

## MEMORANDUM

**DATE:** May 29, 2019

**TO:** Andrew Sics  
City of Snohomish

**FROM:** Spenser Haynie/Chris Forster, P.E.  
TENW

**SUBJECT:** Parking Analysis  
McDonald's Redevelopment – Snohomish, WA  
TENW Project No. 5663

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Hard copy received on 6/3/2019

This memorandum documents the parking analysis conducted for the redevelopment (expansion) of the existing McDonald's restaurant located at 917 Avenue D in Snohomish, WA. This memo includes a project description, comparison of code required parking to proposed parking supply, and a justification for a reduction in required parking based on a parking study conducted at existing McDonald's Restaurant locations.

### Project Description

The existing McDonald's site is located at 917 Avenue D in Snohomish, WA. A vicinity map is included as **Attachment A**.

The proposed project includes a new 4,586 square foot (SF) McDonald's fast food restaurant with drive-through replacing an existing 3,521 SF McDonald's for a net increase of 1,065 SF. The redevelopment will also include an expanded drive-through facility with a new 2-lane entry configuration. Customer and delivery vehicle ingress/egress will remain the same, with full access provided by the existing driveway on Avenue D. A preliminary site plan is included as **Attachment B**.

### Parking Supply

The existing McDonald's site includes 33 on-site parking stalls. Based on the current site plan, the proposed redevelopment of the existing McDonald's site would include a total of 44 on-site parking stalls (9.59 stalls per 1,000 SF).

### Code Required Parking

City of Snohomish requires off-street parking based on Snohomish Municipal Code (SMC) section 14.235. Per SMC 14.235.200, the minimum code-required off-street parking for eating and drinking places is 1 space per 100 SF (for sit-down establishments). As the proposed McDonald's restaurant includes both sit-down and drive-through functions, the minimum parking ratio in SMC 14.235.200 is not directly applicable. SMC 14.235.030 states that for uses not specified the applicant may be required to provide sufficient information to demonstrate that the parking demand for a specific use will be satisfied, based upon existing uses similar to the proposed use. Pursuant to this requirement and based on discussions with the City, parking study data from other existing McDonald's restaurants was used to justify the adequacy of the proposed parking supply.

## Parking Study at Existing McDonald's Restaurants

A parking study was conducted in 2017 by the professional engineering firm Kimley Horn at three existing McDonald's restaurants in California for the purposes of documenting the peak parking demand at the existing McDonald's sites. Based on the results, the observed weekday peak parking demand ranged between 3.95 and 6.39 with an overall average of 5.44 parked vehicles per 1,000 SF. The parking study conducted by Kimley Horn is included as **Attachment C**.

