



CITY OF NEWARK
DELAWARE

June 8, 2017

TO: Mayor and Members of Council

VIA: Tom Coleman, Acting City Manager

FROM: Marvin Howard, Parking Manager
Court Mulvanity, Parking Supervisor
Andrew S. Haines, Deputy City Manager

RE: Meter Occupancy Report – November 2016 through March 2017

The Parking Division was asked to supply information regarding on-street parking meter occupancy. Previously, the Parking Division reported meter occupancy statistics for May, June, September, and October of 2016. This meter occupancy report will cover November and December of 2016, as well as Quarter 1 of 2017. To establish a regular schedule and meet certain expectations, occupancy reports will now be supplied quarterly to the mayor and members of council. The goals of the reports are to give a better understanding of when and where downtown patrons are parking their vehicles and to supply reliable statistics that can be used in making decisions concerning the area and its access by patrons. This report pays special attention to City-sponsored events and holiday parking, as the time period includes a number of events that may affect parking occupancy through the test area.

Background

In 2013, the City of Newark purchased IPS credit card enabled parking meters and in-ground vehicle sensors. These new meters are referred to as “smart parking meters” because in addition to accepting all major credit cards and reporting back to a central database, they can generate occupancy data when paired with a sensor, which can be used for planning and operational purposes. Specifically, when coupled with sensors that track and record occupancy, the meters allow for calculations to estimate the number of metered parking spaces in use and or are available at any given time, giving both the percentage of meters occupied and the number of spaces available in a particular sub-section or street. Information was collected from the meters in the downtown area for specific timeframes to demonstrate meter usage and occupancy requested by mayor and city council. Parking industry benchmarks establish that over 85% occupancy is a threshold of presumed capacity, by the consumer. Staff utilizes this benchmark when assessing occupancy, presumed occupancy, and how the current inventory can or cannot support service needs in a given parking zone or at given periods of time.

Area of Study

Following the same methodology as the first report, occupancy reports were pulled from 130 meters along both sides of East and West Main Street from North Chapel Street to the Deer Park Tavern, representing a significant portion of the Central Business District (CBD). Loading zone meters were excluded from the study, as no vehicles should be parking at these meters (with exception to tractor-trailers at no charge) before 4 p.m. and including them would negatively skew overall occupancy calculations for specific time periods. Meters blocked due to projects or experiencing malfunctions were also excluded. It is important to note the data does not include vehicles parked illegally at yellow curbs or in loading zones. Motorcycles that may not be correctly positioned above the sensors are also excluded from the study.

Study Timeframes

To demonstrate occupancy and available spaces by hour, data was used from November through December of 2016 and January through March of 2017, the five most recent months that the data is available. Analyzing data during this timeframe allows comparisons of meter usage when students are in session at University of Delaware, when the student population is reduced due to the holiday break, and when there are several events and incentives to encourage increased patronage downtown. This timeframe was chosen not only for its diversity in who parks over this period, but because it picks up from where the last report ends and brings the reporting up-to-date with the most current full month of information available from the meters.

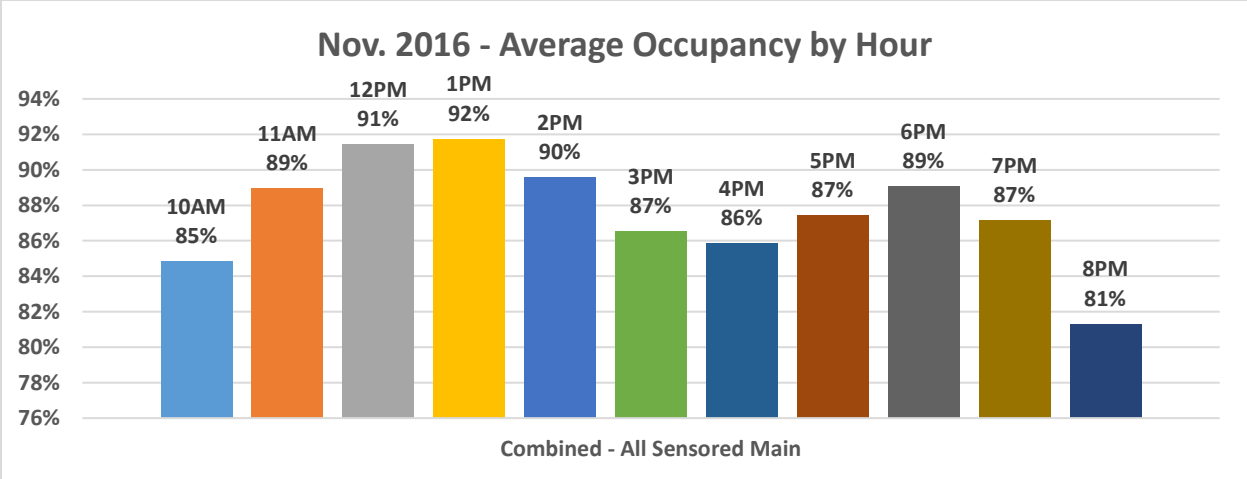
Data by Month

November 2016

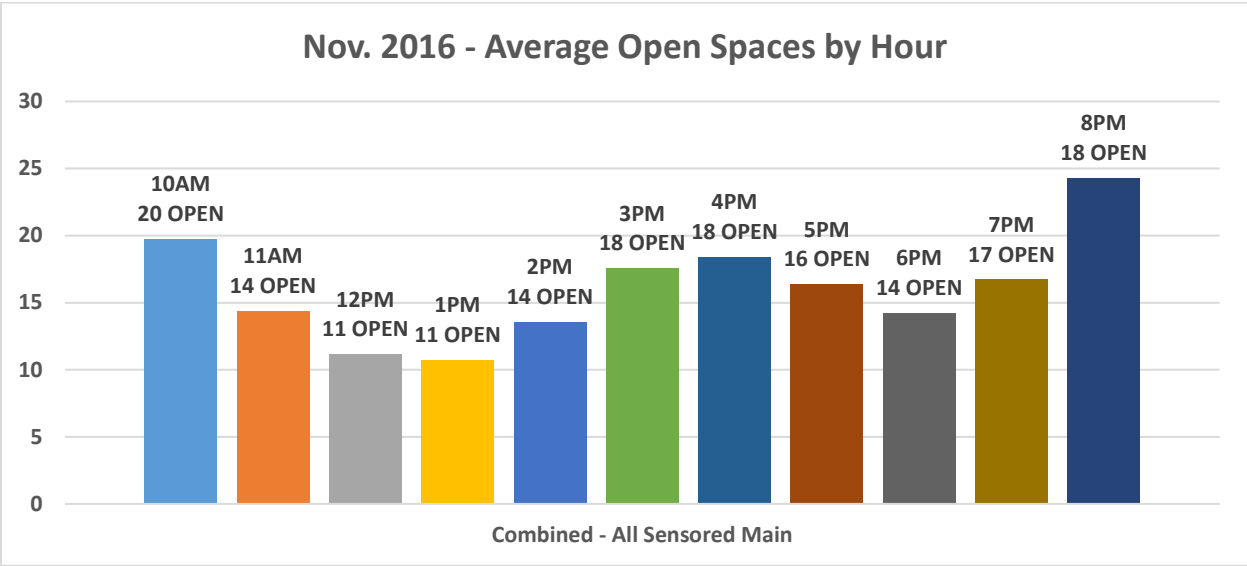
The month of November is generally one of the busier months for parking in the City of Newark. An exception to this is near the end of the month, when parking prior to the Thanksgiving holiday decreases and is significantly reduced on the date of the holiday. There are no parking fees collected on Thanksgiving, Black Friday or Small Business Saturday in an effort to entice shoppers to support local businesses. On the next page is a heat map, which shows the impact the holidays and parking at no charge had on parking occupancy at smart meters.

