HWA PARKING
strickland | jamail

NEAR SOUTHSIDE

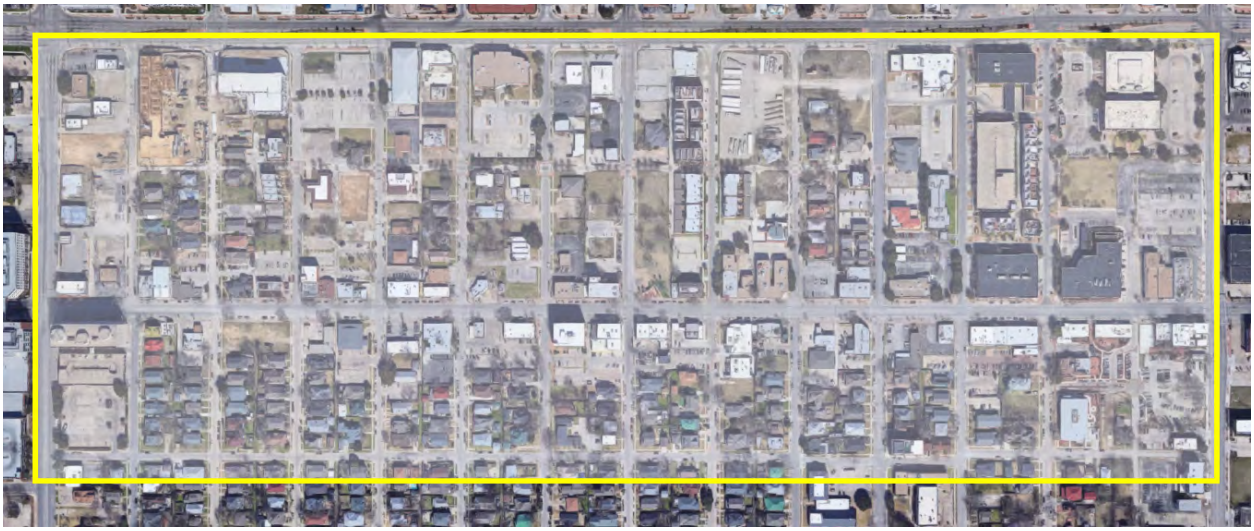
MAGNOLIA VILLAGE PARKING STUDY

ON-STREET PARKING MANAGEMENT REPORT

JANUARY 31, 2019

ON-STREET PARKING MANAGEMENT

HWA PARKING was commissioned by Near Southside Inc. to conduct a parking study of the Magnolia Village district. One task within the overall parking study consists of a supply and demand study within the study boundary. The overall study area is highlighted below.



Four (4) on-site assessments, two (2) weekdays and two (2) weekends, were performed. The weekday assessments were conducted on Thursday, April 26, 2018 and Thursday, May 3, 2018 between the hours of 7:00 am and 9:00 pm. The weekend on-site assessments were conducted on April 28, 2018 and Saturday, May 5, 2018 between the hours of 9:00 am and 9:00 pm. The onsite assessment documents the parking supply and demand of the Magnolia Village study area. The goal of this analysis is to understand the parking demand and utilization for future district planning. The following report summaries the observed demand within the study area.

PARKING METHODOLOGY

This task consisted of an on-site parking utilization study of the Magnolia Village district. Beginning with a parking supply/demand assessment, we performed the following tasks:

1. Document/verify district current parking inventory (on-street)
2. Assess current demand (utilization)
3. Determine present-day parking surpluses or deficits

Definition of Terms

Throughout this report, certain terminology specific to parking and parking analysis is used. The following definitions are provided to help clarify their meaning to a broad audience who may be more or less familiar with parking concepts. More complete discussions are provided throughout the report as appropriate.

Design Day - A typical day from which to observe and collect data that would represent most days of the current year.

Parking Supply - The total number of parking spaces within a defined area.

Parking Demand - The number of parking spaces required to satisfy employee and visitors needs on any given day.

Utilization - Number of occupied parking spaces compared to the total inventory within a given area.

Off-Street – Parking spaces located on surface lots and parking garages and not on a public street, typically private parking.

On-Street – Parking spaces located on public streets, typically along a street curb.

RPP – Residential Parking Permit

RESIDENTIAL PARKING PERMIT

Residential Parking Permit (RPP) is a program designed to give residents a better chance of finding an on-street parking space in their neighborhood. RPP allows any resident of that neighborhood to register a vehicle to be parked without restriction in the permit area of the vehicle's registered address.

The purpose of the Residential Permit Parking (RPP) program is to help ease the impacts to neighborhoods from non-residential parking along streets adjacent to commercial properties. The goal of an RPP program is to increase the amount of on-street parking available to residents and their guests.

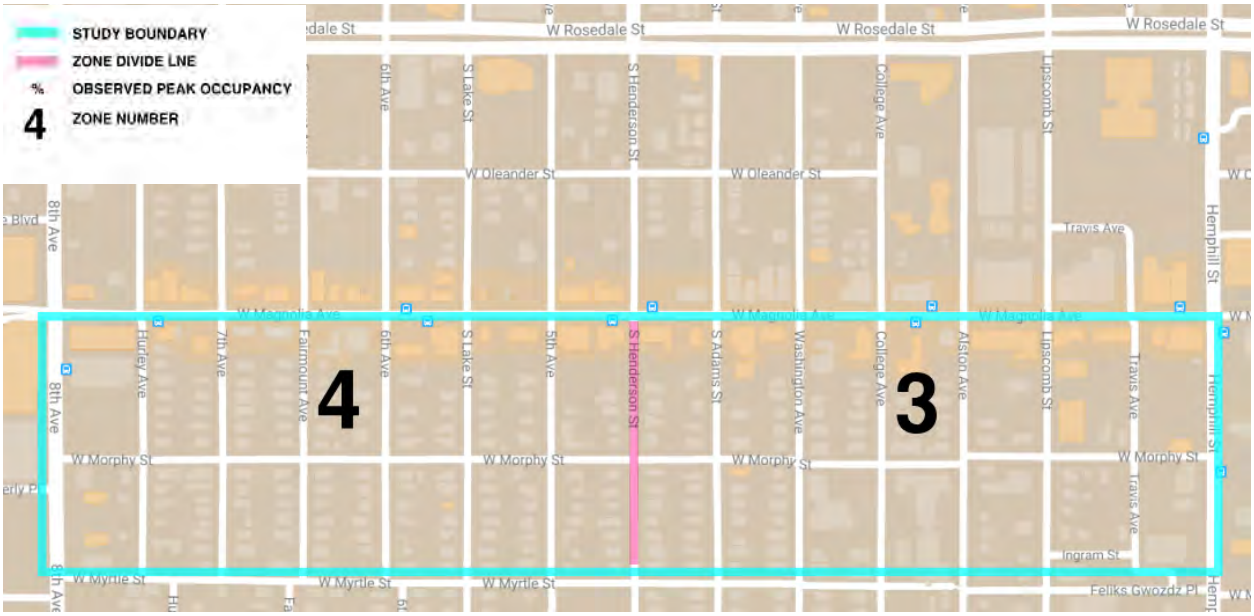
ON-STREET PARKING UTILIZATION (ZONE 3 & 4)

Focusing on the on-street utilization of the area south of Magnolia Ave., the data collection area is bounded by Hemphill St. (east), 8th Ave. (west), Magnolia Ave. (north), and W. Myrtle St. (south). Data was collected up to Myrtle St. on streets running north-south, however no data was collected on W. Myrtle St.

Zone Boundary

- Zone 3 - Hemphill St. (east), S. Henderson St. (west), W. Magnolia Ave. (north), and W. Mrytle St. (south)
- Zone 4 - S. Henderson St. (east), 8th Ave. (west), W. Magnolia Ave. (north), and W. Mrytle (south)

The study area and zones are shown below.



Parking Inventory

There is a total of 480 on-street parking spaces within the study area.

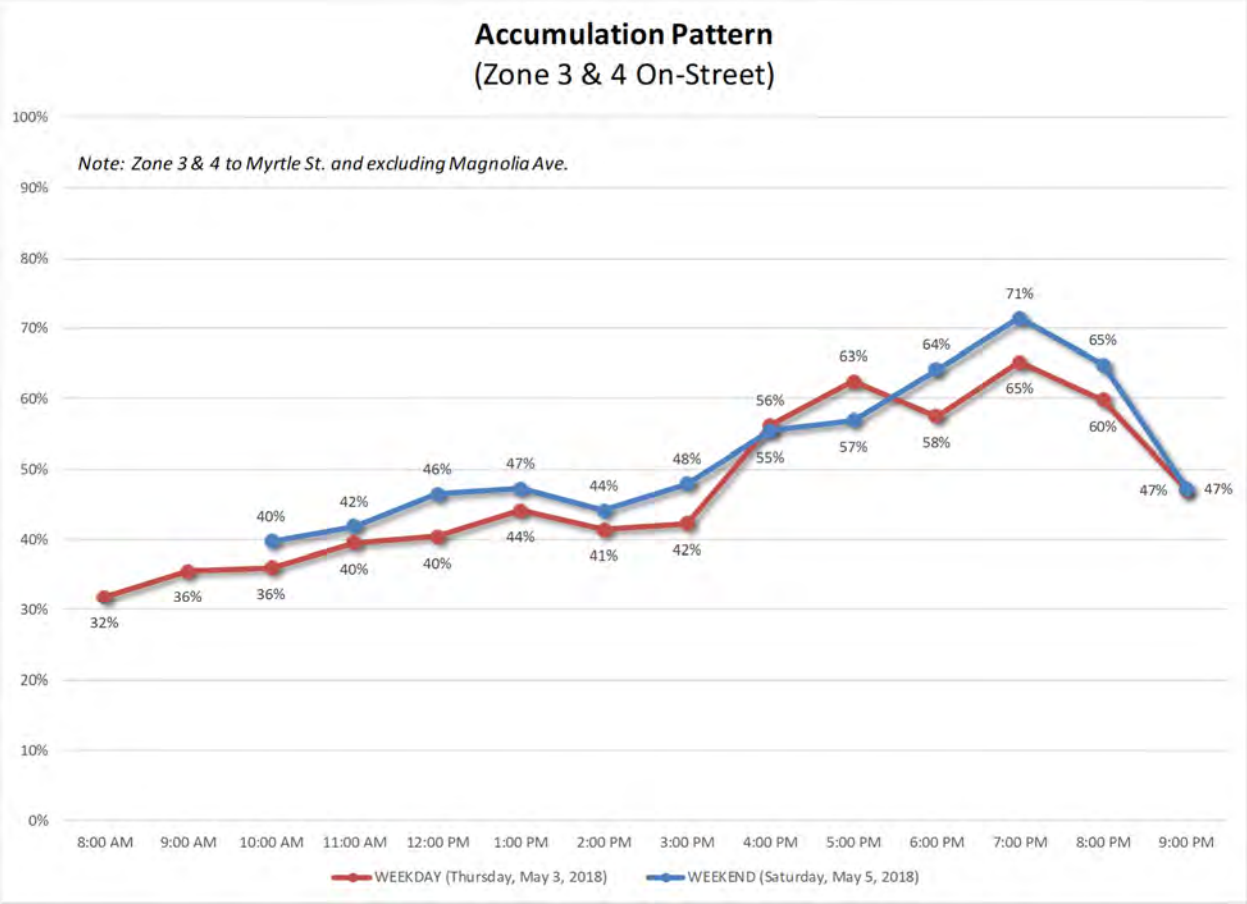
Parking Inventory

Magnolia Village.: On-Street (minus Magnolia Ave.)				**Total**	
Location	**Standard**	**Reserved**	**ADA**	**Capacity**	**% of Total**
Zone 3	269			269	56%
Zone 4	211			211	44%
SUBTOTAL	**480**	**0**	**0**	**480**	**100%**

Utilization

The Magnolia Village Zone 3 & 4 study area on Thursday, May 3, 2018 had a total peak demand of 313 cars at 7:00 PM for a 65% overall on-street observed utilization, based on a total physical inventory of 480 on-street parking spaces. For the weekend, Saturday, May 5, 2018 had a total peak demand of 343 cars at 7:00 PM for an 71% overall on-street observed utilization, based on a total physical inventory of 480 on-street parking spaces.

The chart below represents the accumulation pattern by percent of occupancy for the peak weekday and peak weekend on-street observed for zones 3 & 4 (minus Magnolia Ave.) combined.



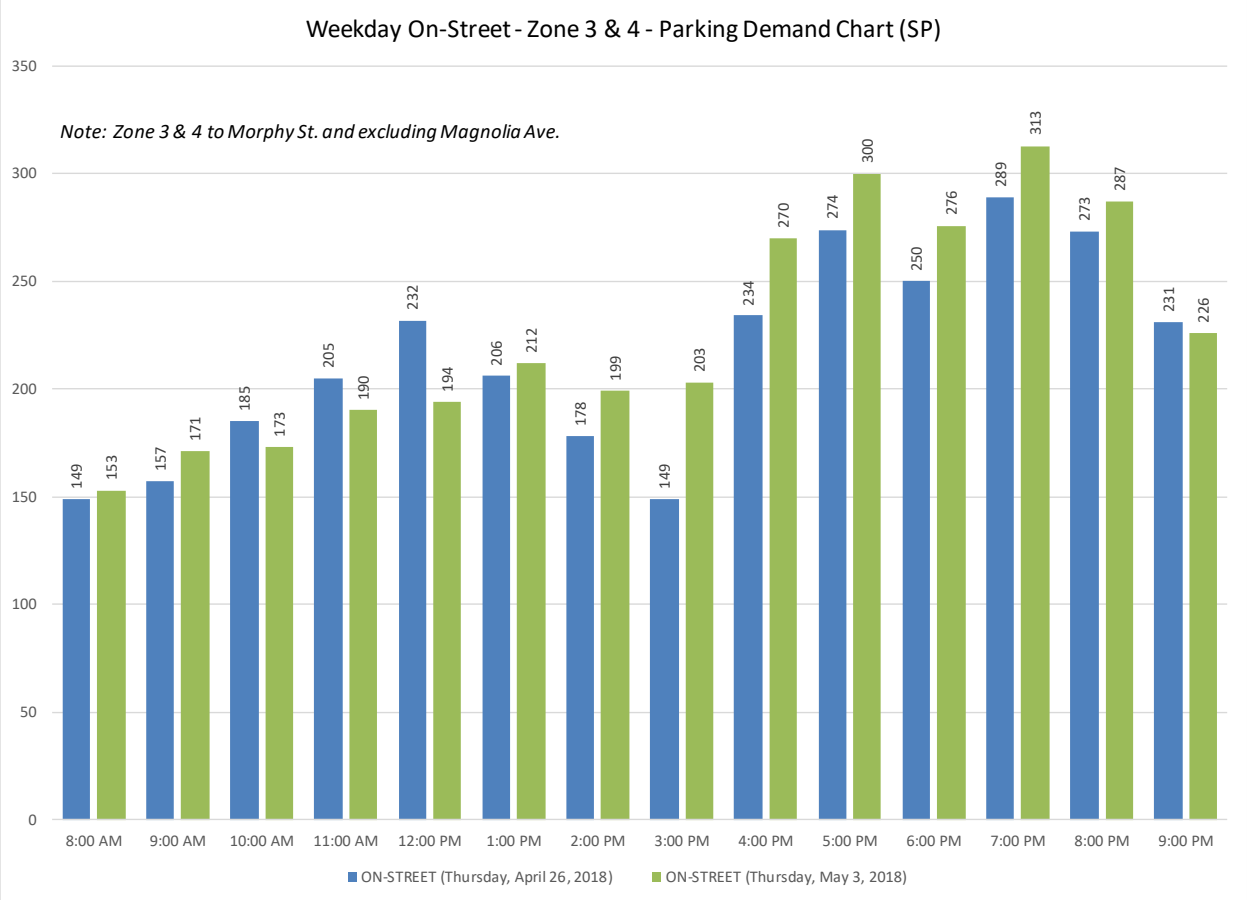
A typical parking accumulation pattern throughout the day of a residential neighborhood shows a higher demand during the early morning hours prior to residents leaving for work, lower demand during the work day, and then an increased demand in the evening as residents return home. The accumulation pattern of zones 3 & 4 shows an increased demand throughout the day as retail patrons and employees park in the residential neighborhood for overflow parking.

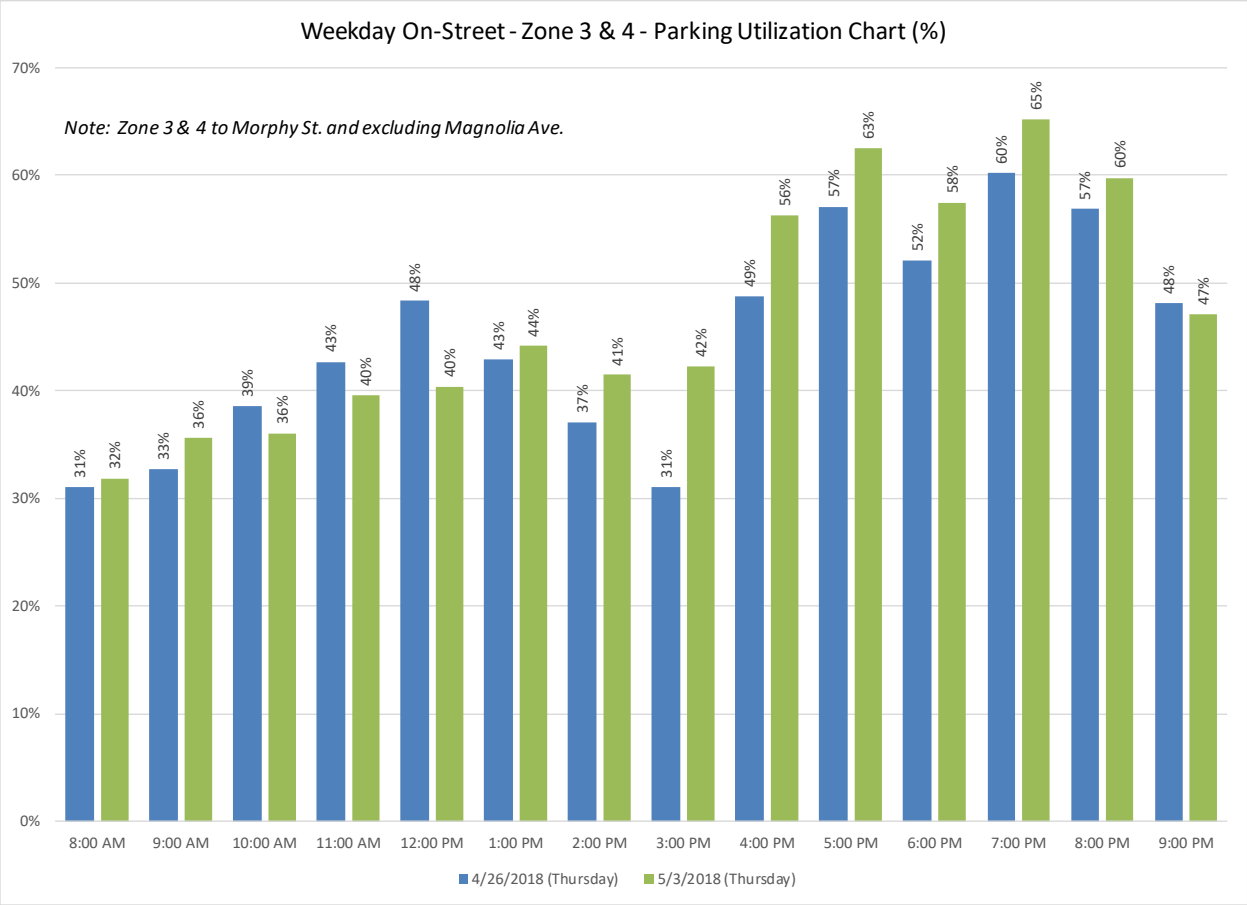
The charts on the following pages show the parking data/utilization and accumulation pattern for the zones 3 & 4 on-street parking. Refer to the Appendix for full size sheets.