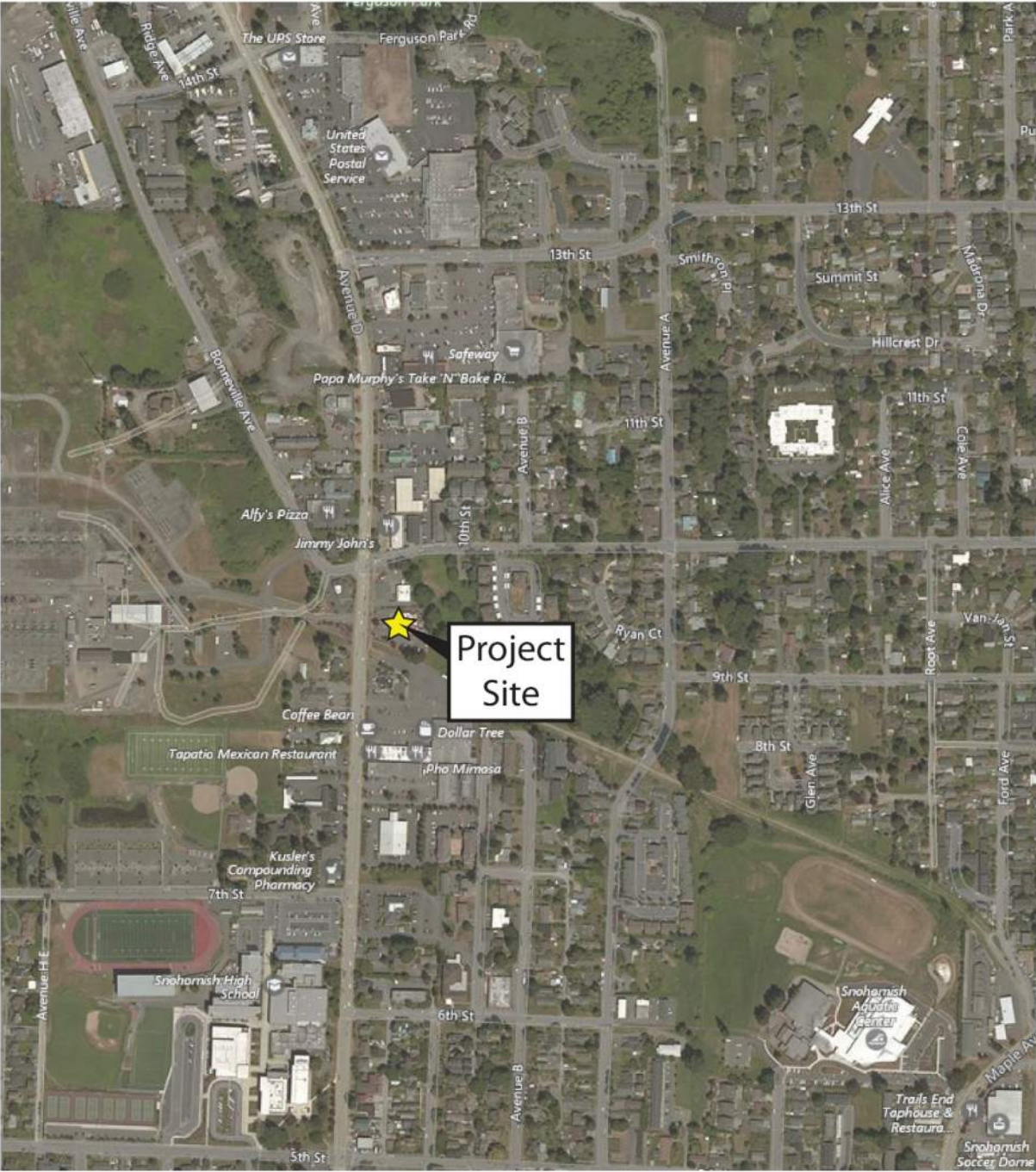
## Conclusion

Based on the latest site plan and the observed McDonald's peak parking demand rate at three existing McDonald's sites in California, the estimated peak parking demand for the proposed project in Snohomish is 25 vehicles (4,586 SF/1,000 SF x 5.44 parked vehicles per 1,000 SF). This estimated peak parking demand will be accommodated by the proposed on-site parking supply (44 parking spaces, 9.59 stalls per 1,000 SF).

Please contact Spenser Haynie at 206-390-7253 or [spenser@tenw.com](mailto:spenser@tenw.com) if you have any questions with the information included in this memorandum.

