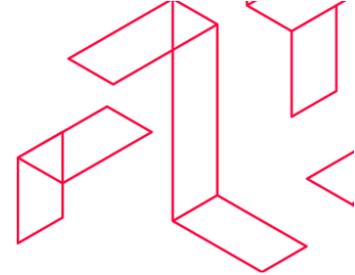


# Norfolk & HotSpot Analysis

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June to September 2022/2023 Data





## Overview

This report looks to summarize anonymized HotSpot parking payment transaction data from Norfolk County’s Paid Parking Program throughout 2022 and 2023. The report provides visual summaries of paid parking data and some potential insights to county staff to aid in policy decisions for the upcoming year.

This report covers parking payment data from June 15<sup>th</sup> to September 15<sup>th</sup> in 2022 and June 15<sup>th</sup> to September 4<sup>th</sup> in 2023. This data is all stored on a central database, so additional queries and analysis can be completed upon request. All data was obtained via directly from HotSpot, Precise ParkLink, and MacKay Meters.

Data was initially provided and sorted by its HotSpot ID. Each HotSpot ID represents an area of curbside parking or an off-street lot. These areas can be seen below (Larger images found in Appendix “C”).



Figure 1 –2023 Port Dover Paid Parking Locations



Figure 2 – 2023 Turkey Point Paid Parking Locations



Figure 3 – 2023 Long Point Paid Parking Locations

This report looks to take the parking transaction data and produce some recommendations and insights for the County. A breakdown of the parking inventory is provided, and details on parking occupancy, revenues, and sessions is given for demand. The residential parking program is also analyzed, along with some general insights and outlook for the future.



## 2023 Parking Inventory

The parking lots and spaces, both on-street and off-street, are aggregated into 11 zones. The HotSpot payment ID of each zone as well as its corresponding capacity can be seen below.

Table 1 – 2023 Payment IDs and Capacity of On-Street and Off-Street Parking Zones

| Zone                | Location             | Type           | Rate      | Parking Supply (spaces) |
|---------------------|----------------------|----------------|-----------|-------------------------|
| <b>Port Dover</b>   |                      |                |           | <b>Total: 148</b>       |
| 1001                | Clinton St. Lot      | Off-Street Lot | \$4.00/hr | 14                      |
| 1002                | Lift Bridge Lot      | Off-Street Lot | \$4.00/hr | 20                      |
| 1003                | Harbour Street North | On-Street      | \$4.00/hr | 38                      |
| 1004                | Harbour Street South | On-Street      | \$4.00/hr | 13                      |
| 1005                | St George Street     | On-Street      | \$4.00/hr | 21                      |
| 1006                | Walker Street        | On-Street      | \$4.00/hr | 42                      |
| <b>Turkey Point</b> |                      |                |           | <b>Total: 106</b>       |
| 1007                | Cedar Drive North    | On-Street      | \$4.00/hr | 39                      |
| 1008                | Cedar Drive South    | On-Street      | \$4.00/hr | 67                      |
| <b>Long Point</b>   |                      |                |           | <b>Total: 203</b>       |
| 1009                | Abigail Becker Lot   | Off-Street Lot | \$4.00/hr | 40                      |
| 1010                | Erie Boulevard East  | On-Street      | \$4.00/hr | 33                      |
| 1011                | Erie Boulevard West  | On-Street      | \$4.00/hr | 130                     |

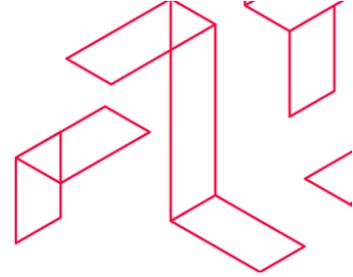
Both on-street and off-street paid parking was in effect from 10 AM to 6 PM, seven days a week. The parking rate for on-street and off-street parking was \$4.00/hour.

## 2023 Parking Demand

Paid parking was in place from June 15<sup>th</sup> to September 4<sup>th</sup> in Norfolk County with HotSpot Parking, Precise ParkLink, and MacKay Meters being the vendors for the parking payment systems. During the summer of 2023, 31002 transactions were recorded, so data has been aggregated in a few different ways depending on the metric to better understand and visualize the information. These include:

- Per Month
- Per Zone (based on Table 1 above)
- Per Day of Week
- Per Off-Street and On-Street
- Per Payment Type

Assumptions can be found in Appendix B for any work that was done on the data to present it in the below findings. Some of this data cleaning may be why there are slight discrepancies between dashboard data and the findings below.



## Sessions, Transactions, Dwell Times, & Revenues

A parking session is represented by an event in the data feed consisting of a start and end time. This is a completed transaction done on the HotSpot app, physical meter, or Fast Tap. The average and total dwelling time can also be directly calculated from transaction data using the start and end time stamps. Using the parking duration and hourly rate the revenue can also be determined.

Table 2 – 2023 Parking Sessions and Revenues Aggregated by Month

| Month             | # of Transactions (Sessions) | % of Total Sessions | Ave. Dwell Time (hr) | Tot. Dwell Time (hr) | Revenue           |
|-------------------|------------------------------|---------------------|----------------------|----------------------|-------------------|
| June              | 3418                         | 11.03               | 2.02                 | 6906                 | \$ 27,502         |
| July              | 12685                        | 40.92               | 2.39                 | 30366                | \$ 119,463        |
| August            | 12039                        | 38.83               | 2.35                 | 28279                | \$ 111,251        |
| September         | 2860                         | 9.23                | 2.67                 | 7627                 | \$ 30,381         |
| <b>2023 Total</b> | <b>31002</b>                 | -                   | <b>2.36</b>          | <b>73178</b>         | <b>\$ 288,598</b> |

Table 3 - 2023 Parking Sessions and Revenues Aggregated by Day of Week

| Day of Week | # of Transactions (Sessions) | % of Total Sessions | Ave. Dwell Time (hr) | Tot. Dwell Time (hr) | Revenue   |
|-------------|------------------------------|---------------------|----------------------|----------------------|-----------|
| Monday      | 3892                         | 12.56               | 2.29                 | 8900                 | \$ 34,964 |
| Tuesday     | 2999                         | 9.67                | 2.21                 | 6619                 | \$ 26,128 |
| Wednesday   | 3432                         | 11.07               | 2.31                 | 7921                 | \$ 31,056 |
| Thursday    | 2735                         | 8.82                | 2.10                 | 5764                 | \$ 22,587 |
| Friday      | 3829                         | 12.35               | 2.22                 | 8504                 | \$ 33,289 |
| Saturday    | 6236                         | 20.12               | 2.45                 | 15267                | \$ 60,500 |
| Sunday      | 7879                         | 25.42               | 2.56                 | 20202                | \$ 80,072 |



