall</b>	<b>737</b>	<b>4%</b>	<b>18%</b>	<b>31%</b>	<b>37%</b>	<b>27%</b>	<b>31%</b>	<b>51%</b>	<b>23%</b>
<b>Change in Occupancy since July 2013</b>									
Tennis Court Garage	127	0%	-16%	-11%	15%	6%	-4%	2%	1%
El Camino Real Garage	293	0%	4%	7%	5%	6%	12%	13%	6%
Transit Center Garage	226	0%	0%	3%	4%	4%	6%	3%	2%
Talbots Lot	50	2%	10%	-24%	-2%	-8%	32%	4%	-6%
Ravioli House Lot	41	-2%	7%	-2%	-2%	-15%	20%	20%	7%
<b>Overall</b>	<b>737</b>	<b>0%</b>	<b>0%</b>	<b>0%</b>	<b>6%</b>	<b>3%</b>	<b>9%</b>	<b>7%</b>	<b>3%</b>

**Note:** July 2013 comparisons represent the change in occupancy from July 2013; cells highlighted in blue represent an occupancy decrease of 10 percent or more since the 2013 study, while cells highlighted in orange represent an increase by 10 percent or more since then.

### Spot Occupancy (4 observations per day)

The following sequence of tables present the spot occupancies from the morning (8-9 AM), midday (12 noon), afternoon (2-3 PM), and early evening (5-6 PM) periods for weekday and Saturdays.

#### Weekday

**Table 3** displays the weekday off-street parking occupancy for the remaining four public parking facilities. To provide comparison, July 2013 data is also exhibited and highlighted to indicate the degree of change in occupancy since that time.

The facilities all exceed or approach practical capacity at either midday and afternoon periods, indicating these facilities have little remaining available capacity. These facilities were selected for spot occupancy for data collection due to their high recorded occupancies in July 2013. The data presented in **Table 3** confirms similar parking behavior in 2015; overall, there is an increase in parking occupancies during the early morning, with the midday peak continuing to increase beyond the practical capacity of the system; reasons for these continued high occupancies include sustained employee parking, proximity to the downtown core, and the availability of free long-term parking at some lots.

**Table 3 Off-Street Occupancy – Spot Occupancy (Weekday) - 2015**

Garage/Lot	Total Spaces	Morning	Midday	Afternoon	Early Evening
<b>Spot Occupancy</b>					
Central Garage	398	17%	88%	79%	79%
Main Street Garage	380	51%	89%	83%	66%
Kinko's Lot*	125	50%	95%	97%	66%
Worker Resource Lot	107	14%	86%	85%	61%
<b>Overall</b>	<b>1,010</b>	<b>34%</b>	<b>89%</b>	<b>83%</b>	<b>71%</b>
<b>Change in Occupancy since July 2013</b>					
Central Garage	398	3%	-8%	-14%	-1%
Main Street Garage	380	39%	21%	15%	3%
Kinko's Lot*	89	-8%	4%	7%	-6%
Worker Resource Lot	107	9%	-7%	-8%	-5%
<b>Overall</b>	<b>974</b>	<b>17%</b>	<b>5%</b>	<b>1%</b>	<b>0%</b>

**Note:** July 2013 comparisons represent the change in occupancy from July 2013; cells highlighted in blue represent an occupancy decrease of 10 percent or more since the 2013 study, while cells highlighted in orange represent an increase by 10 percent or more since then.

\*A new section of the Kinko's Lot has opened since the July 2013 study, resulting in increased parking capacity

**Weekend**

**Table 4** display the weekend off-street parking occupancy for the remaining four public parking facilities. To provide visual definition, the July 2013 data is highlighted to indicate the degree of change in occupancy.

With the exception of the Worker Resource Lot, the facilities all exceed or approach practical capacity at least once throughout the time periods indicating these facilities have higher demand at some point throughout the day. Compared to the July 2013 data, both the Main Street Garage and Worker Resource Lot experience a decrease in occupancy of greater than 10 percent during the midday and afternoon time periods while the Central Garage shows increases in occupancy greater than 10 percent during the same time periods. This indicates users are showing a greater preference for the Central Garage during these time periods; likely due to the convenience of its central location within downtown San Mateo.

These facilities were selected for spot occupancy due to their high occupancies in July 2013. The data presented in Table 3 confirms similar parking behavior as recorded in July 2013.