Percent Occupied by Date/Time/Zone (November 2016)														
Date	Day	Location	# Meters	10AM	11AM	12PM	1PM	2PM	3PM	4PM	5PM	6PM	7PM	8PM
11/1/2016	Tuesday	Combined - All Sensored Main	130	87%	92%	94%	94%	90%	89%	89%	95%	95%	92%	88%
11/2/2016	Wednesday	Combined - All Sensored Main	130	88%	93%	95%	93%	92%	85%	91%	93%	95%	95%	92%
11/3/2016	Thursday	Combined - All Sensored Main	130	85%	92%	95%	94%	91%	89%	88%	94%	95%	95%	90%
11/4/2016	Friday	Combined - All Sensored Main	130	88%	93%	94%	95%	92%	87%	85%	89%	91%	92%	85%
11/5/2016	Saturday	Combined - All Sensored Main	130	87%	92%	95%	95%	93%	92%	89%	87%	86%	88%	88%
11/6/2016	Sunday	Combined - All Sensored Main	130	90%	91%	94%	94%	92%	87%	88%	93%	88%	88%	81%
11/7/2016	Monday	Combined - All Sensored Main	130	83%	94%	93%	92%	89%	91%	90%	92%	92%	90%	84%
11/8/2016	Tuesday	Combined - All Sensored Main	130	88%	89%	92%	89%	85%	85%	84%	83%	89%	89%	85%
11/9/2016	Wednesday	Combined - All Sensored Main	130	83%	88%	92%	92%	88%	85%	87%	92%	95%	94%	85%
11/10/2016	Thursday	Combined - All Sensored Main	130	90%	95%	95%	94%	93%	92%	92%	91%	95%	93%	88%
11/11/2016	Friday	Combined - All Sensored Main	130	92%	95%	95%	95%	95%	94%	95%	93%	95%	92%	92%
11/12/2016	Saturday	Combined - All Sensored Main	130	88%	91%	93%	92%	92%	90%	86%	85%	89%	89%	85%
11/13/2016	Sunday	Combined - All Sensored Main	130	91%	92%	92%	92%	91%	89%	85%	90%	89%	85%	83%
11/14/2016	Monday	Combined - All Sensored Main	130	83%	89%	94%	93%	92%	91%	90%	92%	93%	90%	84%
11/15/2016	Tuesday	Combined - All Sensored Main	130	87%	94%	95%	93%	89%	91%	88%	93%	94%	88%	85%
11/16/2016	Wednesday	Combined - All Sensored Main	130	88%	90%	93%	93%	92%	92%	93%	97%	96%	94%	91%
11/17/2016	Thursday	Combined - All Sensored Main	130	92%	98%	98%	97%	98%	97%	94%	97%	95%	95%	84%
11/18/2016	Friday	Combined - All Sensored Main	130	94%	98%	98%	98%	98%	94%	93%	94%	90%	88%	84%
11/19/2016	Saturday	Combined - All Sensored Main	130	92%	91%	92%	94%	90%	83%	85%	92%	94%	95%	86%
11/20/2016	Sunday	Combined - All Sensored Main	130	88%	91%	92%	91%	88%	78%	78%	77%	74%	76%	59%
11/21/2016	Monday	Combined - All Sensored Main	130	75%	82%	90%	92%	86%	80%	85%	88%	89%	79%	68%
11/22/2016	Tuesday	Combined - All Sensored Main	130	75%	86%	91%	92%	86%	82%	83%	88%	86%	78%	70%
11/23/2016	Wednesday	Combined - All Sensored Main	130	82%	88%	92%	91%	88%	86%	85%	82%	82%	83%	77%
11/24/2016	Thursday	Combined - All Sensored Main	130	43%	38%	42%	42%	47%	34%	33%	22%	38%	35%	28%
11/25/2016	Friday	Combined - All Sensored Main	130	80%	85%	88%	94%	92%	85%	80%	86%	88%	84%	75%
11/26/2016	Saturday	Combined - All Sensored Main	130	86%	85%	88%	93%	89%	86%	82%	88%	88%	85%	87%
11/27/2016	Sunday	Combined - All Sensored Main	130	84%	88%	92%	94%	90%	87%	84%	82%	85%	81%	77%
11/28/2016	Monday	Combined - All Sensored Main	130	85%	89%	94%	95%	94%	92%	93%	92%	95%	92%	82%
11/29/2016	Tuesday	Combined - All Sensored Main	130	86%	92%	95%	97%	95%	93%	92%	93%	94%	94%	87%
11/30/2016	Wednesday	Combined - All Sensored Main	130	85%	92%	93%	94%	91%	87%	88%	88%	95%	94%	90%

As noted above, Thursday, November 24th (Thanksgiving) shows a noticeable decrease in parking meter occupancy. Regular businesses on Main Street were mostly closed, except for some restaurants that provided Thanksgiving services or catering for the public. Days when regular rates were not in effect also saw decreased occupancy, with many University of Delaware students away for Thanksgiving. The report also indicates many patrons took advantage of Black Friday and Small Business Saturday deals on Main Street and in downtown districts. Near the end of the month, there is an increase back to ordinary occupancy levels for the month, likely due to returning students and University staff. Paying attention to the days of the week that are most busy, Thursdays and Fridays tend to have higher occupancy than Monday through Wednesday, with exception of the Thanksgiving week. Saturdays remain busy, but they generally do not experience the max occupancy levels seen on Thursdays and Fridays. Sundays generally show a noticeable decrease in traffic during dinner hours, but remain at normal occupancy levels during lunch. This may be an effect of giving parking at no charge from 7 a.m. to 1 p.m. on Sundays and/or due to church services in the area. With a high number of restaurants on Main Street, Sunday brunch is also a popular activity in the area, with local restaurants giving brunch deals to remain competitive in the area.



The chart above shows the average occupancy by hour for November, which includes the data from Thanksgiving. By leaving this day in, it brings average occupancy down by roughly 2% by hour, but is important to include as meters were available for parking that day, even if at no charge. Overall, the average hourly occupancy saw the busiest hours during the lunch hours between 11 a.m. and 2 p.m., where meters were around 90%+ occupied. Dinner hours brought an increase to average occupancy before taking a major decrease at 8 p.m. Average occupancy floated between 85% and 93% by hour, on average.



Average open spaces by hour statistics were generated from the average occupancy by hour statistics to give what the expectation should be when a patron drives down Main Street concerning available spaces. During lunch, a patron could expect to see 11-14 available legal parking spaces out of 130 total parking spaces over the test area, although there were times on Thursday and Friday when little to no parking was available, especially during lunch and dinner hours.