Weekday Peak

ON-STREET (Thursday, May 3, 2018)

	Supply	Time	8:00 AM	9:00 AM	10:00 AM	11:00 AM	12:00 PM	1:00 PM	2:00 PM	3:00 PM	4:00 PM	5:00 PM	6:00 PM	7:00 PM	8:00 PM	9:00 PM	PEAK
ZONE 3 SUMMARY																	
On-Street	269	Hourly Demand	80	103	107	114	126	131	119	115	121	146	158	165	161	123	165
		Hourly Occupancy	30%	38%	40%	42%	47%	49%	44%	43%	45%	54%	59%	61%	60%	46%	61%
ZONE 4 SUMMARY																	
On-Street	211	Hourly Demand	73	68	66	76	68	81	80	88	149	154	118	148	126	103	154
		Hourly Occupancy	35%	32%	31%	36%	32%	38%	38%	42%	71%	73%	56%	70%	60%	49%	73%
ALL ZONES SUMMARY																	
On-Street	480	Hourly Demand	153	171	173	190	194	212	199	203	270	300	276	313	287	226	313
		Hourly Occupancy	32%	36%	36%	40%	40%	44%	41%	42%	56%	63%	58%	65%	60%	47%	65%

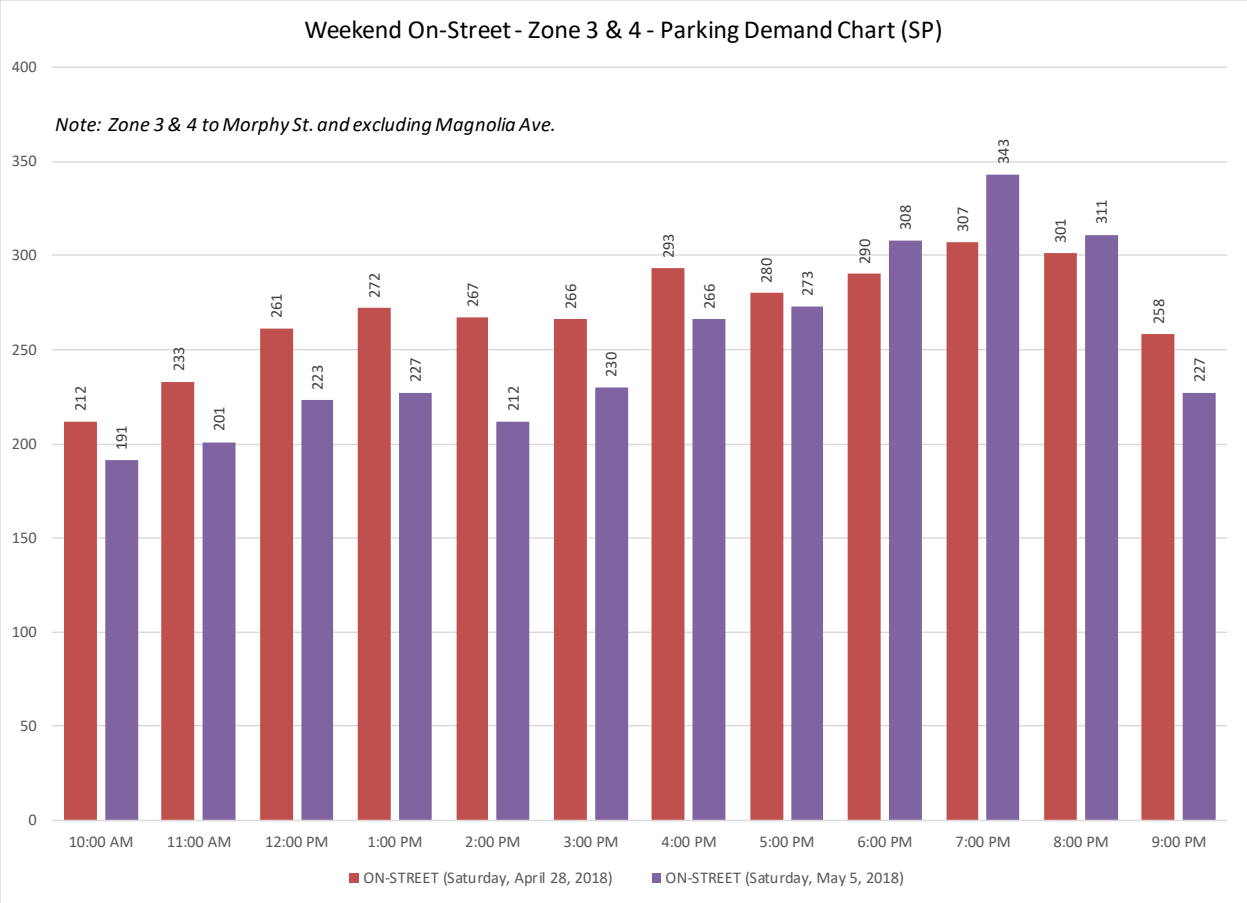


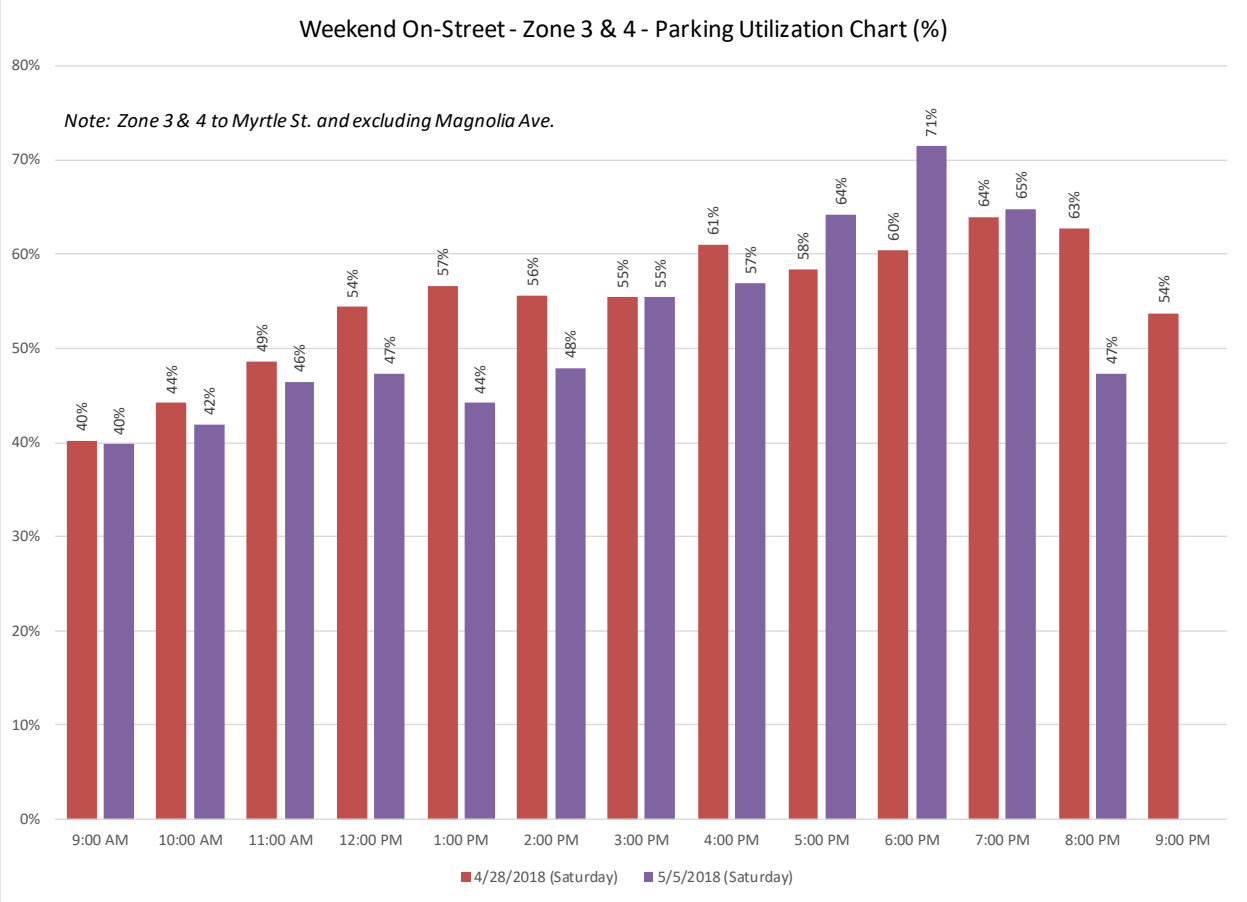

Weekday On-Street - Zone 3 & 4 - Parking Utilization Chart (%)
Note: Zone 3 & 4 to Morphy St. and excluding Magnolia Ave.
70%
60%
50%
40%
30%
20%
10%
0%
8:00 AM
9:00 AM
10:00 AM
11:00 AM
12:00 PM
1:00 PM
2:00 PM
3:00 PM
4:00 PM
5:00 PM
6:00 PM
7:00 PM
8:00 PM
9:00 PM
31%
32%
33%
36%
39%
36%
43%
40%
48%
40%
43%
44%
37%
41%
31%
42%
49%
56%
57%
63%
52%
58%
60%
65%
57%
60%
48%
47%
4/26/2018 (Thursday)
5/3/2018 (Thursday)

Weekend Peak

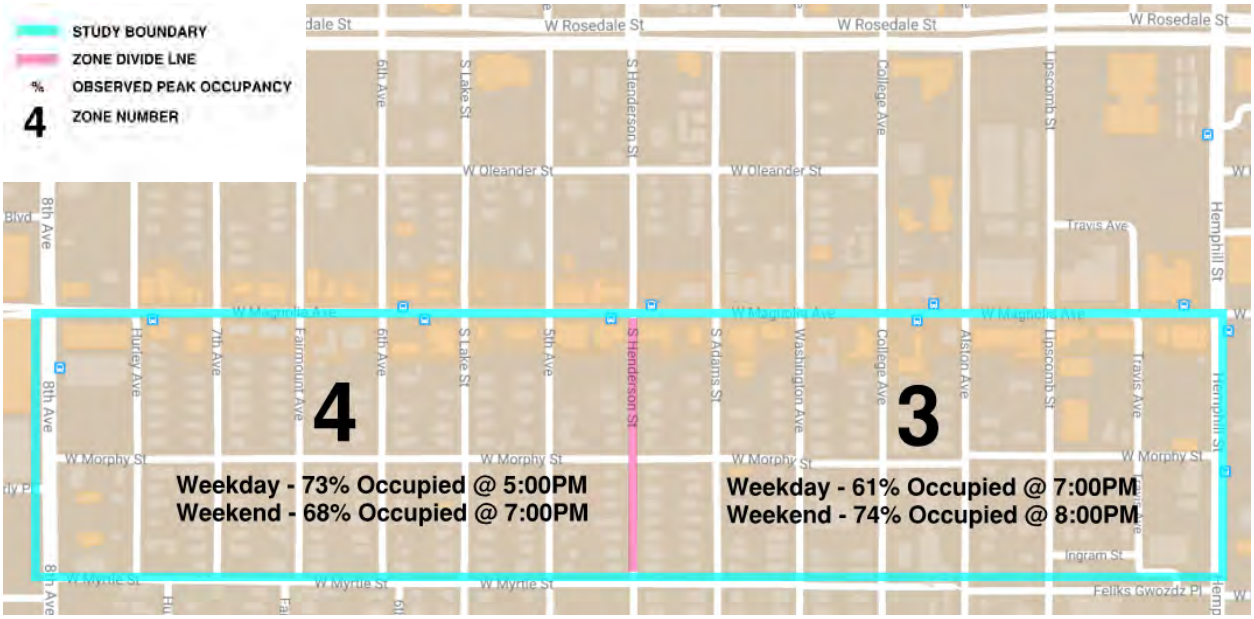
ON-STREET (Saturday, May 5, 2018)

	Supply	Time	10:00 AM	11:00 AM	12:00 PM	1:00 PM	2:00 PM	3:00 PM	4:00 PM	5:00 PM	6:00 PM	7:00 PM	8:00 PM	9:00 PM	PEAK
ZONE 3 SUMMARY															
On-Street	269	Hourly Demand	107	118	144	165	147	157	154	161	178	200	198	131	200
		Hourly Occupancy	40%	44%	54%	61%	55%	58%	57%	60%	66%	74%	74%	49%	74%
ZONE 4 SUMMARY															
On-Street	211	Hourly Demand	84	83	79	62	65	73	112	112	130	143	113	96	143
		Hourly Occupancy	40%	39%	37%	29%	31%	35%	53%	53%	62%	68%	54%	45%	68%
ALL ZONES SUMMARY															
On-Street	480	Hourly Demand	191	201	223	227	212	230	266	273	308	343	311	227	343
		Hourly Occupancy	40%	42%	46%	47%	44%	48%	55%	57%	64%	71%	65%	47%	71%





The map below highlights the peak observed weekday and weekend on-street occupancy for each zone.



Residential Parking Permit Program Benchmark Comparisons

The benchmark cities are intended to parallel the size, development and cultural similarities of Fort Worth. These cities include Fort Worth, Dallas, Austin, San Antonio, and Houston.

	Fort Worth	Austin	Dallas	San Antonio	Houston
Permit Limits					
Resident	Three (3)	Two (2)	Six (6)	Two (2)	Four (4)
Visitor	Two (2)	Two (2)	n/a		Two (2)
Special Event	n/a	20 per event	50 per event	n/a	100 per event
Permit Costs					
Resident	No cost	$15.00 ea.	$6.00 ea.	$20.00 ea.	$28.50 ea.
Visitor	No cost	$15.00 ea.	$6.00 ea.	$20.00 ea.	$28.50 ea.
Special Event	n/a	$1.00 ea. (1 day)	.10 cents (1 day)		$1.14 ea. (1 day)

ON-STREET PAID PARKING

On-street parking meters help in promoting vehicle turnover by providing short-term parking which distributes the limited parking supply across a larger demand base; second, short-term parking improves traffic circulation and economic vitality by maximizing the number of patron visits by car and third, generating revenue for the district.

ON-STREET PARKING UTILIZATION

The study focused on the Magnolia Village district bounded by Hemphill St. (east), 8th Ave. (west), W. Rosedale St. (north), and Magnolia Ave. St. (south). Due to the size of the study area, the parking data collection was broken up into two (2) zones.

Zone Boundary

- Zone 1 – S. Henderson St. (east), 8th Ave. (west), Rosedale St. (north), and W. Magnolia Ave. (south)
- Zone 2 – Hemphill St. (east), S. Henderson St. (west), Rosedale St. (north), and W. Magnolia Ave. (south)

The study area and zones are shown below, including both side of Magnolia Ave.

During the onsite assessment, the study area was visually observed every hour throughout the design day. Parked cars were counted at each parking location of each collection zone during the survey timeframe.

Parking Inventory

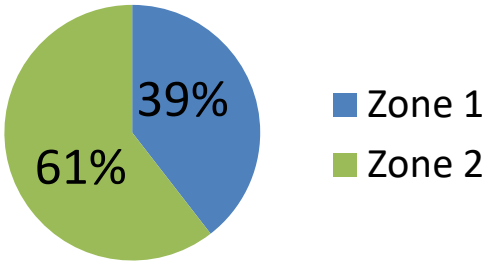
There is a total of 519 on-street parking spaces within the study area (zone 1 & 2). 39% of the total Magnolia Village on-street parking is located within zone 1 and 61% of the on-street parking is located within zone 2. The chart below summarizes the zone 1 & 2 (plus Magnolia Ave. on both sides) on-street parking inventory.

Parking Inventory

Magnolia Village: On-Street				Total	
Location	**Standard**	**Reserved**	**ADA**	**Capacity**	**% of Total**
Zone 1*	205	0	-	205	39%
Zone 2*	286	26	2	314	61%
SUBTOTAL	**491**	**26**	**2**	**519**	**100%**

** includes both sides of Magnolia Ave.*

Zone 1 & 2 On-Street Parking Inventory*

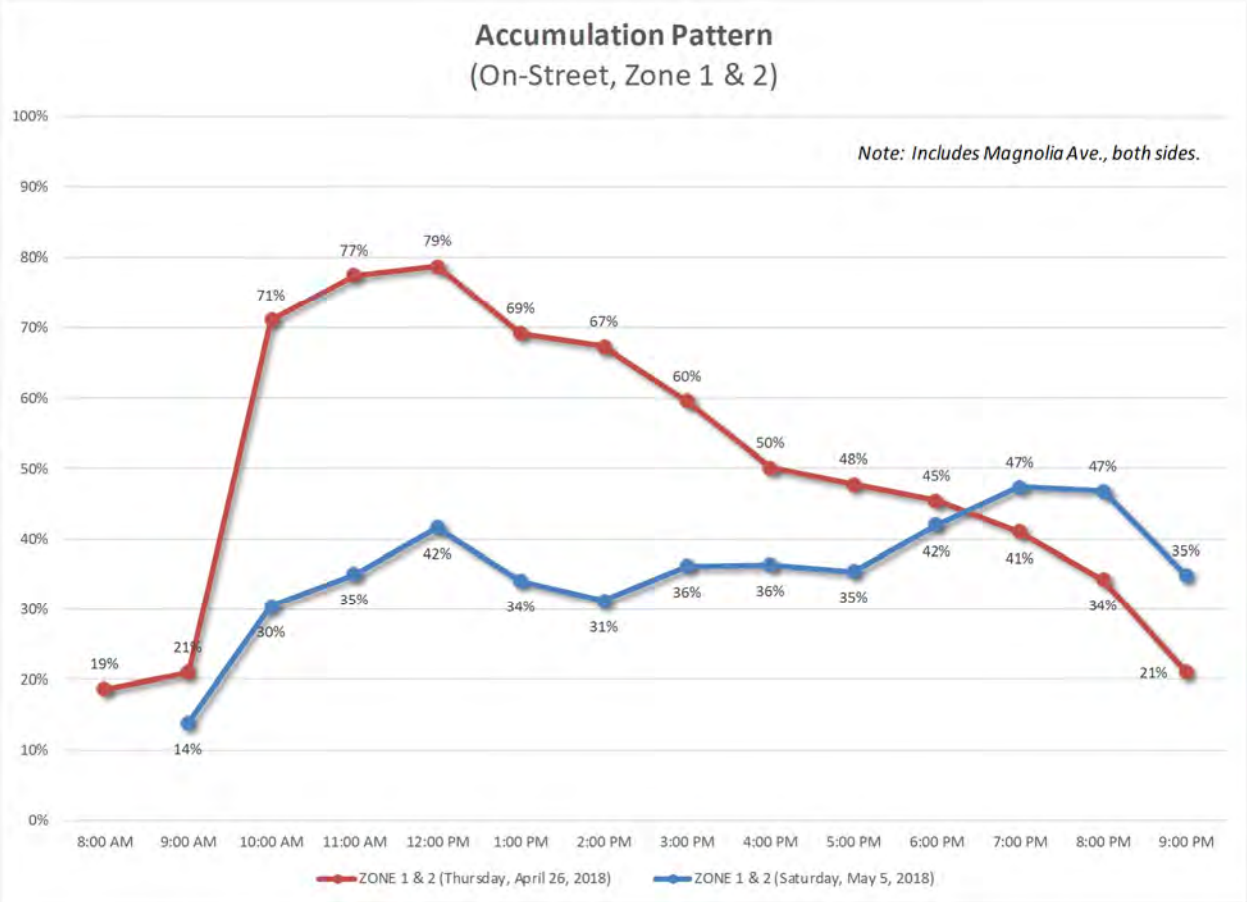


** includes both sides of Magnolia Ave.*

Utilization – Zone 1 & 2

Magnolia Village study area parking on Thursday, April 26, 2018 had a total peak demand utilization of 409 cars at noon for an 79% overall on-street observed utilization, based on a total physical inventory of 519 parking spaces. For the weekend, Saturday, May 5, 2018 had a total peak demand utilization of 246 cars at 7:00 PM for an 47% overall on-street observed utilization, based on a total physical inventory of 519 parking spaces.

The chart below represents the accumulation pattern, by percent, of occupancy for the peak weekday and peak weekend on-street observed for zones 1 & 2 combined, plus Magnolia Ave.



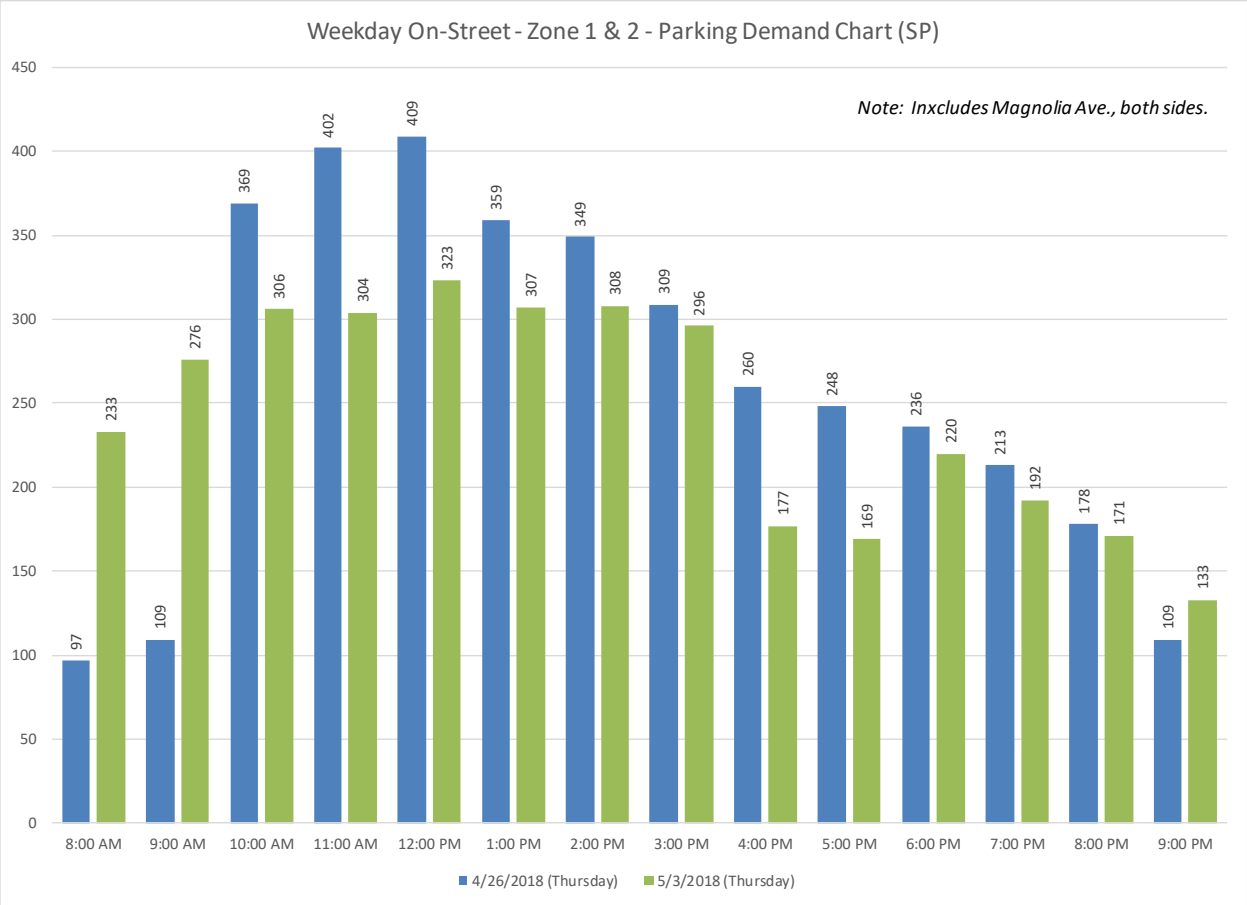
The charts on the following pages show the parking data/utilization and accumulation pattern for the on-street parking. Refer to the Appendix for the raw data collection figures of each parking location observed.

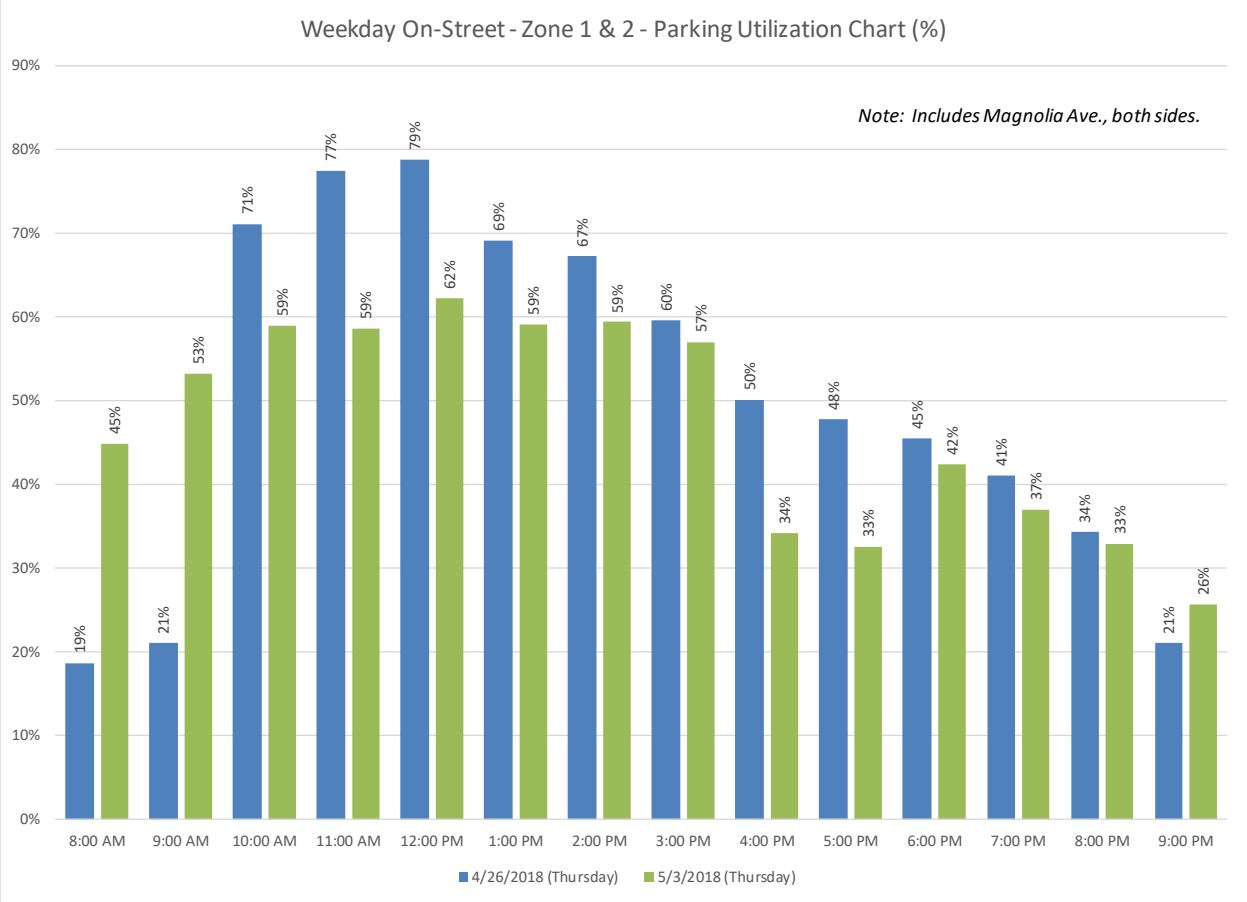
Weekday Peak

ZONE 1 & 2 (Thursday, April 26, 2018)

Note: Including Magnolia Ave., both sides of street.