Table 4 – 2023 Parking Sessions and Revenues Aggregated by Zone

| Zone                 | # of Transactions | % of Total Sessions (Town) | % of Total Sessions (Overall) | Ave. Dwell Time (hr) | Total Dwell Time (hr) | Revenue    |
|----------------------|-------------------|----------------------------|-------------------------------|----------------------|-----------------------|------------|
| Port Dover           | 17202             | -                          | 55.49                         | -                    | -                     | \$ 144,343 |
| Clinton St. Lot      | 1089              | 6.33                       | 3.51                          | 2.47                 | 2688                  | \$ 10,668  |
| Lift Bridge Lot      | 653               | 3.8                        | 2.11                          | 2.42                 | 1578                  | \$ 6,282   |
| Harbour Street North | 2014              | 11.71                      | 6.5                           | 2.29                 | 4602                  | \$ 16,816  |
| Harbour Street South | 1731              | 10.06                      | 5.58                          | 1.89                 | 3277                  | \$ 12,690  |
| St George Street     | 3272              | 19.02                      | 10.55                         | 2.02                 | 6601                  | \$ 26,132  |
| Walker Street        | 8443              | 49.08                      | 27.23                         | 2.14                 | 18104                 | \$ 71,755  |
| Turkey Point         | 6208              | -                          | 20.02                         | -                    | -                     | \$ 61,141  |
| Cedar Drive North    | 1472              | 23.71                      | 4.75                          | 2.61                 | 3844                  | \$ 15,233  |
| Cedar Drive South    | 4736              | 76.29                      | 15.28                         | 2.45                 | 11588                 | \$ 45,908  |
| Long Point           | 7592              | -                          | 24.49                         | -                    | -                     | \$ 83,115  |
| Abigail Becker Lot   | 4729              | 62.29                      | 15.25                         | 2.68                 | 12665                 | \$ 50,380  |
| Erie Boulevard East  | 515               | 6.78                       | 1.66                          | 3.00                 | 1550                  | \$ 6,137   |
| Erie Boulevard West  | 2348              | 30.93                      | 7.57                          | 2.84                 | 6679                  | \$ 26,598  |

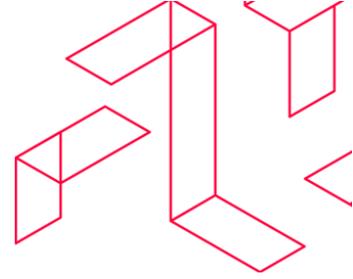
Table 5 – 2023 Dwell Time Totals for On-Street vs Off-Street Parking (upper bound stored in greater bin)

| Dwell Time                     | 0 – 0.5hr | 0.5 – 1 hr | 1 - 2hr | 2 - 4hr | 4 - 6hr | 6+ hr |
|--------------------------------|-----------|------------|---------|---------|---------|-------|
| On-Street Total                | 722       | 763        | 7724    | 11003   | 3692    | 627   |
| On-Street % of Total Sessions  | 2.94      | 3.11       | 31.49   | 44.85   | 15.05   | 2.56  |
| Off-Street Total               | 106       | 138        | 1634    | 2996    | 1351    | 246   |
| Off-Street % of Total Sessions | 1.64      | 2.13       | 25.25   | 46.3    | 20.88   | 3.8   |
| All Sessions                   | 828       | 901        | 9358    | 13999   | 5043    | 873   |
| % of All Sessions              | 2.67      | 2.91       | 30.19   | 45.16   | 16.27   | 2.82  |

Table 6 – 2023 Parking Sessions by Payment Type

| Area         | Hourly <sup>1</sup> Transactions |             | Meter <sup>2</sup> Transactions |              | Fast Tap <sup>3</sup> Transactions |              |
|--------------|----------------------------------|-------------|---------------------------------|--------------|------------------------------------|--------------|
|              | Count                            | %           | Count                           | %            | Count                              | %            |
| Off-Street   | 257                              | 3.97        | 2804                            | 43.33        | 3410                               | 52.7         |
| On-Street    | 1460                             | 5.95        | 9786                            | 39.89        | 13285                              | 54.16        |
| <b>Total</b> | <b>1717</b>                      | <b>5.54</b> | <b>12590</b>                    | <b>40.61</b> | <b>16695</b>                       | <b>53.85</b> |

- Hourly represents payments through the HotSpot mobile app.
- Meter represents payments through the physical meters installed on the curb.
- Fast Tap represents payments through hotspot but using the QC code scan (no app required)



## 2023 Occupancy

Since transaction data has both a start and end time for the session, we can use it to get an accurate estimation on occupancy of each zone. This is an estimation opposed to an exact value because transaction data does not capture people parked illegally, overstays, or leaving a spot early, however it can be taken to be a good indicator.

Unfortunately, aggregating occupancy data has proven to be more difficult compared to transaction and revenue data. Aggregating by an individual metric (month, day of week, zone) often skews occupancy. For example, aggregating by month would have very low average hourly occupancies as all zones and days of the week are included instead of just periods of interest, a similar situation occurs with days of week aggregation. Overstays, leaving a spot early, and inaccurate supply counts can all attribute to the high max occupancy values. With that being said, an hourly average breakdown per zone provides an understanding of how much each zone is being used throughout the day.