**Table 4 Off-Street Occupancy – Spot Occupancy (Weekend) – 2015**

Garage/Lot	Total Spaces	Morning	Midday	Afternoon	Early Evening
<b>Spot Occupancy</b>					
Central Garage	398	9%	88%	82%	60%
Main Street Garage	380	12%	52%	71%	88%
Kinko's Lot*	125	37%	94%	96%	56%
Worker Resource Lot	107	18%	44%	46%	29%
<b>Overall</b>	<b>1,010</b>	<b>14%</b>	<b>71%</b>	<b>76%</b>	<b>67%</b>
<b>Change in Occupancy since July 2013</b>					
Central Garage	398	-2%	30%	15%	4%
Main Street Garage	380	2%	-14%	-14%	-3%
Kinko's Lot*	89	-6%	4%	12%	-14%
Worker Resource Lot	107	9%	-23%	-21%	-18%
<b>Overall</b>	<b>974</b>	<b>1%</b>	<b>6%</b>	<b>0%</b>	<b>-3%</b>

**Note:** July 2013 comparisons represent the change in occupancy from July 2013; cells highlighted in blue represent an occupancy decrease of 10 percent or more since the 2013 study, while cells highlighted in orange represent an increase by 10 percent or more since then.

\*A new section of the Kinko's Lot has opened since the July 2013 study, resulting in increased parking capacity

### Hour-by-Hour On-Street Occupancy

The following section discusses the hour-by-hour occupancy rates for on-street parking spaces for the four 1-block segments of the downtown based on sensor data provided by Streetline.

#### *Weekday*

**Table 5** displays on-street parking occupancy at four blocks in the core area of Downtown San Mateo. Occupancy is shown to exceed practical capacity both in the midday (11 AM to 3 PM) and evening hours (4 PM to 9 PM); parking occupancies only briefly dipped below 85 percent occupancy during the 3 PM hour. These occupancy peaks are likely due to lunch time visitors and patrons accessing the area for dinner and shopping/entertainment activities.

Overall, occupancy rates from the July 2013 San Mateo Downtown PMP indicates occupancy has remained relatively consistent. The midday and evening peak occurs during nearly the same time period (12 PM to 2 PM and 4 PM to 10 PM) and with relatively similar intensity. Data indicated that occupancies at 24-minute spaces generally remained below practical capacity, underscoring, that these spaces may be oversupplied, per the PMP.

**Table 5 On-Street Occupancy (Weekday) - 2015**

Space Type	Total Spaces	AM					PM									
		8	9	10	11	12	1	2	3	4	5	6	7	8	9	10
		9	10	11	12	1	2	3	4	5	6	7	8	9	10	11
24 Min	13	31%	46%	46%	46%	69%	46%	46%	46%	54%	54%	54%	85%	77%	62%	46%
4 Hour	120	38%	49%	54%	88%	97%	94%	88%	80%	89%	94%	99%	98%	97%	78%	48%
<b>Total</b>	<b>133</b>	<b>38%</b>	<b>49%</b>	<b>53%</b>	<b>84%</b>	<b>94%</b>	<b>89%</b>	<b>84%</b>	<b>77%</b>	<b>86%</b>	<b>90%</b>	<b>95%</b>	<b>97%</b>	<b>95%</b>	<b>77%</b>	<b>48%</b>
<b>July 2013 Comparison</b>																
<b>Overall</b>	<b>133</b>	<b>29%</b>	<b>33%</b>	<b>50%</b>	<b>73%</b>	<b>97%</b>	<b>95%</b>	<b>89%</b>	<b>76%</b>	<b>86%</b>	<b>92%</b>	<b>98%</b>	<b>96%</b>	<b>98%</b>	<b>88%</b>	<b>70%</b>

**Weekend**

**Table 6** shows on-street parking occupancy at four blocks in the core area on a Saturday. Occupancy is shown to exceed practical capacity throughout the day, beginning at 10 AM and continuing through the end of enforcement hours to the late evening at 10 PM. The high occupancy throughout the day can be attributed to the amount of visitors and shoppers going to Downtown San Mateo during weekends.