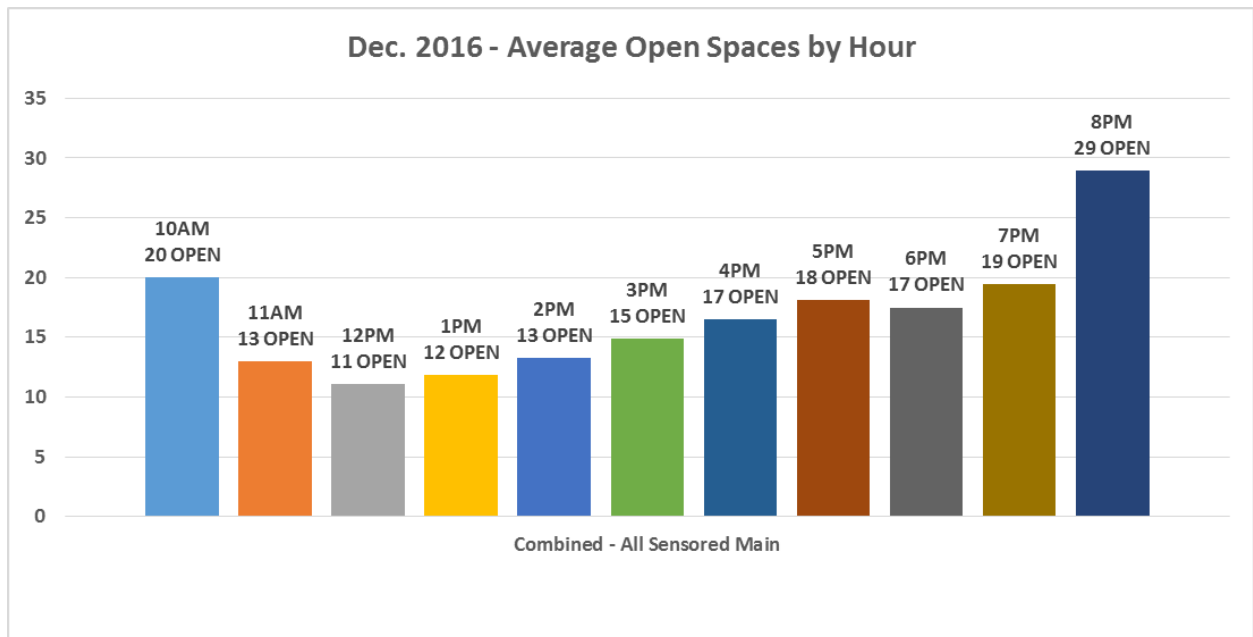
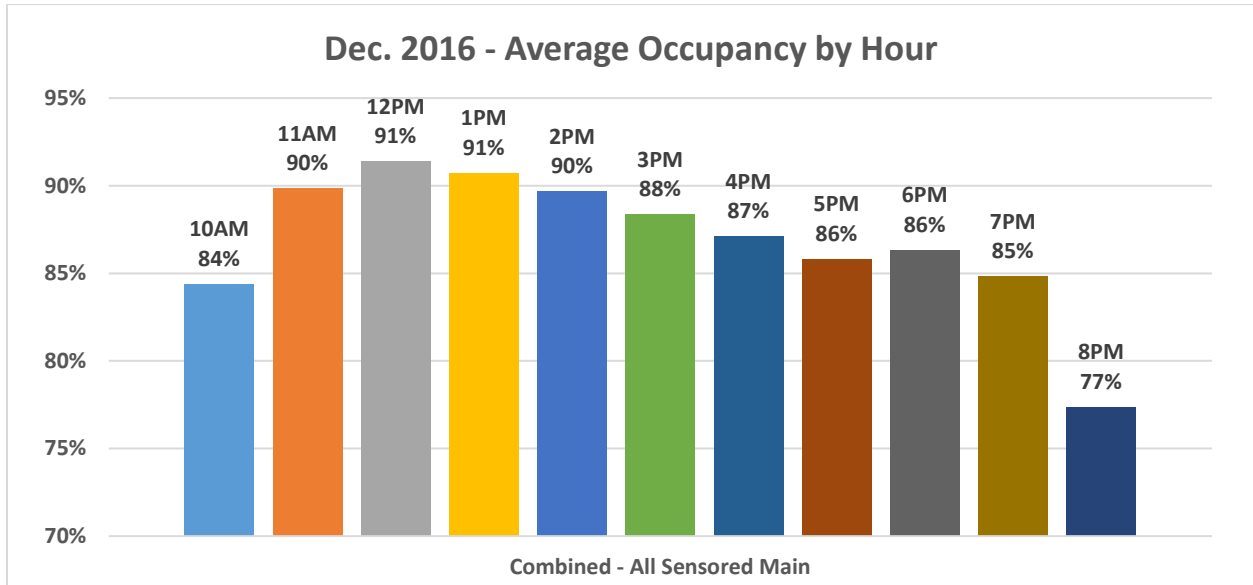
December 2016

In December, downtown parking can be influenced by the holiday season, City of Newark events including Winterfest, the end of the University of Delaware Fall semester, and parking incentives to increase patronage to area businesses. For 2016, parking was free from December 21-26. The dates for this incentive are selected based, in part, by the University of Delaware schedule to decrease the likelihood of staff and students utilizing parking resources and incentives meant for business patrons. Parking was also free from 5 p.m. to midnight on New Year’s Eve as an incentive to draw patrons downtown. The number of meters available for testing this month decreased from 130 to 128, as two smart meters had meter-sensor connection issues. A heat map is provided below, showing occupancy rates per day by hour.