	Supply	Time	8:00 AM	9:00 AM	10:00 AM	11:00 AM	12:00 PM	1:00 PM	2:00 PM	3:00 PM	4:00 PM	5:00 PM	6:00 PM	7:00 PM	8:00 PM	9:00 PM	PEAK
ZONE 1 SUMMARY																	
On-Street	205	Hourly Demand	60	68	106	136	161	90	105	86	88	96	94	110	93	51	161
		Hourly Occupancy	29%	33%	52%	66%	79%	44%	51%	42%	43%	47%	46%	54%	45%	25%	79%
ZONE 2 SUMMARY																	
On-Street	314	Hourly Demand	37	41	263	266	248	269	244	223	172	152	142	103	85	58	269
		Hourly Occupancy	12%	13%	84%	85%	79%	86%	78%	71%	55%	48%	45%	33%	27%	18%	86%
ALL ZONES SUMMARY																	
On-Street	519	Hourly Demand	97	109	369	402	409	359	349	309	260	248	236	213	178	109	409
		Hourly Occupancy	19%	21%	71%	77%	79%	69%	67%	60%	50%	48%	45%	41%	34%	21%	79%



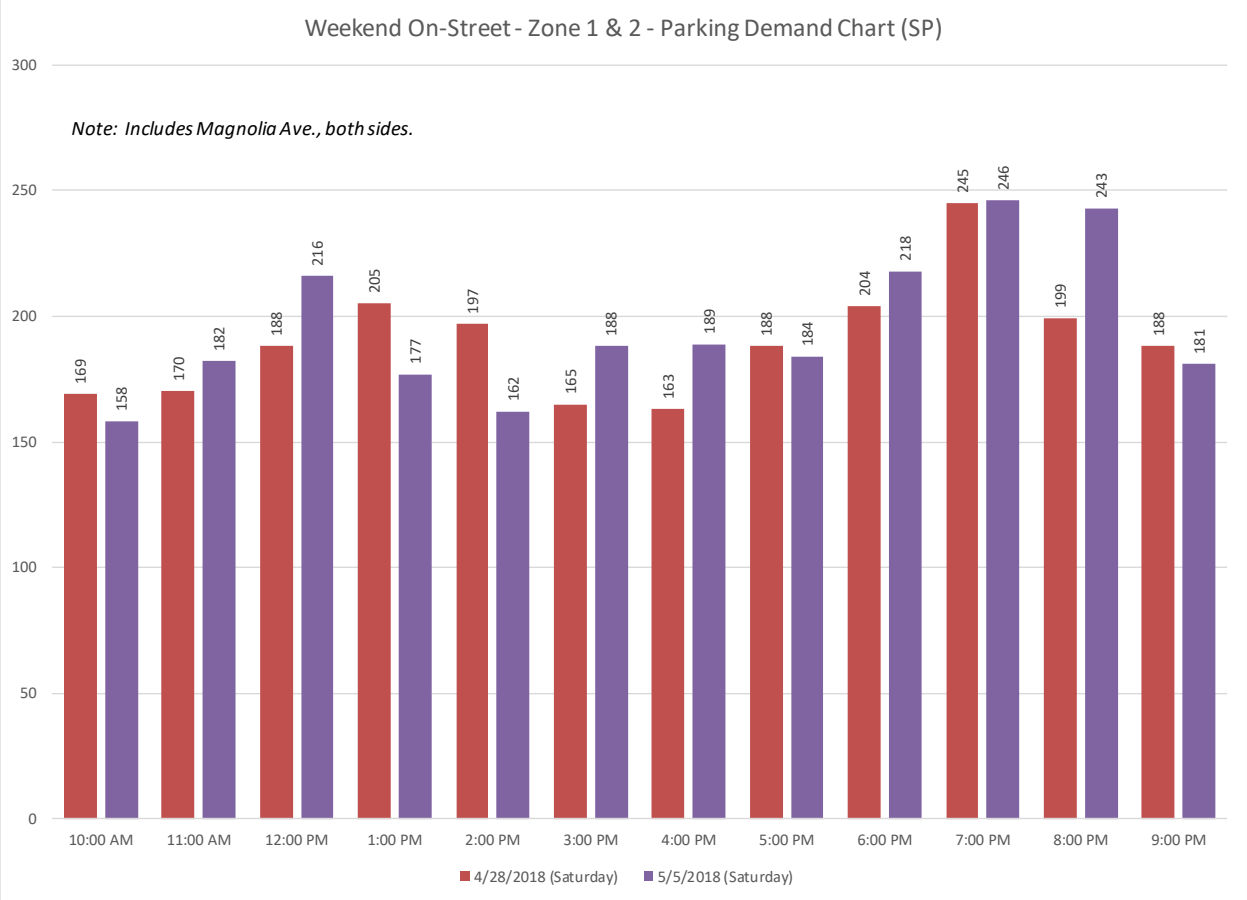

Weekday On-Street - Zone 1 & 2 - Parking Utilization Chart (%)
Note: Includes Magnolia Ave., both sides.
90%
80%
70%
60%
50%
40%
30%
20%
10%
0%
19%
45%
21%
53%
71%
59%
77%
59%
79%
62%
69%
59%
67%
59%
60%
57%
50%
34%
48%
33%
45%
42%
41%
37%
34%
33%
21%
26%
8:00 AM
9:00 AM
10:00 AM
11:00 AM
12:00 PM
1:00 PM
2:00 PM
3:00 PM
4:00 PM
5:00 PM
6:00 PM
7:00 PM
8:00 PM
9:00 PM
4/26/2018 (Thursday)
5/3/2018 (Thursday)

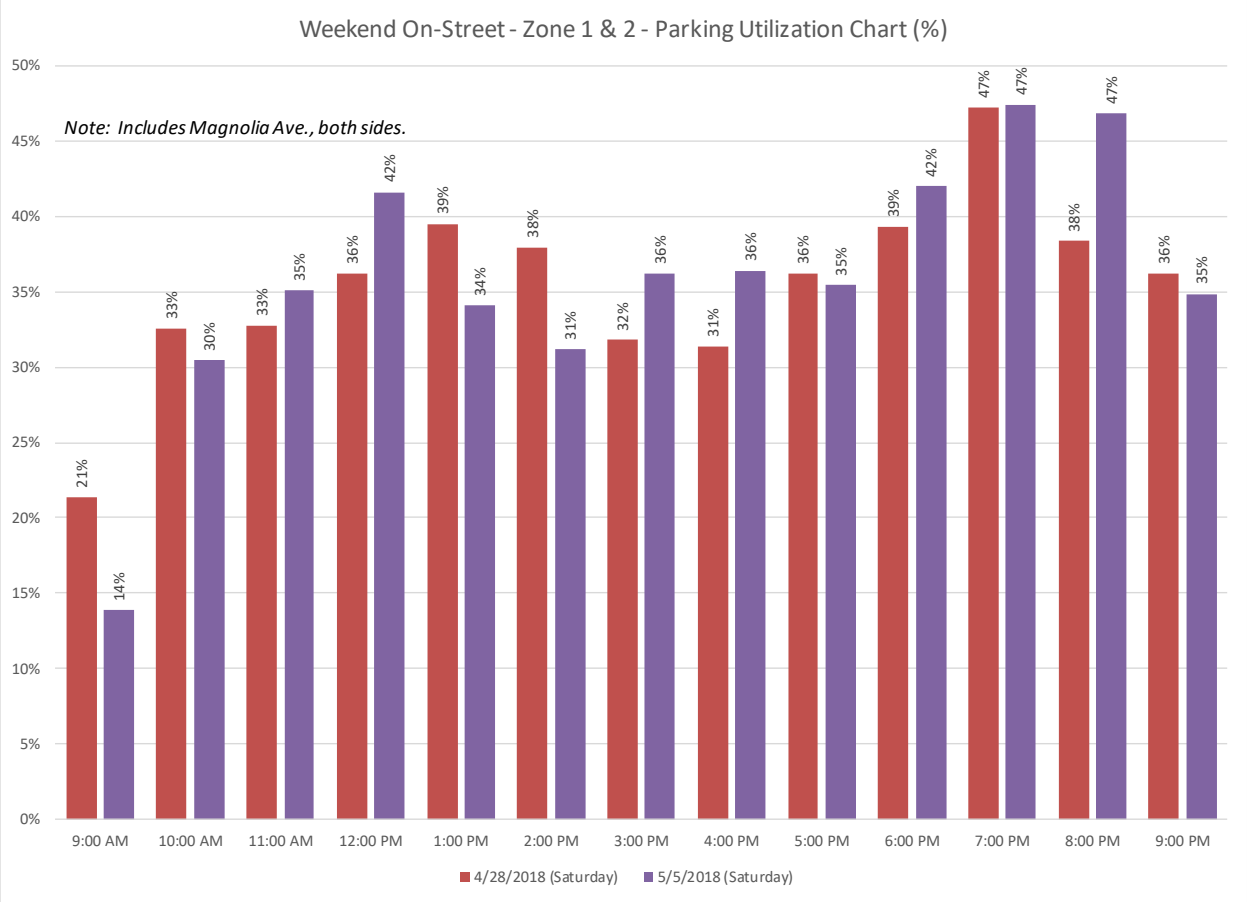
Weekend Peak

ZONE 1 & 2 (Saturday, May 5, 2018)

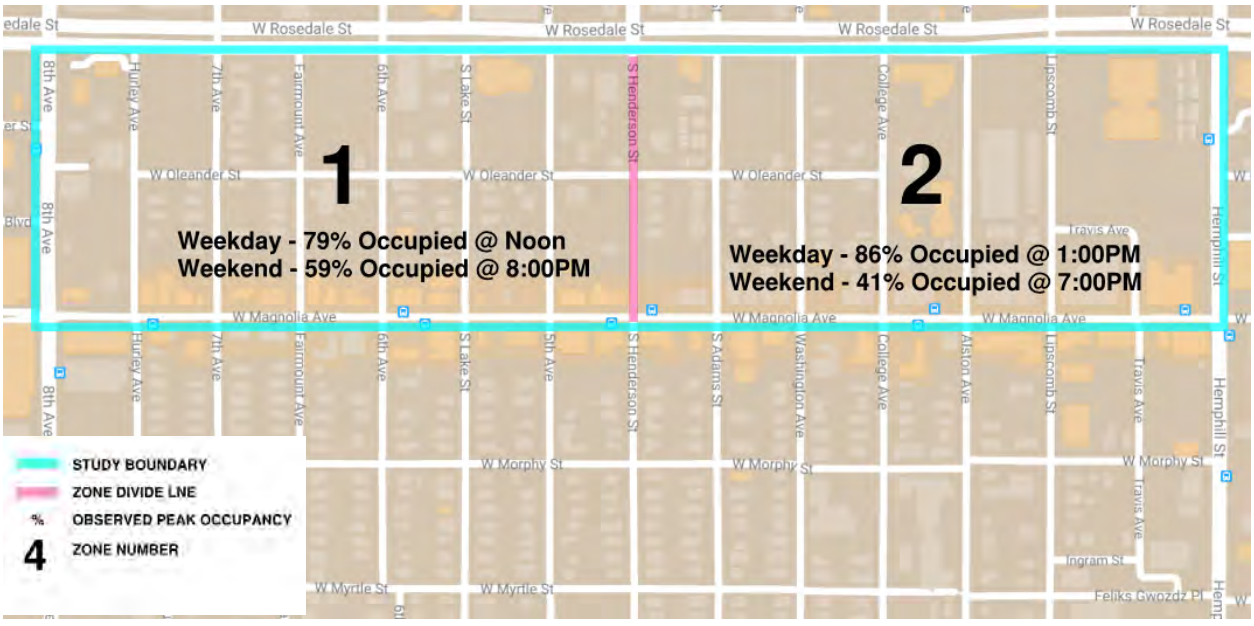
Note: Including Magnolia Ave., both sides of street.

	Supply	Time	10:00 AM	11:00 AM	12:00 PM	1:00 PM	2:00 PM	3:00 PM	4:00 PM	5:00 PM	6:00 PM	7:00 PM	8:00 PM	9:00 PM	PEAK
ZONE 1 SUMMARY															
On-Street	205	Hourly Demand	89	101	119	91	87	96	82	91	97	116	121	95	121
		Hourly Occupancy	43%	49%	58%	44%	42%	47%	40%	44%	47%	57%	59%	46%	59%
ZONE 2 SUMMARY															
On-Street	314	Hourly Demand	69	81	97	86	75	92	107	93	121	130	122	86	130
		Hourly Occupancy	22%	26%	31%	27%	24%	29%	34%	30%	39%	41%	39%	27%	41%
ALL ZONES SUMMARY															
On-Street	519	Hourly Demand	158	182	216	177	162	188	189	184	218	246	243	181	246
		Hourly Occupancy	30%	35%	42%	34%	31%	36%	36%	35%	42%	47%	47%	35%	47%





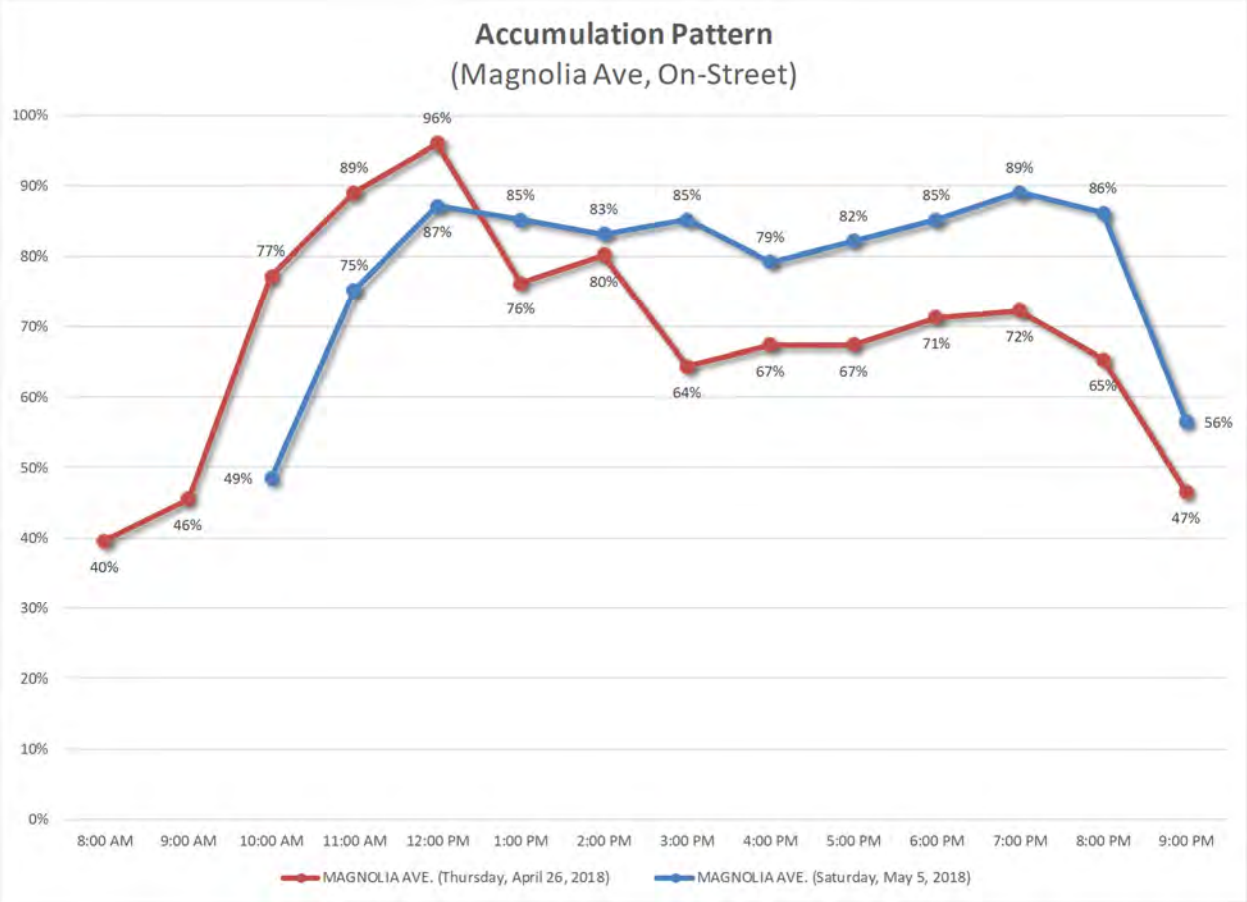
The map below highlights the peak observed weekday and weekend on-street occupancy for each zone.



Utilization – Magnolia Ave.

Focusing on Magnolia Ave. demand only, between Hemphill St. and 8th Ave. The Magnolia Ave. parking on Thursday, April 26, 2018 had a total peak demand utilization of 97 cars at Noon for a 96% overall observed utilization, based on a total physical inventory of 101 parking spaces. For the weekend, Saturday, May 5, 2018 had a total peak demand utilization of 90 cars at 7:00 pm for an 89% overall observed utilization, based on a total physical inventory of 101 parking spaces. The charts below show the parking data/utilization and accumulation pattern for Magnolia Ave.

The chart below represents the accumulation pattern, by percent, of occupancy for the peak weekday and peak weekend on-street observed for Magnolia Ave.



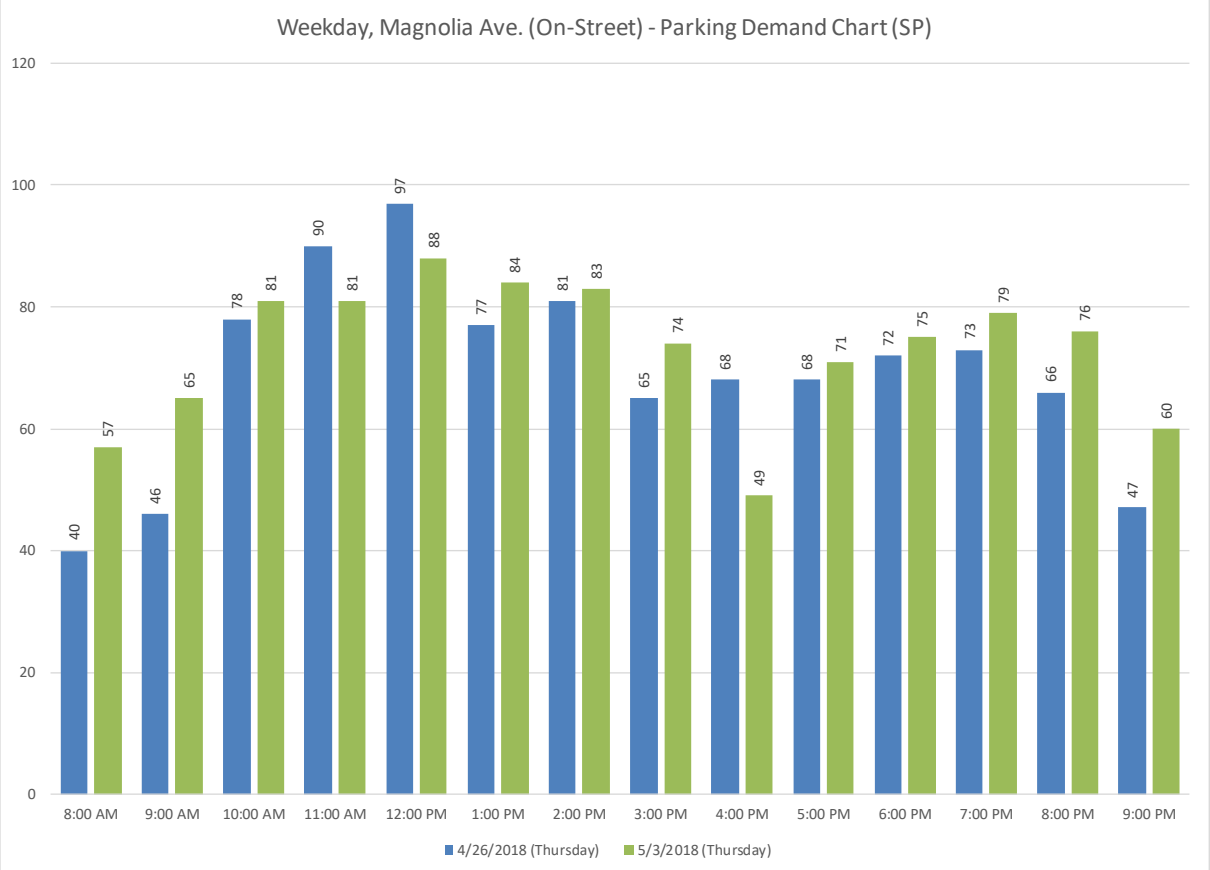
Weekday Demand

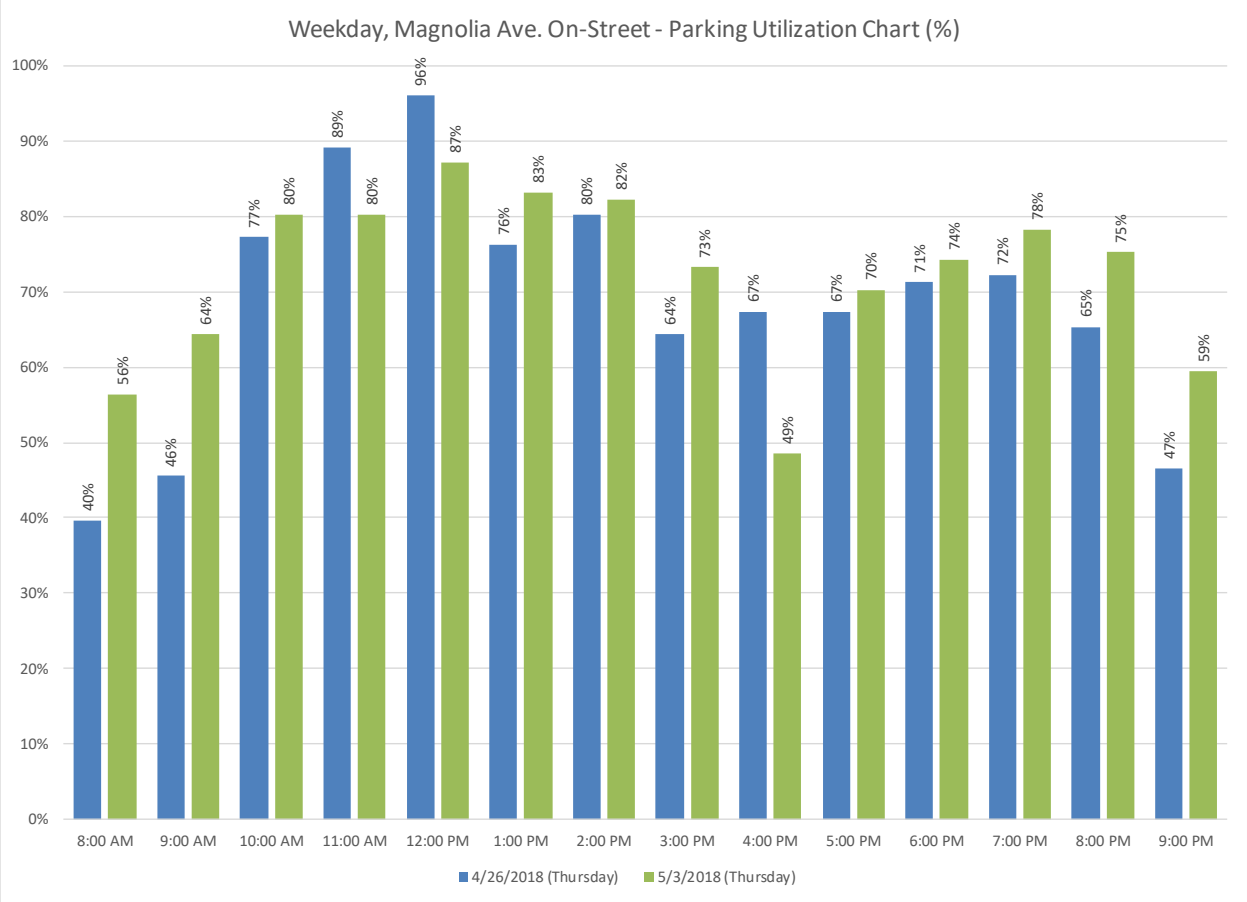
MAGNOLIA AVE. (Thursday, April 26, 2018)