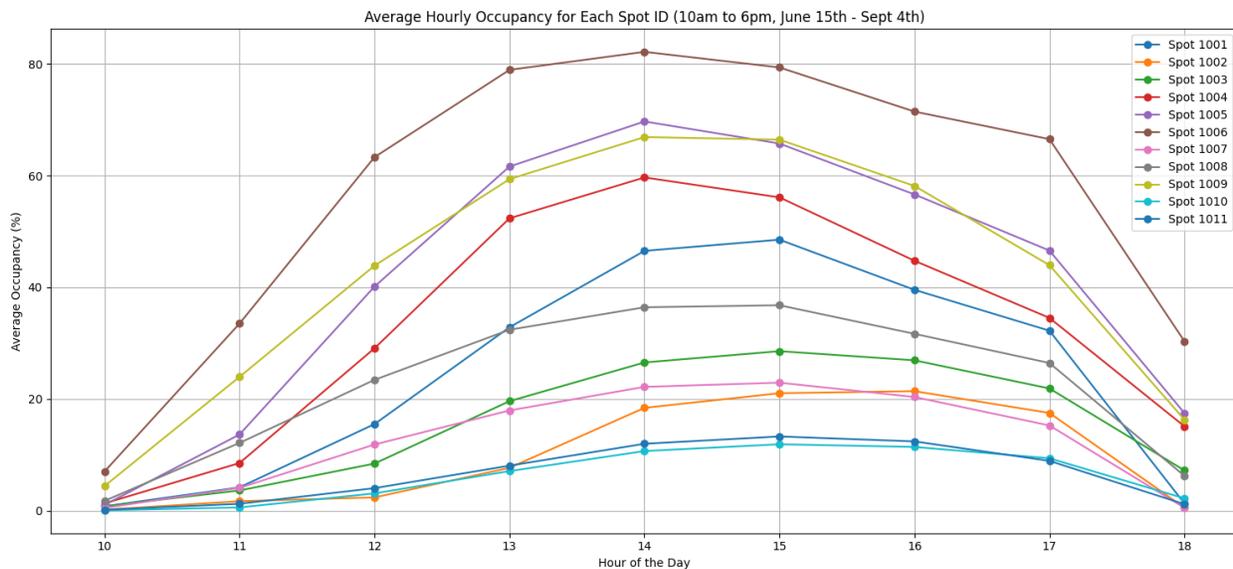
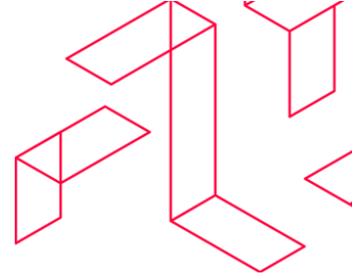


Figure 4 – 2023 Average Parking Occupancy Aggregated by Zone and Hour

Additional queries and calculations on occupancy can be completed upon request. It would be recommended to use a filterable analytics dashboards like Curb Analyzer to do further analysis.



## 2023 Resident Permit Parking Program

In 2023, Norfolk County implemented a permit parking program allowing verified residents to purchase a permit for \$20 which would grant them up to 4 hours of free parking per session. Permit parking sessions are tracked in the HotSpot database allowing us to create a breakdown of how these permits were utilized. There were 158 permits purchased in 2023. Of the 158 permits purchased, 5 were refunded and only 87 were used.

Table 7 – 2023 Resident Parking Permit Use Aggregated by Zone

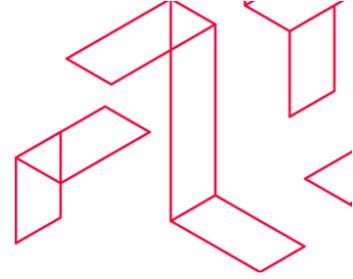
| Zone                 | # of Sessions (Transactions) | Ave. Dwell Time (hr) |
|----------------------|------------------------------|----------------------|
| <b>Port Dover</b>    |                              |                      |
| Clinton St. Lot      | 2                            | 2.00                 |
| Lift Bridge Lot      | 1                            | 4.00                 |
| Harbour Street North | 165                          | 2.30                 |
| Harbour Street South | 68                           | 1.47                 |
| St George Street     | 29                           | 1.40                 |
| Walker Street        | 92                           | 1.29                 |
| <b>Turkey Point</b>  |                              | -                    |
| Cedar Drive North    | 9                            | 2.38                 |
| Cedar Drive South    | 40                           | 1.90                 |
| <b>Long Point</b>    |                              |                      |
| Abigail Becker Lot   | 30                           | 2.09                 |
| Erie Boulevard East  | 5                            | 3.02                 |
| Erie Boulevard West  | 4                            | 2.94                 |

Table 7 – 2023 Resident Parking Permit Use Aggregated by Number of Uses

| # of Uses per Permit Holder | Count |
|-----------------------------|-------|
| 0                           | 66    |
| 1 - 5                       | 67    |
| 6 - 10                      | 10    |
| 11 +                        | 10    |

Some additional data points from the permit session data:

- There was a total of 445 parking sessions recorded by permit holders.
- Of the 445 parking sessions, there was only 84 that used the whole 4 hours available.
- The average number of parking sessions per permit holder (of those who used theirs) was 5.11



## 2022 Parking Inventory

The parking lots and spaces, both on-street and off-street, are aggregated into 7 zones as there were less paid parking zones in 2022. The HotSpot payment ID of each zone as well as its corresponding capacity can be seen below. Please note that the HotSpot ID's in 2022 do not align with those used in 2023.

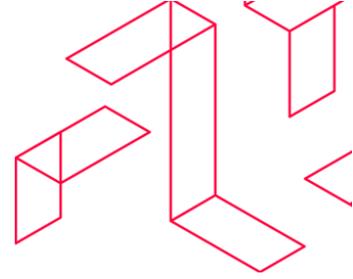
*Table 9 – 2022 Payment IDs and Capacity of On-Street and Off-Street Parking Zones*

| Zone              | Location             | Type           | HotSpot Payment ID | Rate      | Parking Supply (spaces) |
|-------------------|----------------------|----------------|--------------------|-----------|-------------------------|
| <b>Port Dover</b> |                      |                |                    |           | <b>148</b>              |
| 1001              | Clinton St. Lot      | Off-Street Lot | 1001               | \$5.00/hr | 14                      |
| 1002              | Walker Street        | On-Street      | 1002               | \$5.00/hr | 42                      |
| 1003              | St George Street     | On-Street      | 1003               | \$5.00/hr | 21                      |
| 1004              | Harbour Street North | On-Street      | 1004               | \$5.00/hr | 38                      |
| 1005              | Lift Bridge Lot      | Off-Street Lot | 1005               | \$5.00/hr | 20                      |
| 1006              | Harbour Street South | On-Street      | 1006               | \$5.00/hr | 13                      |
| <b>Long Point</b> |                      |                |                    |           | <b>40</b>               |
| 1007              | Abigail Becker Lot   | Off-Street Lot | 1007               | \$3.00/hr | 40                      |

Both on-street and off-street paid parking was in effect from 10 AM to 7 PM, seven days a week. The parking rate for on-street and off-street parking is \$3/hour in Long Point and \$5/hour in Port Dover.

## 2022 Parking Demand

Paid parking was in place from June 15<sup>th</sup> to September 15<sup>th</sup> in Norfolk County with HotSpot Parking and Precise ParkLink Meters being the vendors for the parking payment systems. During the summer of 2022, 27,804 transactions were completed. The same calculations and assumptions as 2023 were completed for the 2022 data, except for the permit program which did not exist in 2022.