In general, occupancy rates for the weekend are also similar from the July 2013 San Mateo Downtown PMP, as occupancy remains above practical capacity throughout the day. However, compared to July 2013, existing occupancy begins exceeding practical capacity at an earlier hour of 11 AM, versus 12 PM in 2013.

**Table 6 On-Street Occupancy (Weekend) - 2015**

Space Type	Total Spaces	AM					PM									
		8	9	10	11	12	1	2	3	4	5	6	7	8	9	10
		9	10	11	12	1	2	3	4	5	6	7	8	9	10	11
24 Min	13	31%	46%	54%	54%	62%	54%	46%	54%	46%	62%	77%	85%	85%	69%	62%
4 Hour	120	28%	57%	87%	94%	98%	98%	95%	91%	90%	98%	100%	99%	98%	100%	84%
<b>Total</b>	<b>133</b>	<b>29%</b>	<b>56%</b>	<b>83%</b>	<b>90%</b>	<b>94%</b>	<b>94%</b>	<b>90%</b>	<b>87%</b>	<b>86%</b>	<b>94%</b>	<b>98%</b>	<b>98%</b>	<b>97%</b>	<b>97%</b>	<b>82%</b>
<b>July 2013 Comparison</b>																
<b>Overall</b>	<b>133</b>	<b>25%</b>	<b>45%</b>	<b>53%</b>	<b>79%</b>	<b>94%</b>	<b>95%</b>	<b>90%</b>	<b>86%</b>	<b>89%</b>	<b>95%</b>	<b>96%</b>	<b>97%</b>	<b>95%</b>	<b>92%</b>	<b>75%</b>

**Overall Occupancy Observations**

Based on the data presented in the above section, parking occupancies remain extremely high, particularly during the midday and evening hours during both weekdays and Saturdays. The implementation of the PMP is in process, but pricing, enforcement and regulatory changes are still in process. Therefore behavior remains very similar since 2013, with additional parking pressure being placed on core downtown parking facilities through an improving economy, vibrant businesses, and employers located in San Mateo.

**Parking Duration and Turnover**

Occupancy data is a key metric describing how parking in the downtown is used by providing a series of snapshots of how parking facilities are utilized throughout the day. However, to

understand current parking usage in the downtown, it is equally important to develop insight into how long individual users stay and the frequency of parking turnover. This allows us to recognize how the parking system in total is being used.

The parking duration analysis is presented in terms of the observed distribution of “parking events” by length of stay. A parking event is defined as when a vehicle is observed to occupy a single space during one time period of data collection.

Please note that as part of this analysis, only the five off-street facilities where license plate data was collected can be analyzed, since the plates can be tracked and attributed to individual vehicles, resulting in a complete dataset where this information can then be calculated. On-street Streetline information provided only the average length of stay by parking event, which are exhibited in the summary tables.

## **Parking Duration**

### ***Weekday***

**Table 7** examines the duration (length of stay) by space type for on-street and off-street parking spaces throughout the study area from 8 AM to 10 PM; **Figure 1** exhibits the durations for the study area at the five facilities where data was available.

The average length of stay for users parking in 4-hour spaces indicates the overall parking demand for 4-hour spaces to be approximately just under 3 hours. The average length of stay for users parking in 10-hour spaces suggests an average parking demand of approximately 6.5 hours. No more than 10 percent of users parking at each facility exceeded the posted time limit, with the exception of Ravioli House Lot, where around 15 percent of users stayed beyond the 4-hour time limit. Overall, the majority of users parking within the study area stayed generally within the time limits.

In comparison to the July 2013 data, average durations are relatively similar. Please refer to **Table A1** in Appendix A for duration calculations from the 2013 report. Only the 4-hour spaces at the Ravioli House Lot and the 10-hour spaces at the El Camino Real Garage observe substantial changes in duration; these facilities both have higher durations than the July 2013 data, which indicate users at these facilities have changed their behavior to stay at the facilities for a longer period. However, the higher durations are still within the time limits of the facility.