	Supply	Time	8:00 AM	9:00 AM	10:00 AM	11:00 AM	12:00 PM	1:00 PM	2:00 PM	3:00 PM	4:00 PM	5:00 PM	6:00 PM	7:00 PM	8:00 PM	9:00 PM	PEAK
ZONE 1 SUMMARY																	
On-Street	34	Hourly Demand	0	0	22	29	34	18	22	17	22	26	24	27	20	12	34
		Hourly Occupancy	0%	0%	65%	85%	100%	53%	65%	50%	65%	76%	71%	79%	59%	35%	100%
ZONE 2 SUMMARY																	
On-Street	27	Hourly Demand	17	17	24	20	23	23	24	19	17	17	18	21	25	19	25
		Hourly Occupancy	63%	63%	89%	74%	85%	85%	89%	70%	63%	63%	67%	78%	93%	70%	93%
ZONE 3 SUMMARY																	
On-Street	19	Hourly Demand	9	12	15	19	19	16	16	10	13	11	18	10	9	6	19
		Hourly Occupancy	47%	63%	79%	100%	100%	84%	84%	53%	68%	58%	95%	53%	47%	32%	100%
ZONE 4 SUMMARY																	
On-Street	21	Hourly Demand	14	17	17	22	21	20	19	19	16	14	12	15	12	10	22
		Hourly Occupancy	67%	81%	81%	105%	100%	95%	90%	90%	76%	67%	57%	71%	57%	48%	105%
ALL ZONES SUMMARY																	
On-Street	101	Hourly Demand	40	46	78	90	97	77	81	65	68	68	72	73	66	47	97
		Hourly Occupancy	40%	46%	77%	89%	96%	76%	80%	64%	67%	67%	71%	72%	65%	47%	96%

MAGNOLIA AVE. (Thursday, May 3, 2018)

	Supply	Time	8:00 AM	9:00 AM	10:00 AM	11:00 AM	12:00 PM	1:00 PM	2:00 PM	3:00 PM	4:00 PM	5:00 PM	6:00 PM	7:00 PM	8:00 PM	9:00 PM	PEAK
ZONE 1 SUMMARY																	
On-Street	34	Hourly Demand	14	19	21	26	27	25	24	19	0	22	25	25	24	22	27
		Hourly Occupancy	41%	56%	62%	76%	79%	74%	71%	56%	0%	65%	74%	74%	71%	65%	79%
ZONE 2 SUMMARY																	
On-Street	27	Hourly Demand	17	17	24	20	23	23	24	19	17	17	18	21	25	19	25
		Hourly Occupancy	63%	63%	89%	74%	85%	85%	89%	70%	63%	63%	67%	78%	93%	70%	93%
ZONE 3 SUMMARY																	
On-Street	19	Hourly Demand	8	10	15	17	18	18	15	15	15	15	15	14	13	7	18
		Hourly Occupancy	42%	53%	79%	89%	95%	95%	79%	79%	79%	79%	79%	74%	68%	37%	95%
ZONE 4 SUMMARY																	
On-Street	21	Hourly Demand	18	19	21	18	20	18	20	21	17	17	17	19	14	12	21
		Hourly Occupancy	86%	90%	100%	86%	95%	86%	95%	100%	81%	81%	81%	90%	67%	57%	100%
ALL ZONES SUMMARY																	
On-Street	101	Hourly Demand	57	65	81	81	88	84	83	74	49	71	75	79	76	60	88
		Hourly Occupancy	56%	64%	80%	80%	87%	83%	82%	73%	49%	70%	74%	78%	75%	59%	87%





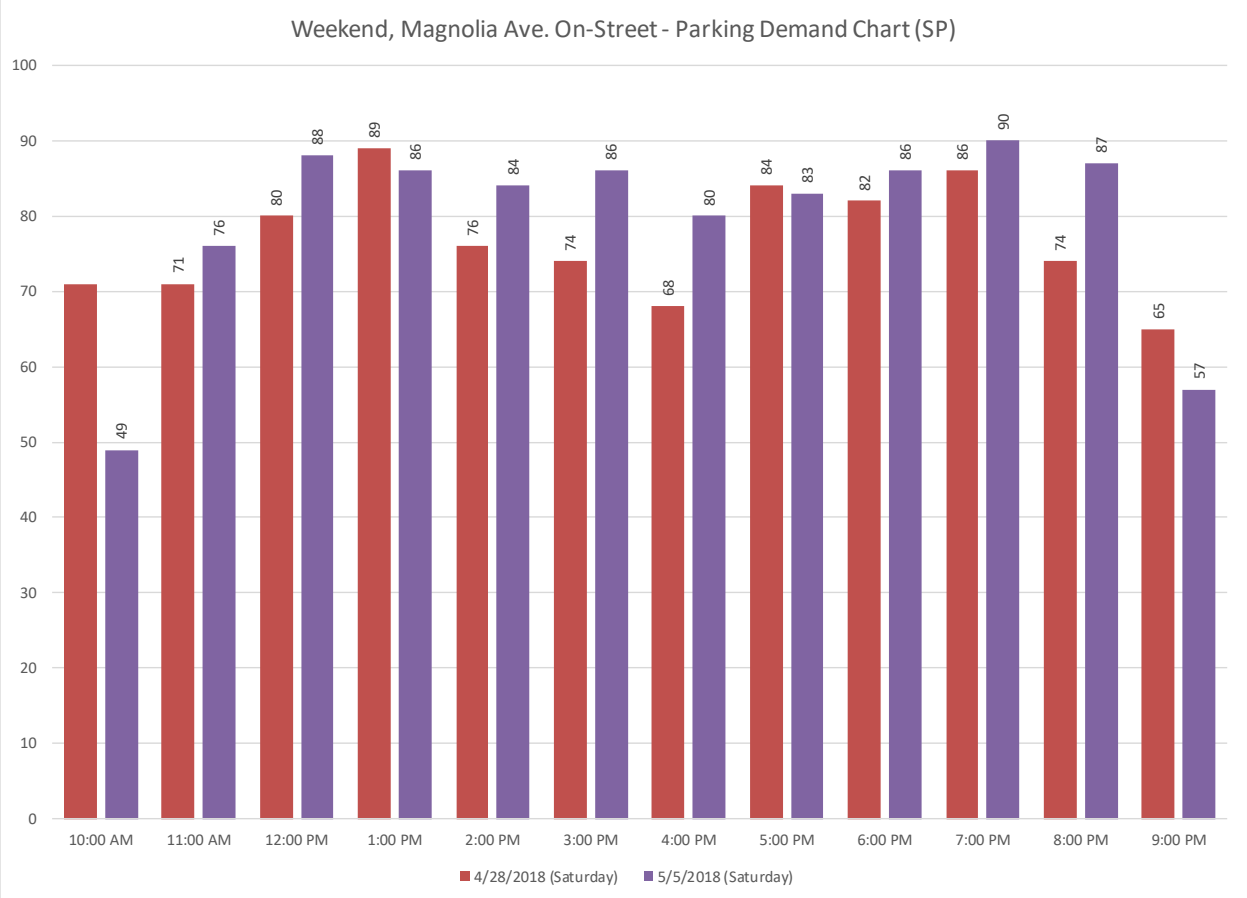
Weekend Demand

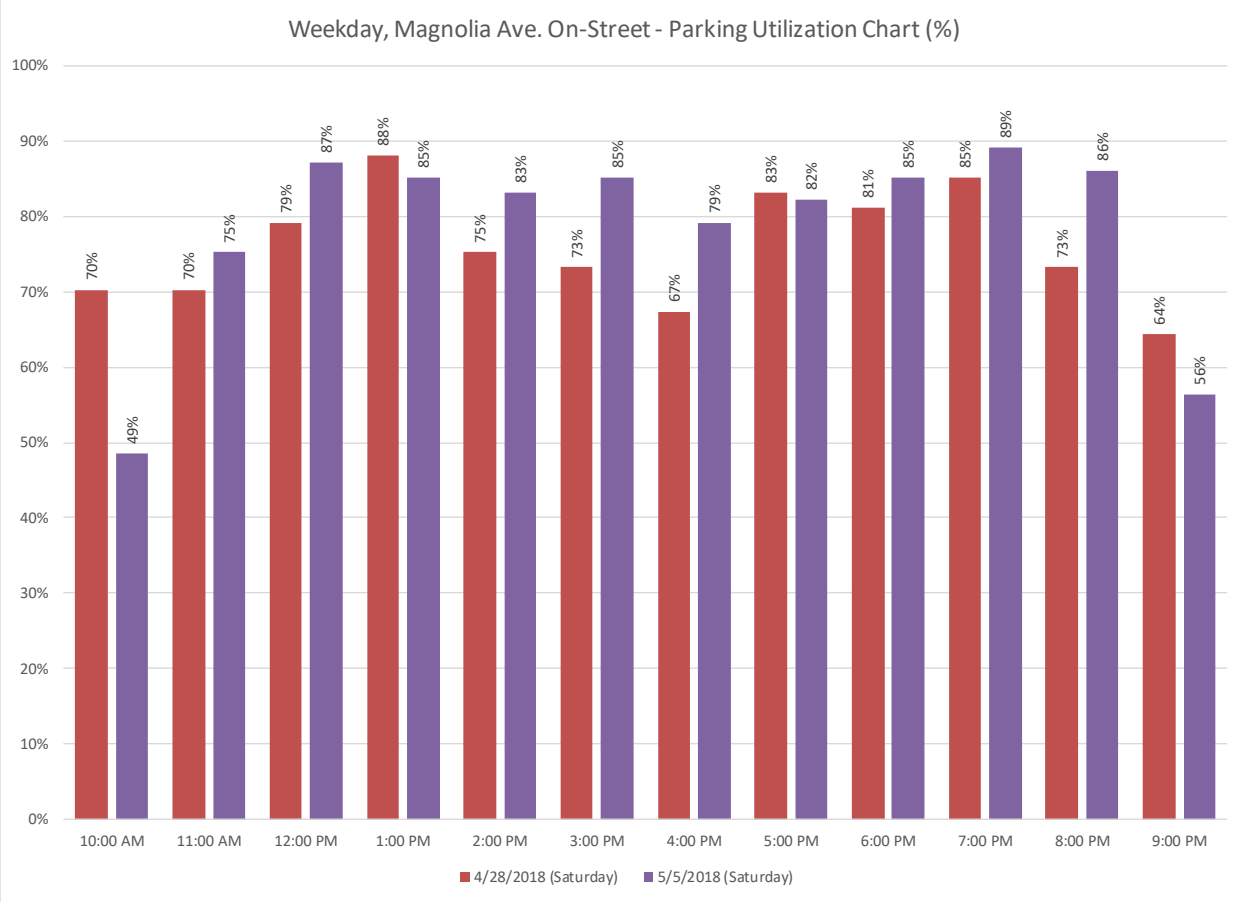
MAGNOLIA AVE. (Saturday, April 28, 2018)

	Supply	Time	10:00 AM	11:00 AM	12:00 PM	1:00 PM	2:00 PM	3:00 PM	4:00 PM	5:00 PM	6:00 PM	7:00 PM	8:00 PM	9:00 PM	PEAK
ZONE 1 SUMMARY															
On-Street	34	Hourly Demand	18	17	22	26	22	19	19	27	28	31	28	25	31
		Hourly Occupancy	53%	50%	65%	76%	65%	56%	56%	79%	82%	91%	82%	74%	91%
ZONE 2 SUMMARY															
On-Street	27	Hourly Demand	23	23	25	25	19	20	17	23	23	25	22	19	25
		Hourly Occupancy	85%	85%	93%	93%	70%	74%	63%	85%	85%	93%	81%	70%	93%
ZONE 3 SUMMARY															
On-Street	19	Hourly Demand	11	12	12	17	16	14	11	12	16	19	18	11	19
		Hourly Occupancy	58%	63%	63%	89%	84%	74%	58%	63%	84%	100%	95%	58%	100%
ZONE 4 SUMMARY															
On-Street	21	Hourly Demand	19	19	21	21	19	21	21	22	15	11	6	10	22
		Hourly Occupancy	90%	90%	100%	100%	90%	100%	100%	105%	71%	52%	29%	48%	105%
ALL ZONES SUMMARY															
On-Street	101	Hourly Demand	71	71	80	89	76	74	68	84	82	86	74	65	89
		Hourly Occupancy	70%	70%	79%	88%	75%	73%	67%	83%	81%	85%	73%	64%	88%

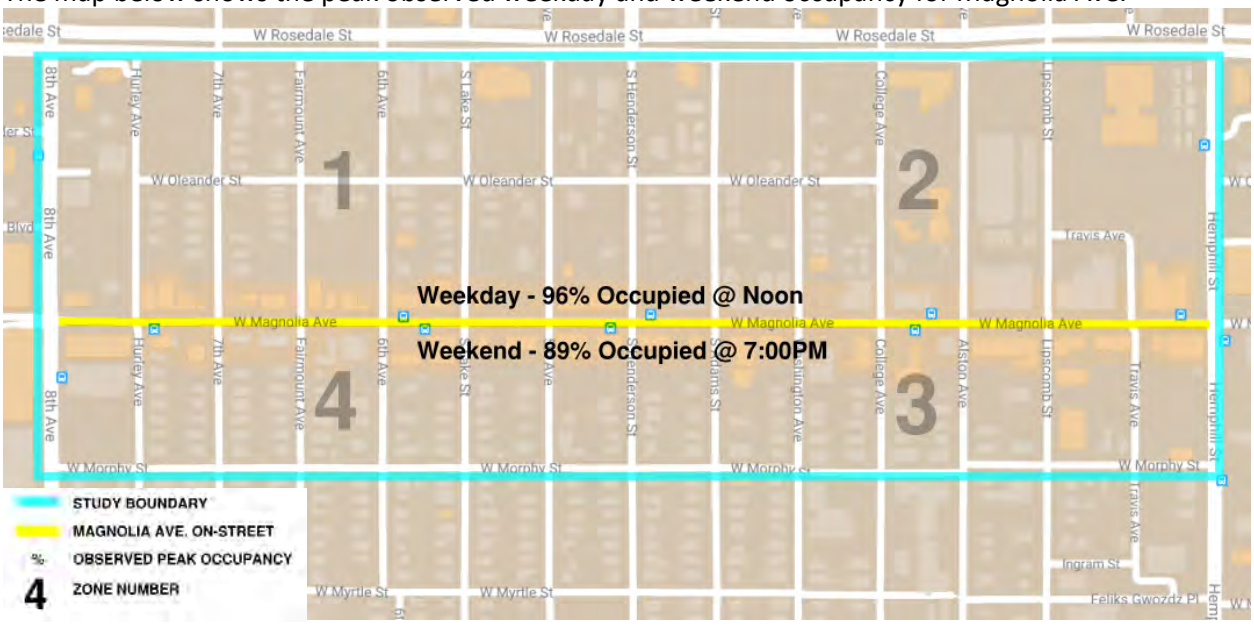
MAGNOLIA AVE. (Saturday, May 5, 2018)

	Supply	Time	10:00 AM	11:00 AM	12:00 PM	1:00 PM	2:00 PM	3:00 PM	4:00 PM	5:00 PM	6:00 PM	7:00 PM	8:00 PM	9:00 PM	PEAK
ZONE 1 SUMMARY															
On-Street	34	Hourly Demand	27	26	33	33	31	30	30	27	25	27	27	19	33
		Hourly Occupancy	79%	76%	97%	97%	91%	88%	88%	79%	74%	79%	79%	56%	97%
ZONE 2 SUMMARY															
On-Street	27	Hourly Demand	8	20	25	24	20	26	25	23	26	25	25	13	26
		Hourly Occupancy	30%	74%	93%	89%	74%	96%	93%	85%	96%	93%	93%	48%	96%
ZONE 3 SUMMARY															
On-Street	19	Hourly Demand	4	17	19	18	16	16	16	17	17	18	15	9	19
		Hourly Occupancy	21%	89%	100%	95%	84%	84%	84%	89%	89%	95%	79%	47%	100%
ZONE 4 SUMMARY															
On-Street	21	Hourly Demand	10	13	11	11	17	14	9	16	18	20	20	16	20
		Hourly Occupancy	48%	62%	52%	52%	81%	67%	43%	76%	86%	95%	95%	76%	95%
ALL ZONES SUMMARY															
On-Street	101	Hourly Demand	49	76	88	86	84	86	80	83	86	90	87	57	90
		Hourly Occupancy	49%	75%	87%	85%	83%	85%	79%	82%	85%	89%	86%	56%	89%





The map below shows the peak observed weekday and weekend occupancy for Magnolia Ave.



PEAK OCCUPANCY: MAGNOLIA AVE. ON-STREET
MAGNOLIA VILLAGE

ON-STREET PARKING METERS

There are several types of technology from which can selected to manage payment and collection of parking revenue. The single-space meter is an iconic figure of on-street parking management, however, alternative technologies, such as pay stations, have ushering in a new era of usability, collection, report and energy reduction. As cities change to advanced alternatives it becomes necessary to consider their benefits and disadvantages.

Pay-and-Display Pay Stations (used by the City of Fort Worth)

Pay-and-Display utilizes the same technology as Pay-by-Space only after the customer pays for their parking at the kiosk, they must return to place a parking permit in or on their vehicle. This eliminates space designation and allows the patron to park anywhere on-street parking is available. This system has also shown to increase revenue more than Pay-by-Space as it allows different patrons to pay for the same space. One kiosk can accommodate many spaces but is also recommended one per block face or every 8 spaces for on-street parking applications.

Advantages:

- Can provide two-way communications with a central office.
- Reduces sidewalk clutter as opposed to single-space meters.
- Allows additional pay options from coin, credit or debit and smart cards.
- Allows customer to park elsewhere in the city using the same payment.
- Provides a parking receipt.
- If one kiosk is out of order, the patron can purchase a parking permit from any kiosk in the system.
- Parking spaces do not have to be marked or numbered, which potentially increases the parking supply and reduces maintenance costs keeping up such.
- Allows flexibility to control customized timing and/or setting of parking rates.
- Can rely on extended-power or solar power batteries.
- On-street kiosk alerts central office when maintenance or collection is needed.
- Collection is on-demand rather than scheduled route. This eliminates unnecessary collections.
- Allows flexibility to control timing and/or setting of parking rates.
- Ability to audit system and track revenue and expenses by meter.

Disadvantages:

- Customer must return to vehicle to display parking permit.
- City must monitor parking areas for illegally-obtained parking receipts.
- Higher cost of equipment as compared to single space parking meters.
- Excess paper waste created.

Pay-By-Space Pay Stations

Pay-by-Space technology utilizes pay-station kiosks located at various points within the on-street parking area. Each pay-station has the capacity to effectively control numerous parking spaces within a system. It is recommended by distributors one kiosk per block face or for every 8 spaces of parking. In a Pay-by-Space system, parking stalls are individually numbered. Patrons must enter the number of their parking space on a numeric keypad at the kiosk. Pay Station technologies can also assist enforcement personnel through compatibility with hand-held citation writers, which increase speed and accuracy.

Advantages:

- Can provide two-way communications with a central office
- Reduces sidewalk clutter as opposed to single-space meters improving streetscapes.
- Allows additional pay options from coin, credit or debit and smart cards.
- Customers do not have to return to their vehicle to display their parking permit.
- Employs no paper resources, receipts or tickets unless requested therefore reducing waste, litter and expense.
- Can rely on extended-power or solar power batteries.
- On-street kiosk alerts central office when maintenance or collection is needed.
- Collection is on-demand rather than on scheduled route eliminating unnecessary collections.
- Allows flexibility to control customized timing and/or setting of parking rates.
- Ability to audit system and track revenue and expenses by meter.

Disadvantages:

- To make the system work, the city must mark off and uniquely number each parking space under that area's kiosk control.
- Customer don't have option of transferring meter time to another parking location (versus pay-and-display technologies).
- Higher cost of equipment than first-generation electric parking meters.
- Recurring maintenance of repainting numbers.
- Limits the number of cars that can park on the street.

Mobile-Phone Apps (used by the City of Fort Worth)

Mobile phone technology may be used in conjunction with any parking system. Though the city must purchase handheld devices to enforce affectively, installation is reduced to numbering each space uniquely and displaying the phone number to the cell-phone technology provider. When a patron parks, they will use their cell phone to call the provider where they can pay for their parking space using credit or debit card. City personnel will use handheld devices to monitor which spaces have been paid for. Due to the low upfront and maintenance costs, there are not many noticeable disadvantages to this technology.