## Sessions, Transactions, Dwell Times, & Revenues

Table 10 – 2022 Parking Sessions and Revenues Aggregated by Month

| Month             | # of Transactions (Sessions) | % of Total Sessions | Average Dwell Time (hr) <sup>1</sup> | Total Dwell Time (hr) <sup>1</sup> | Revenue           |
|-------------------|------------------------------|---------------------|--------------------------------------|------------------------------------|-------------------|
| June              | 3821                         | 13.74               | 1.98                                 | 7566                               | \$ 24,823         |
| July              | 11356                        | 40.84               | 2.33                                 | 26465                              | \$ 78,191         |
| August            | 9844                         | 35.40               | 2.21                                 | 21796                              | \$ 63,638         |
| September         | 2783                         | 10.01               | 1.96                                 | 5449                               | \$ 14,473         |
| <b>2022 Total</b> | <b>27804</b>                 | <b>-</b>            | <b>2.20</b>                          | <b>61276</b>                       | <b>\$ 181,125</b> |

1. Sessions 1 hour or less were free in 2022 so the exact dwell time is unknown, a base length of 1hr was applied to these free sessions.

Table 11 - 2022 Parking Sessions and Revenues Aggregated by Day of Week

| Day of Week | # of Transactions (Sessions) | % of Total Sessions | Average Dwell Time (hr) <sup>1</sup> | Total Dwell Time (hr) <sup>1</sup> | Revenue   |
|-------------|------------------------------|---------------------|--------------------------------------|------------------------------------|-----------|
| Monday      | 2803                         | 10.08               | 2.05                                 | 5758                               | \$ 15,904 |
| Tuesday     | 2820                         | 10.14               | 2.00                                 | 5631                               | \$ 16,072 |
| Wednesday   | 3285                         | 11.81               | 2.03                                 | 6673                               | \$ 18,378 |
| Thursday    | 3478                         | 12.51               | 2.02                                 | 7021                               | \$ 19,428 |
| Friday      | 3994                         | 14.36               | 2.18                                 | 8702                               | \$ 25,555 |
| Saturday    | 6555                         | 23.58               | 2.52                                 | 16499                              | \$ 52,220 |
| Sunday      | 4869                         | 17.51               | 2.26                                 | 11003                              | \$ 33,568 |

1. Sessions 1 hour or less were free in 2022 so the exact dwell time is unknown, a base length of 1hr was applied to these free sessions.

Table 12 – 2022 Parking Sessions and Revenues Aggregated by Zone

| Zone                 | # of Transactions | % of Total Sessions (Town) | % of Total Session (Overall) | Average Dwell Time (hr) <sup>1</sup> | Total Dwell Time (hr) <sup>1</sup> | Revenue    |
|----------------------|-------------------|----------------------------|------------------------------|--------------------------------------|------------------------------------|------------|
| Port Dover           | 22577             | -                          | 81.20                        | -                                    | -                                  | \$ 135,604 |
| Clinton St. Lot      | 357               | 1.58                       | 1.28                         | 2.77                                 | 990                                | \$ 2,974   |
| Walker Street        | 11193             | 49.58                      | 40.26                        | 2.19                                 | 24480                              | \$ 66,080  |
| St George Street     | 4761              | 21.09                      | 17.12                        | 2.17                                 | 10320                              | \$ 27,381  |
| Harbour Street North | 2791              | 12.36                      | 10.04                        | 2.30                                 | 6429                               | \$ 17,633  |
| Lift Bridge Lot      | 904               | 4.00                       | 3.25                         | 2.75                                 | 2482                               | \$ 6,998   |
| Harbour Street South | 2571              | 11.39                      | 9.25                         | 2.13                                 | 5473                               | \$ 14,538  |
| Long Point           | -                 | -                          | -                            | -                                    | -                                  | -          |
| Abigail Becker Lot   | 5227              | -                          | 18.80                        | 2.12                                 | 11103                              | \$ 45,520  |

1. Sessions 1 hour or less were free in 2022 so the exact dwell time is unknown, a base length of 1hr was applied to these free sessions.



Table 13 – 2022 Dwell Time Totals for On-Street vs Off-Street Parking (upper bound stored in greater bin)

| Dwell Time <sup>1</sup>               | 0 - 0.5hr   | 0.5 - 1 hr   | 1 - 2 hr     | 2 - 4hr      | 4 - 6hr      | 6+ hr       |
|---------------------------------------|-------------|--------------|--------------|--------------|--------------|-------------|
| On-Street Total                       | 34          | 1114         | 2051         | 2238         | 830          | 221         |
| <b>On-Street % of Total Sessions</b>  | <b>0.52</b> | <b>17.17</b> | <b>31.61</b> | <b>34.49</b> | <b>12.79</b> | <b>3.41</b> |
| Off-Street Total                      | 297         | 165          | 9272         | 7933         | 2856         | 793         |
| <b>Off-Street % of Total Sessions</b> | <b>1.39</b> | <b>0.77</b>  | <b>43.5</b>  | <b>37.22</b> | <b>13.40</b> | <b>3.72</b> |
| All Sessions                          | 331         | 1279         | 11323        | 10171        | 3686         | 1014        |
| <b>% of All Session</b>               | <b>1.19</b> | <b>4.60</b>  | <b>40.72</b> | <b>36.58</b> | <b>13.26</b> | <b>3.65</b> |

1. Sessions 1 hour or less were free in 2022 so the exact dwell time is unknown, a base length of 1hr was applied to these free sessions.

Table 14 – 2022 Parking Sessions by Payment Type

| Area         | Hourly <sup>1</sup> Transactions |             | Meter <sup>2</sup> Transactions |              | Fast Tap <sup>3</sup> Transactions |              |
|--------------|----------------------------------|-------------|---------------------------------|--------------|------------------------------------|--------------|
|              | Count                            | %           | Count                           | Count        | %                                  | Count        |
| Off-Street   | 187                              | 2.88        | 3761                            | 57.97        | 2540                               | 39.15        |
| On-Street    | 1103                             | 5.17        | 10928                           | 51.27        | 9285                               | 43.56        |
| <b>Total</b> | <b>1290</b>                      | <b>4.64</b> | <b>14689</b>                    | <b>52.83</b> | <b>11825</b>                       | <b>42.53</b> |

1. Hourly represents payments through the HotSpot mobile app.
2. Meter represents payments through the physical meters installed on the curb.
3. Fast Tap represents payments through hotspot but using the QC code scan (no app required)



## 2022 Occupancy

Using the same calculations as 2023, we can generate the average hourly occupancy for summer 2022 as well.

