2018

NEWBURYPORT PARKING PROGRAM REVIEW AND UPDATE



John M. Burke, Independent Consulting
Parking, Transit & Downtown Development
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Newburyport Parking Program Review & Update
Addition of New Downtown Intermodal Parking Facility
March 20, 2018

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I. Study Background, Purpose & Need

The City of Newburyport, in cooperation with the Merrimack Valley Regional Transit Authority (MVRTA), has completed design and construction bidding for a new intermodal parking facility at the intersection of Merrimac and Titcomb Streets in Downtown Newburyport. Construction of the planned, 3-level, 207-space parking garage, with protected bus waiting and seating areas, is scheduled to begin in early 2018 and be completed and opened by early 2019. A rendering of the new facility, which will be the City's first public parking garage downtown, is depicted in **Figure 1** below.

The new garage will be located within the downtown commercial district close to several paid public parking lots, free on-street parking (time-restricted and unregulated), and a resident permit parking (RPP) zone in an adjacent neighborhood. The City's objective in requesting an update to the Parking Program is to ensure that on- and off-street parking regulations, policies or actions in and around the facility are working to maximize use of the parking garage while achieving efficient use of the rest of the parking supply. Recommended modifications to the Parking Program should therefore be complimentary to the goals of the new facility and adjacent commercial businesses while being protective and respectful to the needs of the nearby residential neighborhood.

The City is also interested in finalizing a rate structure for the new parking garage by updating previous analysis and recommendations prepared during the concept design/feasibility phase of the project. The opening-day rate structure should include hourly, daily and monthly contract rates. Consideration will be given to establishing potential introductory, discount user, validation, and other rate structures and types. Any parking accommodations for transit riders, per federal funding requirements, must also be considered.

Major benefits of the new garage will be to shift longer-term parkers from City streets to the garage to free-up more conveniently located on-street spaces for short-term customer parking; and to reduce spillover of downtown parking into adjacent residential neighborhoods. The City can also reduce traffic congestion downtown by efficiently directing tourists and visitors, who may be unfamiliar with the downtown, to park at the garage rather than searching City streets for available parking. The facility is beneficially-sited between Route 1 and Green Street, both of which serve as primary ingress to the downtown, particularly during the peak summer season.



Figure 1: Newburyport Intermodal Parking Facility (Merrimac Street façade)

The planned new 207-space parking facility comes at an opportune time, as the City pursues future options for removing public parking spaces along the central waterfront to increase community greenspace in an expanded waterfront park. These long-term, paid parking spaces would be removed from the Newburyport Redevelopment Authority (NRA) paid waterfront lots commensurate with the planned, future green-space expansion, which could occur in phases over time. The NRA has indicated their intent to decommission at least 100 parking spaces for the first phase of the park expansion once the new garage is opened. This analysis is based in part on the NRA's commitment, as it will impact the overall supply and demand of

parking downtown – and thus the optimal effective rates and restrictions of the City's unified downtown parking system.

In summary, the purpose and need for this study is to integrate the new public parking garage into the overall Downtown Parking Program with a goal of maximizing use of the new garage and balancing use of the on- and off-street parking supply. To that end, this study will identify and recommend appropriate modifications and refinements to the overall downtown parking program including, where appropriate, parking time limits, permit zone areas and policies, rates/pricing, hours of operation, enforcement, parking technology needs, and other management practices and strategies. These recommendations, must be considerate of the separate and often competing needs of different parking user groups that include tourist/visitor, resident, employee, customer, business, and others.

II. Study Area

As part of the study, the City requested updated parking occupancy data be collected for the broader downtown area, which would encompass the planned new parking facility. This broader area, which was developed in coordination with City staff, forms the basis of the study area. It is generally described as being bounded by the waterfront area to the north, High Street to the south, Federal Street to the east and Kent Street to the west. The Study Area is delineated as a red-dashed line on the map presented in **Figure 2** below. The planned new parking garage and existing public parking lots are also shown.