Percent Occupied by Date/Time/Zone (December 2016)														
Date	Day	Location	# Meters	10AM	11AM	12PM	1PM	2PM	3PM	4PM	5PM	6PM	7PM	8PM
12/1/2016	Thursday	Combined - All Sensored Main	128	89%	95%	96%	95%	94%	92%	95%	95%	95%	91%	85%
12/2/2016	Friday	Combined - All Sensored Main	128	94%	96%	97%	96%	97%	95%	93%	97%	95%	95%	93%
12/3/2016	Saturday	Combined - All Sensored Main	128	94%	97%	97%	97%	89%	88%	88%	93%	88%	79%	
12/4/2016	Sunday	Combined - All Sensored Main	128	87%	93%	96%	93%	93%	94%	91%	92%	93%	89%	82%
12/5/2016	Monday	Combined - All Sensored Main	128	80%	95%	98%	96%	91%	90%	95%	97%	98%	96%	90%
12/6/2016	Tuesday	Combined - All Sensored Main	128	93%	98%	98%	95%	95%	95%	93%	95%	97%	95%	84%
12/7/2016	Wednesday	Combined - All Sensored Main	128	89%	96%	96%	97%	96%	94%	92%	95%	97%	98%	90%
12/8/2016	Thursday	Combined - All Sensored Main	128	88%	96%	98%	98%	95%	95%	95%	93%	95%	95%	82%
12/9/2016	Friday	Combined - All Sensored Main	128	91%	97%	98%	98%	98%	97%	95%	94%	96%	96%	88%
12/10/2016	Saturday	Combined - All Sensored Main	128	92%	93%	96%	95%	93%	95%	91%	88%	86%	87%	80%
12/11/2016	Sunday	Combined - All Sensored Main	128	89%	95%	96%	95%	90%	92%	90%	92%	87%	81%	77%
12/12/2016	Monday	Combined - All Sensored Main	128	89%	95%	97%	96%	94%	95%	94%	91%	95%	93%	85%
12/13/2016	Tuesday	Combined - All Sensored Main	128	91%	96%	95%	97%	95%	93%	94%	93%	94%	93%	89%
12/14/2016	Wednesday	Combined - All Sensored Main	128	95%	97%	96%	97%	96%	95%	91%	93%	95%	95%	88%
12/15/2016	Thursday	Combined - All Sensored Main	128	89%	97%	98%	97%	97%	97%	95%	91%	95%	94%	87%
12/16/2016	Friday	Combined - All Sensored Main	128	94%	98%	98%	98%	98%	97%	96%	93%	95%	96%	93%
12/17/2016	Saturday	Combined - All Sensored Main	128	88%	91%	91%	91%	95%	96%	94%	92%	85%	81%	81%
12/18/2016	Sunday	Combined - All Sensored Main	128	85%	89%	92%	88%	85%	86%	81%	77%	71%	69%	62%
12/19/2016	Monday	Combined - All Sensored Main	128	83%	91%	91%	92%	88%	88%	84%	82%	92%	83%	68%
12/20/2016	Tuesday	Combined - All Sensored Main	128	80%	89%	93%	92%	89%	83%	88%	85%	89%	85%	69%
12/21/2016	Wednesday	Combined - All Sensored Main	128	89%	94%	95%	92%	92%	89%	94%	93%	92%	90%	76%
12/22/2016	Thursday	Combined - All Sensored Main	128	91%	95%	95%	95%	95%	94%	94%	92%	89%	89%	78%
12/23/2016	Friday	Combined - All Sensored Main	128	91%	91%	93%	91%	92%	93%	91%	88%	85%	84%	79%
12/24/2016	Saturday	Combined - All Sensored Main	128	85%	85%	89%	91%	88%	81%	78%	69%	56%	61%	61%
12/25/2016	Sunday	Combined - All Sensored Main	128	36%	33%	31%	28%	30%	30%	31%	30%	29%	36%	26%
12/26/2016	Monday	Combined - All Sensored Main	128	64%	81%	87%	87%	87%	81%	81%	74%	81%	81%	69%
12/27/2016	Tuesday	Combined - All Sensored Main	128	75%	84%	85%	86%	83%	81%	83%	79%	81%	81%	74%
12/28/2016	Wednesday	Combined - All Sensored Main	128	76%	82%	88%	85%	87%	87%	77%	79%	78%	80%	77%
12/29/2016	Thursday	Combined - All Sensored Main	128	74%	79%	86%	83%	83%	81%	77%	77%	82%	78%	70%
12/30/2016	Friday	Combined - All Sensored Main	128	78%	83%	85%	87%	88%	84%	81%	80%	83%	78%	74%
12/31/2016	Saturday	Combined - All Sensored Main	128	79%	82%	83%	87%	81%	79%	77%	75%	77%	70%	63%

As the chart indicates, December 2016 started with very high occupancy numbers. Winterfest, an event held by the Parks and Recreation Department on Main Street at the Academy Lawn, brought extremely high occupancy numbers through the night of Friday, December 2nd. Between December 1st and December 17th, occupancy was consistently at or above 90% between 11 a.m. and 6 p.m., with a couple of exceptions around 3 p.m. and 5 p.m. on Sundays and Mondays. Parking occupancy peaked at 97-98% multiple times in the month, usually during lunch or dinner hours. On December 18th there is a sudden decrease in occupancy through the day, most likely due to students going home for the holidays and the closing of the dorms for the semester. Even with the students leaving for the holidays, 90%+ occupancy is charted through the week before the Christmas holiday and may be representative of a thriving Main Street and a desire by patrons to shop local for their holiday gifts. On Christmas Day, there a major decrease in parking

occupancy, as most businesses are closed for the holiday. The last week in December sees a decrease from the normal parking occupancy that was seen earlier in the month and at no point does on-street meter occupancy go above 90%, but floats between 68-87%. Lunch continues to be the busiest period of the day for on-street meters in the central business district.



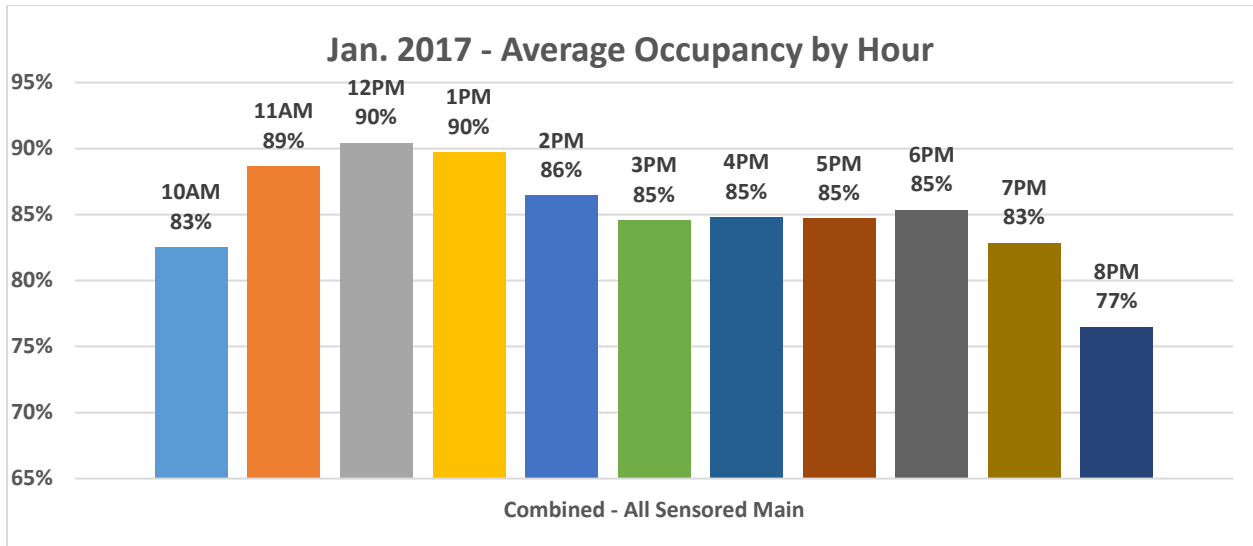
Average occupancy by hour and average open spaces by hour for December 2016 are presented above.