**Table 7 Parking Duration by Space Type (Weekday)**

Facility and Space Type	Total Spaces	Parking Duration (Hours)						Average Stay (Hours)
		2	4	6	8	10	12+	
<b>4 Hour</b>								
Tennis Court Garage	46	71%	26%	4%	0%	0%	0%	2.66
El Camino Real Garage	46	70%	19%	6%	3%	1%	0%	2.91
Talbots Lot	48	78%	15%	4%	4%	0%	0%	2.66
Ravioli House Lot	39	71%	15%	3%	9%	3%	0%	3.18
<b>10 Hour</b>								
Tennis Court Garage	74	31%	15%	16%	17%	17%	5%	5.78
El Camino Real Garage	240	15%	10%	17%	33%	19%	6%	7.06
Transit Center Garage	215	33%	14%	12%	15%	18%	8%	5.95
<b>On-Street</b>								
24 Minute	13	N/A	N/A	N/A	N/A	N/A	N/A	0.48
4 Hour	120	N/A	N/A	N/A	N/A	N/A	N/A	0.88

# SAN MATEO FOCUSED PARKING UTILIZATION STUDY



## Legend

### Average duration of vehicles per facility/blockface per day

Off-Street	On-Street	Duration
<span style="color: green;">■</span>	<span style="color: green;">—</span>	0 - 1 hour
<span style="color: lightgreen;">■</span>	<span style="color: lightgreen;">—</span>	1 - 2 hours
<span style="color: yellow;">■</span>	<span style="color: yellow;">—</span>	2 - 3 hours
<span style="color: orange;">■</span>	<span style="color: orange;">—</span>	3 - 4 hours
<span style="color: red;">■</span>	<span style="color: red;">—</span>	4 or more hours

1.68 Average number of unique cars per space per day

+++ Caltrain  
  Central Parking Improvement District

0 250 500 Feet



**Weekend**

**Table 8** examines the length of stay by space type for on-street and off-street parking spaces throughout the study area from 8 AM to 10 PM for Saturday parking data; **Figure 2** exhibits the durations for the study area.

The weekend average length of stay for users parking in 4-hour and 10-hour spaces is somewhat lower than the average length of stay on a weekday, with all average durations remaining within their limits; this is not surprising, since there are more short-term/leisure visits on the weekend and fewer employees needing to park for significant amounts of time in a facility. No more than five percent of users at each facility stay longer than the allowed time limit; only the 10-hour spaces in the El Camino Real Garage exceeds five percent. Overall, this confirms the higher amount of short-term visitors on the weekend versus on a weekday.

In comparison to the July 2013 data, weekend average durations remain relatively consistent, suggesting that parking behavior has not substantially changed in the past two years. Please refer to **Table A2** at in Appendix A for more detail.

**Table 8 Parking Duration by Space Type (Weekend)**

Facility and Space Type	Total Spaces	Parking Duration (Hours)						Average Stay (Hours)
		2	4	6	8	10	12+	
<b>4 Hour</b>								
Tennis Court Garage	46	85%	11%	4%	0%	0%	0%	2.37
El Camino Real Garage	46	80%	14%	4%	1%	1%	1%	2.63
Talbots Lot	48	84%	10%	3%	1%	1%	0%	2.52
Ravioli House Lot	39	84%	13%	0%	2%	2%	0%	2.47
<b>10 Hour</b>								
Tennis Court Garage	74	59%	20%	10%	8%	3%	1%	3.61
El Camino Real Garage	240	37%	19%	15%	14%	8%	8%	5.31
Transit Center Garage	215	59%	22%	12%	4%	1%	2%	3.41
<b>On-Street</b>								
24 Minute	13	N/A	N/A	N/A	N/A	N/A	N/A	0.43
4 Hour	120	N/A	N/A	N/A	N/A	N/A	N/A	0.93

# SAN MATEO FOCUSED PARKING UTILIZATION STUDY



## Legend

### Average duration of vehicles per facility/blockface per day

Off-Street	On-Street	Duration
Green	Green	0 - 1 hour
Light Green	Light Green	1 - 2 hours
Yellow-Green	Yellow-Green	2 - 3 hours
Orange	Orange	3 - 4 hours
Red	Red	4 or more hours

(1.68) Average number of unique cars per space per day

+++ Caltrain  
 [---] Central Parking Improvement District

0 250 500 Feet



## Parking Turnover

Parking turnover is an indicator of how often a single parking space is used by vehicles throughout the day. Turnover rates are essential for areas with limited parking supply, such as within the downtown core, as they signify the level of convenience and availability for patrons parking in the area throughout the day.

The average frequency of parking turnover is shown below in **Table 9** and graphically in **Figures 1** and **2** for the five off-street facilities that received bi-hourly vehicle plate collection.