Figure 2: Study Area

The updated parking utilization data is needed to effectively modify and refine the current parking program coincident with the facility opening. It will also be needed to measure supply and demand-side impacts of the new garage once built, and to assist with further refinements of the parking program post-construction. Occupancy rates were collected in early October when they are higher than an average month, but somewhat lower than the peak-summer months of July and August. City's with fixed parking rates (same rates year-round) as opposed to variable, demand-based rates, often use May and October occupancy rates to establish and modify year-round prices, since they represent busier-than-average, but not peak conditions.

III. Study Scope of Work/Methodology

A summary of the major tasks comprising the study scope of services include:

- Conduct Due Diligence - Review previous parking studies, reports, available data sets, planned development projects, as well as the final design layout plan and traffic study for the intermodal parking facility. Review current parking program elements and paraments. Meet with City parking management and planning staff to identify areas of parking concern/need. Review and discuss current on- and off-street parking regulations and enforcement levels in the study area. Review updated parking permit sales figures, parking meter, pay-by-phone and enforcement revenue, rate and fine schedules, and other available parking data.

- Conduct, Tabulate & Graphically Present Parking Inventory – conduct field inventory of on- and off-street public parking spaces in the study area to identify the estimated number of public parking spaces by street/block & surface lot, including permit zones, time limits and unregulated parking spaces. Because many streets in the study area are residential and do not have painted parking stalls, the number of street spaces must be estimated. Review the City Parking Ordinance to identify time-restricted streets not currently posted. Tabulate/graphically present results.

- Conduct, Tabulate and Graphically Present Parking Occupancy Survey – conduct a parking occupancy/utilization survey of on- and off-street public parking in the study area on a typical, good weather weekday and Saturday in early October between the hours of 7 a.m. and 7 p.m. and calculate occupancy rates by street segment/facility and by day/hour counted. Select count dates in consultation with City staff in consideration of any major construction, special events or poor weather that could skew results. Tabulate results and graphically present peak-period use.

- Identify Significantly Over- and Underutilized Parking Facilities - identify street segments and lots that either exceed 85% occupancy (considered "effective capacity") or are under 50% used (considered "significantly underutilized") by hour for the weekday and Saturday surveyed. Graphically present occupancy rate classifications on color-coded map.

- Conduct Duration-of-Stay & Permit Occupancy Survey – conduct license plate and permit survey of the 3-hour, time-restricted Green Street Lot and adjacent time-restricted streets for an 8-hour weekday period to identify customer lengths-of-stay, number of cars parked in excess of posted time limits, and % of permit parkers in the Green Street Lot. Since this lot and its surrounding streets are within a short walk of the planned new parking garage, any long-term parking there, that should be redirected to the parking garage or waterfront lots, will be identified.

- Conduct Pricing Analysis of New Parking Garage and Permit Program – update previous pricing analysis prepared during the financial feasibility phase of the parking garage project for both the planned new garage and existing lots that currently accept monthly permits. Consider current monthly permit sales and pricing, the interrelationship between monthly garage, surface lot and hourly rates, and the market parking rates in nearby New England Cities.

- Conduct Parking Program Review & Analysis – based on tasks listed above, assess the performance of the current parking program and evaluate potential program changes, strategies, policy measures, management practices and technology improvements designed to maximize use of the new garage and achieve efficient used of the broader public parking system. Consider changes to parking pricing, hours of operation, parking time limits, other regulations and restrictions, the permit program, enforcement, signage and management policies and practices.

- Issue Parking Program Update Report with Recommendations – draft the final report documenting survey results, analysis, and recommended update to the Parking Program for implementation in coordination with the opening of the new parking garage.

IV. Public Parking Supply

A total of 2,733 on- and off-street public parking spaces in the study area were counted in the parking inventory. This number of spaces is an estimate since most parking stalls outside the commercial district are unmarked. The NRA East and West lots, which are mostly gravel, are also not lined.