January 2017

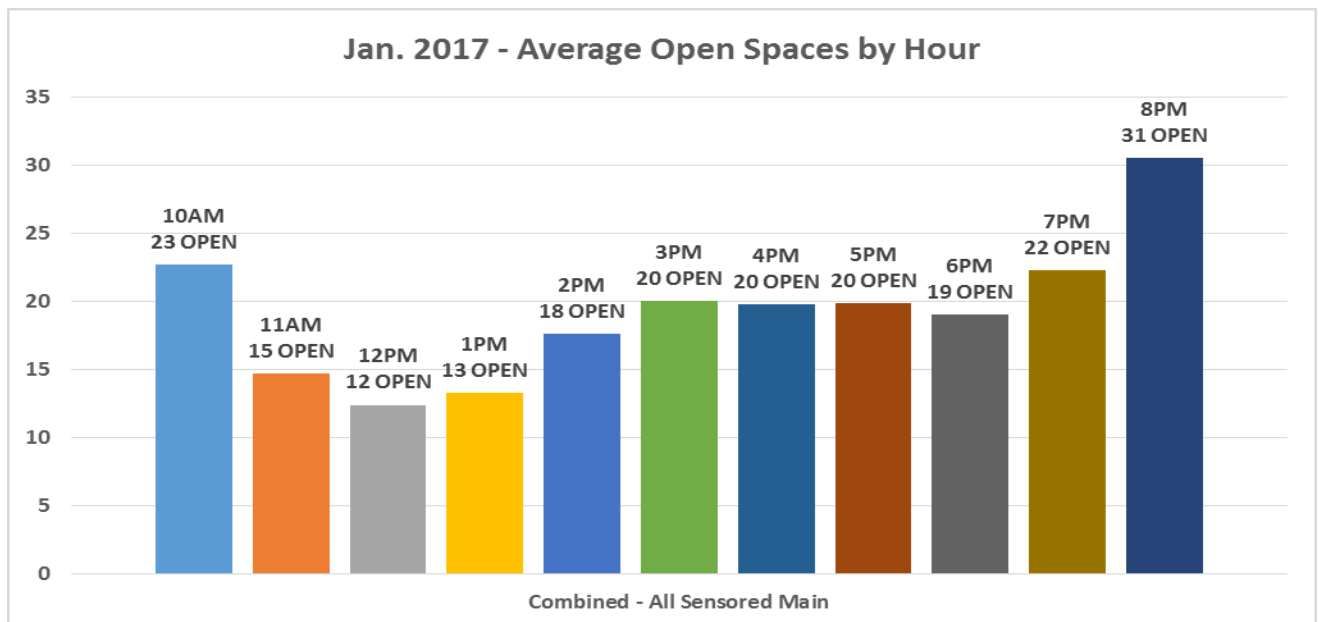
The beginning of the New Year brings a general decrease in on-street parking. While University students are still present due to the UD winter session, the number of on-campus students is significantly lower compared to the fall and spring semesters. Parking was free on New Year's Day and Martin Luther King Jr. Day (Monday, January 16th). Restaurant Week was held from Monday, January 16th to Sunday, January 22nd. There was no significant snow during the month, which is a rarity but helpful to local businesses, as the lack of a snow event led to more available business days. A heat map is provided below to give a visual representation of occupancy levels.

Percent Occupied by Date/Time/Zone (January 2017)				10AM	11AM	12PM	1PM	2PM	3PM	4PM	5PM	6PM	7PM	8PM
Date	Day	Location	# Meters											
1/1/2017	Sunday	Combined - All Sensored Main	130	74%	76%	85%	82%	76%	75%	70%	72%	70%	71%	63%
1/2/2017	Monday	Combined - All Sensored Main	130	74%	85%	86%	85%	85%	85%	81%	78%	75%	72%	71%
1/3/2017	Tuesday	Combined - All Sensored Main	130	78%	90%	93%	91%	92%	88%	92%	85%	87%	84%	75%
1/4/2017	Wednesday	Combined - All Sensored Main	130	80%	89%	92%	89%	85%	88%	85%	85%	89%	87%	82%
1/5/2017	Thursday	Combined - All Sensored Main	130	84%	91%	95%	92%	90%	85%	85%	87%	89%	83%	71%
1/6/2017	Friday	Combined - All Sensored Main	130	85%	88%	94%	95%	90%	90%	92%	89%	89%	84%	80%
1/7/2017	Saturday	Combined - All Sensored Main	130	86%	86%	89%	89%	85%	82%	81%	74%	75%	75%	72%
1/8/2017	Sunday	Combined - All Sensored Main	130	81%	88%	91%	89%	84%	82%	79%	79%	78%	75%	67%
1/9/2017	Monday	Combined - All Sensored Main	130	84%	85%	92%	89%	91%	92%	92%	92%	92%	87%	78%
1/10/2017	Tuesday	Combined - All Sensored Main	130	84%	89%	92%	92%	89%	88%	85%	92%	92%	89%	82%
1/11/2017	Wednesday	Combined - All Sensored Main	130	86%	92%	93%	95%	88%	86%	91%	92%	92%	89%	79%
1/12/2017	Thursday	Combined - All Sensored Main	130	80%	88%	91%	92%	89%	82%	80%	88%	89%	89%	84%
1/13/2017	Friday	Combined - All Sensored Main	130	85%	89%	93%	92%	85%	82%	88%	93%	92%	92%	89%
1/14/2017	Saturday	Combined - All Sensored Main	130	90%	92%	92%	92%	88%	85%	88%	85%	83%	82%	80%
1/15/2017	Sunday	Combined - All Sensored Main	130	91%	92%	92%	92%	93%	89%	90%	86%	85%	84%	78%
1/16/2017	Monday	Combined - All Sensored Main	130	87%	93%	92%	94%	94%	91%	87%	87%	86%	83%	74%
1/17/2017	Tuesday	Combined - All Sensored Main	130	85%	93%	93%	92%	90%	88%	94%	92%	94%	92%	85%
1/18/2017	Wednesday	Combined - All Sensored Main	130	85%	96%	94%	94%	91%	84%	86%	91%	95%	92%	88%
1/19/2017	Thursday	Combined - All Sensored Main	130	81%	95%	94%	94%	85%	84%	86%	92%	91%	88%	87%
1/20/2017	Friday	Combined - All Sensored Main	130	90%	95%	96%	95%	94%	89%	93%	90%	95%	95%	88%
1/21/2017	Saturday	Combined - All Sensored Main	130	92%	96%	95%	95%	90%	86%	92%	88%	85%	85%	79%
1/22/2017	Sunday	Combined - All Sensored Main	130	92%	95%	94%	92%	88%	85%	83%	81%	84%	79%	72%
1/23/2017	Monday	Combined - All Sensored Main	130	85%	88%	92%	91%	92%	91%	90%	88%	87%	82%	74%
1/24/2017	Tuesday	Combined - All Sensored Main	130	81%	88%	90%	92%	82%	88%	92%	93%	94%	89%	81%
1/25/2017	Wednesday	Combined - All Sensored Main	130	82%	88%	89%	86%	81%	82%	85%	85%	86%	86%	83%
1/26/2017	Thursday	Combined - All Sensored Main	130	77%	80%	82%	82%	79%	79%	81%	82%	78%	73%	68%
1/27/2017	Friday	Combined - All Sensored Main	130	74%	85%	85%	82%	76%	75%	76%	68%	75%	73%	69%
1/28/2017	Saturday	Combined - All Sensored Main	130	76%	79%	82%	83%	82%	80%	75%	77%	74%	75%	69%
1/29/2017	Sunday	Combined - All Sensored Main	130	78%	79%	82%	81%	78%	73%	69%	74%	78%	71%	62%
1/30/2017	Monday	Combined - All Sensored Main	130	72%	85%	85%	82%	82%	83%	78%	78%	82%	80%	65%

When compared to other months when students are in session, January's parking situation provided more available parking for patrons across the entire month, but not significantly more. Restaurant Week brought an increase in parking traffic to on-street meters, even though businesses are unable to validate at our parking meters, which are considered "prime" parking and charge a slightly higher rate than our off-street municipal parking lots that do accept business validations. Between the hours of 11 a.m. and 2 p.m. saw the highest rates of occupancy, specifically between the dates of January 14th and January 22nd.



Average hourly occupancy is representative of what the entire month of January experienced. Meter occupancy numbers did see a slight increase in dinner traffic during Restaurant Week, as patrons took advantage of deals from local restaurants. Martin Luther King, Jr. Day didn't see any noticeable change in how people parked or occupancy numbers. The lunch hours continued to be the busiest time of day with meter occupancy. January showed the dinner hour is relatively slower on Sundays and Mondays within Newark, as some dinner hours struggled to get over the 75% occupancy mark.