Advantages:

- Allows credit and debit card payments without additional hardware purchases.
- Customers may extend parking time within the allowable limit by phone. This eliminates the need to return to their vehicle to make payment.
- Provides customers the convenience of pay-and-go, where there is no need to return to their vehicle to display a parking permit or receipt.

Disadvantages:

- Requires hand-held device to monitor whether a space has been paid for by cell phone. This piece of equipment would be in addition to other equipment parking personnel might have to carry.
- Some platforms require a customer must pay a transaction fee, approximately $ .25, in order to pay by phone. Transaction fee can vary by platform.

Benchmark Comparisons

The benchmark cities are intended to parallel the size, development and cultural similarities of Fort Worth. These cities include Fort Worth, Dallas, Austin, San Antonio, and Houston. All these cities have installed systems which utilize advanced meter technology.

	Fort Worth	Austin	Dallas	San Antonio	Houston
Meters Type	Pay & display Single-space Mobile app	Pay & display Single-space Mobile app	Single-space Mobile app	Pay & display Single-space Mobile app	Pay & display Single-space Mobile app
Hours (downtown)	8:00am - 6:00pm (Mon. thru Fri.)	8:00am - 6:00pm (Mon. thru Tues.) 8:00am - midnight (Wed. thru Sat.)	7:00am - 6:00pm (Mon. thru Sun.)	8:00am - 6:00pm (Mon. thru Sat.)	7:00am - 6:00pm (Mon. thru Sat.)
Cost	$1.50 per hour (1 & 2 hr meters)	$1.20 per hour	$2.00 per hour	$1,80 per hour	$1.50 per hour
Payment Type	Cash Credit card Mobile app	Cash Credit card Mobile app	Coin Mobile app	Cash Credit card	Cash Credit card Mobile app
Mobile App	FW Park	ParkX	ParkMobile	n/a	ParkMobile

	West 7th Street (Fort Worth)
Meters Type	Pay & display Mobile app
Days	Monday thru Sunday, except holidays
Hours	10:00am - 10:00pm
Cost	$1.00 per hour: 10:00am - 4:00pm $2.50 per hour: 4:00pm - 10:00pm Free: 10:00pm - 10:00am Variable rates during peak demand, max. $4.50 per hour
Payment Type	Cash Credit card Mobile app
Mobile App	FW Park

COMMERCIAL LOADING/CUSTOMER SERVICE ZONES

Businesses along Magnolia Ave. currently use the center turn lane of Magnolia Ave. for its commercial loading zone during daytime hours. This has been an efficient use of space; however, safety can become a concern as traffic demand continues to increase.

Commercial loading areas are critical to supporting retail businesses in an urban area. Creating a 10' x 40' commercial loading zone along the adjacent side streets of Magnolia Ave. can help to reduce safety concerns and provide easier access to the business they serve. Adding a 10' x 30' customer services zones (15 min parking zones) allows business to provide an area for patrons to quickly pick up 'to go' orders and provide a dedicated patron pick up/drop off areas for ride sharing services.

The commercial loading zones can also serve as valet drop-off/pickup locations during dinner hours, when the loading zones are not in use, to provide a higher level of service to its visiting Magnolia Village patrons.

SUMMARY

Magnolia Village is experiencing a season of revitalization and expansion as it's being transformed into a pedestrian-friendly and culturally rich environment for businesses and residents. Based on the data collected and our observations of the Magnolia Village study area, the on-street parking showed peak capacity in most zones with Magnolia Ave. having the highest parking occupancy. As Magnolia Village continues to grow and develop, there will be an increase in the volume of traffic and demand for on-street parking.

The patron parking experience is a contributing factor of their overall experience to Magnolia Village and one that will influence a retail patron to return or not. Factors affecting patrons include:

- Length of time to locate parking
- Ease of entering/exiting the space
- Cost and ease of payment
- Equipment that is user friendly
- Distance from parking space to destination

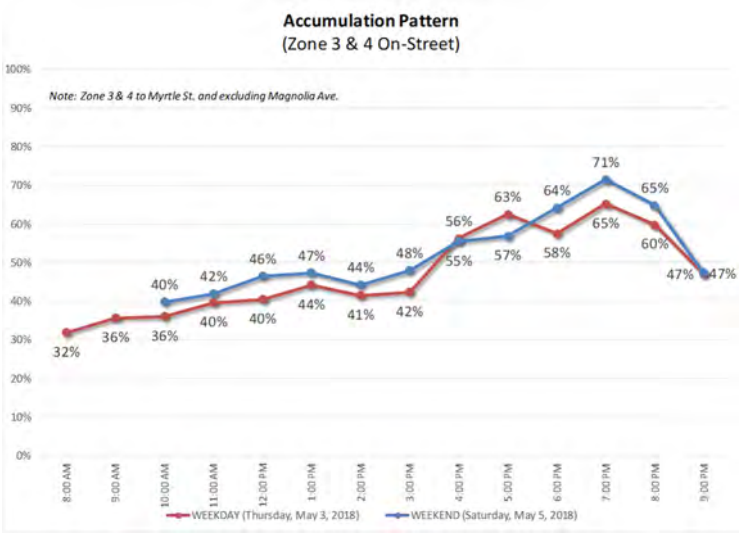
Limited availability of parking for retail patrons or residents living in the area, pick-up and delivery difficulties, traffic congestion, and traffic enforcement issues are just some of the concerns Magnolia Village could face as parking demands continue to increase. A negative parking experience can have direct impact on the patrons' decisions to select Magnolia Village as their destination in the future. Parking is often the first and last impression of a retail patron's experience to a development. Retail patrons have a choice. If a retail patron finds parking difficult and inadequate, they will not return. Magnolia Village will encounter parking problems if parking management strategies are not implemented.

Due to high on-street parking utilization observed within Magnolia Village and the continued residential and retail growth, we recommend the following phased parking management strategies to improve Magnolia Village on-street parking.

- **PHASE 1**

  <u>Residential Parking Permit (RPP) - Zone 3 & 4</u>

  The neighborhood residents in zones 3 & 4 have experienced on-street parking difficulties in the evening. The parking data observed in zones 3 & 4 confirms the limited parking availability during the evenings after 4:00 pm. The neighborhood's on-street parking availability will continue to decrease if parking management strategies are not established.

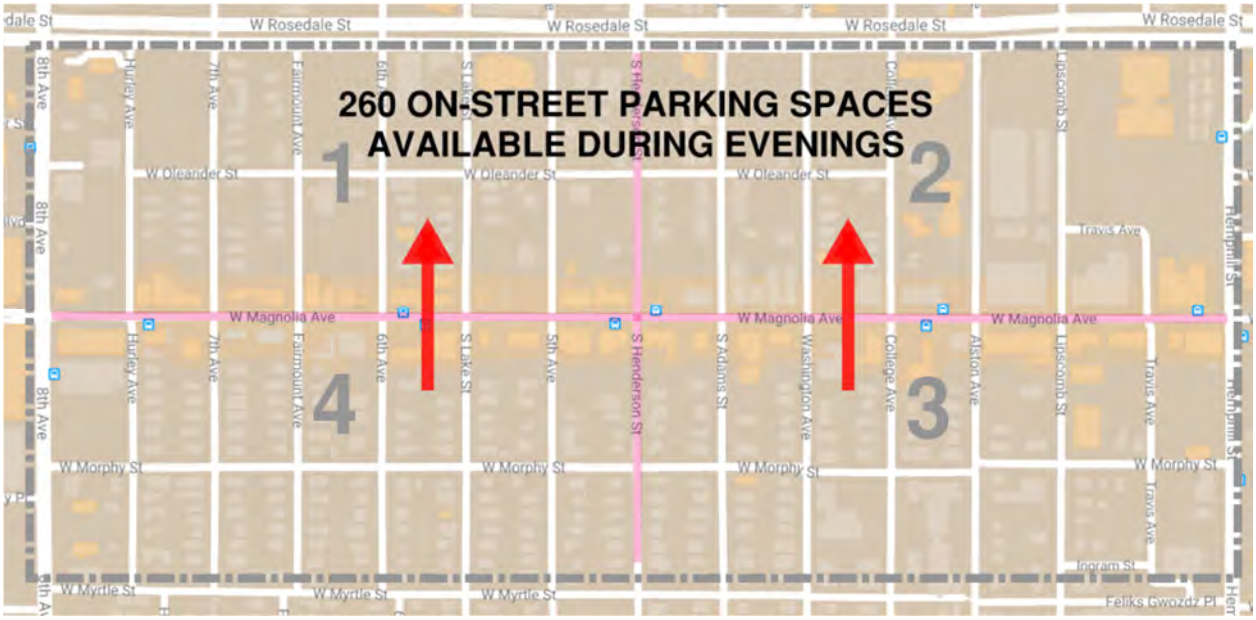


  Our recommendation is to implement a Residential Parking Permit (RPP) in zones 3 & 4 based on the parking needs of the residents. The parking study data support the need to implement an RPP program. Suggested RPP boundary limits have Hurley Ave (west), Lipscomb St. (east), W. Myrtle St. (south), and the start of the residential section just south of Magnolia Ave. as

the north limits. Suggested RPP time limit starts at 4:00 PM and runs until 6:00 AM. However, we recommend the RPP policy defining the specific streets, days, and times should be refined with the neighborhood stakeholders. The streets, days, and times included in the RPP program can be expanded in the future as needed.

The City of Fort Worth currently has an existing RPP program and we recommend Near Southside Inc petition the City of Fort Worth to join the City's RPP program.

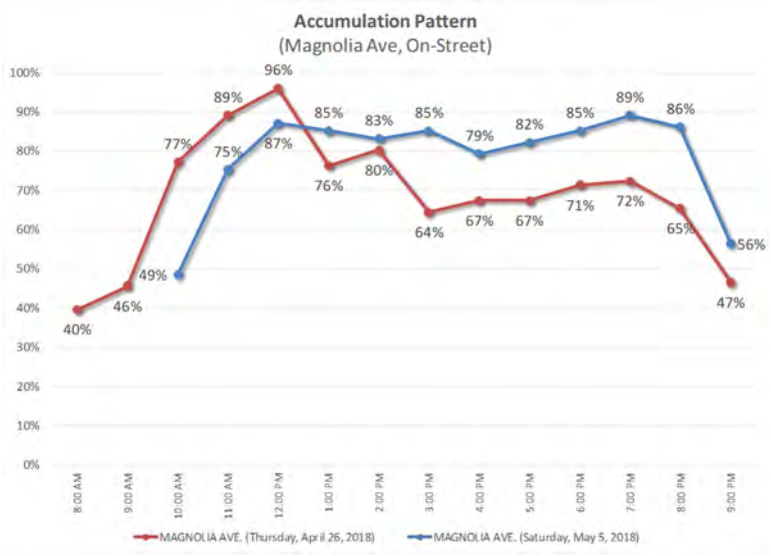
Note: The parking data in zones 1 & 2 indicate that there are approximately 260 on-street parking spaces available during the evening hours. Zones 1 & 2 have ample evening parking for any evening parking demand displaced from zones 3 or 4.



- **PHASE 2**

  Paid Parking on Magnolia Ave.

  For a district the size of Magnolia Village, it is a parking industry standard for 80% to 85% occupancy of the on-street parking to be considered full. A 15% to 20% buffer is needed to help people find a space, enhance the perception of adequate parking, and help accommodate higher demand on peak days. Based on the data for our observations, Magnolia Avenue on-street parking utilization reached an observed peak demand of 96% during the weekday and 89% during the weekend. On-street parking management strategies are needed along Magnolia Ave. to help create vehicle turnover and improve the experience for retail patron on-street parking.



  - A 2 to 3-hour time limit for on-street parking over a ten-hour period will typically allow four to six vehicle turnovers per parking space.
  - Businesses typically want 2 to 3-hour on-street parking time limits.
  - The parking industry recommends the walking distance (vehicle to destination) for a retail patron is 300’ to 600’. The shorter the distance, the higher the level of service.

  Our recommendation is to implement on-street paid parking on Magnolia Ave. to increase the on-street parking availability for Magnolia Village patrons. On-street paid parking will provide short-term parking, improve traffic circulation, help maximizes the number of patron visits, and improve the patron experience within Magnolia Village. Suggested on-street paid parking timeframe along Magnolia Ave., between 8th Ave. and Hemphill St. is 10:00 AM to 8:00 PM. However, we recommend the on-street paid parking defining the specific street, days, and times should be refined with City and business stakeholders.

  The City of Fort Worth currently has an existing on-street paid parking program and we recommend Near Southside Inc petition the City of Fort Worth to join the City’s on-street paid parking program. We also recommend the pay stations and mobile payment app used by the City of Fort Worth are used in Magnolia Village.

  Note: The City of Austin replaced free on-street parking during evenings with paid on-street parking on Thursday through Saturday. After a six-month study to assess the effects of the policy change was completed, the results showed receipts from sales tax increased 9% and the liquor tax increased by 15%. The study also found that parking close to a destination was more important to a patron than the cost of the parking.

Commercial Loading Zone

Loading and unloading in the middle of Magnolia Ave. is an efficient use of space, yet safety is a concern for those making deliveries. Safety concerns could increase as traffic increases on Magnolia Ave.

Our recommendation is for the Commercial Loading Zones to have set defined hours of use and defined locations. Commercial Loading Zones hours of use and locations should be clearly defined with signage or striping. Stakeholder input from local businesses can help determine defined loading zone times/locations for these commercial loading zones.

Customer Service Zones

Currently, retail patrons don't have short-term parking available for pick-up/drop-off with Magnolia Ave. businesses. Short-term parking locations help to increase the retail patron convenience. Customer service zones can also be used as dedicated ride-share (i.e. Uber) pick-up/drop-off locations as the ride-share service industry continues to increase in popularity.

Our recommendation is for Customer Service Zones (short-term parking) to be created for patron convenience. Stakeholder input from local businesses can help determine the best locations for these customer service zones.

Parking Benefit District (PBD)

A Parking Benefit District (PBD) ties the economic benefits of parking revenue directly to improving the quality of life in the immediate area. Revenue would be dedicated to improvements in Magnolia Village (neighborhood & business areas). PBD improvements can help to promote walking by improving sidewalks in the neighborhood, improve safety by upgrading site lighting, beautification of Magnolia Ave. by installing trees and landscaping improvements, or wayfinding improvements to help brand Magnolia Village and improve wayfinding for patrons.

Improvements from other similar PBD:

- Plazas/Parklets
- Landscaping
- Increased maintenance
- Traffic calming
- Bicycle lanes
- Sidewalks
- Curb Ramps

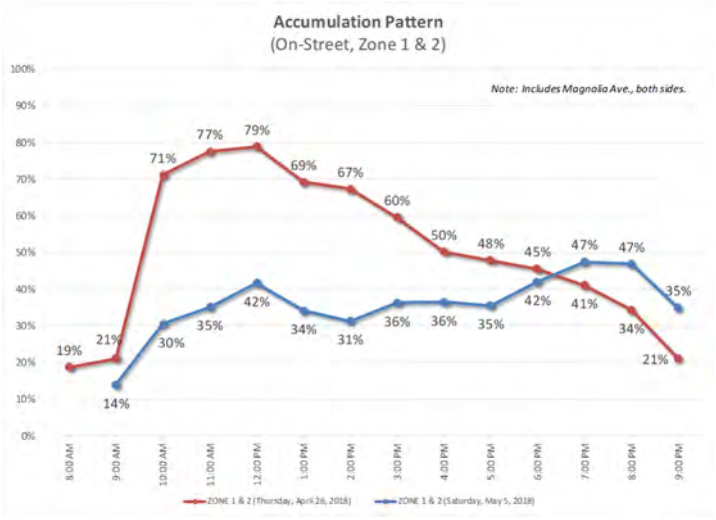
A PBD agreement would be developed between the City of Fort Worth and Near Southside Inc. on behalf of Magnolia Village. As approved by the City Council of Fort Worth, the designated parking revenue, after expenses, would be used to benefit Magnolia Village and the City. Neighborhood and business stakeholder input can help determine PBD improvements important to Magnolia Village.

Our recommendation is for Near Southside Inc. and the City of Fort Worth to create a Parking Benefit District for Magnolia Village to improve the quality of the area of life.

- **PHASE 3**

  Paid Parking for Zones 1 & 2/Parking Garages

  In the foreseeable future, after the proposed Magnolia hotel/garage is completed and new retail & residential developments continue to open, on-street paid parking in zones 1 & 2 would need to be implemented to increase the availability of on-street parking for Magnolia Village patrons. This will improve traffic circulation, help maximize the number of patron visits, and improve the patron experience within Magnolia Village. For patrons needing long-term parking, off-street paid parking should be implemented at the Green garage (1201 Alston Ave.) and the proposed Magnolia hotel garage.



Note: Parking options for Magnolia Village employees could include the Green garage, Magnolia Medical Tower (1307 8th Ave) garage/surface lot, or various surface lots. An increased focus on public transportation can be another option for employees.

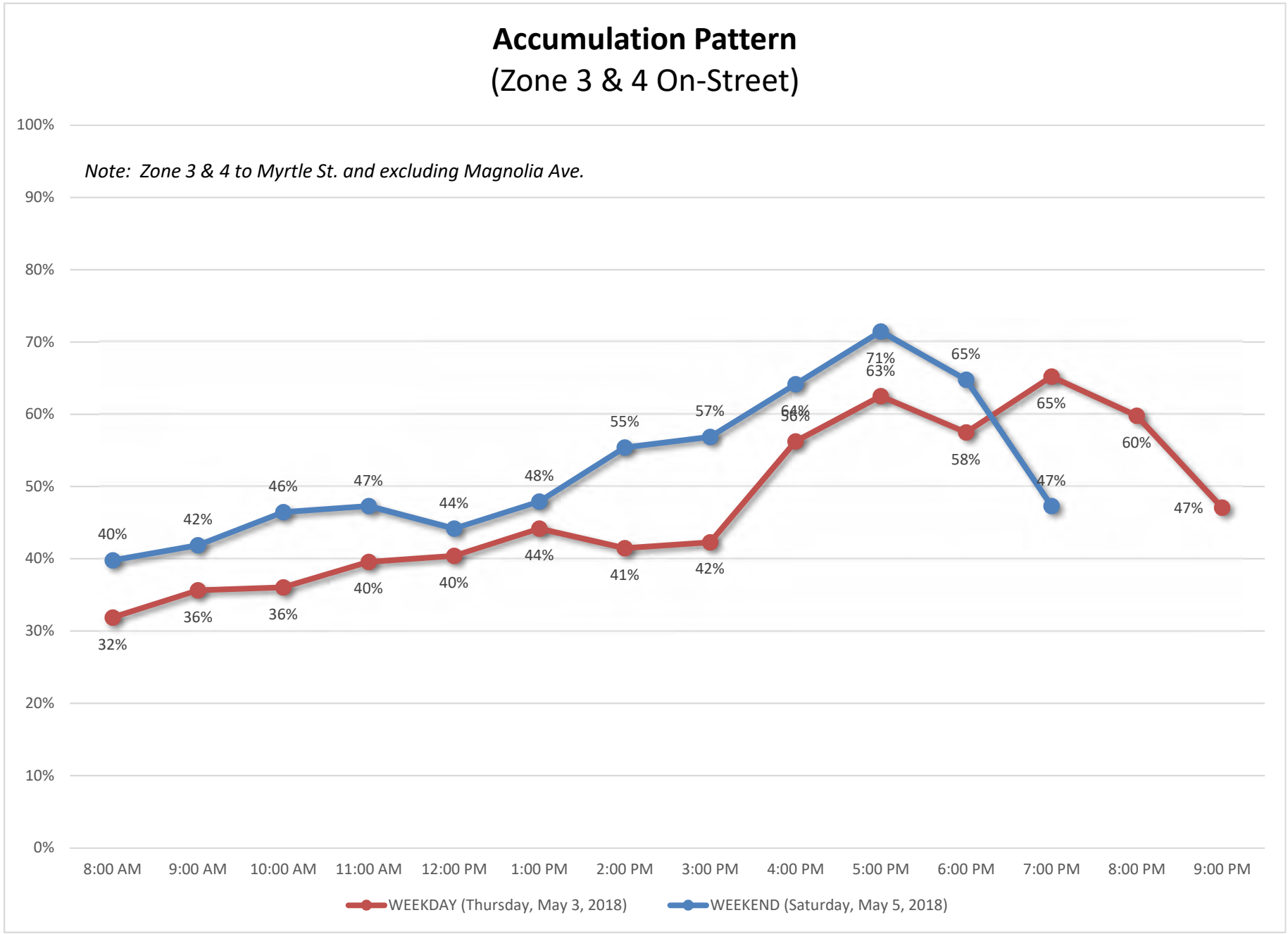
Our recommendation is to implement on-street paid parking for zones 1 & 2 and implement off-street paid parking for the Green & Magnolia Hotel garages once Magnolia hotel opens and demand continues to increase within the village. Expanding the Magnolia Ave. on-street paid parking into zones 1 & 2, plus the addition of off-street paid parking (Green garage & Magnolia Hotel garage) will help increase parking availability and improve patron experience within Magnolia Village.

The Magnolia Village Parking Benefit District should increase during Phase 3 to include zones 1 & 2 on-street parking and potentially the Green Garage. Zone 1 & 2 on-street paid parking would roll into the City of Fort Worth's on-street meter program. It is recommended the Green and Magnolia Hotel garages are operated by local private parking operators.

APPENDIX

RESIDENTIAL PARKING PERMIT SECTION DATA
(Zones 3 & 4, excluding Magnolia Ave.)

Residential Parking Permit (Zones 3 & 4, excluding Magnolia Ave.)



Residential Parking Permit (Zones 3 & 4, excluding Magnolia Ave.)