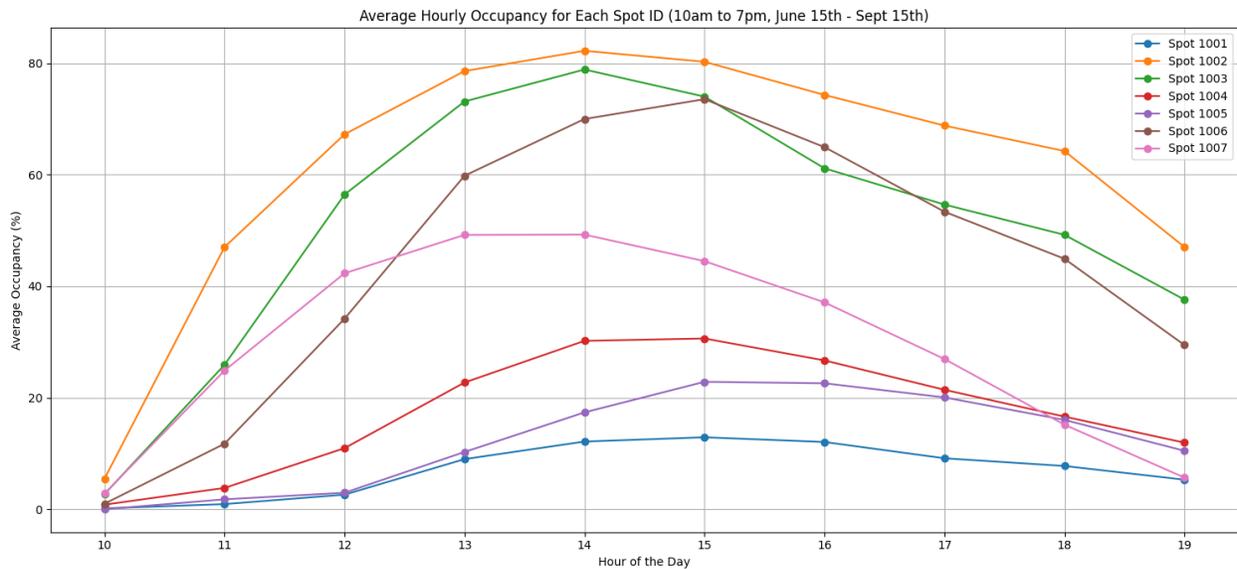
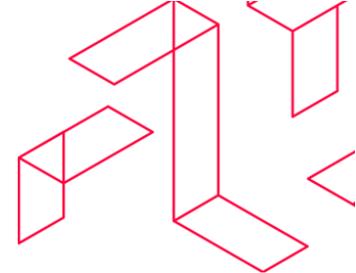


Figure 5 – 2022 Average Parking Occupancy Aggregated by Zone and Hour

Additional queries and calculations on occupancy can be completed upon request. It would be recommended to use a filterable analytics dashboards like Curb Analyzer to do further analysis.



## 2022 vs 2023 Comparison

The Norfolk paid parking program existed in a selection of zones for both 2022 and 2023, using the supply and demand data we can look at the year over years changes. Note that the amount of paid parking locations and length of the program were different year to year, so a direct comparison cannot be made.

Table 85 – 2022 vs 2023 HotSpot IDs

| Location             | Type           | 2022 Zone # | 2023 Zone # | 2022 Rate | 2023 Rate | Parking Supply (spaces) |
|----------------------|----------------|-------------|-------------|-----------|-----------|-------------------------|
| <b>Port Dover</b>    |                |             |             |           |           |                         |
| Clinton St. Lot      | Off-Street Lot | 1001        | 1001        | \$5.00/hr | \$4.00/hr | 14                      |
| Walker Street        | On-Street      | 1002        | 1006        | \$5.00/hr | \$4.00/hr | 42                      |
| St George Street     | On-Street      | 1003        | 1005        | \$5.00/hr | \$4.00/hr | 21                      |
| Harbour Street North | On-Street      | 1004        | 1003        | \$5.00/hr | \$4.00/hr | 38                      |
| Lift Bridge Lot      | Off-Street Lot | 1005        | 1002        | \$5.00/hr | \$4.00/hr | 20                      |
| Harbour Street South | On-Street      | 1006        | 1004        | \$5.00/hr | \$4.00/hr | 13                      |
| <b>Long Point</b>    |                |             |             |           |           |                         |
| Abigail Becker Lot   | Off-Street Lot | 1007        | 1009        | \$3.00/hr | \$4.00/hr | 40                      |

Table 96 – 2022 vs 2023 Zone Usage

| Location             | Type           | 2022 Transactions | 2023 Transactions | % Change | Parking Supply (spaces) |
|----------------------|----------------|-------------------|-------------------|----------|-------------------------|
| <b>Port Dover</b>    |                |                   |                   |          |                         |
| Clinton St. Lot      | Off-Street Lot | 357               | 1089              | 205.04   | 14                      |
| Walker Street        | On-Street      | 11193             | 8443              | -24.57   | 42                      |
| St George Street     | On-Street      | 4761              | 3272              | -31.27   | 21                      |
| Harbour Street North | On-Street      | 2791              | 2014              | -27.84   | 38                      |
| Lift Bridge Lot      | Off-Street Lot | 904               | 653               | -27.77   | 20                      |
| Harbour Street South | On-Street      | 2571              | 1731              | -32.67   | 13                      |
| <b>Long Point</b>    |                |                   |                   |          |                         |
| Abigail Becker Lot   | Off-Street Lot | 5227              | 4729              | -9.53    | 40                      |



## Insights & Recommendations

### Public Parking Demand

**Weekly and Monthly Trends:** Many of the trends seen in the parking data were expected, with others being slightly surprising. Transactions (and in turn revenue) peaking in the mid-summer and on weekends was expected, as well as off-street sessions being generally longer than on-street sessions. Although there were peak days and months, transactions remained relatively high in shoulder months and weekdays, indicating that demand remains strong throughout the entire summer. Most notably Zone 1001 (Port Dover – Clinton St. Lot) and 1011 (Long Point – Erie Boulevard West) hit their peak occupancy on September 3<sup>rd</sup> in 2023 (Labor Day Weekend) one day before the end of the parking program.