Weekday and weekend days experience similar turnover rates. The five off-street facilities on the weekday all experience an average of two vehicles or less per space. On the weekend, the Talbots Lot is the only facility to exhibit an average of two to four vehicles per space throughout the day; all other facilities experience two vehicles or less per space. However, the El Camino Real Garage actually exhibits lower turnover during the weekend as compared to the weekday. Overall, the surveyed facilities are being used primarily as long-term parking facilities.

**Table 9 Parking Turnover**

Garage/Lot	Total Spaces	Average Unique Cars Per Space Per Day			
		Feb 2015		July 2013	
		Weekday	Weekend	Weekday	Weekend
Tennis Court Garage	127	1.72	1.58	1.77	1.34
El Camino Real Garage	293	1.34	0.89	1.50	0.58
Transit Center Garage	226	1.78	1.45	1.65	1.30
Talbots Lot	50	1.74	2.82	1.30	3.16
Ravioli House Lot	41	0.83	1.63	0.93	1.49

## Permit Parking

As part of the data collection, vehicles displaying long-term employee permits (i.e. non-time-limited parking) were also recorded; this allows for occupancy and duration information of permit vehicles to be analyzed. Permit duration and turnover analysis was limited to facilities with 10-hour parking spaces, as the City of San Mateo allows only permit parking to occur in that space type.

### Permit Occupancy

#### *Weekday Permit Occupancy*

**Tables 10** and **11** present weekday permit space occupancies, organized by permit users and non-permit users, for all available permit spaces throughout the study area.

Throughout the day permit users accounted for up to 40 percent of occupancy across all permit facilities. Permit holders generally are most frequently observed during standard business hours,

with a significant drop in permit usage in the 10-hour spaces by 6 PM. A substantial number of permit users park in the Central Garage, Tennis Court Garage, and El Camino Garage; in contrast, the Transit Center Garage was observed to be the least utilized by permit holders. The low permit space usage at the Transit Center Garage suggests available permit parking supply, and could be attributed to the relative distance away from the downtown core and use by Caltrain riders instead of downtown employees.

Overall, in comparison to the July 2013 data, there are fewer permit users present throughout the day. This may indicate a potential decline in permit participation as fewer permit users are utilizing the permit facilities, as well as a general increase in parking occupancy for early arriving vehicles wanting to utilize the 10-hour spaces. This would need to be confirmed with a duration analysis.

**Table 10 Permit Space Occupancy by User Type – Bi-Hourly (Weekday)**

Parking Type/Facility	Total Permit Spaces	User Type	8 AM	10 AM	12 PM	2 PM	4 PM	6 PM	8 PM	10 PM
<b>Bi-Hourly</b>										
Tennis Court Garage	74	Permit	3%	32%	30%	30%	28%	23%	4%	0%
		Non-Permit	24%	68%	70%	62%	59%	23%	20%	7%
		<b>Total</b>	<b>27%</b>	<b>100%</b>	<b>100%</b>	<b>92%</b>	<b>88%</b>	<b>46%</b>	<b>24%</b>	<b>7%</b>
El Camino Real Garage	240	Permit	10%	33%	34%	35%	30%	13%	5%	1%
		Non-Permit	20%	58%	58%	55%	50%	19%	5%	2%
		<b>Total</b>	<b>30%</b>	<b>92%</b>	<b>92%</b>	<b>91%</b>	<b>81%</b>	<b>32%</b>	<b>10%</b>	<b>3%</b>
Transit Center Garage	215	Permit	3%	5%	4%	6%	6%	3%	0%	0%
		Non-Permit	45%	79%	91%	91%	78%	57%	53%	27%
		<b>Total</b>	<b>48%</b>	<b>84%</b>	<b>95%</b>	<b>96%</b>	<b>83%</b>	<b>60%</b>	<b>53%</b>	<b>27%</b>
<b>Total</b>	<b>529</b>	<b>Permit</b>	<b>6%</b>	<b>22%</b>	<b>21%</b>	<b>22%</b>	<b>20%</b>	<b>10%</b>	<b>3%</b>	<b>1%</b>
		<b>Non-Permit</b>	<b>31%</b>	<b>68%</b>	<b>73%</b>	<b>71%</b>	<b>63%</b>	<b>35%</b>	<b>26%</b>	<b>13%</b>
		<b>Total</b>	<b>37%</b>	<b>90%</b>	<b>95%</b>	<b>93%</b>	<b>83%</b>	<b>45%</b>	<b>29%</b>	<b>13%</b>
<b>July 2013 Comparison</b>										
<b>Total</b>	<b>529</b>	<b>Permit</b>	<b>17%</b>	<b>34%</b>	<b>29%</b>	<b>34%</b>	<b>33%</b>	<b>12%</b>	<b>1%</b>	<b>0%</b>
		<b>Non-Permit</b>	<b>23%</b>	<b>48%</b>	<b>57%</b>	<b>47%</b>	<b>40%</b>	<b>26%</b>	<b>30%</b>	<b>14%</b>
		<b>Total</b>	<b>40%</b>	<b>82%</b>	<b>86%</b>	<b>81%</b>	<b>73%</b>	<b>38%</b>	<b>31%</b>	<b>14%</b>