A. Free On-street Parking Supply: There are an estimated 2,029 on-street parking spaces in the study area, of which, approximately 30% have time restrictions and 70% do not. All on-street parking is free. Most major commercial streets downtown have either a 1- or 2-hour time limit requiring enforcement officers to conduct regular rounds checking time zone compliance, which is very time consuming given current enforcement techniques. Many residential and mixed residential/ commercial streets located very close to the downtown business district have been designated resident parking permit (RPP) zones - generally with 2-hour time limits for non-resident parkers.

B. Paid Off-Street Parking Supply: There are an estimated 704 paid public off-street spaces in the study area - all located within 7 surface lots listed in **Table 1** and shown in **Figure 3** below. Only 418 of these spaces allow parking over 3-hours. This number will increase by about 50%, to 625, with construction of the new parking garage.

Table 1: Paid Public Parking Lots Downtown

Paid Parking Lots		Time Restrictions
Green Street Lot	231 spaces	3-hour time limit
NRA East Lot	223 spaces	None
NRA West Lot	99 spaces	None
Waterfront Trust Lot	59 spaces	None
Prince Place Lot	43 spaces	Six (6) have 2-hr. time limit
State Street Lot	31 spaces	3-hour time limit
Hales Court Lot	18 spaces	3-hour time limit
Total Spaces	704 spaces	

There are no free off-street public parking lots in the commercial district area of downtown. The City derives its parking meter revenue entirely from the off-street parking supply.

C. Paid Off-Street Parking Rates/Hours: The parking meter rate in the kiosk-controlled, "pay-and display" lots is $1.00/hour. The kiosks accept coins, bills and credit cards. A pay-by-phone app. service is provided as an alternative to paying at the kiosk. Paid parking is in effect from 8 a.m. to 6 p.m., Monday through Saturdays, and 12 noon to 6 p.m. on Sundays, year-round.

D. Off-Street Permit Parking: Employee permit holders, who generally reside outside of the City, are only allowed to park in the NRA and Prince Place lots. Employee permits are currently $100/year. Resident permitholders can park in any lot but must observe posted time limits. Resident permits cost a mere $10 for two years of use, or an effective rate of $5/year. Senior resident permits are free. These policies require significant overhead expense without commensurate revenues. Over the past two years, the City has issued a whopping 10,268 parking permits - 5,789 resident permits; 3,747 senior resident permits; and 732 employee permits. Permits must be displayed on the vehicle for enforcement verification.

E. Resident Permit Parking (RPP) Zones: RPP Zones are established by City Ordinance where a bona fide parking hardship exists for residents of the zone, who from a parking perspective, "…suffer from

unreasonable burdens in gaining access to their residences." All streets in RPP Zones carry either a 2- or 4- hour time limit for parkers, except for resident permitholders of the zone who are exempt from time limits. RPP Zones are in effect 8 a.m. to 6 p.m., Mondays through Saturdays. Each residents of the zone with a valid driver's license and vehicle registration is eligible for a resident parking permit. Each household of the zone is also eligible for one (1) portable Visitor Parking Permit to be used within the zone by visitors of the residents of that household. There are currently 636 RPP Zone permits in circulation. RPP Zone permits are free and can also be used in the paid public parking lots.

There are four (4) RPP Zones in the study area all located very close to the downtown business district as shown in the color-coded map in **Figure 4** below. All streets in these zones carry 2-hour time limits for parkers, except for residents of a zone with a permit, who are exempt. RPP Zones 1 through 3 are contiguous zones located between State Street and Fair/Fruit Streets. RPP Zone 4 is a series of mainly non-contiguous street sections west of Green Street.