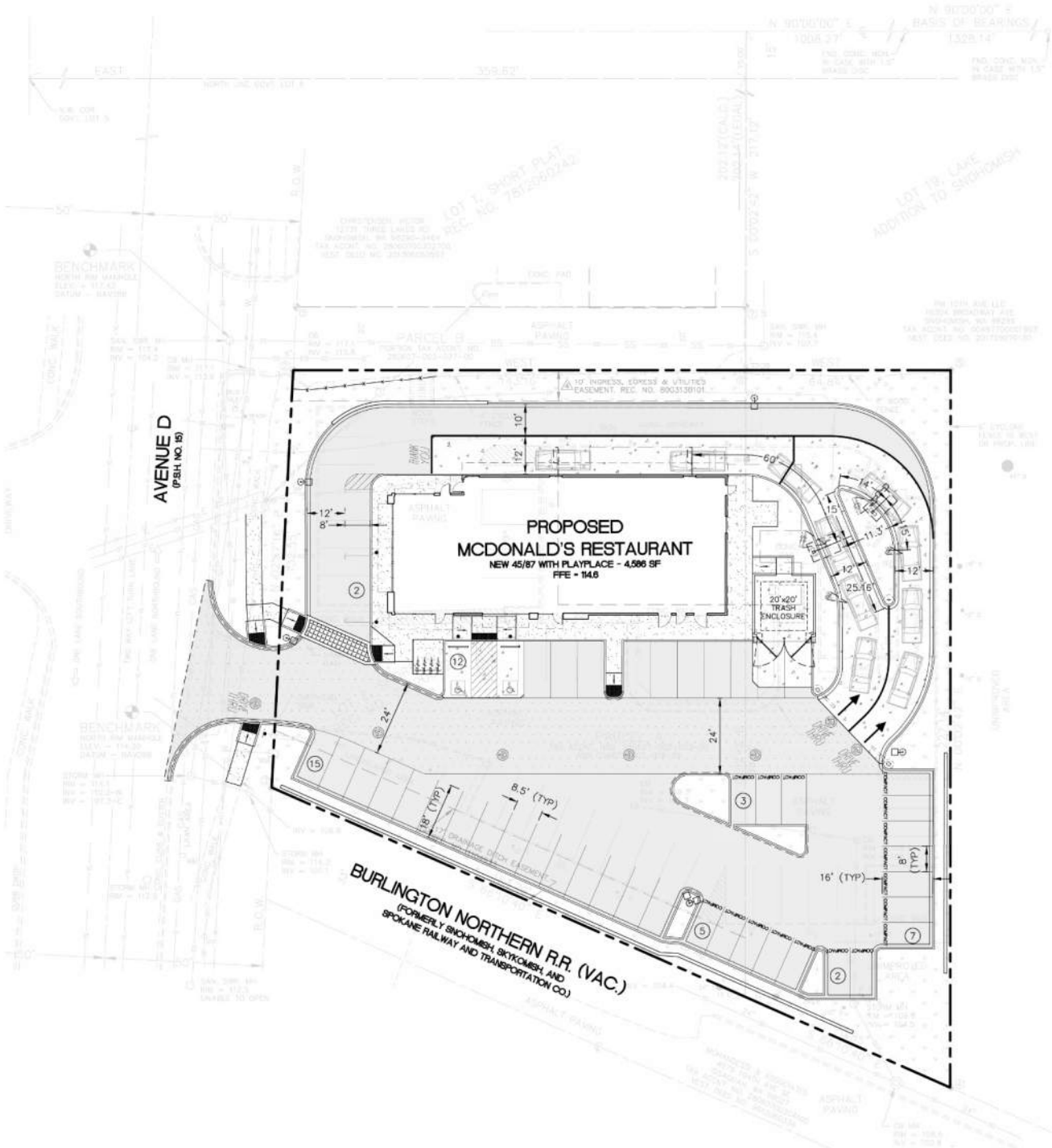
cc: Jason Green, Navix Engineering

Attachments



Attachment A: Site Vicinity Map





Attachment B: Preliminary Site Plan



## ATTACHMENT C

Parking Study at Existing McDonald's Restaurant Locations  
Kimley Horn, 2017

## Memorandum

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**To:** Jeff Holzer  
PM Design Group, Inc.

**From:** Chris Gregerson, P.E.  
Matt Weir, P.E., T.E., PTOE

**Re:** *McDonald's #2280, Roseville Harding*  
Parking Study  
Roseville, California

**Date:** January 17, 2017

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Per your request and authorization, we have prepared this traffic evaluation for the above referenced project.

### Project Understanding

Kimley-Horn understands that McDonald's plans to rebuild the existing restaurant located at 120 Harding Boulevard in Roseville. The 4,267-square foot rebuild will replace the existing 3,600-square foot restaurant. The current restaurant has 63 parking stalls while the rebuild, through its expansion and setback requirements, is anticipated to provide a total of 61 parking stalls. You have noted that the City's zoning code requires one parking stall per 50-square feet, or 86 total stalls.

We also understand that the project site is included in a 1961 reciprocal parking agreement with the two adjacent parcels, both of which are currently operating as restaurants (Waffle Square and Fish & Chips). Although not the focus of this effort, you have also requested we consider how the three uses' parking dynamics are currently interacting. In the event the project site was found to have insufficient parking supply, it may have been necessary to look at the three parcels comprehensively to achieve the parking conditions ultimately required by the City.

The purpose of this study was to document the existing restaurant's parking conditions to enable us to more accurately project the anticipated parking operations on the project site with the store's rebuild. We have also documented the parking conditions for the two adjacent parcels (Waffle Square and Fish & Chips) to enable a comprehensive evaluation of the three uses that are included in the existing reciprocal parking agreement. Finally, as you have requested, we have also surveyed two similar local McDonald's stores to document their parking and drive-thru dynamics for the purpose of bolstering the Harding Boulevard site's parking conditions and comparison to the City's requirements.