**Table 11 Permit Space Occupancy by User Type – Spot Occupancy (Weekday)**

Parking Type/Facility	Total Permit Spaces	User Type	Morning	Midday	Afternoon	Early Evening
<b>Bi-Hourly</b>						
Central Garage	209	Permit	11%	49%	36%	33%
		Non-Permit	13%	49%	55%	53%
		<b>Total</b>	<b>24%</b>	<b>98%</b>	<b>90%</b>	<b>86%</b>
Main Street Garage	160	Permit	23%	29%	29%	12%
		Non-Permit	39%	71%	71%	50%
		<b>Total</b>	<b>62%</b>	<b>100%</b>	<b>100%</b>	<b>62%</b>
<b>Total</b>	<b>369</b>	<b>Permit</b>	<b>16%</b>	<b>40%</b>	<b>33%</b>	<b>24%</b>
		<b>Non-Permit</b>	<b>24%</b>	<b>58%</b>	<b>62%</b>	<b>51%</b>
		<b>Total</b>	<b>41%</b>	<b>99%</b>	<b>95%</b>	<b>76%</b>
<b>July 2013 Comparison</b>						
<b>Total</b>	<b>369</b>	<b>Permit</b>	<b>10%</b>	<b>44%</b>	<b>44%</b>	<b>33%</b>
		<b>Non-Permit</b>	<b>10%</b>	<b>54%</b>	<b>52%</b>	<b>50%</b>
		<b>Total</b>	<b>20%</b>	<b>98%</b>	<b>96%</b>	<b>83%</b>

***Weekend Permit Occupancy***

**Tables 12 and 13** present weekend permit space occupancies, organized by permit users and non-permit users, for all available permit spaces throughout the study area.

Overall, there are dramatically less permit users found in the downtown, as they account for no more than six percent of the permit space occupancies throughout the day, indicating most permit users are likely weekday-only (i.e. standard employee) parkers. Current permit weekend occupancy data is similar to the July 2013 data, where few permit users were observed on the weekend.