**Dwell Times:** The average dwell times being relatively low in Port Dover (hovering just over 2 hours) compared to the time range parking is available (8 hours) is a positive sign for an area consisting of small businesses. Policies such as maximum stays or discounted daily rates would likely have minimal effects on parking usage and revenues in this area. Turkey Point and Long Point having longer average dwell times (around 2.5 – 3 hours) would align with the usage of nearby beaches. A discounted daily rate could be considered in these areas.

**Parking Rate Changes:** Despite having a \$1 drop in the hourly rate from 2022 to 2023 the number of parking sessions decreased, providing no evidence that an increase in rate change would impact the parking usage. It's difficult to determine the effect of the rate changes from 2022 and 2023 in Long Point since the supply changed as well. Often a change in rate causes drivers to search for other parking options but given the large number of tourists utilizing these lots, rate changes would likely not drive them away.

**Zone Usage:** Looking at the breakdown of occupancy across all zones, there is no concerning underutilized lots. The zones with the lowest occupancy were Erie Boulevard East and West in Long Point but given their high supply counts that is not concerning. The Lift Bridge lot in Port Dover saw just 653 sessions across the whole summer of 2023, averaging out to just 7.96 sessions per day. Based on the average occupancy, Walker Street in Port Dover was the most utilized zone reaching an average occupancy of around 80% at 2pm. This is also not concerning as parking areas are considered “full” when they hit 85%+ occupancy.

**Permit Parking Program:** In 2023, the County implemented a permit parking program allowing residents to purchase a permit that would grant them 4 hours of free parking. These permits were relatively underutilized with 43% of the 153 total permits sold not being used even once. Of the 87 permits that were used, 77% of them were used 5 or less times throughout the summer. It is also worth noting the relatively low average dwell times from permit users which indicates that the permits aren't being abused by residents parking all day long.



## Looking Ahead

Only so much can be put into a report - the most effective way to forecast future parking revenues and utilization is to use dashboards such as CurbIQ's Curb Analyzer to play around with various filters and settings to output various scenarios. Having said that, some scenarios were run to provide some outlooks on what parking could look like in future years to come.

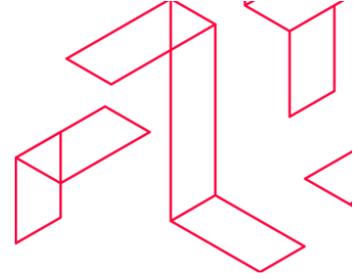
**Additional Weeks:** With these towns being heavily utilized by tourists in the summer months it is difficult to project what the usage would look like in the Spring and Fall. In the final 15 days of June there was 3418 sessions, if usage was a conservative 50% of that in the first 15 days of the month (1709 sessions) and assuming a continued 2hr average dwell time, the County could seek an additional \$13,672 in revenue by starting the season early. At the end of the season, there was an astounding 2860 sessions in just the first 4 days of September before the program ended, which resulted in the highest daily average compared to all other months. This suggests that extending the program later into September would generate significant additional revenue, however its worth noting that September 4<sup>th</sup> was Labor Day.

**Modification of Paid Parking Hours:** With many parking sessions having an end time at or beyond 6pm it would suggest that there is an opportunity to gain extra revenue by extending the operating hours later in the evening.

**Additional Lot in Turkey Point:** There is potential for revenue growth with the addition of 100 more parking spaces in Turkey Point. Both Zone 1007 (4.75%) and Zone 1008 (15.28%) contribute to 20% of the County's overall transactions, indicating a strong foundation for growth. For instance, by assuming a conservative 20% occupancy for additional lots, a potential increase of around \$5,120 in monthly parking revenues is feasible. See Table 20 for additional revenue projections.

**Other City Examples:** The County of Norfolk faces similar trends and challenges with their paid parking areas to other cities HotSpot operates in. Many other tourist towns experience the typical busy summer months and quieter off seasons. Residents have often complained about losing access to free parking yet formal permit programs don't have much utilization – City of Jasper is a good example where HotSpot recently removed the permit program due to lack of use from residents. Other Hotspot client cities like Barrie, Midland, and Collingwood have found financial success in sustaining their paid parking programs around busy areas, with many fears from businesses and staff not being realized.

Continuing to monitor and analyze parking demand data on an annual basis can help country staff track year-on-year changes and the corresponding impacts, resulting in more informed decisions to optimize parking and curbside operations for Norfolk County in future years to come.



## Appendix A – Additional Data

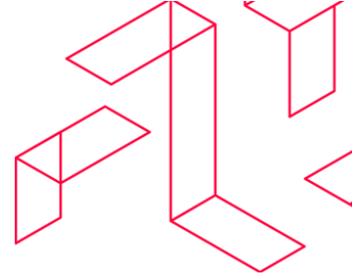
Table 17 – 2023 Enforcement Breakdown

| Zone                 | Total Charges | Total Transactions | Charge/Transactions Ratio |
|----------------------|---------------|--------------------|---------------------------|
| <b>Port Dover</b>    |               |                    |                           |
| Clinton St. Lot      | 2             | 1089               | 0.00117096                |
| Lift Bridge Lot      | 22            | 653                | 0.03369066                |
| Harbour Street North | 26            | 2014               | 0.01110162                |
| Harbour Street South | 75            | 1731               | 0.09566327                |
| St George Street     | 108           | 3272               | 0.03300733                |
| Walker Street        | 130           | 8443               | 0.01539737                |
| <b>Turkey Point</b>  |               |                    |                           |
| Cedar Drive North    | 19            | 1472               | 0.01290761                |
| Cedar Drive South    | 189           | 4736               | 0.03992395                |
| <b>Turkey Point</b>  |               |                    |                           |
| Abigail Becker Lot   | 128           | 4729               | 0.02706703                |
| Erie Boulevard East  | 24            | 515                | 0.04660194                |
| Erie Boulevard West  | 108           | 2348               | 0.04601619                |

Assuming similar occupancies to the existing lots in Turkey Point, the use of an additional lot available to the County could generate additional revenue.