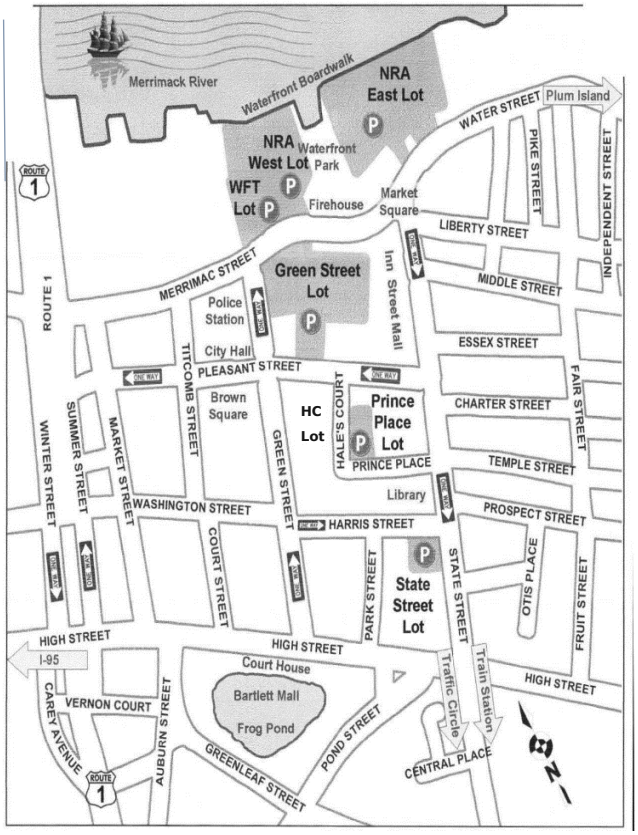


Figure 3: Paid Public Parking Lots

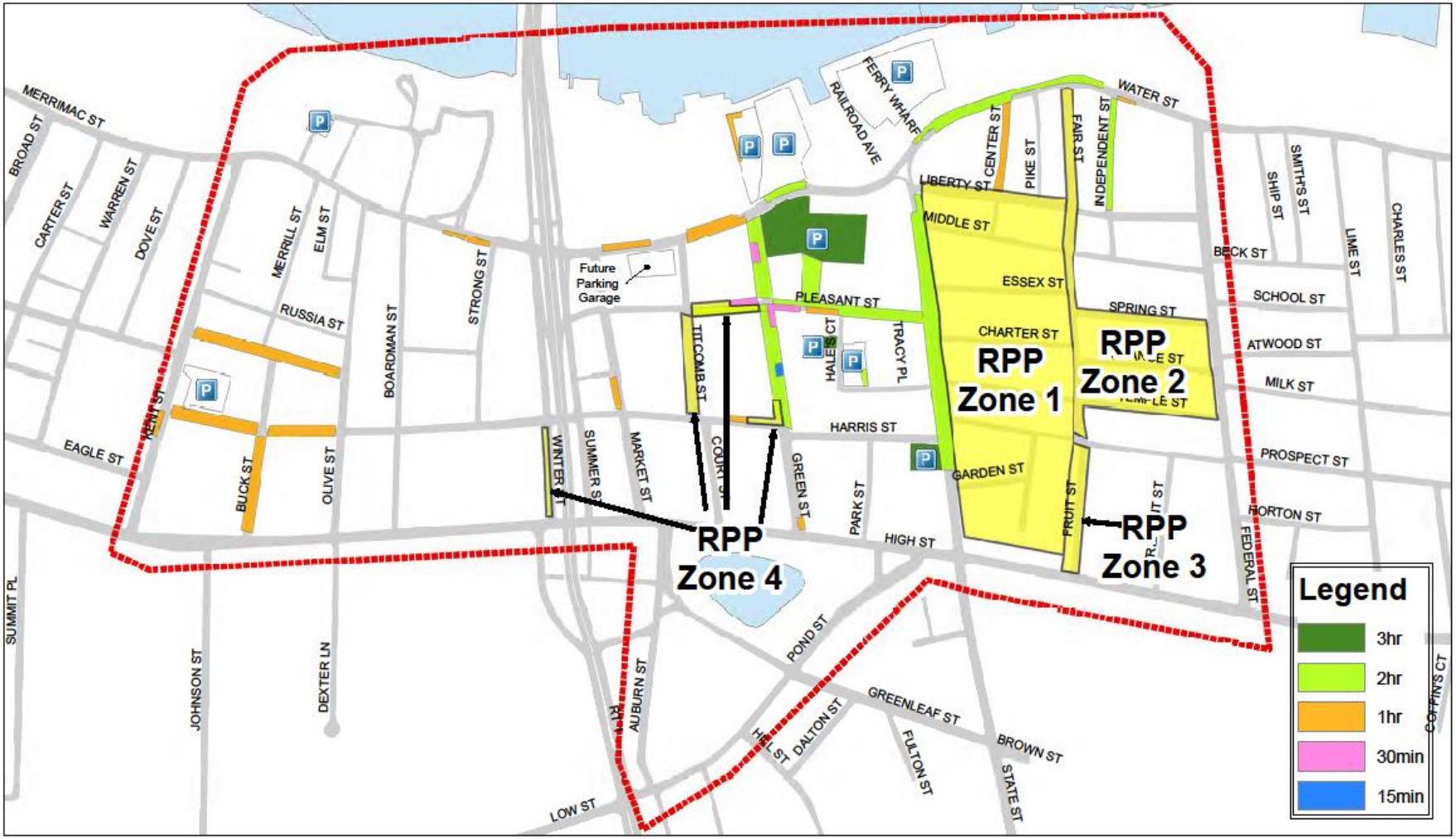
F. Time-Restricted Parking

The map in **Figure 4** also depicts the 15-minute, 30-minute, 1-hour, 2-hour, and 3-hour time-restricted streets and lots listed in the City Parking Ordinance. It also shows streets and lots without time restrictions (allowing all-day parking). Several streets, such as Merrimac Street between Market and Green Streets (1-hour time limit), are not posted for their designated time restriction. In one case though, it appears that the missing signs are unwarranted – this is on the residential sections of Washington, Congress and Buck Streets, which are designated 1-hour parking in the Ordinance. It appears this Ordinance may date back several decades ago when a factory was once located in the area.

V. Parking Occupancy Rates

Parking occupancy counts were collected on Thursday, October 5th and Saturday, October 14th, 2017. Both days enjoyed good weather, free of rain, special events or significant construction projects that could have skewed the results. Counts were collected between 7 a.m. and 7 p.m. for the following time periods: 7 a.m. to 8 a.m. (before paid parking began), 9 a.m. to 10 a.m., 12 noon to 1 p.m., 3 p.m. to 4 p.m., 5 p.m. to 6 p.m. and 7 p.m. to 8 p.m. (after paid parking ended). The raw parking occupancy counts by street segment/lot for each hour and day counted are tabularized and included in the Appendix as **Exhibit 1**.

The parking occupancy counts were then used to calculate occupancy rates for both the weekday and Saturday period. Those street segments and lots exceeding 85% occupancy were identified as being at or exceeding "effective capacity", in other words "overutilized", while those under 50% were identified as "significantly underutilized" parking assets. An out-of-balance parking system can be qualified as one where you can find over-used parking facilities relatively close to under-used parking facilities within a



Time Restricted Parking

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1/29/18

Figure 4: Time Restricted Parking

specific time-period. The trick is finding effective ways to shift some use from the over-used facilities to the under-used one(s).

A. 85% Occupancy Rate Threshold

Why are parking rates above 85% considered exceeding effective capacity? Parking planners use the 85% "ideal" occupancy threshold in that way because at 85% use, there should be 1 or 2 parking stalls available per block face, giving the parker a reasonable expectation of finding a space on a specific street segment or facility. 85% occupancy achieves efficient use of a parking asset while still offering sufficient availability to would-be parkers. Above roughly 85% occupancy, we start to see cars circling – with parkers hunting for spaces – and a perception that there is not enough parking. On- and off-street parking facilities that are at very high levels of occupancy for multiple hours, can result in customers avoiding an area altogether.