**Table 12 Permit Space Occupancy by User Type – Bi-Hourly (Weekend)**

Parking Type/Facility	Total Permit Spaces	User Type	8 AM	10 AM	12 PM	2 PM	4 PM	6 PM	8 PM	10 PM
<b>Bi-Hourly</b>										
Tennis Court Garage	74	Permit	0%	1%	1%	0%	1%	1%	1%	1%
		Non-Permit	12%	30%	51%	55%	38%	12%	14%	4%
		<b>Total</b>	<b>12%</b>	<b>31%</b>	<b>53%</b>	<b>55%</b>	<b>39%</b>	<b>14%</b>	<b>15%</b>	<b>5%</b>
El Camino Real Garage	240	Permit	1%	2%	2%	1%	1%	0%	1%	0%
		Non-Permit	3%	15%	16%	19%	15%	9%	14%	6%
		<b>Total</b>	<b>3%</b>	<b>16%</b>	<b>18%</b>	<b>20%</b>	<b>16%</b>	<b>9%</b>	<b>15%</b>	<b>7%</b>
Transit Center Garage	215	Permit	0%	1%	1%	0%	0%	0%	0%	0%
		Non-Permit	4%	10%	18%	24%	22%	42%	92%	46%
		<b>Total</b>	<b>4%</b>	<b>11%</b>	<b>20%</b>	<b>25%</b>	<b>22%</b>	<b>42%</b>	<b>92%</b>	<b>46%</b>
<b>Total</b>	<b>529</b>	<b>Permit</b>	<b>1%</b>	<b>2%</b>	<b>2%</b>	<b>1%</b>	<b>1%</b>	<b>0%</b>	<b>1%</b>	<b>0%</b>
		<b>Non-Permit</b>	<b>4%</b>	<b>15%</b>	<b>22%</b>	<b>26%</b>	<b>21%</b>	<b>23%</b>	<b>45%</b>	<b>22%</b>
		<b>Total</b>	<b>5%</b>	<b>16%</b>	<b>24%</b>	<b>27%</b>	<b>22%</b>	<b>23%</b>	<b>46%</b>	<b>22%</b>
<b>July 2013 Comparison</b>										
<b>Total</b>	<b>529</b>	<b>Permit</b>	<b>1%</b>	<b>2%</b>	<b>2%</b>	<b>2%</b>	<b>0%</b>	<b>0%</b>	<b>0%</b>	<b>0%</b>
		<b>Non-Permit</b>	<b>4%</b>	<b>16%</b>	<b>22%</b>	<b>24%</b>	<b>19%</b>	<b>19%</b>	<b>40%</b>	<b>20%</b>
		<b>Total</b>	<b>5%</b>	<b>18%</b>	<b>25%</b>	<b>26%</b>	<b>19%</b>	<b>19%</b>	<b>40%</b>	<b>20%</b>

**Table 13 Permit Space Occupancy by User Type – Spot Occupancy (Weekend)**

Parking Type/Facility	Total Permit Spaces	User Type	Morning	Midday	Afternoon	Early Evening
<b>Bi-Hourly</b>						
Central Garage	209	Permit	4%	6%	7%	4%
		Non-Permit	8%	90%	70%	41%
		<b>Total</b>	<b>12%</b>	<b>96%</b>	<b>77%</b>	<b>45%</b>
Main Street Garage	160	Permit	4%	6%	3%	4%
		Non-Permit	14%	54%	69%	76%
		<b>Total</b>	<b>18%</b>	<b>60%</b>	<b>71%</b>	<b>81%</b>
<b>Total</b>	<b>369</b>	<b>Permit</b>	<b>4%</b>	<b>6%</b>	<b>5%</b>	<b>4%</b>
		<b>Non-Permit</b>	<b>11%</b>	<b>74%</b>	<b>69%</b>	<b>56%</b>
		<b>Total</b>	<b>15%</b>	<b>80%</b>	<b>74%</b>	<b>61%</b>
<b>July 2013 Comparison</b>						
<b>Total</b>	<b>369</b>	<b>Permit</b>	<b>4%</b>	<b>6%</b>	<b>9%</b>	<b>5%</b>
		<b>Non-Permit</b>	<b>12%</b>	<b>51%</b>	<b>65%</b>	<b>60%</b>
		<b>Total</b>	<b>16%</b>	<b>57%</b>	<b>74%</b>	<b>65%</b>

## Permit Duration

### *Weekday Permit Duration*

**Table 14** presents weekday parking duration for permit users parking in 10-hour spaces. The permit users in permit spaces reflects the total number of permit users observed in permit spaces throughout the day as well as the total number of permit spaces for a given facility.

Permit users were observed to park for extended periods of time, at an overall duration of approximately 7.26 hours. Compared to durations of facilities with 10-hour spaces, these durations are dramatically higher. This suggests permit users are opting to purchase a permit for long-term parking in-lieu of purchasing extended hours of parking on a daily basis at the 10-hour spaces.

Duration for permit user remains relatively consistent to the July 2013 data indicating permit user behavior has changed very little. However, approximately 100 fewer permit users were identified at the three garages where data could be compared. This could either indicate a reduction in permit participation or that non-permit users are accessing the parking first and paying for all-day parking. This would need to be confirmed with a duration analysis.