Table 18 – Additional Lot in Turkey Point

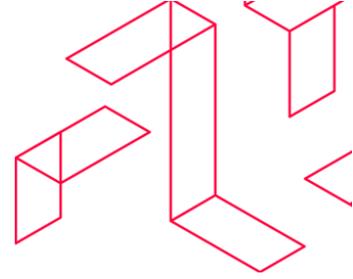
| Occupancy % | Spaces | Available Parking Hours | Potential Daily Revenue |
|-------------|--------|-------------------------|-------------------------|
| 10          | 100    | 8                       | \$ 320                  |
| 20          | 100    | 8                       | \$ 640                  |
| 30          | 100    | 8                       | \$ 960                  |
| 40          | 100    | 8                       | \$ 1,280                |



## Appendix B – Data Cleaning & Assumptions

Several steps had to be completed when cleaning the data to calculate the metrics displayed above. These are noted below for your reference:

- Only transactions between June 15<sup>th</sup> and September 15<sup>th</sup> 2022 and June 15<sup>th</sup> and September 4<sup>th</sup> 2023 were used in calculations
- Transaction end time could be set past 6 PM even if a user was not paying, hence occupancy appears relatively high at 6 PM for some zones.
- In 2022, users parking in Port Dover were granted 1 hour of free parking for each of their sessions. This free parking hour impacts the way we calculate the dwell time of a parking session. Curbside dwell time was assumed to be 1 hour for users who had a free session that did not extend beyond the one hour.
- Revenue is a direct calculation from the session length and rate and provides an idea of how much each zone is generating. The exact revenue the County received may be slightly less due to cancelled transactions, fees, etc.



## Appendix C – Images from Report



Image 2 –2023 Port Dover Paid Parking Locations



Image 2 – 2023 Turkey Point Paid Parking Locations

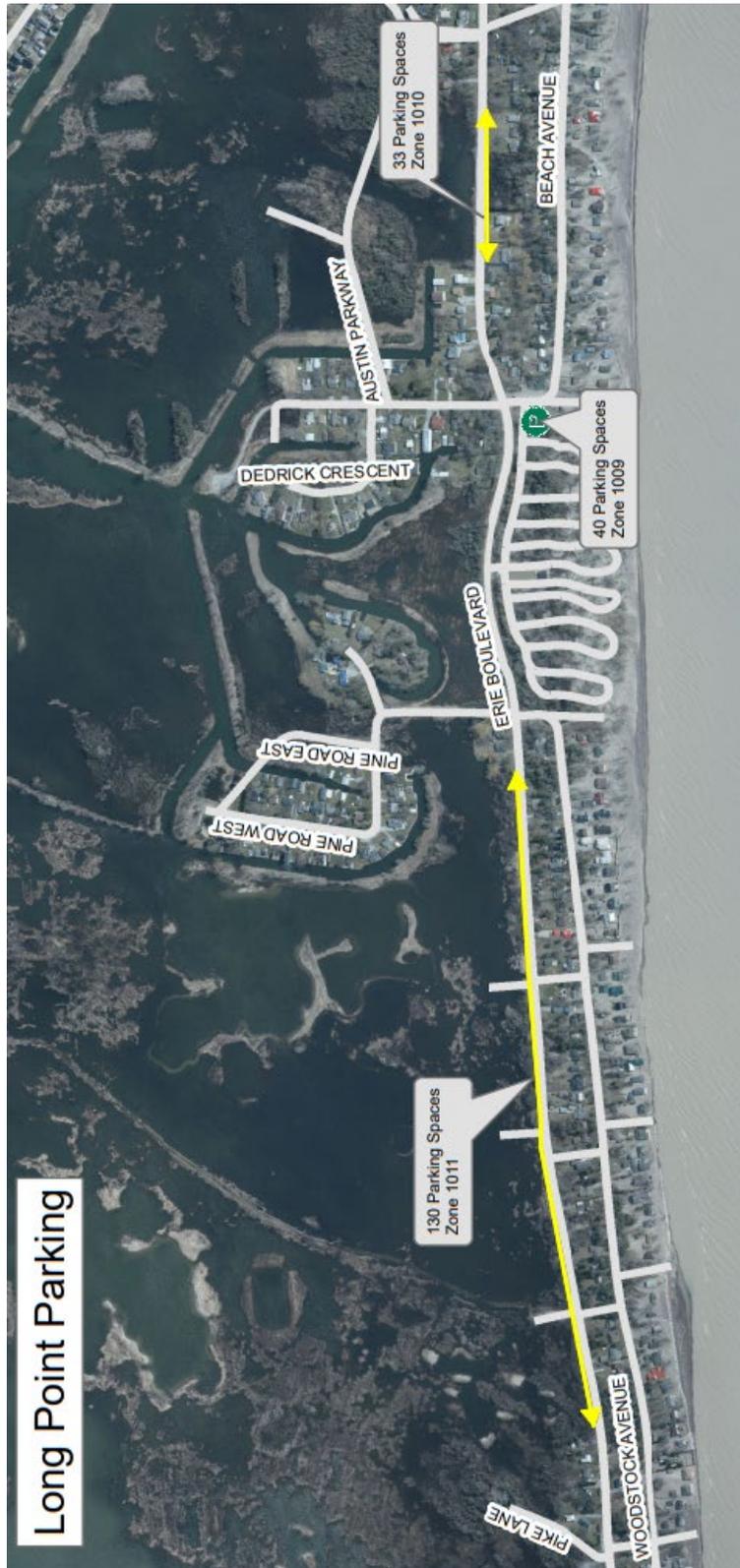
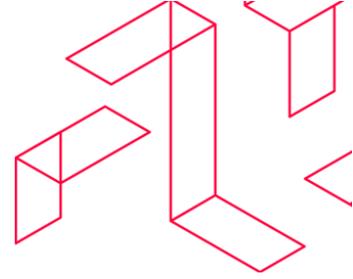