Parking in January is presumed easier for patrons to park compared to other months; however, the data demonstrates only a marginal (1-4%) increase in open spaces. More parking spaces are open during the dinner hours, and patrons can have a reasonable expectation to find parking near business they want to patronize. Restaurant Week provides a noticeable increase to the

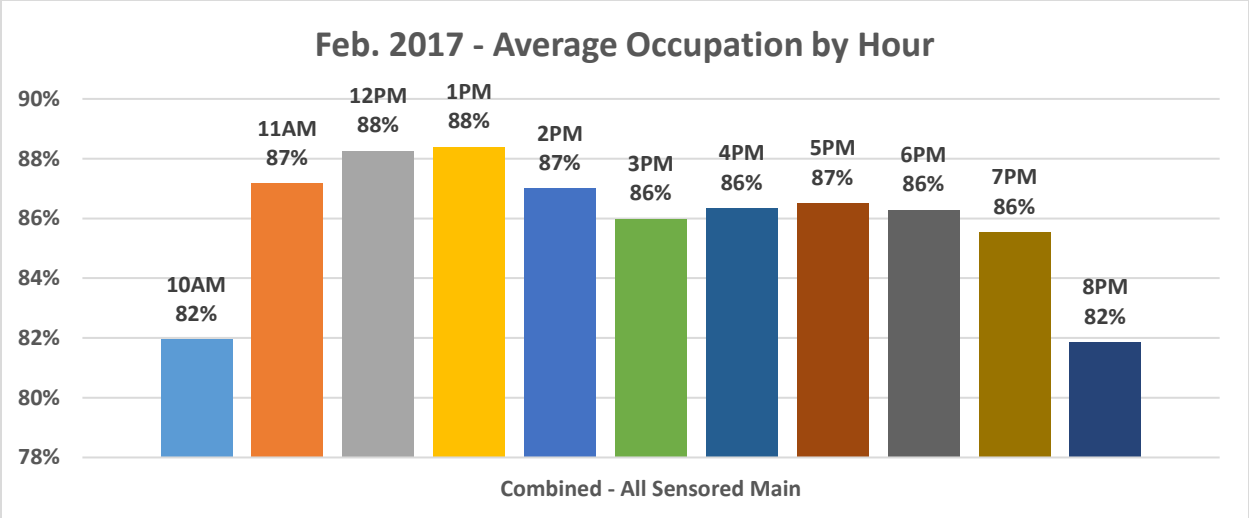
number of people who patronize area restaurants and parking numbers can support a correlation to the increase in local restaurant economy.

February 2017

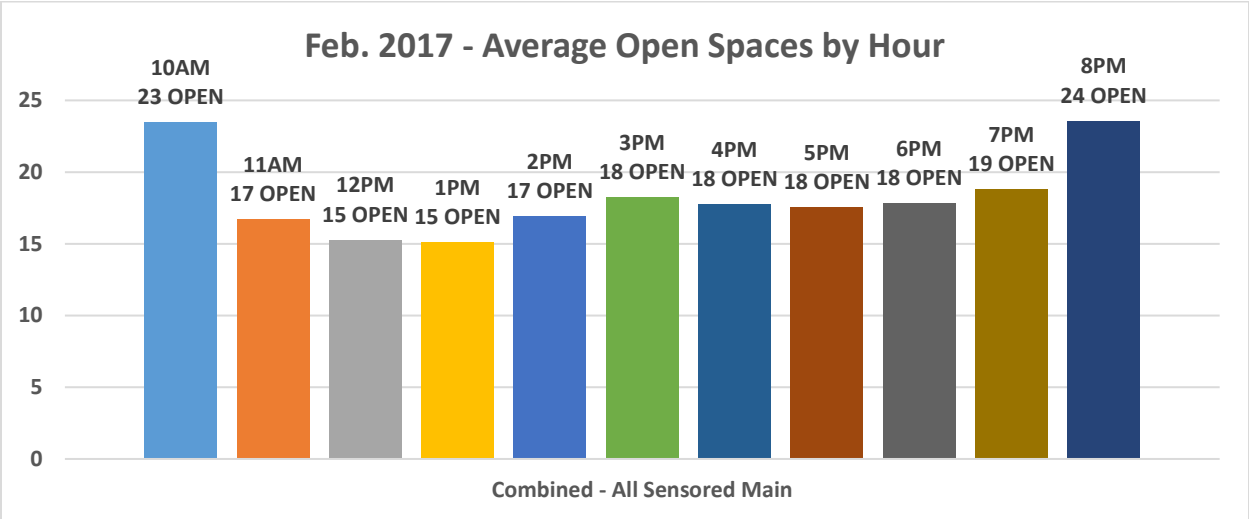
February is often a month with two different volumes for parking. In the beginning, it is an extension of the occupancy and patronage levels seen in January, but as the month continues, the number of people and vehicles in the town increases as University students move back to Newark for the spring semester. There were no major public events scheduled for February and the only holiday for parking at no charge was President’s Day on February 20th. There were no major weather events in the month that would affect parking. Below is a heat map of occupancy levels through the month of February.

Percent Occupied by Date/Time/Zone (February 2017)														
Date	Day	Location	# Meters	10AM	11AM	12PM	1PM	2PM	3PM	4PM	5PM	6PM	7PM	8PM
2/1/2017	Wednesday	Combined - All Sensored Main	130	75%	85%	88%	86%	86%	81%	85%	85%	88%	87%	80%
2/2/2017	Thursday	Combined - All Sensored Main	130	84%	85%	85%	85%	81%	83%	81%	87%	82%	82%	80%
2/3/2017	Friday	Combined - All Sensored Main	130	80%	87%	88%	88%	88%	86%	86%	85%	82%	80%	79%
2/4/2017	Saturday	Combined - All Sensored Main	130	83%	87%	87%	88%	87%	85%	85%	83%	88%	88%	80%
2/5/2017	Sunday	Combined - All Sensored Main	130	85%	87%	88%	88%	88%	85%	87%	85%	82%	68%	54%
2/6/2017	Monday	Combined - All Sensored Main	130	81%	86%	88%	88%	85%	83%	87%	82%	88%	88%	75%
2/7/2017	Tuesday	Combined - All Sensored Main	130	83%	88%	87%	88%	85%	85%	83%	88%	88%	87%	85%
2/8/2017	Wednesday	Combined - All Sensored Main	130	79%	86%	88%	87%	87%	83%	86%	85%	84%	82%	76%
2/9/2017	Thursday	Combined - All Sensored Main	130	69%	85%	88%	88%	88%	88%	86%	87%	86%	85%	82%
2/10/2017	Friday	Combined - All Sensored Main	130	82%	88%	87%	88%	88%	87%	85%	85%	84%	85%	80%
2/11/2017	Saturday	Combined - All Sensored Main	130	78%	85%	88%	86%	87%	85%	83%	79%	79%	82%	85%
2/12/2017	Sunday	Combined - All Sensored Main	130	88%	87%	88%	88%	87%	85%	86%	85%	82%	85%	74%
2/13/2017	Monday	Combined - All Sensored Main	130	77%	85%	87%	87%	86%	85%	87%	88%	88%	86%	84%
2/14/2017	Tuesday	Combined - All Sensored Main	130	84%	87%	88%	86%	87%	85%	85%	86%	85%	85%	85%
2/15/2017	Wednesday	Combined - All Sensored Main	130	85%	86%	87%	87%	85%	84%	86%	88%	86%	88%	87%
2/16/2017	Thursday	Combined - All Sensored Main	130	79%	86%	90%	90%	87%	86%	89%	90%	90%	90%	88%
2/17/2017	Friday	Combined - All Sensored Main	130	85%	89%	91%	91%	89%	89%	88%	89%	88%	89%	87%
2/18/2017	Saturday	Combined - All Sensored Main	130	88%	90%	91%	91%	90%	87%	88%	89%	91%	86%	89%
2/19/2017	Sunday	Combined - All Sensored Main	130	88%	91%	91%	91%	91%	91%	88%	85%	88%	88%	83%
2/20/2017	Monday	Combined - All Sensored Main	130	90%	90%	91%	91%	91%	90%	89%	88%	90%	88%	88%
2/21/2017	Tuesday	Combined - All Sensored Main	130	86%	89%	89%	90%	90%	88%	89%	89%	90%	90%	85%
2/22/2017	Wednesday	Combined - All Sensored Main	130	83%	90%	90%	90%	89%	88%	89%	89%	89%	90%	89%
2/23/2017	Thursday	Combined - All Sensored Main	130	79%	89%	91%	90%	89%	84%	87%	89%	90%	90%	87%
2/24/2017	Friday	Combined - All Sensored Main	130	87%	88%	91%	91%	89%	87%	88%	86%	83%	80%	81%
2/25/2017	Saturday	Combined - All Sensored Main	130	86%	90%	89%	90%	90%	88%	88%	86%	87%	87%	85%
2/26/2017	Sunday	Combined - All Sensored Main	130	85%	90%	90%	90%	89%	89%	84%	87%	85%	81%	78%
2/27/2017	Monday	Combined - All Sensored Main	130	71%	78%	79%	85%	75%	86%	86%	86%	84%	88%	83%
2/28/2017	Tuesday	Combined - All Sensored Main	130	75%	85%	88%	87%	83%	84%	85%	88%	88%	90%	83%