B. Weekday Occupancy Rates

Parking occupancy rates for the weekday period were calculated using the raw occupancy count data in Exhibit 1 and tabularized and included in the Appendix as **Exhibit 2**. The weekday peak parking period occurred between 12 noon and 1 p.m. when 62.0% of study area parking spaces were occupied. The 12 noon to 1 p.m. peak parking period is generally consistent with previous parking studies that identified the weekday peak occurring during the lunch-time hours, in the range of 12 noon to 2 p.m. A review of each count period is provided below.

7 a.m. to 8 a.m.

Exhibit 2 shows that there were no street segments or off-street lots exceeding 85% utilization before 8 a.m. when paid parking goes into effect. At this time some downtown residents have not yet left for work, many downtown employees have not arrived for work, and most customers/visitors have not arrived downtown. These counts confirm why the City does not charge for parking during this period.

9 a.m. to 10 a.m.

During this period, none of the paid public parking lots downtown exceed the 85% occupancy threshold, however, several street segments do. And several of those street segments remain at effective capacity throughout most, if not the entire day, including:

- Merrimac Street – Titcomb to Green Street (free all-day parking)
- Green Street – Pleasant to Merrimac Street (2-hr./30-min.)
- Titcomb Street – Pleasant to Merrimac Street (free all-day parking)
- Harris Street – Green to State Street (free all-day parking)
- State Street – Liberty to Pleasant Street (2-hr. parking)
- State Street – Prospect to High Street (2-hr. parking)
- Middle Street – State to Fair Street (2-hr./RPP Zone)

It is not surprising that the street segments of Merrimac, Titcomb and Harris Streets are at capacity through most, or all, of the day since all are within a 5-minute walk of Market Square and all offer free, all-day parking. It appears many of these parkers are employees seeking free all-day parking within the downtown as an alternative to purchasing a parking permit. The other streets listed are high-demand, free, 2-hour spaces in the heart of the commercial district.

12 noon to 1 p.m.

Using the occupancy rates from Exhibit 2, the 12 noon to 1 p.m. peak parking period is graphically presented in **Figure 5** below. Streets exceeding 85% use are shown in red; under 50% used in blue; and from 50% to 85% in yellow. All street segments that were listed above for the 10 a.m. to 11 a.m. period continue to exceed effective capacity through the lunch-time period. Capacity conditions on several of