### Data Collection

We completed a site visit to observe the site's parking supply, designations, access, circulation, drive-thru configuration/operations, and other readily apparent features that were deemed by Kimley-Horn to be relevant to the Scope of Services. In addition, the following data were collected to complete this study:

- **Harding Boulevard Site**
  - Inventory of existing parking supply for the project site and two adjacent sites (Waffle Square and Fish & Chips)
  - Parking occupancy and drive-thru observations at 15-minute intervals on a typical weekday: 6:00 am – 2:00 pm (8 hours) for all three Harding Boulevard sites (Waffle Square, Fish & Chips, and existing McDonald's)

- **Sample Sites** (3994 Foothills Blvd, Roseville, and 7850 Lichen Dr, Citrus Heights)
  - Inventory of existing parking supply.
  - Parking occupancy and drive-thru observations at 15-minute intervals on a typical weekday: 6:00 am – 2:00 pm (8 hours).

The data collected for the **Harding Boulevard site** enabled the following conclusions (see data summary table provided as **Attachment A** to this memorandum):

- The comprehensive three-parcel site experiences a maximum parking occupancy during the 15-minute interval between 12:15 pm - 12:30 pm (48 total parked vehicles, 38-percent occupancy).
  - Although not included in the **Attachment A** data, the three individual parcels (McDonald’s, Waffle Square, and Fish & Chips) experience individual parking occupancy maximums of 39-percent, 21-percent, and 95-percent respectively.
- Because the three parcels do not exceed their individual parking supplies, it was determined that the Harding Boulevard site would be considered independently from the two adjacent parcels for the purpose of this evaluation.
- The existing McDonald’s site was observed to have peak parking occupancy less than 40-percent (23 total parked vehicles, 38-percent occupancy).

Furthermore, the data collected for the **Sample Sites** enable the following conclusions (see data summary table provided as **Attachment A** to this memorandum):

- The two sample sites were observed to have peak parking occupancy of less than 50-percent (45-percent at 3994 Foothills Boulevard, 47-percent at 7850 Lichen Drive).
- Similar to the Harding Boulevard site, both of the sample sites’ data collection included adjacent parking supply outside the immediate McDonald’s parking lot to ensure an accurate parking demand (and therefore occupancy) was captured. As noted above, because both McDonald’s parking lots had adequate parking supply (parking occupancy less than 50-percent), the adjacent parking supplies were not included in this evaluation.

**Attachment A** also includes a summary graph in which each of the three sites’ parking occupancy is plotted over the course of the study period (6:00 a.m. – 2:00 p.m.).

**Parking Evaluation**

As noted above, we completed a parking occupancy study for the existing project site, as well as the two sample sites. This study determined the sites’ current observed peak parking occupancy and peak generation rate (number of spaces per thousand square feet). This data is summarized in **Table 1** below.

**Table 1 – Parking Rates**

McDonald's Location	Building Size (sf)	Peak Parking (# Occupied Spaces)	Peak Parking Rate (# Occupied Spaces / 1,000 sf)
120 Harding Blvd	3,600	23	6.39
3994 Foothills Blvd	4,375	26	5.94
7850 Lichen Dr	3,800	15	3.95
<b>Average:</b>	<b>3,925</b>	<b>21</b>	<b>5.44</b>

As depicted in **Table 1**, the existing McDonald’s located at 120 Harding Boulevard exhibits the highest peak parking rate (6.39 occupied spaces per 1,000 square feet), while the average of the three sites equates to 5.44 occupied spaces per 1,000 square feet. Accordingly, when the average local rate is used along with the published Institute of Transportation Engineers’ (ITE) rate, it is possible to compare the proposed number of parking spaces (61) to the projected peak parking demand at the project site. This data is presented in **Table 2**. Only the ITE 85<sup>th</sup> percentile peak period demand exceeds the proposed parking supply (65 vs. 61).

**Table 2 – Projected Parking Demand**

Source of Parking Generation Rate	Proposed Size (sq. ft.) <b>(A)</b>	Peak Parking Rate (# Occupied Spaces / 1,000 sf) <b>(B)</b>	Peak Parking (# Occupied Spaces) <b>((A)*(B)/1000)</b>
Average Local Rate	4,267	5.44	24
ITE Avg Peak <sup>+</sup>	4,267	9.98	43
ITE 85th Percentile <sup>+</sup>	4,267	15.13	65

<sup>+</sup> Source: *Parking Generation, 4th Edition*, ITE.