**Table 14 Permit User Parking Duration (Weekday)**

Facility and Space Type	Permit Users in Permit Spaces	Parking Duration (Hours)						Average Stay (Hours)
		2	4	6	8	10	12+	
<b>Off-Street</b>								
Tennis Court Garage	31 (74)	10%	19%	16%	3%	42%	10%	7.55
El Camino Real Garage	83 (240)	14%	7%	20%	29%	19%	9%	7.25
Transit Center Garage	16 (215)	19%	13%	25%	19%	6%	19%	6.75
<b>Overall</b>								
<b>Total</b>	<b>130 (973)</b>	<b>14%</b>	<b>11%</b>	<b>20%</b>	<b>22%</b>	<b>23%</b>	<b>11%</b>	<b>7.26</b>
<b>July 2013</b>								
<b>Total</b>	<b>244 (529)</b>	<b>16%</b>	<b>11%</b>	<b>16%</b>	<b>26%</b>	<b>26%</b>	<b>6%</b>	<b>7.06</b>

***Weekend Permit Duration***

**Table 15** presents weekend parking duration for permit users parking in 10-hour spaces.

Few permit users were present on the weekend, resulting in a small sample size to determine average durations, particularly for duration distribution. Despite the small sample size, a similar trend to weekday durations were present as permit durations were higher than facilities with 10-hour spaces. This also suggests permit users are opting to purchase a permit for long-term parking in lieu of purchasing extended hours of parking at 10-hour spaces.

The average permit duration for weekend permit users is lower than the July 2013 data. However, the small sample size makes it difficult to compare and conclude any discernible change in trends.

**Table 15 Permit User Parking Duration (Weekend)**

Facility and Space Type	Permit Users in Permit Spaces	Parking Duration (Hours)						Average Stay (Hours)
		2	4	6	8	10	12+	
<b>Off-Street</b>								
Tennis Court Garage	3 (74)	67%	0%	0%	33%	0%	0%	4.00
El Camino Real Garage	9 (240)	44%	11%	11%	11%	11%	0%	5.56
Transit Center Garage	4 (215)	50%	0%	50%	0%	0%	0%	4.00
<b>Overall</b>								
<b>Total</b>	<b>16 (973)</b>	<b>50%</b>	<b>6%</b>	<b>19%</b>	<b>13%</b>	<b>6%</b>	<b>0%</b>	<b>4.88</b>
<b>July 2013 Data</b>								
<b>Total</b>	<b>15 (973)</b>	<b>7%</b>	<b>33%</b>	<b>40%</b>	<b>13%</b>	<b>0%</b>	<b>7%</b>	<b>6.00</b>



## Appendix A - July 2013 Tables

For comparison purposes, this section includes applicable data tables from the July 2013 PMP.

**Table A1 Parking Duration by Space Type (Weekday)**

Facility and Space Type	Total Spaces	Parking Duration (Hours)						Average Stay (Hours)
		2	4	6	8	10	12+	
<b>4 Hour</b>								
Tennis Court Garage	46	97%	2%	1%	0%	0%	0%	2.61
El Camino Real Garage	46	91%	8%	1%	0%	0%	0%	2.73
Talbots Lot	48	95%	5%	0%	0%	0%	0%	2.46
Ravioli House Lot	39	92%	5%	3%	0%	0%	0%	2.63
<b>10 Hour</b>								
Tennis Court Garage	74	46%	35%	18%	0%	0%	0%	5.80
El Camino Real Garage	240	44%	41%	16%	0%	0%	0%	5.76
Transit Center Garage	215	59%	20%	21%	1%	0%	0%	5.28

Note: Durations have been adjusted to represent the data collection methodology used for the 2015 data in this memo.

**Table A2 Parking Duration by Space Type (Weekend)**

Facility and Space Type	Total Spaces	Parking Duration (Hours)						Average Stay (Hours)
		2	4	6	8	10	12+	
<b>4 Hour</b>								
Tennis Court Garage	46	99%	1%	0%	0%	0%	0%	2.34
El Camino Real Garage	46	96%	3%	1%	0%	0%	0%	2.57
Talbots Lot	48	99%	1%	1%	0%	0%	0%	2.36
Ravioli House Lot	39	98%	2%	0%	0%	0%	0%	2.20
<b>10 Hour</b>								
Tennis Court Garage	74	59%	32%	10%	0%	0%	0%	4.80
El Camino Real Garage	240	37%	45%	15%	3%	0%	0%	6.03
Transit Center Garage	215	82%	15%	1%	1%	0%	0%	3.49

Note: Durations have been adjusted to represent the data collection methodology used for the 2015 data in this memo.