Image 3 – 2023 Long Point Paid Parking Locations

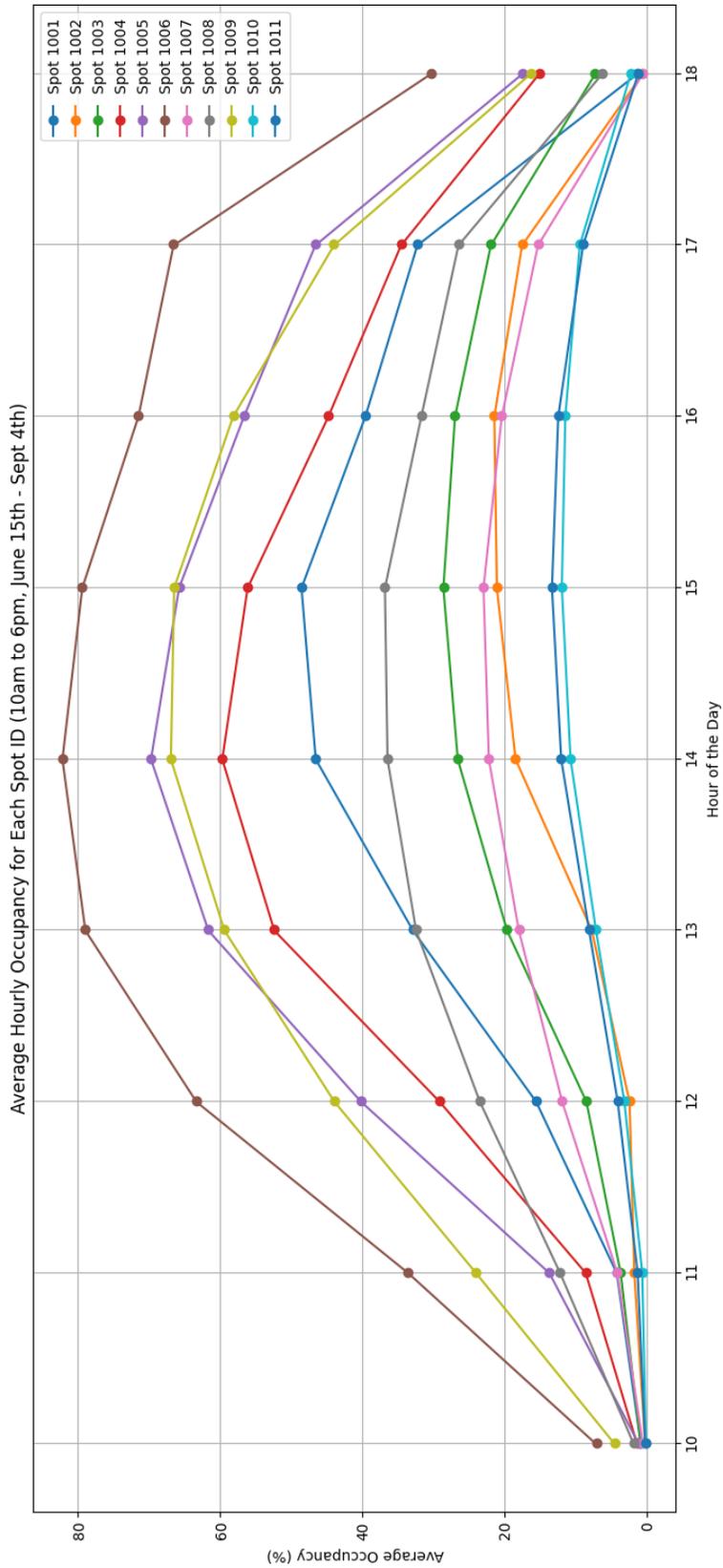


Image 4 – 2023 Average Parking Occupancy Aggregated by Zone and Hour

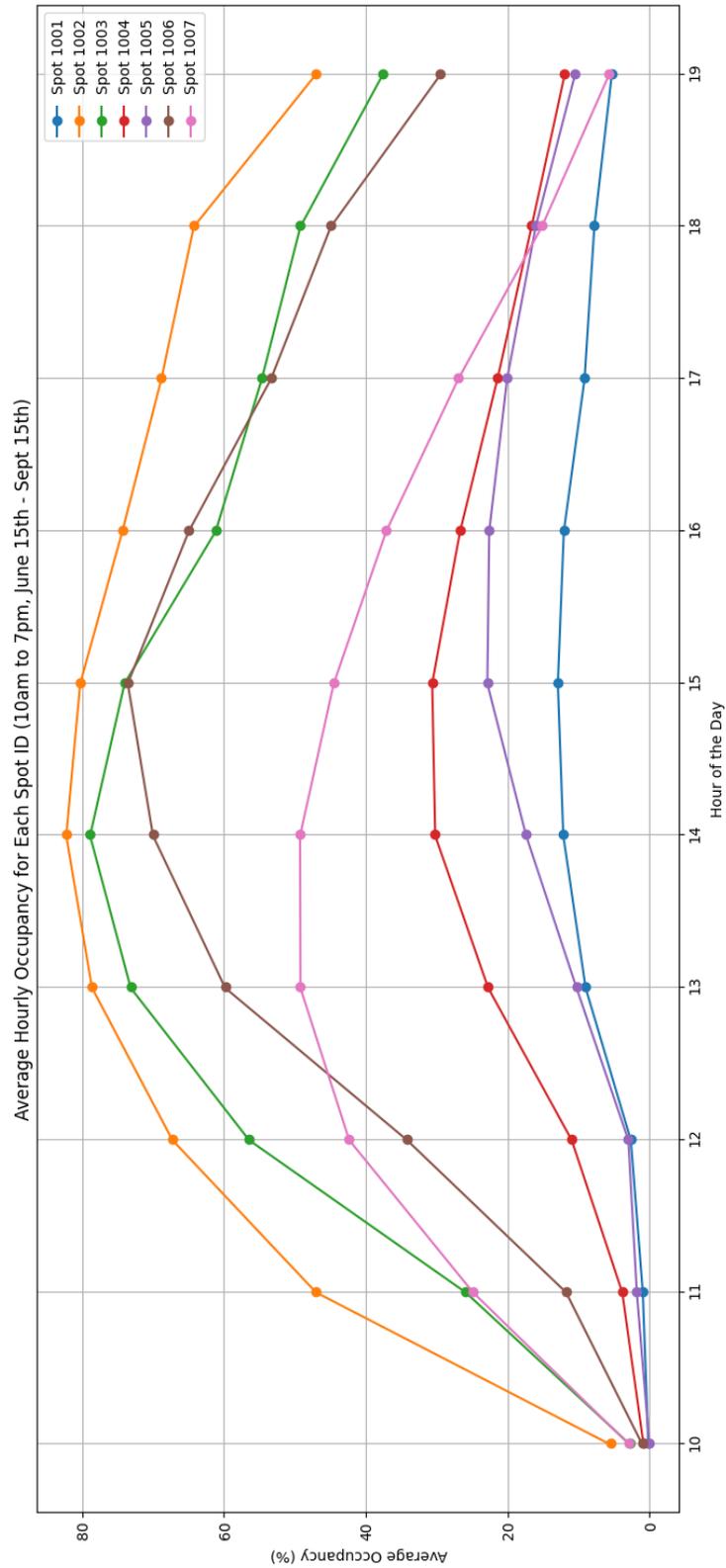
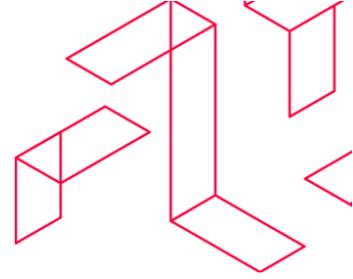


Image 5 – 2022 Average Parking Occupancy Aggregated by Zone and Hour