As noted above, higher occupancy numbers occur more often in the latter half of February. From February 1st to February 15th, occupancy never went above 90% in the test area. Occupancy generally stayed between 83% and 87% between the hours of 11 a.m. to 4 p.m. before decreasing to lower occupancy levels. While over 85% occupancy is generally considered “full” as an industry standard, there does seem to be some available parking spaces throughout the day in the earlier portion of the month. In the latter half of the month, max occupancy held at around 91% at its peak.



Average occupancy by hour in the month of February remains consistent with what is seen over other months during the report timeframe, albeit occupancy was slightly less in other months. With not many events schedule in February, the occupancy and spaces available stayed relatively even fluctuating between 86% and 88%. A customer could reasonably expect to find parking in some capacity over the course of the month, but finding parking at the end of the month would have been more difficult than at the beginning.

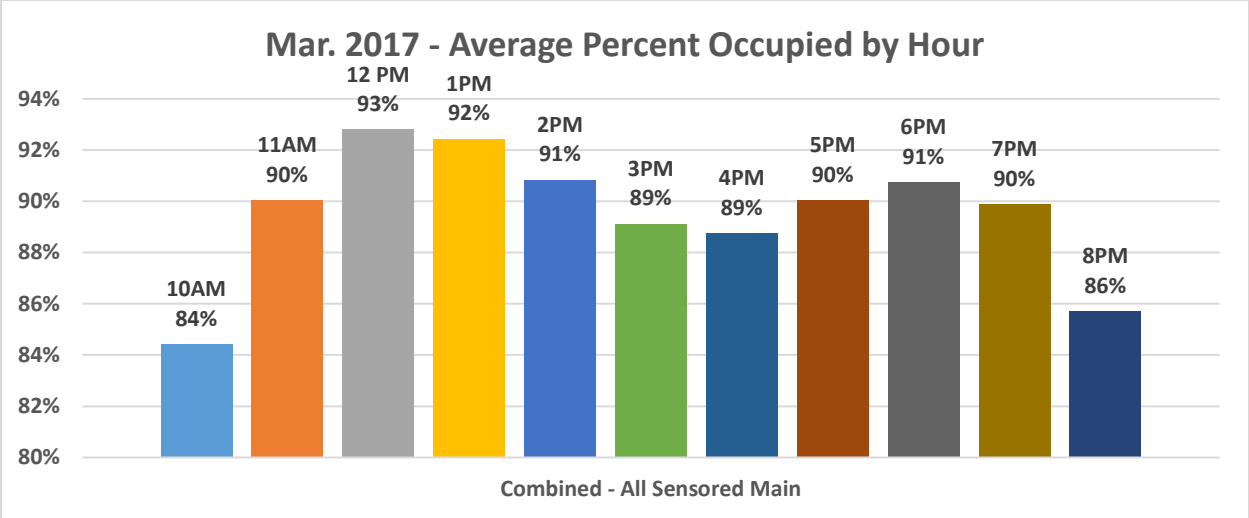


March 2017

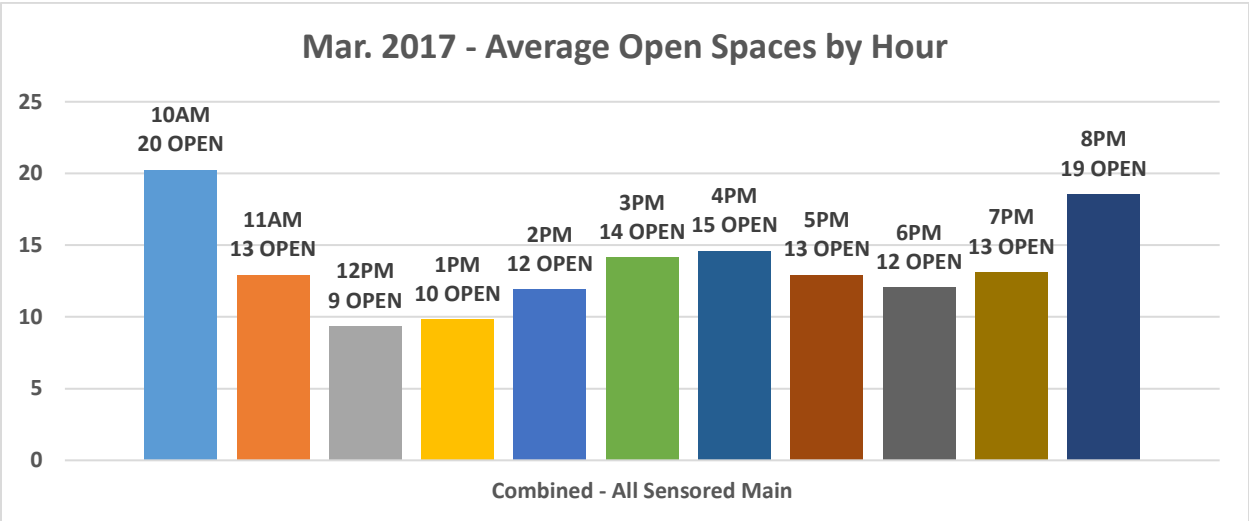
March is generally one of the busier months of the year. The beginning of spring brings warmer weather, encouraging patrons to utilize outdoor seating at restaurants and walk along Main Street. It can also be a month of unpredictable weather, and this year it brought our only snow storm on March 14th. Other notable dates: St. Patrick’s Day (March 17), Wine & Dine (March 25) and spring break (March 27 - March 31). A heat map is provided to show the meter occupancy over the month and how these events affected that occupancy.