Finally, drive-thru queuing was also considered as part of this evaluation (data provided as **Attachment B** to this memorandum). The primary observations were as follows:

- The site with a single drive-thru lane (120 Harding) has a maximum queue that is only one vehicle longer than the largest queue of the sites with dual drive-thru lanes (13 vs. 12).
- Without additional data and observations, it is unclear if or how the queue length is correlated with the amount of parking spaces occupied or vice versa, or if the two are just increasing as demand is increasing separately. Considering the number of available parking spaces and the queue lengths, it is possible that there is some tangential connection.

**Conclusions**

The following are the primary conclusions based on the analyses discussed herein:

- The proposed project includes 61 parking spaces compared to the 63 existing and 86 required per the City of Roseville’s zoning code. The existing McDonald’s on the project site was observed to experience a peak parking occupancy of 23 spaces (38-percent).
- The combination of the two local sample sites with the existing McDonald’s on the project site results in an average peak parking rate of 5.44 occupied spaces per 1,000 square feet.
- Applying the calculated average local rate (5.44 spaces per 1,000 square feet) and ITE parking generation rates (9.98 spaces per 1,000 square feet, average peak; and 15.13 spaces per 1,000 square feet, 85<sup>th</sup> percentile) to the proposed rebuild (4,267 square feet), the projected peak parking demand is estimated to range from 24 to 65 spaces.
- Considering the quality and applicability of the local data collected, including the unique operational dynamics of the existing use on the project site, the proposed parking supply of 61-spaces appears to be adequate to accommodate the typical weekday parking demands of the proposed project.

**Attachments:**

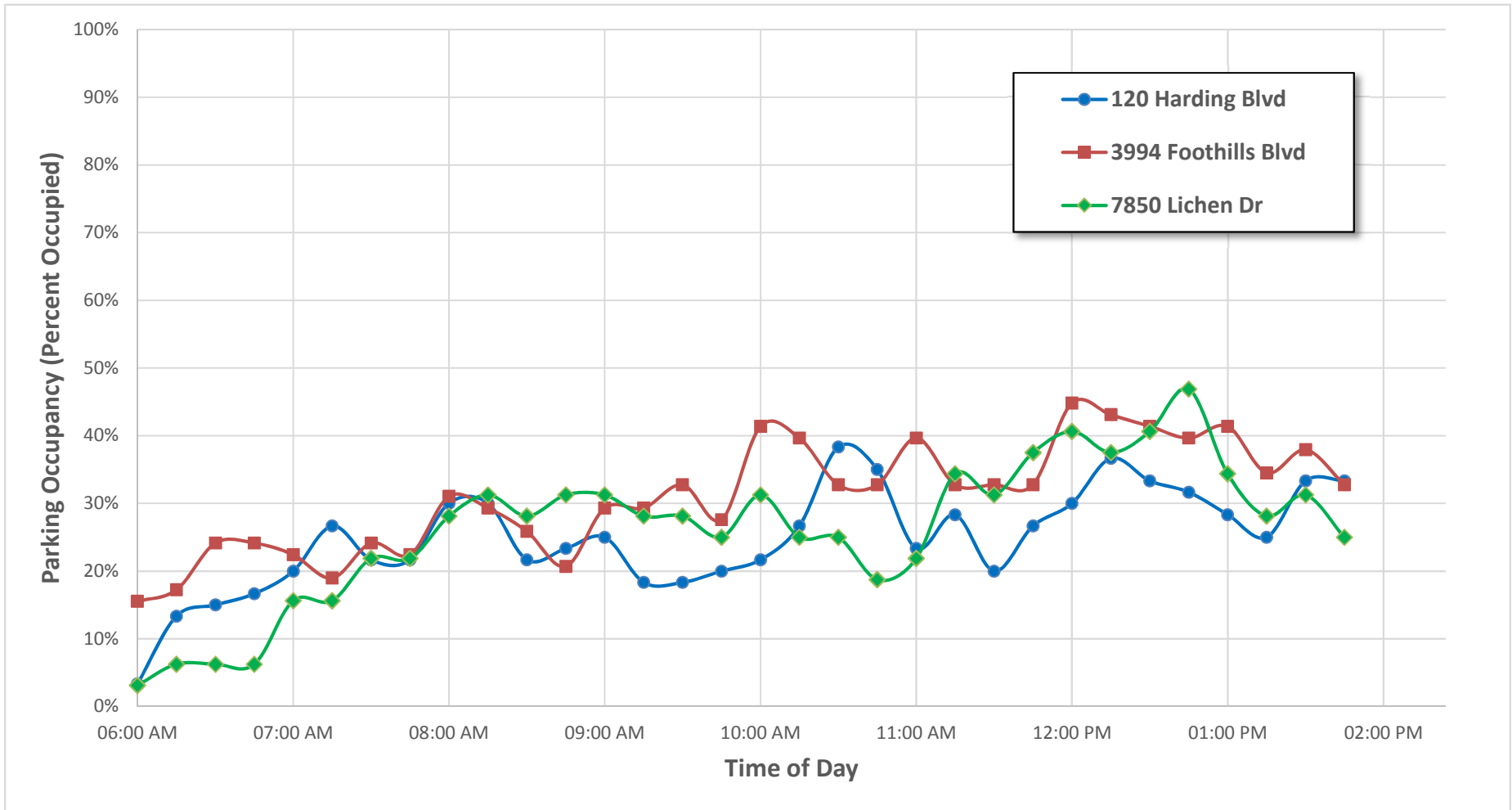
- Attachment A** – Summary Data Table and Graph
- Attachment B** – Drive-thru Queue Data