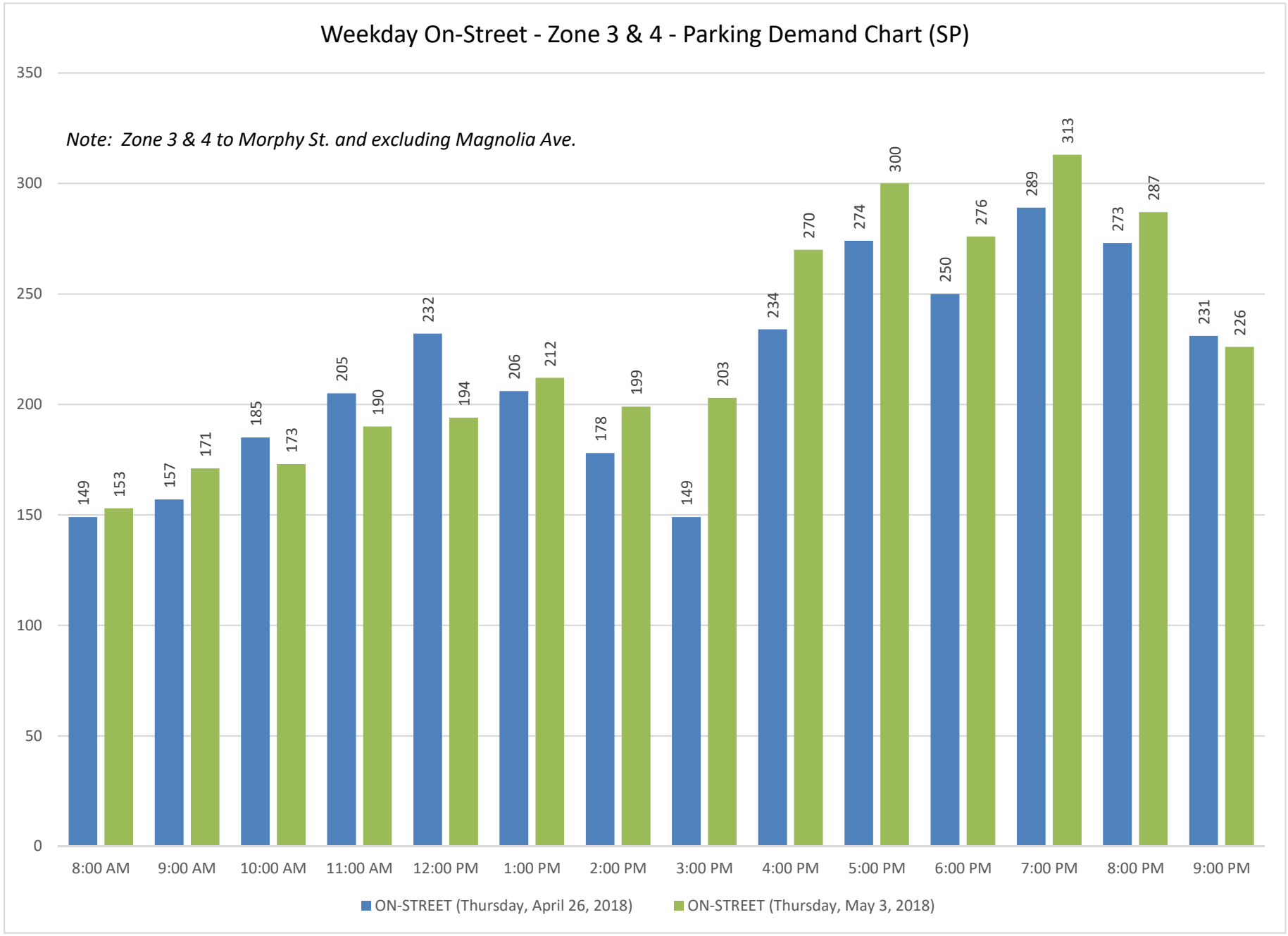
ON-STREET (Thursday, April 26, 2018)

	Supply	Time	8:00 AM	9:00 AM	10:00 AM	11:00 AM	12:00 PM	1:00 PM	2:00 PM	3:00 PM	4:00 PM	5:00 PM	6:00 PM	7:00 PM	8:00 PM	9:00 PM	PEAK
ZONE 3 SUMMARY																	
On-Street	269	Hourly Demand	78	87	108	129	152	135	116	75	144	208	194	166	177	137	208
		Hourly Occupancy	29%	32%	40%	48%	57%	50%	43%	28%	54%	77%	72%	62%	66%	51%	77%
ZONE 4 SUMMARY																	
On-Street	211	Hourly Demand	71	70	77	76	80	71	62	74	90	66	56	123	96	94	123
		Hourly Occupancy	34%	33%	36%	36%	38%	34%	29%	35%	43%	31%	27%	58%	45%	45%	58%
ALL ZONES SUMMARY																	
On-Street	480	Hourly Demand	149	157	185	205	232	206	178	149	234	274	250	289	273	231	289
		Hourly Occupancy	31%	33%	39%	43%	48%	43%	37%	31%	49%	57%	52%	60%	57%	48%	60%

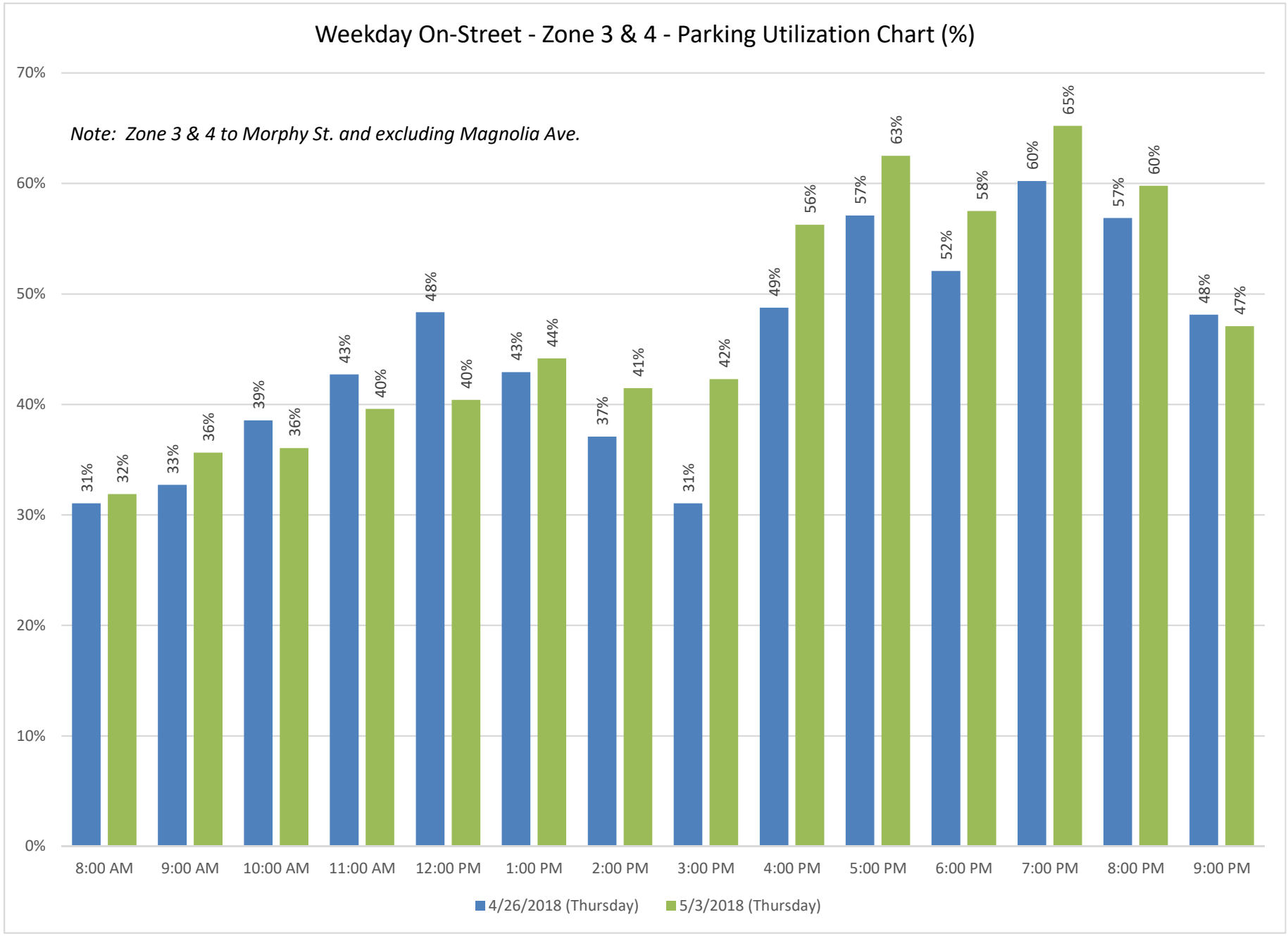
ON-STREET (Thursday, May 3, 2018)

	Supply	Time	8:00 AM	9:00 AM	10:00 AM	11:00 AM	12:00 PM	1:00 PM	2:00 PM	3:00 PM	4:00 PM	5:00 PM	6:00 PM	7:00 PM	8:00 PM	9:00 PM	PEAK
ZONE 3 SUMMARY																	
On-Street	269	Hourly Demand	80	103	107	114	126	131	119	115	121	146	158	165	161	123	165
		Hourly Occupancy	30%	38%	40%	42%	47%	49%	44%	43%	45%	54%	59%	61%	60%	46%	61%
ZONE 4 SUMMARY																	
On-Street	211	Hourly Demand	73	68	66	76	68	81	80	88	149	154	118	148	126	103	154
		Hourly Occupancy	35%	32%	31%	36%	32%	38%	38%	42%	71%	73%	56%	70%	60%	49%	73%
ALL ZONES SUMMARY																	
On-Street	480	Hourly Demand	153	171	173	190	194	212	199	203	270	300	276	313	287	226	313
		Hourly Occupancy	32%	36%	36%	40%	40%	44%	41%	42%	56%	63%	58%	65%	60%	47%	65%

Residential Parking Permit (Zones 3 & 4, excluding Magnolia Ave.)



Residential Parking Permit (Zones 3 & 4, excluding Magnolia Ave.)



Residential Parking Permit (Zones 3 & 4, excluding Magnolia Ave.)

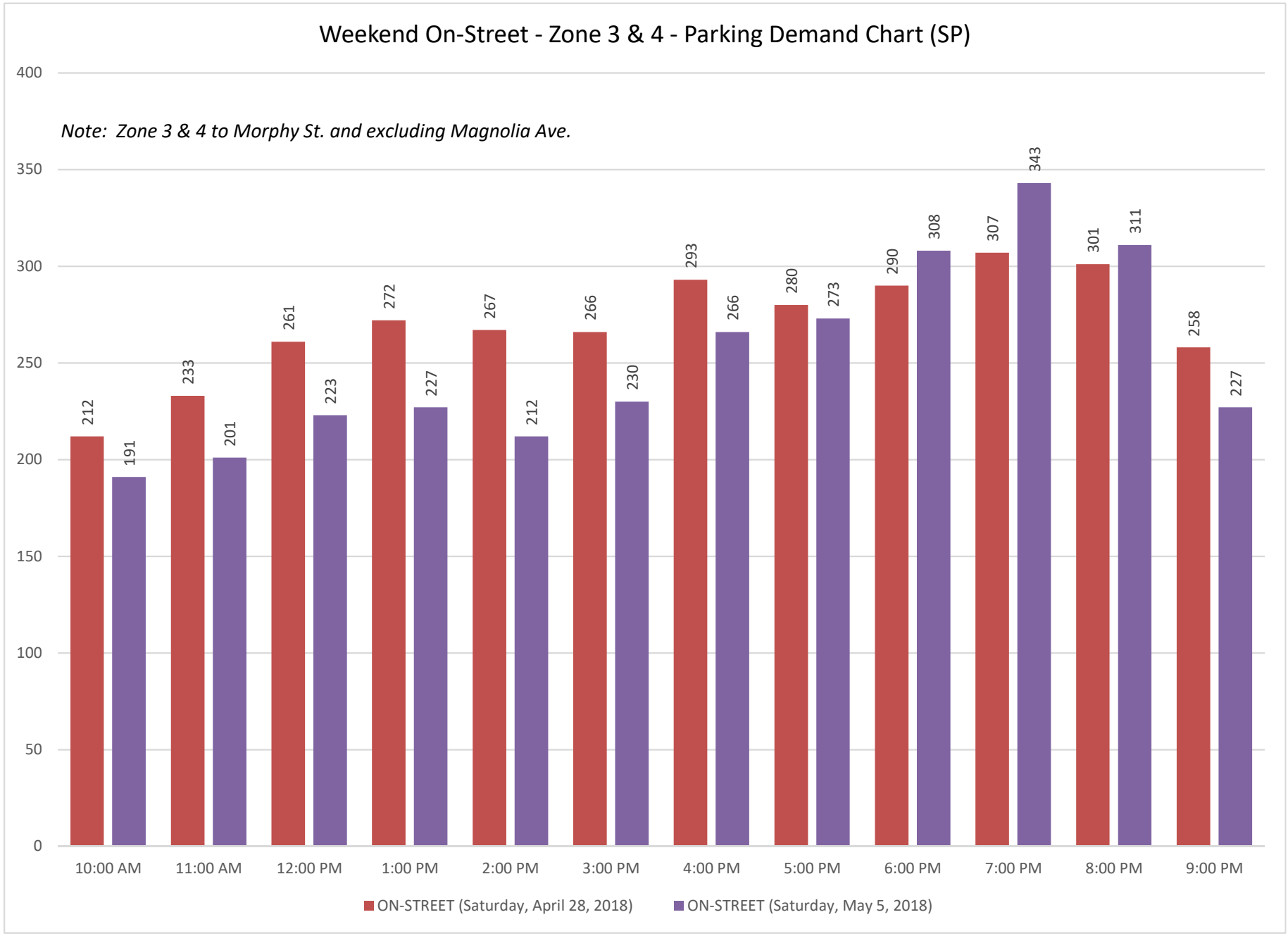
ON-STREET (Saturday, April 28, 2018)

	Supply	Time	10:00 AM	11:00 AM	12:00 PM	1:00 PM	2:00 PM	3:00 PM	4:00 PM	5:00 PM	6:00 PM	7:00 PM	8:00 PM	9:00 PM	PEAK
ZONE 3 SUMMARY															
On-Street	269	Hourly Demand	100	126	123	145	140	114	146	134	154	175	185	167	185
		Hourly Occupancy	37%	47%	46%	54%	52%	42%	54%	50%	57%	65%	69%	62%	69%
ZONE 4 SUMMARY															
On-Street	211	Hourly Demand	112	107	138	127	127	152	147	146	136	132	116	91	152
		Hourly Occupancy	53%	51%	65%	60%	60%	72%	70%	69%	64%	63%	55%	43%	72%
ALL ZONES SUMMARY															
On-Street	480	Hourly Demand	212	233	261	272	267	266	293	280	290	307	301	258	307
		Hourly Occupancy	44%	49%	54%	57%	56%	55%	61%	58%	60%	64%	63%	54%	64%

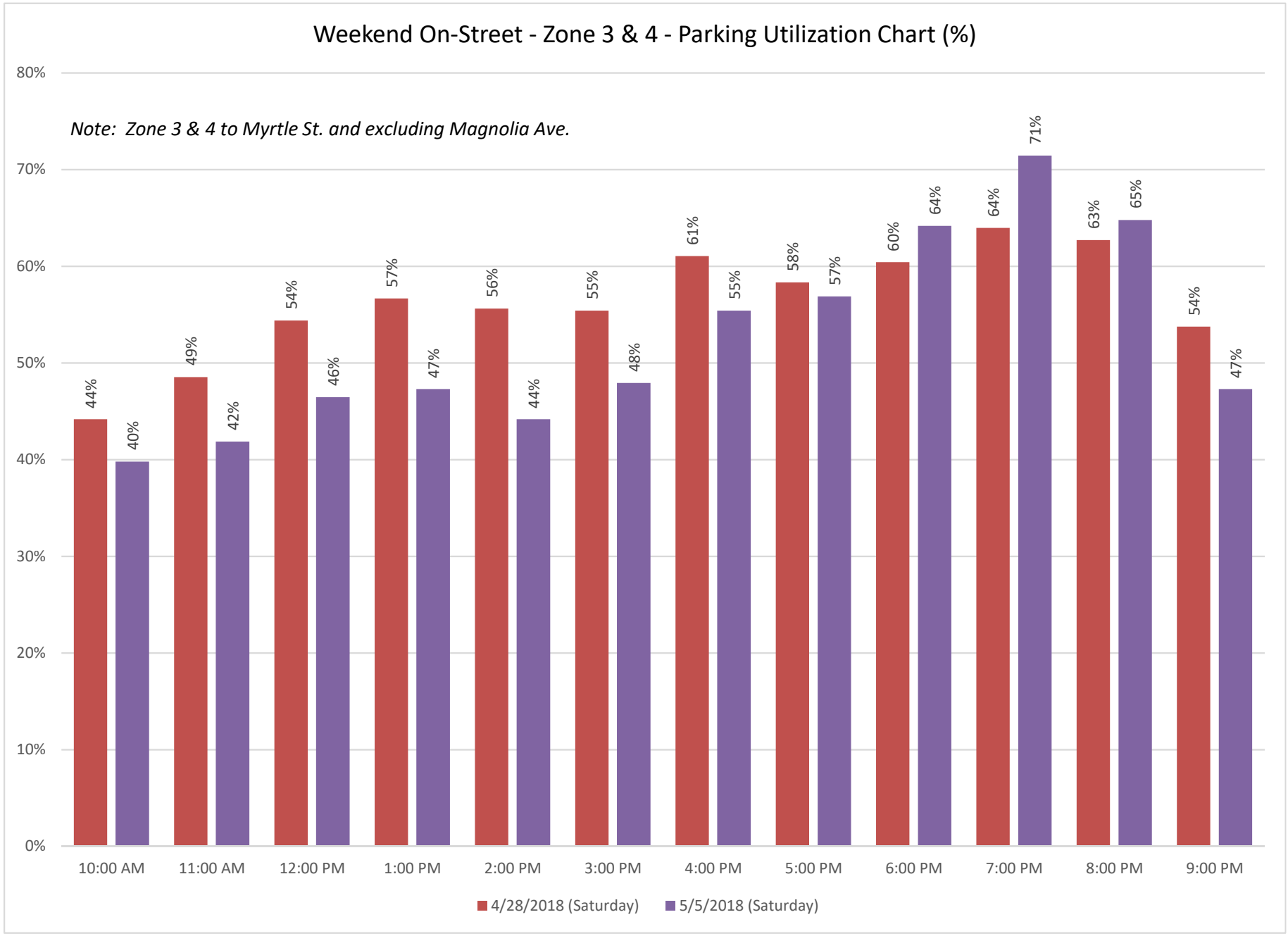
ON-STREET (Saturday, May 5, 2018)

	Supply	Time	10:00 AM	11:00 AM	12:00 PM	1:00 PM	2:00 PM	3:00 PM	4:00 PM	5:00 PM	6:00 PM	7:00 PM	8:00 PM	9:00 PM	PEAK
ZONE 3 SUMMARY															
On-Street	269	Hourly Demand	107	118	144	165	147	157	154	161	178	200	198	131	200
		Hourly Occupancy	40%	44%	54%	61%	55%	58%	57%	60%	66%	74%	74%	49%	74%
ZONE 4 SUMMARY															
On-Street	211	Hourly Demand	84	83	79	62	65	73	112	112	130	143	113	96	143
		Hourly Occupancy	40%	39%	37%	29%	31%	35%	53%	53%	62%	68%	54%	45%	68%
ALL ZONES SUMMARY															
On-Street	480	Hourly Demand	191	201	223	227	212	230	266	273	308	343	311	227	343
		Hourly Occupancy	40%	42%	46%	47%	44%	48%	55%	57%	64%	71%	65%	47%	71%

Residential Parking Permit (Zones 3 & 4, excluding Magnolia Ave.)

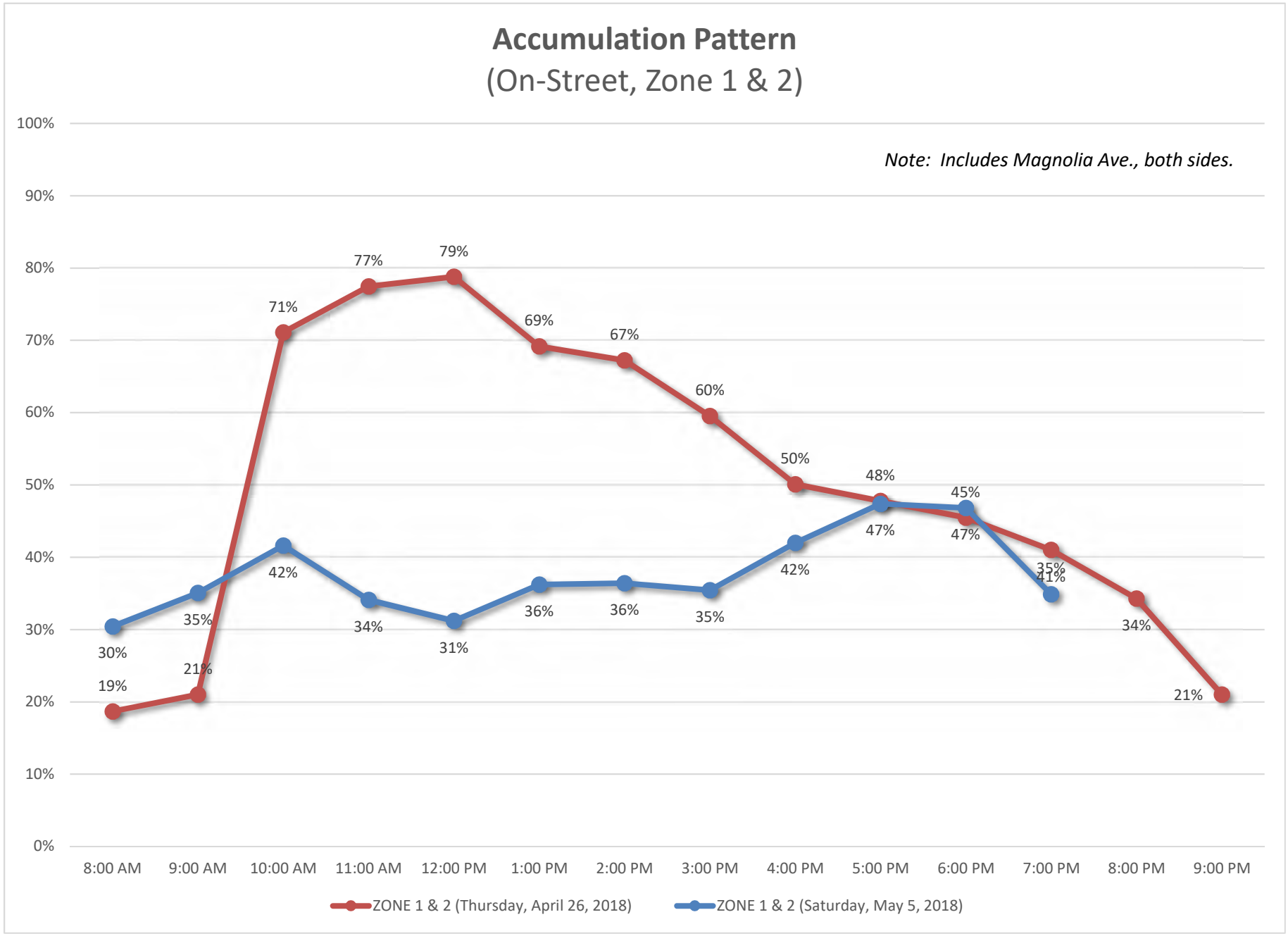


Residential Parking Permit (Zones 3 & 4, excluding Magnolia Ave.)



ON-STREET SECTION DATA
(Zones 1 & 2, including Magnolia Ave.)

On-Street (Zones 1 & 2, including Magnolia Ave.)



On-Street (Zones 1 & 2, including Magnolia Ave.)

ZONE 1 & 2 (Thursday, April 26, 2018)

Note: Including Magnolia Ave., both sides of street.