Percent Occupied by Date/Time/Zone (March 2017)														
Date	Day	Location	# Meters	10AM	11AM	12PM	1PM	2PM	3PM	4PM	5PM	6PM	7PM	8PM
3/1/2017	Wednesday	Combined - All Sensored Main	130	83%	88%	88%	86%	87%	89%	88%	89%	90%	89%	86%
3/2/2017	Thursday	Combined - All Sensored Main	130	82%	92%	93%	91%	92%	89%	91%	92%	92%	92%	82%
3/3/2017	Friday	Combined - All Sensored Main	130	89%	92%	93%	93%	92%	93%	92%	94%	94%	93%	89%
3/4/2017	Saturday	Combined - All Sensored Main	130	93%	95%	95%	94%	94%	91%	94%	92%	88%	87%	88%
3/5/2017	Sunday	Combined - All Sensored Main	130	93%	95%	95%	95%	94%	93%	90%	92%	94%	92%	85%
3/6/2017	Monday	Combined - All Sensored Main	130	85%	92%	93%	95%	93%	93%	95%	92%	93%	91%	87%
3/7/2017	Tuesday	Combined - All Sensored Main	130	81%	92%	96%	95%	93%	92%	94%	95%	94%	95%	87%
3/8/2017	Wednesday	Combined - All Sensored Main	130	88%	95%	96%	95%	94%	92%	92%	95%	97%	95%	92%
3/9/2017	Thursday	Combined - All Sensored Main	130	84%	93%	96%	93%	92%	92%	96%	95%	96%	94%	94%
3/10/2017	Friday	Combined - All Sensored Main	130	91%	95%	97%	97%	97%	94%	95%	92%	95%	96%	92%
3/11/2017	Saturday	Combined - All Sensored Main	130	95%	95%	95%	96%	93%	91%	91%	88%	92%	88%	87%
3/12/2017	Sunday	Combined - All Sensored Main	130	94%	94%	97%	96%	92%	92%	94%	92%	95%	95%	91%
3/13/2017	Monday	Combined - All Sensored Main	130	86%	96%	97%	95%	96%	93%	93%	95%	97%	95%	91%
3/14/2017	Tuesday	Combined - All Sensored Main	130	23%	32%	40%	48%	57%	58%	62%	65%	70%	73%	65%
3/15/2017	Wednesday	Combined - All Sensored Main	130	86%	88%	92%	92%	89%	90%	92%	95%	92%	92%	90%
3/16/2017	Thursday	Combined - All Sensored Main	130	92%	94%	96%	96%	93%	94%	95%	95%	95%	95%	92%
3/17/2017	Friday	Combined - All Sensored Main	130	92%	96%	97%	95%	96%	94%	89%	92%	94%	92%	91%
3/18/2017	Saturday	Combined - All Sensored Main	130	92%	94%	95%	89%	91%	90%	87%	87%	89%	90%	88%
3/19/2017	Sunday	Combined - All Sensored Main	130	94%	96%	95%	96%	94%	92%	90%	96%	94%	95%	87%
3/20/2017	Monday	Combined - All Sensored Main	130	88%	93%	97%	97%	97%	97%	92%	97%	97%	95%	94%
3/21/2017	Tuesday	Combined - All Sensored Main	130	88%	95%	97%	95%	95%	92%	95%	97%	95%	95%	89%
3/22/2017	Wednesday	Combined - All Sensored Main	130	90%	93%	96%	95%	95%	95%	94%	95%	95%	96%	95%
3/23/2017	Thursday	Combined - All Sensored Main	130	89%	95%	96%	97%	96%	94%	94%	96%	95%	97%	90%
3/24/2017	Friday	Combined - All Sensored Main	130	91%	95%	97%	97%	97%	93%	95%	94%	93%	93%	89%
3/25/2017	Saturday	Combined - All Sensored Main	130	82%	90%	95%	95%	95%	97%	93%	95%	95%	92%	89%
3/26/2017	Sunday	Combined - All Sensored Main	130	93%	92%	95%	96%	92%	87%	78%	79%	85%	78%	68%
3/27/2017	Monday	Combined - All Sensored Main	130	68%	80%	88%	90%	85%	82%	80%	82%	78%	72%	71%
3/28/2017	Tuesday	Combined - All Sensored Main	130	69%	83%	92%	88%	81%	75%	71%	79%	81%	75%	72%
3/29/2017	Wednesday	Combined - All Sensored Main	130	77%	85%	92%	95%	88%	81%	78%	82%	85%	82%	78%
3/30/2017	Thursday	Combined - All Sensored Main	130	72%	86%	90%	88%	75%	76%	80%	82%	82%	84%	75%
3/31/2017	Friday	Combined - All Sensored Main	130	87%	89%	94%	95%	91%	81%	83%	82%	84%	89%	84%

The beginning of March shows an increase from the meter occupancy number in February. This may be attributed to the increase in students to the area and/or the warmer weather, but it is apparent that spring brought more patrons to Downtown Newark. The one major weather event in March brought a dramatic decrease to vehicle traffic to Main Street, but the heat map shows how, as the day continued, more people braved the elements and came to Main Street. Effects of the storm were felt into the next day as snow piles had been pushed into single spaces to make room for vehicle traffic going down Main Street and to open as many parking spaces as possible, making some spaces inaccessible to vehicles. It wasn't until Thursday, March 16th, that spaces were fully open and return to the normal levels of meter occupancy. Meter occupancy stayed between 90-97% between 10 a.m. and 6 p.m. until Sunday, March 26th, when many students left for their spring break holiday. Occupancy numbers then fluctuated between 70-95% during those same hours, with the highest occupancy during lunch hours.



March had the highest occupancy per hour of any months in this report. Meters were mainly occupied at 90% or above from 11 a.m. to 7 p.m. With average spaces open by hour, a customer would have had difficulty parking at an on-street meter between the hours of 11 a.m. and 7 p.m. in March.



Conclusion

As stated in the previous report, national and international parking experts indicate that when analyzing existing parking conditions, occupancy should be expressed in terms of “practical capacity.” A driver looking for parking will perceive a parking facility is full when the occupancy is above 85% and that potential parker will often find it difficult to find an available parking space. Individuals who have difficulty finding parking on-street must continue searching for unoccupied spaces, resulting in traffic issues for not only the driver who is searching for parking, but also those who are behind that driver in vehicular traffic, as well as unnecessary dangers for pedestrians in crosswalks and those using on-street bike paths. Parking is safe, effective, and convenient for cities when available park is at or above 15% availability.

The data from the each of the months displayed in the report suggest parking is generally congested from 11 a.m. to 7 p.m. at any given time, with meter occupancy levels fluctuating between 85% and 97%. While the highest occupancy is generally around the lunch hours, 11 a.m. to 2 p.m., even patrons who come during the hours after this period experience some difficulty parking. Data also suggests Main Street smart meter occupancy can vary wildly when the UD student population leaves for and returns from break. Holidays and City events also play a role in the number of vehicles occupying spaces in the downtown area, showing that parking rates and activities can have a direct effect on occupancy and patronage in the downtown area.

Data suggests the City sees a decrease in parking demand overall in the winter months when the student population decreases between the fall and spring semesters, however Main Street parking meters remain fully occupied at “practical capacity” much of the time. Downtown on-street parking meters are the most visible parking available, making them the City’s prime parking spots. As distance between parking space and business is often the most important factor for someone parking their vehicle, these spaces often provide for shortest walking distance between point A and point B.

We hope this information is useful and provides insight on occupancy in the Newark central business district. Please let us know if there is additional data you wish to have. Our goal is to supply Mayor and Council with reliable parking statistics in a reasonable time and fashion moving forward.