**Attachment A**  
Summary Data Table and Graph

Time	120 Harding Boulevard									Grand Total	Occupancy Percentage
	Zone 1 McDonalds					Zone 2 Waffle Square		Zone 3 Fish & Chips			
	Regular	HC	Compact	Motorcycle	Reserved (Drive Thru)	Regular	HC	Regular	HC		
06:00 AM	1	0	1	0	0	1	0	0	0	3	2%
06:15 AM	7	0	1	0	0	4	0	1	0	13	10%
06:30 AM	7	0	2	0	0	5	0	3	0	17	13%
06:45 AM	8	0	2	0	0	6	0	3	0	19	15%
07:00 AM	9	1	2	0	0	7	0	3	0	22	17%
07:15 AM	13	1	2	0	0	6	0	3	0	25	20%
07:30 AM	10	1	2	0	0	6	0	3	0	22	17%
07:45 AM	10	1	2	0	0	7	0	3	0	23	18%
08:00 AM	15	1	2	0	0	6	0	3	0	27	21%
08:15 AM	15	1	2	0	0	5	0	4	0	27	21%
08:30 AM	10	0	3	0	0	4	0	3	0	20	16%
08:45 AM	11	0	3	0	0	3	0	4	0	21	17%
09:00 AM	12	0	3	0	0	3	0	4	0	22	17%
09:15 AM	9	0	2	0	0	6	0	4	0	21	17%
09:30 AM	10	0	1	0	0	7	0	4	0	22	17%
09:45 AM	11	0	1	0	0	6	0	4	0	22	17%
10:00 AM	12	0	1	0	0	7	0	4	0	24	19%
10:15 AM	15	0	1	0	0	7	0	3	0	26	20%
10:30 AM	21	1	1	0	0	9	1	5	0	38	30%
10:45 AM	18	2	1	0	0	9	1	4	0	35	28%
11:00 AM	12	0	2	0	0	7	1	5	0	27	21%
11:15 AM	16	0	1	0	0	8	0	6	0	31	24%
11:30 AM	10	0	2	0	0	8	0	5	0	25	20%
11:45 AM	12	2	2	0	0	8	0	7	1	32	25%
12:00 PM	16	0	2	0	0	9	0	13	1	41	32%
12:15 PM	18	0	4	0	0	8	0	17	1	48	38%
12:30 PM	17	0	3	0	0	7	0	16	0	43	34%
12:45 PM	16	1	2	0	0	8	1	18	0	46	36%
01:00 PM	14	0	3	0	1	9	1	14	1	43	34%
01:15 PM	13	0	2	0	0	6	1	10	1	33	26%
01:30 PM	18	0	2	0	0	7	0	8	1	36	28%
01:45 PM	18	0	2	0	0	8	0	8	0	36	28%
<b>Inventory</b>	<b>44</b>	<b>3</b>	<b>13</b>	<b>2</b>	<b>2</b>	<b>42</b>	<b>1</b>	<b>19</b>	<b>1</b>	<b>127</b>	