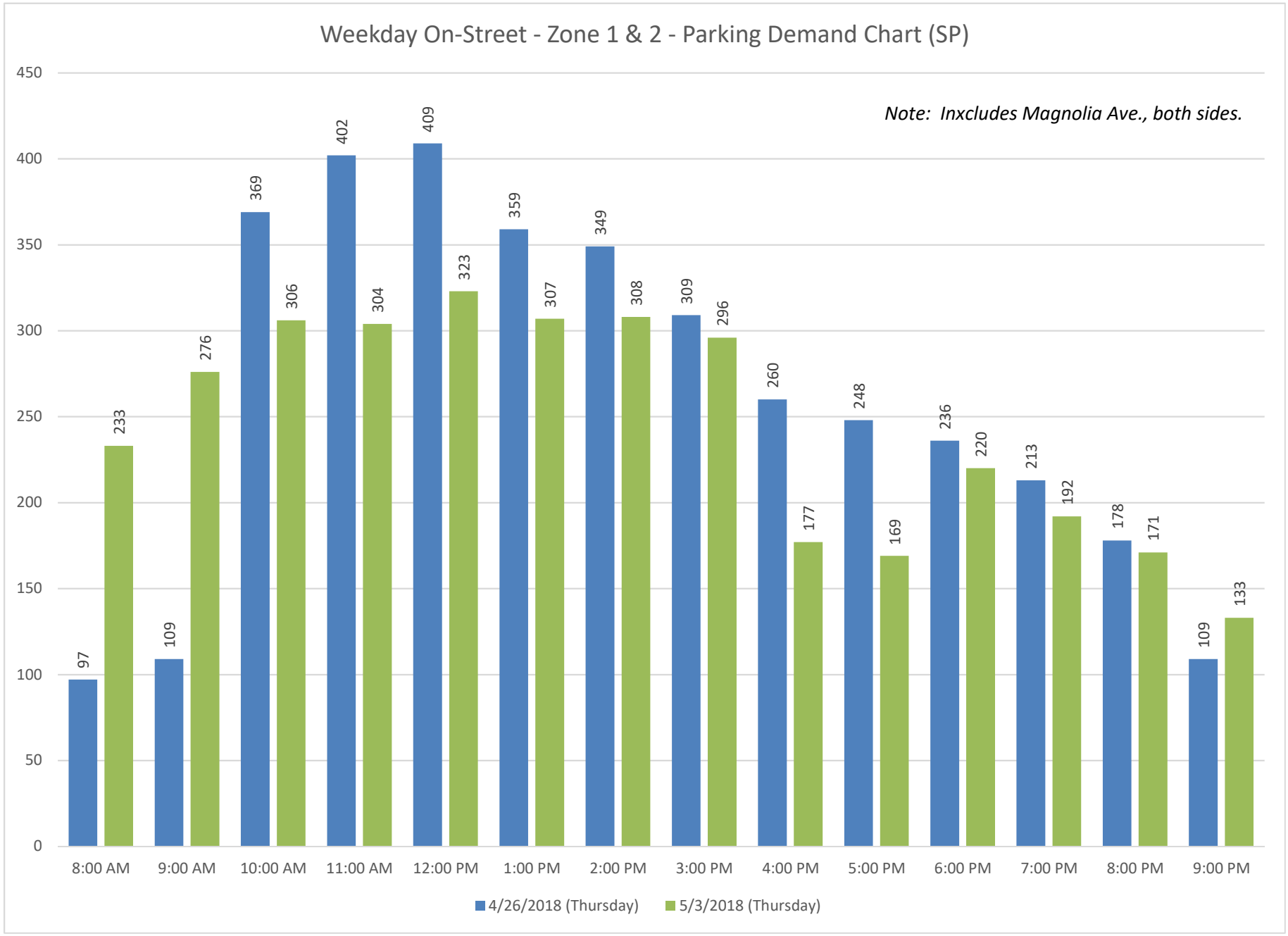
	Supply	Time	8:00 AM	9:00 AM	10:00 AM	11:00 AM	12:00 PM	1:00 PM	2:00 PM	3:00 PM	4:00 PM	5:00 PM	6:00 PM	7:00 PM	8:00 PM	9:00 PM	PEAK
ZONE 1 SUMMARY																	
On-Street	205	Hourly Demand	60	68	106	136	161	90	105	86	88	96	94	110	93	51	161
		Hourly Occupancy	29%	33%	52%	66%	79%	44%	51%	42%	43%	47%	46%	54%	45%	25%	79%
ZONE 2 SUMMARY																	
On-Street	314	Hourly Demand	37	41	263	266	248	269	244	223	172	152	142	103	85	58	269
		Hourly Occupancy	12%	13%	84%	85%	79%	86%	78%	71%	55%	48%	45%	33%	27%	18%	86%
ALL ZONES SUMMARY																	
On-Street	519	Hourly Demand	97	109	369	402	409	359	349	309	260	248	236	213	178	109	409
		Hourly Occupancy	19%	21%	71%	77%	79%	69%	67%	60%	50%	48%	45%	41%	34%	21%	79%

ZONE 1 & 2 (Thursday, May 3, 2018)

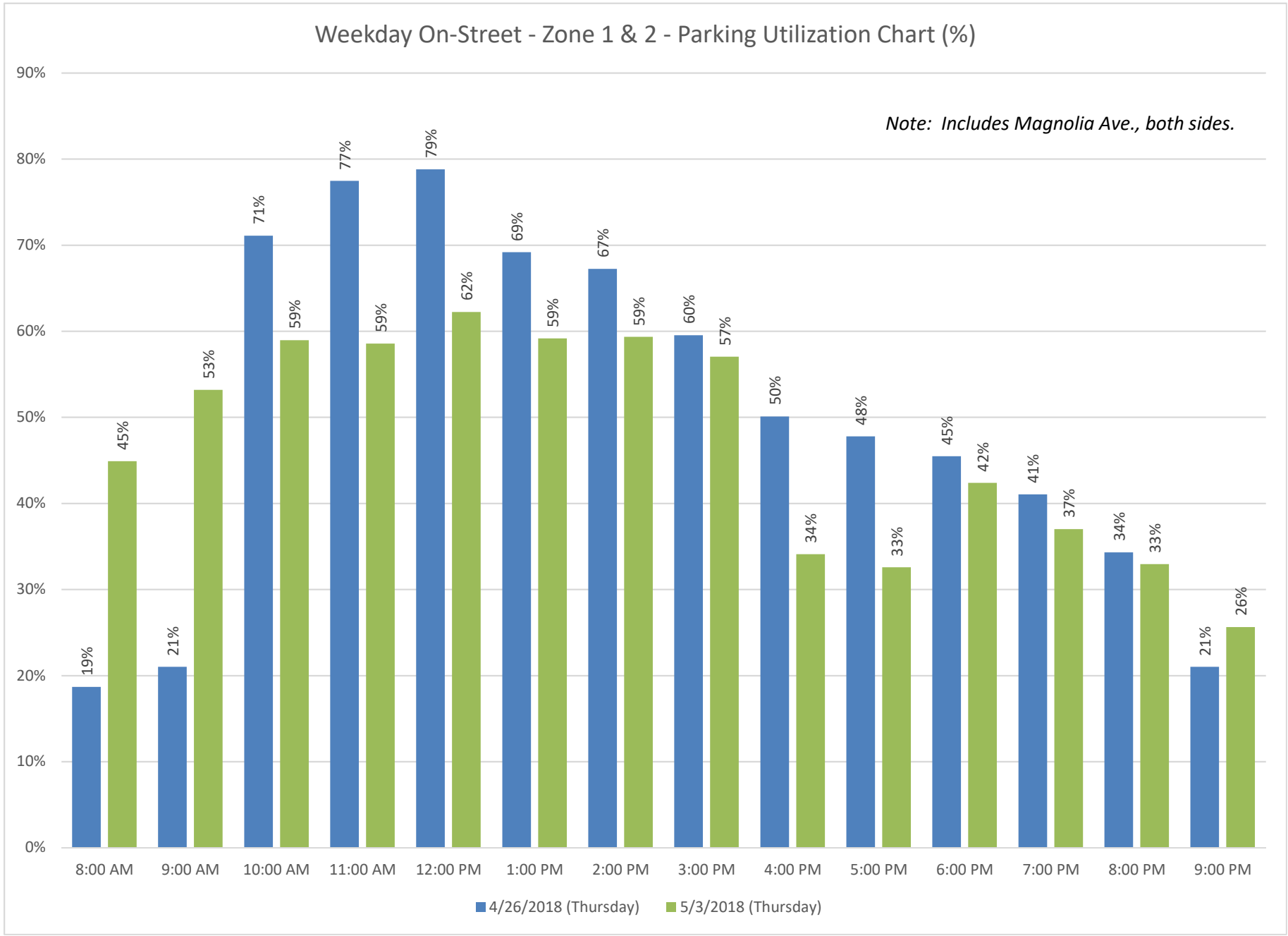
Note: Including Magnolia Ave., both sides of street.

	Supply	Time	8:00 AM	9:00 AM	10:00 AM	11:00 AM	12:00 PM	1:00 PM	2:00 PM	3:00 PM	4:00 PM	5:00 PM	6:00 PM	7:00 PM	8:00 PM	9:00 PM	PEAK
ZONE 1 SUMMARY																	
On-Street	205	Hourly Demand	85	107	99	116	127	118	134	124	22	87	109	108	98	81	134
		Hourly Occupancy	41%	52%	48%	57%	62%	58%	65%	60%	11%	42%	53%	53%	48%	40%	65%
ZONE 2 SUMMARY																	
On-Street	314	Hourly Demand	148	169	207	188	196	189	174	172	155	82	111	84	73	52	207
		Hourly Occupancy	47%	54%	66%	60%	62%	60%	55%	55%	49%	26%	35%	27%	23%	17%	66%
ALL ZONES SUMMARY																	
On-Street	519	Hourly Demand	233	276	306	304	323	307	308	296	177	169	220	192	171	133	323
		Hourly Occupancy	45%	53%	59%	59%	62%	59%	59%	57%	34%	33%	42%	37%	33%	26%	62%

On-Street (Zones 1 & 2, including Magnolia Ave.)



On-Street (Zones 1 & 2, including Magnolia Ave.)



On-Street (Zones 1 & 2, including Magnolia Ave.)

ZONE 1 & 2 (Saturday, April 28, 2018)

Note: Including Magnolia Ave., both sides of street.

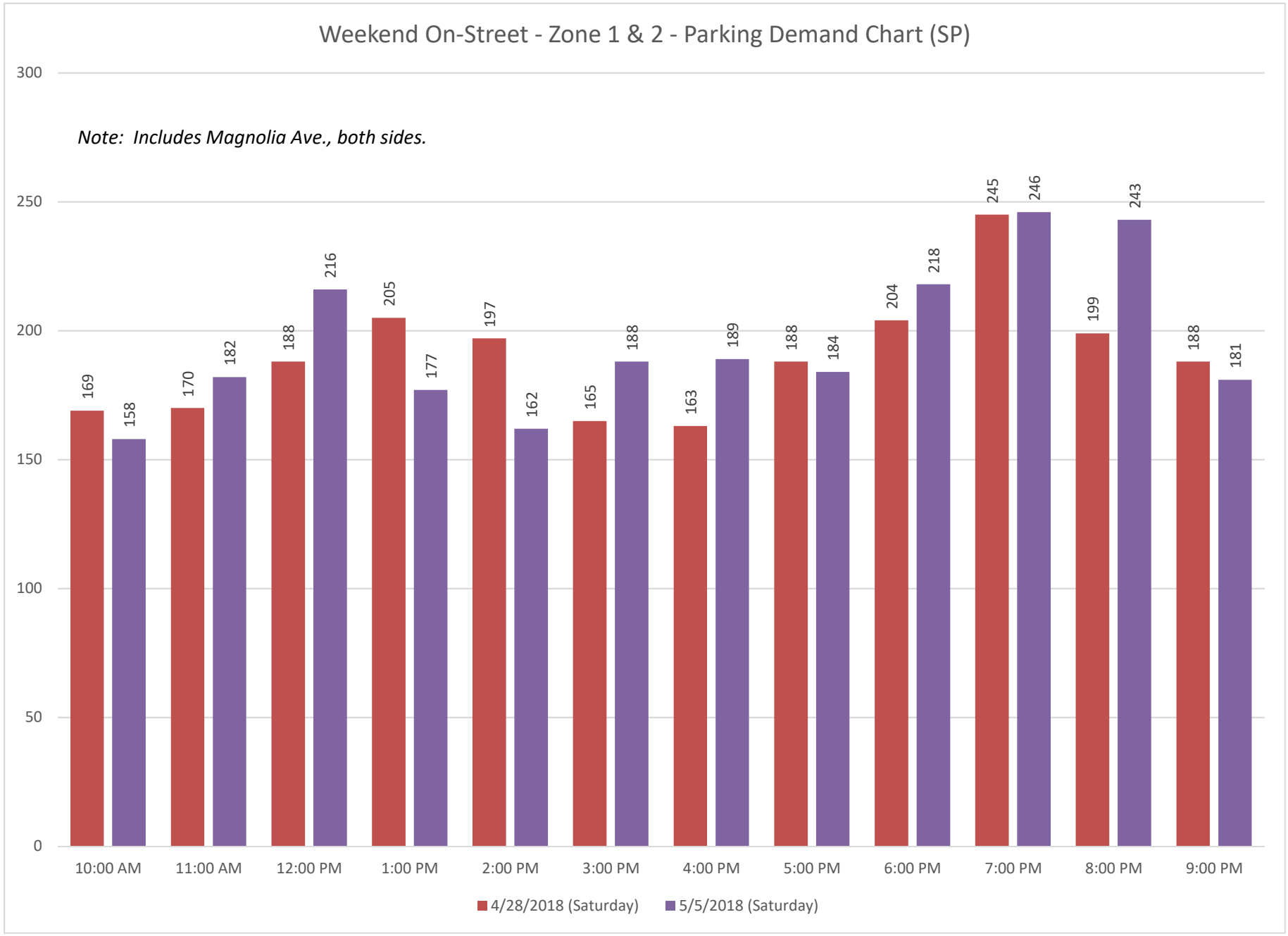
	Supply	Time	10:00 AM	11:00 AM	12:00 PM	1:00 PM	2:00 PM	3:00 PM	4:00 PM	5:00 PM	6:00 PM	7:00 PM	8:00 PM	9:00 PM	PEAK
ZONE 1 SUMMARY															
On-Street	205	Hourly Demand	79	77	77	90	90	81	80	93	96	112	101	95	112
		Hourly Occupancy	39%	38%	38%	44%	44%	40%	39%	45%	47%	55%	49%	46%	55%
ZONE 2 SUMMARY															
On-Street	314	Hourly Demand	90	93	111	115	107	84	83	95	108	133	98	93	133
		Hourly Occupancy	29%	30%	35%	37%	34%	27%	26%	30%	34%	42%	31%	30%	42%
ALL ZONES SUMMARY															
On-Street	519	Hourly Demand	169	170	188	205	197	165	163	188	204	245	199	188	245
		Hourly Occupancy	33%	33%	36%	39%	38%	32%	31%	36%	39%	47%	38%	36%	47%

ZONE 1 & 2 (Saturday, May 5, 2018)

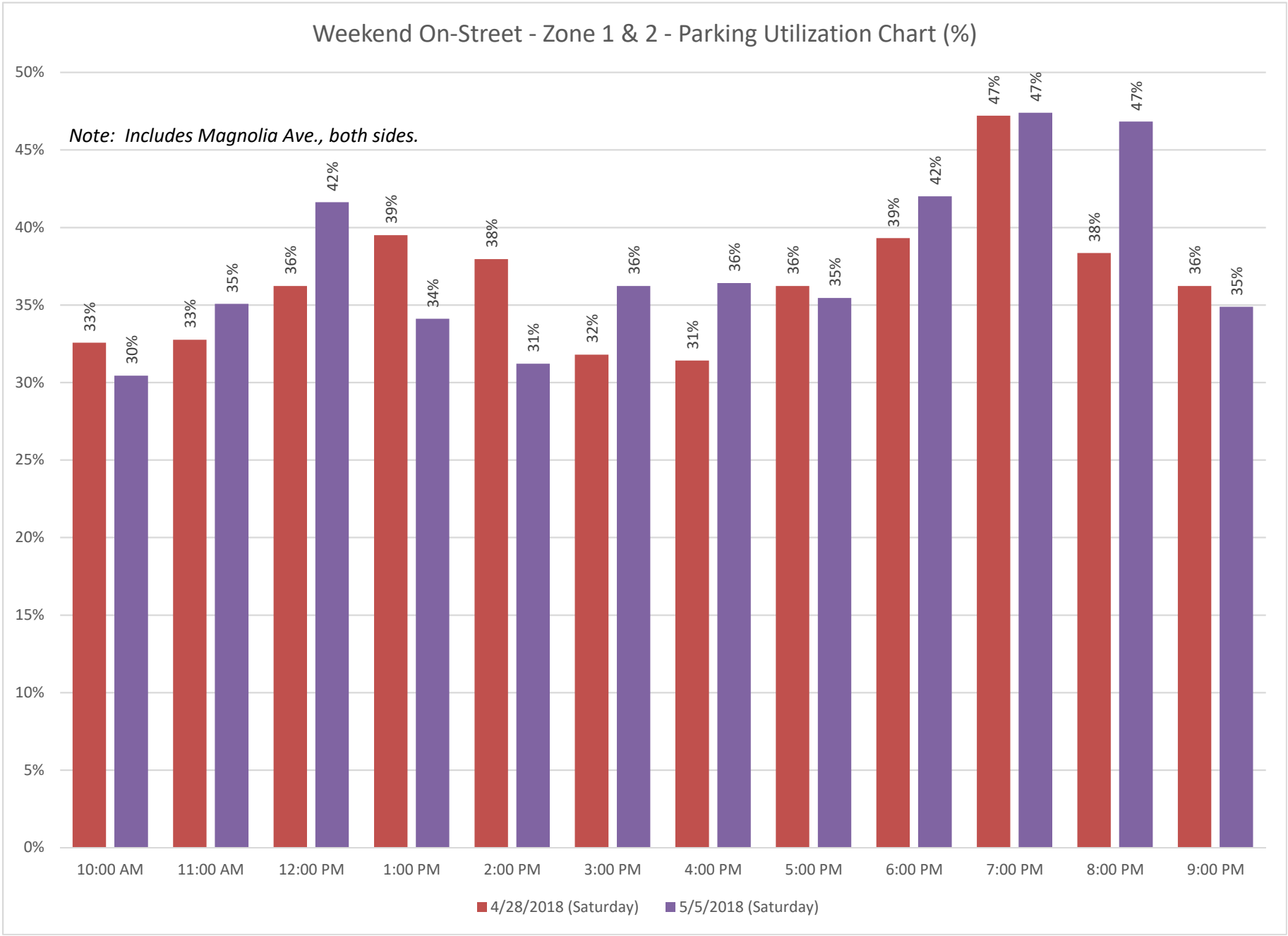
Note: Including Magnolia Ave., both sides of street.

	Supply	Time	10:00 AM	11:00 AM	12:00 PM	1:00 PM	2:00 PM	3:00 PM	4:00 PM	5:00 PM	6:00 PM	7:00 PM	8:00 PM	9:00 PM	PEAK
ZONE 1 SUMMARY															
On-Street	205	Hourly Demand	89	101	119	91	87	96	82	91	97	116	121	95	121
		Hourly Occupancy	43%	49%	58%	44%	42%	47%	40%	44%	47%	57%	59%	46%	59%
ZONE 2 SUMMARY															
On-Street	314	Hourly Demand	69	81	97	86	75	92	107	93	121	130	122	86	130
		Hourly Occupancy	22%	26%	31%	27%	24%	29%	34%	30%	39%	41%	39%	27%	41%
ALL ZONES SUMMARY															
On-Street	519	Hourly Demand	158	182	216	177	162	188	189	184	218	246	243	181	246
		Hourly Occupancy	30%	35%	42%	34%	31%	36%	36%	35%	42%	47%	47%	35%	47%

On-Street (Zones 1 & 2, including Magnolia Ave.)

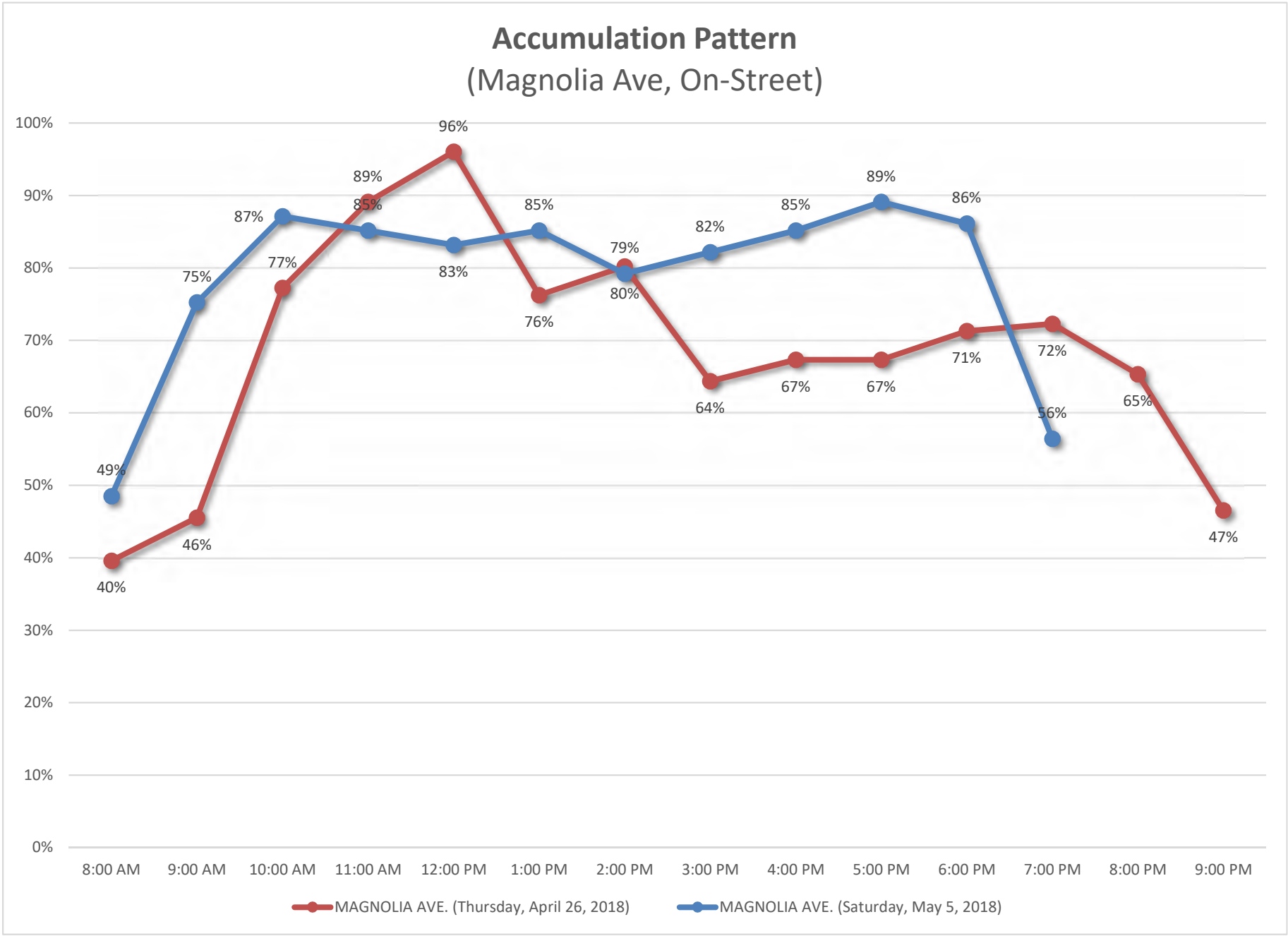


On-Street (Zones 1 & 2, including Magnolia Ave.)