Time	120 Harding Blvd			3994 Foothills Blvd			7850 Lichen Dr		
	Occupied Spaces: Regular and Compact	Occupied Spaces: Regular, Compact, and HC	Occupied Spaces: Regular, Compact, and HC (% Occupied)	Occupied Spaces: Regular	Occupied Spaces: Regular + HC	Occupied Spaces: Regular + HC (% Occupied)	Occupied Spaces: Regular	Occupied Spaces: Regular + HC	Occupied Spaces: Regular + HC (% Occupied)
06:00 AM	2	2	3%	9	9	16%	1	1	3%
06:15 AM	8	8	13%	10	10	17%	2	2	6%
06:30 AM	9	9	15%	14	14	24%	1	2	6%
06:45 AM	10	10	17%	14	14	24%	2	2	6%
07:00 AM	11	12	20%	13	13	22%	4	5	16%
07:15 AM	15	16	27%	10	11	19%	4	5	16%
07:30 AM	12	13	22%	13	14	24%	6	7	22%
07:45 AM	12	13	22%	13	13	22%	6	7	22%
08:00 AM	17	18	30%	18	18	31%	8	9	28%
08:15 AM	17	18	30%	17	17	29%	8	10	31%
08:30 AM	13	13	22%	15	15	26%	7	9	28%
08:45 AM	14	14	23%	12	12	21%	9	10	31%
09:00 AM	15	15	25%	17	17	29%	9	10	31%
09:15 AM	11	11	18%	16	17	29%	8	9	28%
09:30 AM	11	11	18%	18	19	33%	8	9	28%
09:45 AM	12	12	20%	15	16	28%	7	8	25%
10:00 AM	13	13	22%	24	24	41%	10	10	31%
10:15 AM	16	16	27%	23	23	40%	7	8	25%
10:30 AM	22	23	38%	18	19	33%	7	8	25%
10:45 AM	19	21	35%	18	19	33%	6	6	19%
11:00 AM	14	14	23%	22	23	40%	7	7	22%
11:15 AM	17	17	28%	19	19	33%	11	11	34%
11:30 AM	12	12	20%	18	19	33%	10	10	31%
11:45 AM	14	16	27%	19	19	33%	12	12	38%
12:00 PM	18	18	30%	24	26	45%	13	13	41%
12:15 PM	22	22	37%	23	25	43%	11	12	38%
12:30 PM	20	20	33%	22	24	41%	11	13	41%
12:45 PM	18	19	32%	21	23	40%	13	15	47%
01:00 PM	17	17	28%	23	24	41%	10	11	34%
01:15 PM	15	15	25%	20	20	34%	9	9	28%
01:30 PM	20	20	33%	21	22	38%	10	10	31%
01:45 PM	20	20	33%	19	19	33%	8	8	25%
Inventory	57	60	-	55	58	-	30	32	-



**Attachment B**  
Drive-thru Queue Data

Time	120 Harding Blvd Drive Thru Queue (single)	3994 Foothills Blvd Drive Thru Queue (dual)	7850 Lichen Dr Drive Thru Queue (dual)
06:00 AM	1	1	1
06:15 AM	2	2	3
06:30 AM	3	1	6
06:45 AM	1	3	6
07:00 AM	5	4	3
07:15 AM	4	6	5
07:30 AM	1	7	3
07:45 AM	5	6	10
08:00 AM	3	1	7
08:15 AM	2	7	0
08:30 AM	4	9	11
08:45 AM	3	10	5
09:00 AM	0	6	3
09:15 AM	1	4	7
09:30 AM	2	3	4
09:45 AM	2	1	3
10:00 AM	3	2	9
10:15 AM	2	1	3
10:30 AM	2	5	2
10:45 AM	5	4	2
11:00 AM	6	1	2
11:15 AM	10	8	2
11:30 AM	10	4	3
11:45 AM	7	1	11
12:00 PM	7	2	10
12:15 PM	13	4	7
12:30 PM	8	10	3
12:45 PM	5	11	4
01:00 PM	7	5	12
01:15 PM	3	8	2
01:30 PM	2	11	9
01:45 PM	12	4	0