MAGNOLIA AVENUE SECTION DATA

Magnolia Ave. data



Magnolia Ave. data

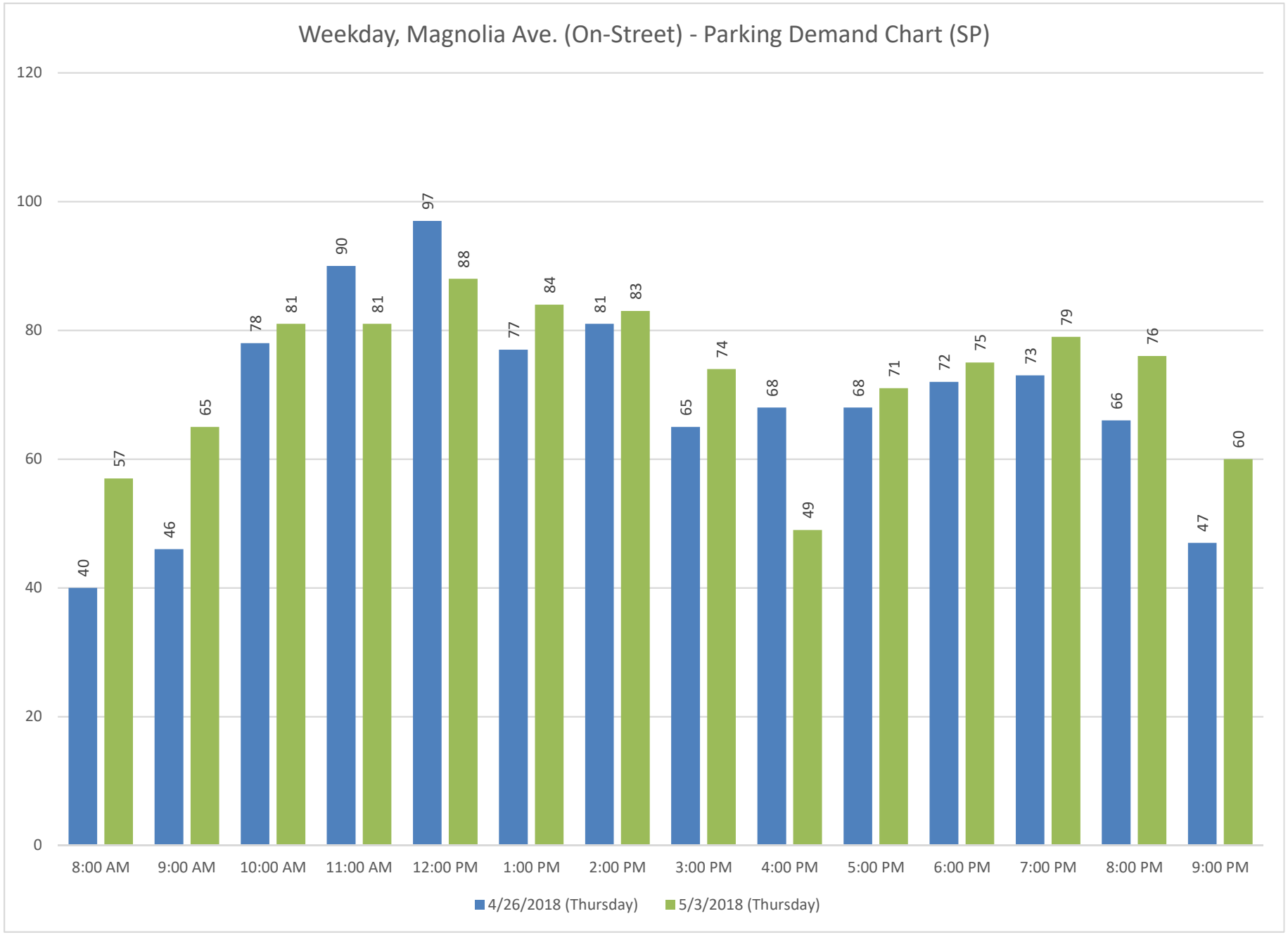
MAGNOLIA AVE. (Thursday, April 26, 2018)

	Supply	Time	8:00 AM	9:00 AM	10:00 AM	11:00 AM	12:00 PM	1:00 PM	2:00 PM	3:00 PM	4:00 PM	5:00 PM	6:00 PM	7:00 PM	8:00 PM	9:00 PM	PEAK
ZONE 1 SUMMARY																	
On-Street	34	Hourly Demand	0	0	22	29	34	18	22	17	22	26	24	27	20	12	34
		Hourly Occupancy	0%	0%	65%	85%	100%	53%	65%	50%	65%	76%	71%	79%	59%	35%	100%
ZONE 2 SUMMARY																	
On-Street	27	Hourly Demand	17	17	24	20	23	23	24	19	17	17	18	21	25	19	25
		Hourly Occupancy	63%	63%	89%	74%	85%	85%	89%	70%	63%	63%	67%	78%	93%	70%	93%
ZONE 3 SUMMARY																	
On-Street	19	Hourly Demand	9	12	15	19	19	16	16	10	13	11	18	10	9	6	19
		Hourly Occupancy	47%	63%	79%	100%	100%	84%	84%	53%	68%	58%	95%	53%	47%	32%	100%
ZONE 4 SUMMARY																	
On-Street	21	Hourly Demand	14	17	17	22	21	20	19	19	16	14	12	15	12	10	22
		Hourly Occupancy	67%	81%	81%	105%	100%	95%	90%	90%	76%	67%	57%	71%	57%	48%	105%
ALL ZONES SUMMARY																	
On-Street	101	Hourly Demand	40	46	78	90	97	77	81	65	68	68	72	73	66	47	97
		Hourly Occupancy	40%	46%	77%	89%	96%	76%	80%	64%	67%	67%	71%	72%	65%	47%	96%

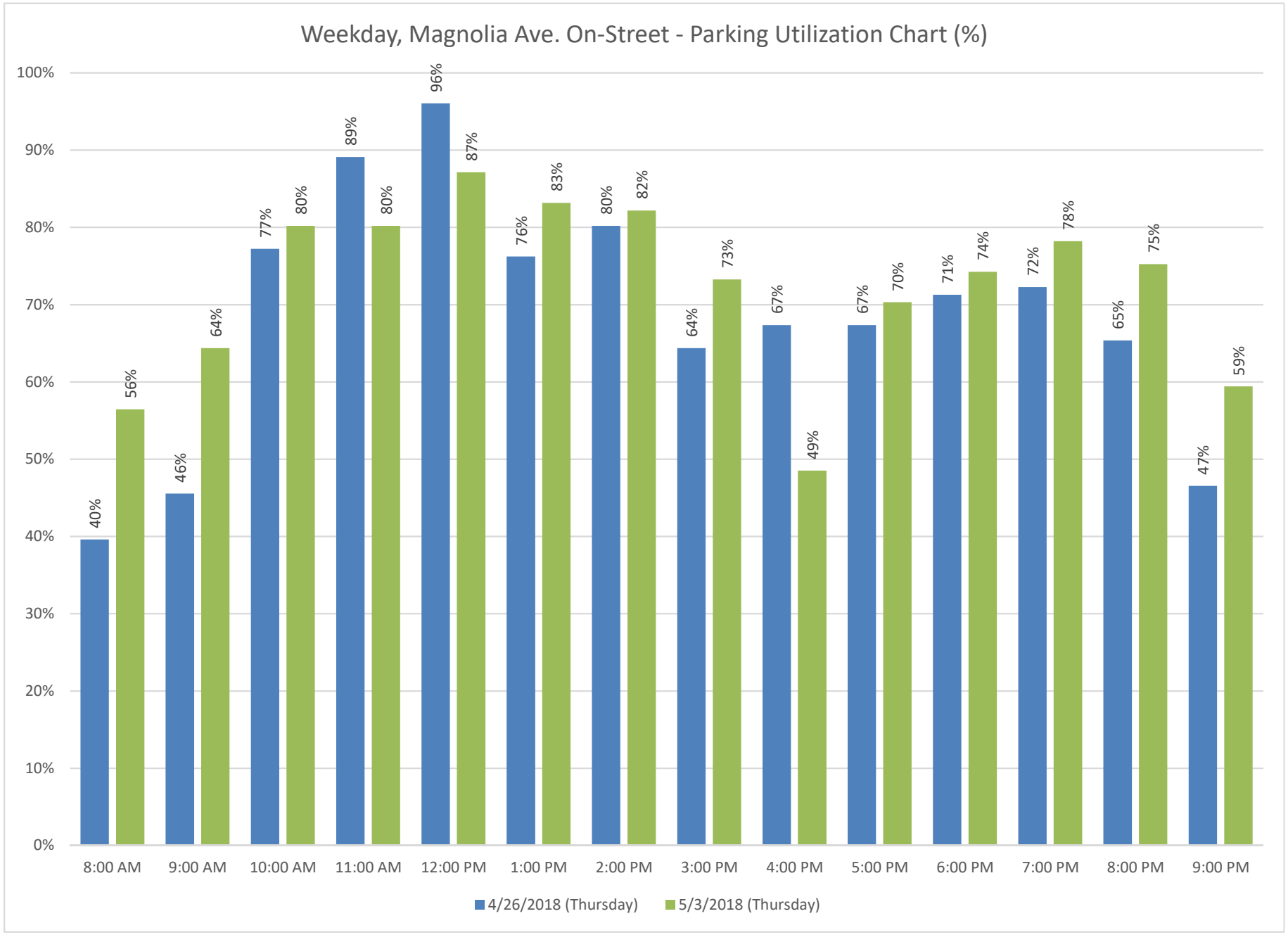
MAGNOLIA AVE. (Thursday, May 3, 2018)

	Supply	Time	8:00 AM	9:00 AM	10:00 AM	11:00 AM	12:00 PM	1:00 PM	2:00 PM	3:00 PM	4:00 PM	5:00 PM	6:00 PM	7:00 PM	8:00 PM	9:00 PM	PEAK
ZONE 1 SUMMARY																	
On-Street	34	Hourly Demand	14	19	21	26	27	25	24	19	0	22	25	25	24	22	27
		Hourly Occupancy	41%	56%	62%	76%	79%	74%	71%	56%	0%	65%	74%	74%	71%	65%	79%
ZONE 2 SUMMARY																	
On-Street	27	Hourly Demand	17	17	24	20	23	23	24	19	17	17	18	21	25	19	25
		Hourly Occupancy	63%	63%	89%	74%	85%	85%	89%	70%	63%	63%	67%	78%	93%	70%	93%
ZONE 3 SUMMARY																	
On-Street	19	Hourly Demand	8	10	15	17	18	18	15	15	15	15	15	14	13	7	18
		Hourly Occupancy	42%	53%	79%	89%	95%	95%	79%	79%	79%	79%	79%	74%	68%	37%	95%
ZONE 4 SUMMARY																	
On-Street	21	Hourly Demand	18	19	21	18	20	18	20	21	17	17	17	19	14	12	21
		Hourly Occupancy	86%	90%	100%	86%	95%	86%	95%	100%	81%	81%	81%	90%	67%	57%	100%
ALL ZONES SUMMARY																	
On-Street	101	Hourly Demand	57	65	81	81	88	84	83	74	49	71	75	79	76	60	88
		Hourly Occupancy	56%	64%	80%	80%	87%	83%	82%	73%	49%	70%	74%	78%	75%	59%	87%

Magnolia Ave. data



Magnolia Ave. data



Magnolia Ave. data

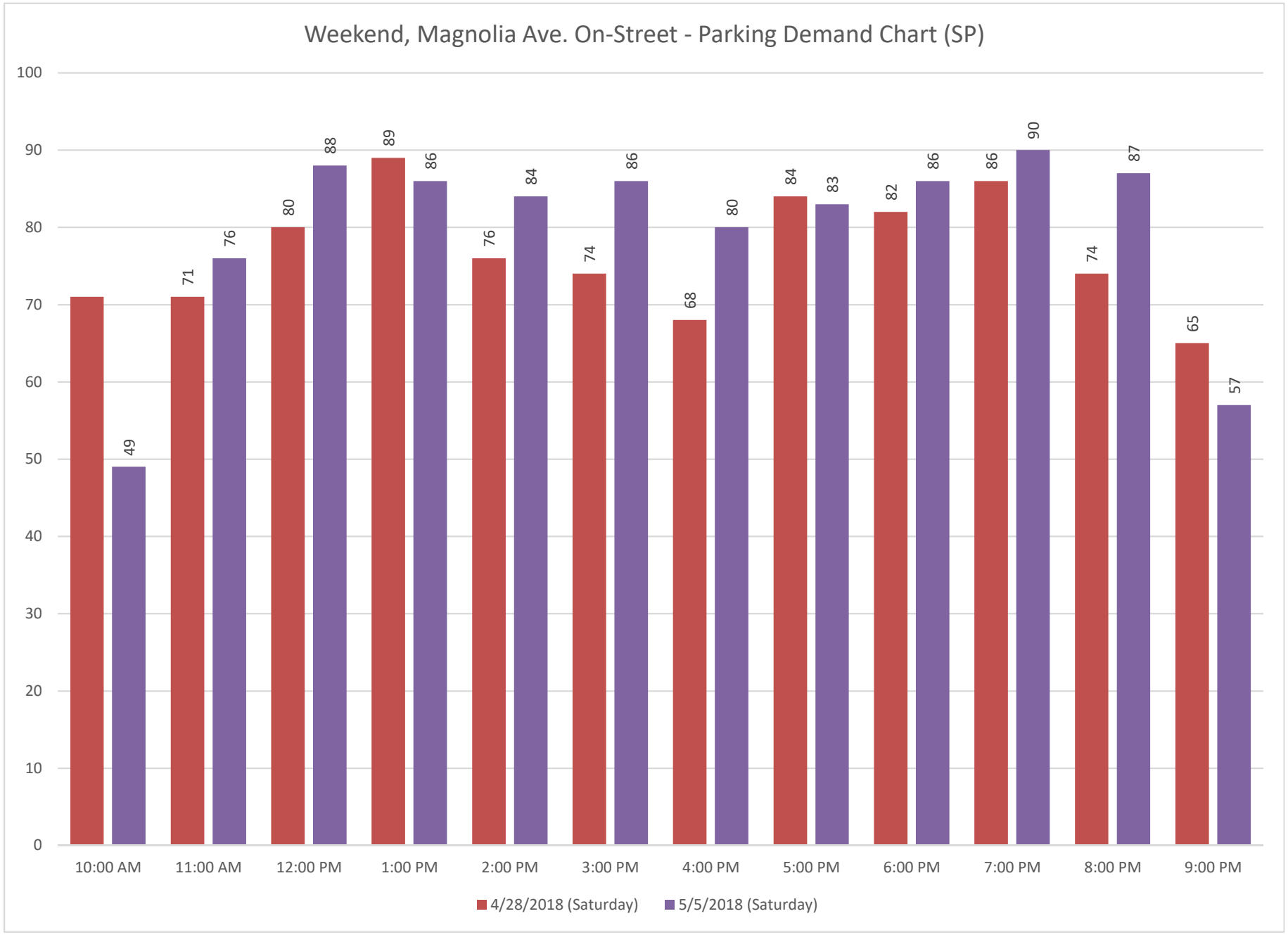
MAGNOLIA AVE. (Saturday, April 28, 2018)

	Supply	Time	10:00 AM	11:00 AM	12:00 PM	1:00 PM	2:00 PM	3:00 PM	4:00 PM	5:00 PM	6:00 PM	7:00 PM	8:00 PM	9:00 PM	PEAK
ZONE 1 SUMMARY															
On-Street	34	Hourly Demand	18	17	22	26	22	19	19	27	28	31	28	25	31
		Hourly Occupancy	53%	50%	65%	76%	65%	56%	56%	79%	82%	91%	82%	74%	91%
ZONE 2 SUMMARY															
On-Street	27	Hourly Demand	23	23	25	25	19	20	17	23	23	25	22	19	25
		Hourly Occupancy	85%	85%	93%	93%	70%	74%	63%	85%	85%	93%	81%	70%	93%
ZONE 3 SUMMARY															
On-Street	19	Hourly Demand	11	12	12	17	16	14	11	12	16	19	18	11	19
		Hourly Occupancy	58%	63%	63%	89%	84%	74%	58%	63%	84%	100%	95%	58%	100%
ZONE 4 SUMMARY															
On-Street	21	Hourly Demand	19	19	21	21	19	21	21	22	15	11	6	10	22
		Hourly Occupancy	90%	90%	100%	100%	90%	100%	100%	105%	71%	52%	29%	48%	105%
ALL ZONES SUMMARY															
On-Street	101	Hourly Demand	71	71	80	89	76	74	68	84	82	86	74	65	89
		Hourly Occupancy	70%	70%	79%	88%	75%	73%	67%	83%	81%	85%	73%	64%	88%

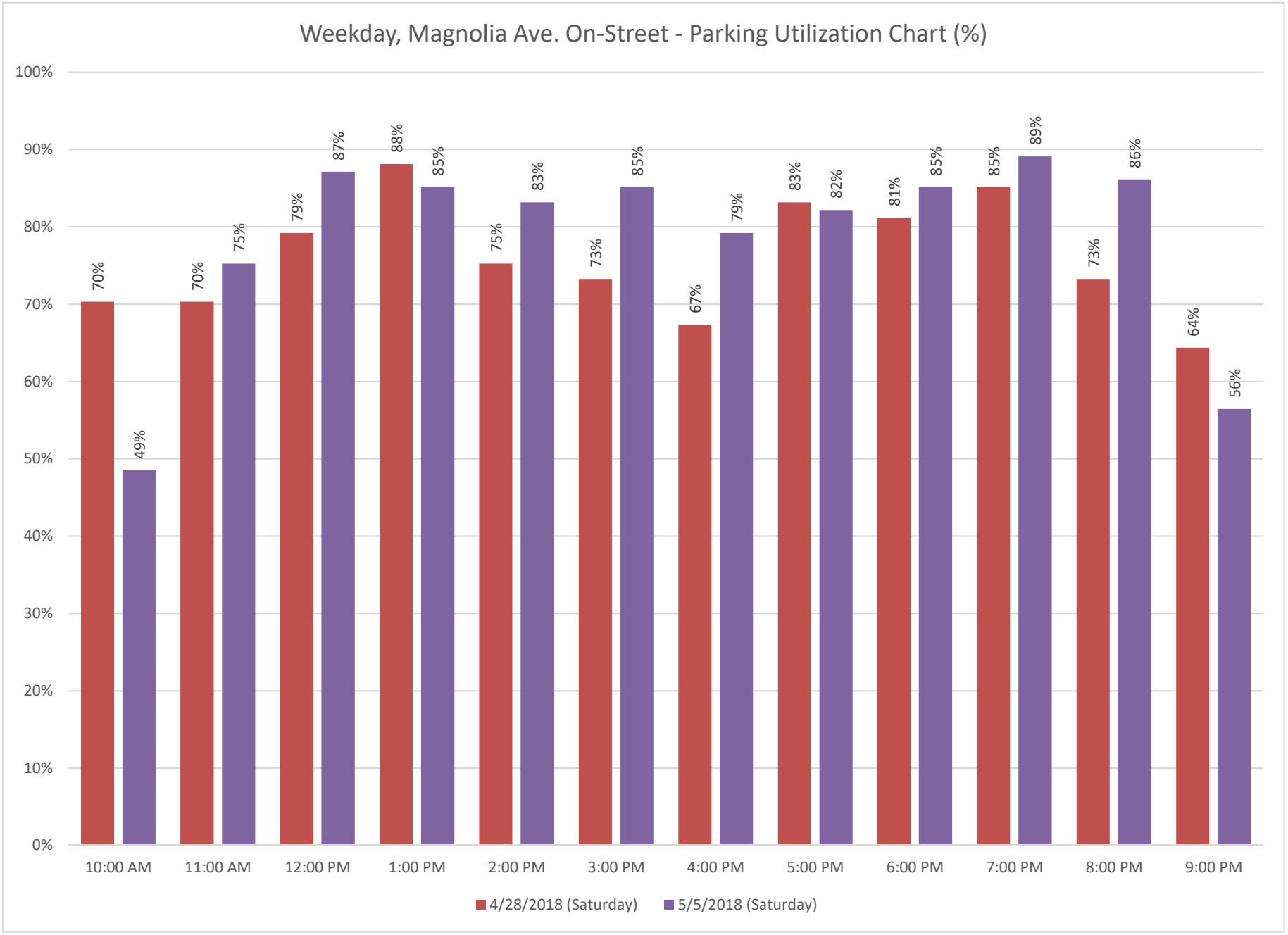
MAGNOLIA AVE. (Saturday, May 5, 2018)

	Supply	Time	10:00 AM	11:00 AM	12:00 PM	1:00 PM	2:00 PM	3:00 PM	4:00 PM	5:00 PM	6:00 PM	7:00 PM	8:00 PM	9:00 PM	PEAK
ZONE 1 SUMMARY															
On-Street	34	Hourly Demand	27	26	33	33	31	30	30	27	25	27	27	19	33
		Hourly Occupancy	79%	76%	97%	97%	91%	88%	88%	79%	74%	79%	79%	56%	97%
ZONE 2 SUMMARY															
On-Street	27	Hourly Demand	8	20	25	24	20	26	25	23	26	25	25	13	26
		Hourly Occupancy	30%	74%	93%	89%	74%	96%	93%	85%	96%	93%	93%	48%	96%
ZONE 3 SUMMARY															
On-Street	19	Hourly Demand	4	17	19	18	16	16	16	17	17	18	15	9	19
		Hourly Occupancy	21%	89%	100%	95%	84%	84%	84%	89%	89%	95%	79%	47%	100%
ZONE 4 SUMMARY															
On-Street	21	Hourly Demand	10	13	11	11	17	14	9	16	18	20	20	16	20
		Hourly Occupancy	48%	62%	52%	52%	81%	67%	43%	76%	86%	95%	95%	76%	95%
ALL ZONES SUMMARY															
On-Street	101	Hourly Demand	49	76	88	86	84	86	80	83	86	90	87	57	90
		Hourly Occupancy	49%	75%	87%	85%	83%	85%	79%	82%	85%	89%	86%	56%	89%

Magnolia Ave. data



Magnolia Ave. data



HWA PARKING
strickland | jamail

9600 Great Hills Trail | Suite 150W | Austin, Texas 78759
(T) 888.708.PARK

www.hwaparking.com