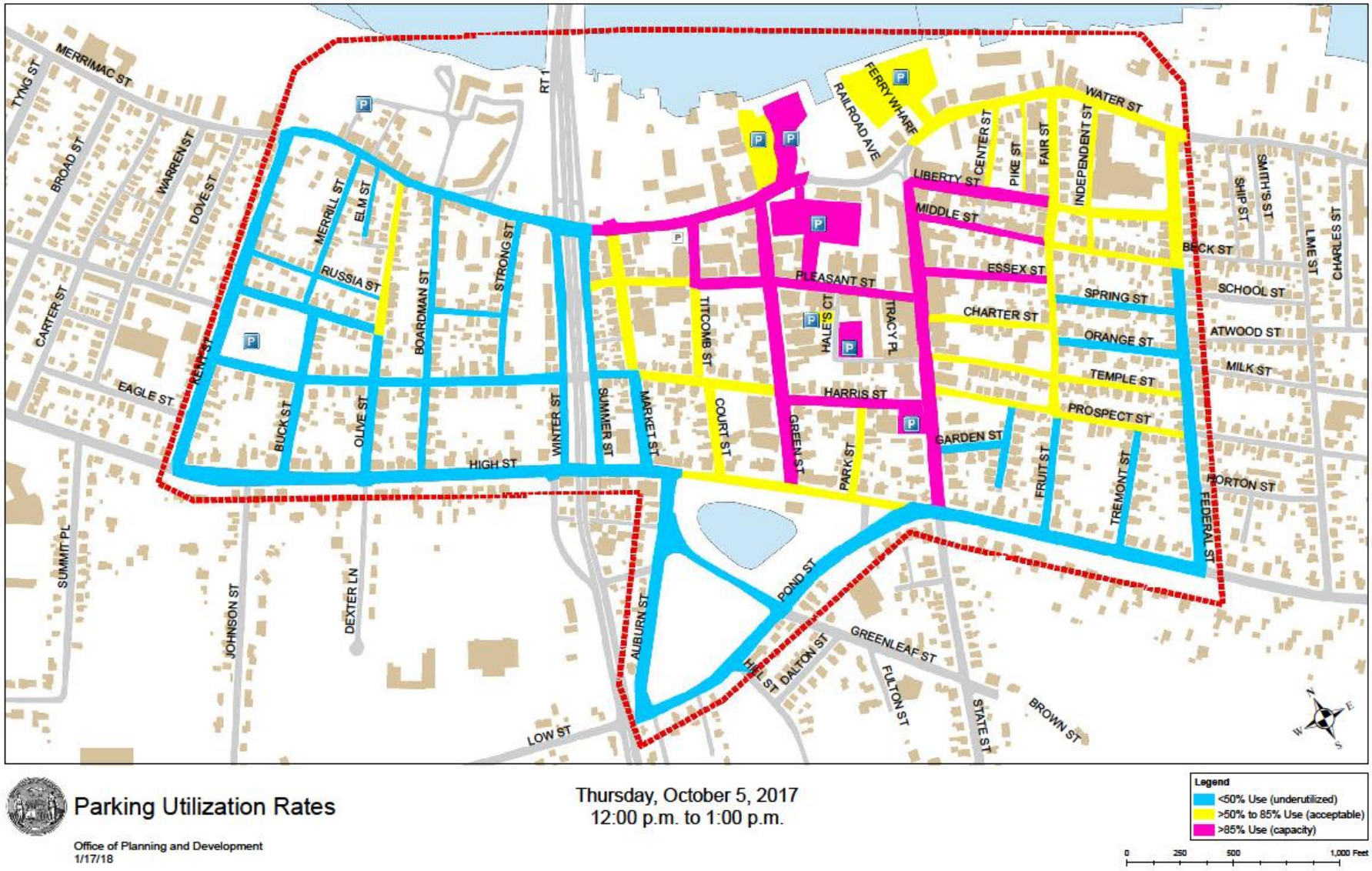


Figure 5: Weekday Lunchtime Parking Utilization Rates

those streets spread outward from the commercial/retail core. In addition to the streets depicted, the following four (4) paid public parking lots also exceed effective capacity:

- Green Street Lot (3-hour limit)
- NRA West Lot (no time limit)
- Prince Place Lot (no time limit except six, 2 hr. spaces)
- State Street Lot (3-hour limit)

While the Green St. and NRA West lots were basically full, there was still ample availability in the NRA East Lot with 110 spaces available (no time limit); and 17 in the Waterfront Trust Lot (no time limit).

During the weekday peak parking period, there is a good amount of unused, all-day free parking on streets peripheral to the downtown including outer Federal, High, Pond, Greenleaf, Summer and Winter Streets. While parking spaces on these streets are generally more than a 5-minute walk to Market Square, they are within a 5-minute walk to many other destinations downtown.

3 p.m. to 4 p.m.
Occupancy rates drop considerably after the lunchtime hours but the 3 to 4 p.m. occupancy rates are higher on average than they are from 10 to 11 a.m. Off-street parking availability increases, but many core commercial streets including State and Green Street continue to exceed effective capacity.

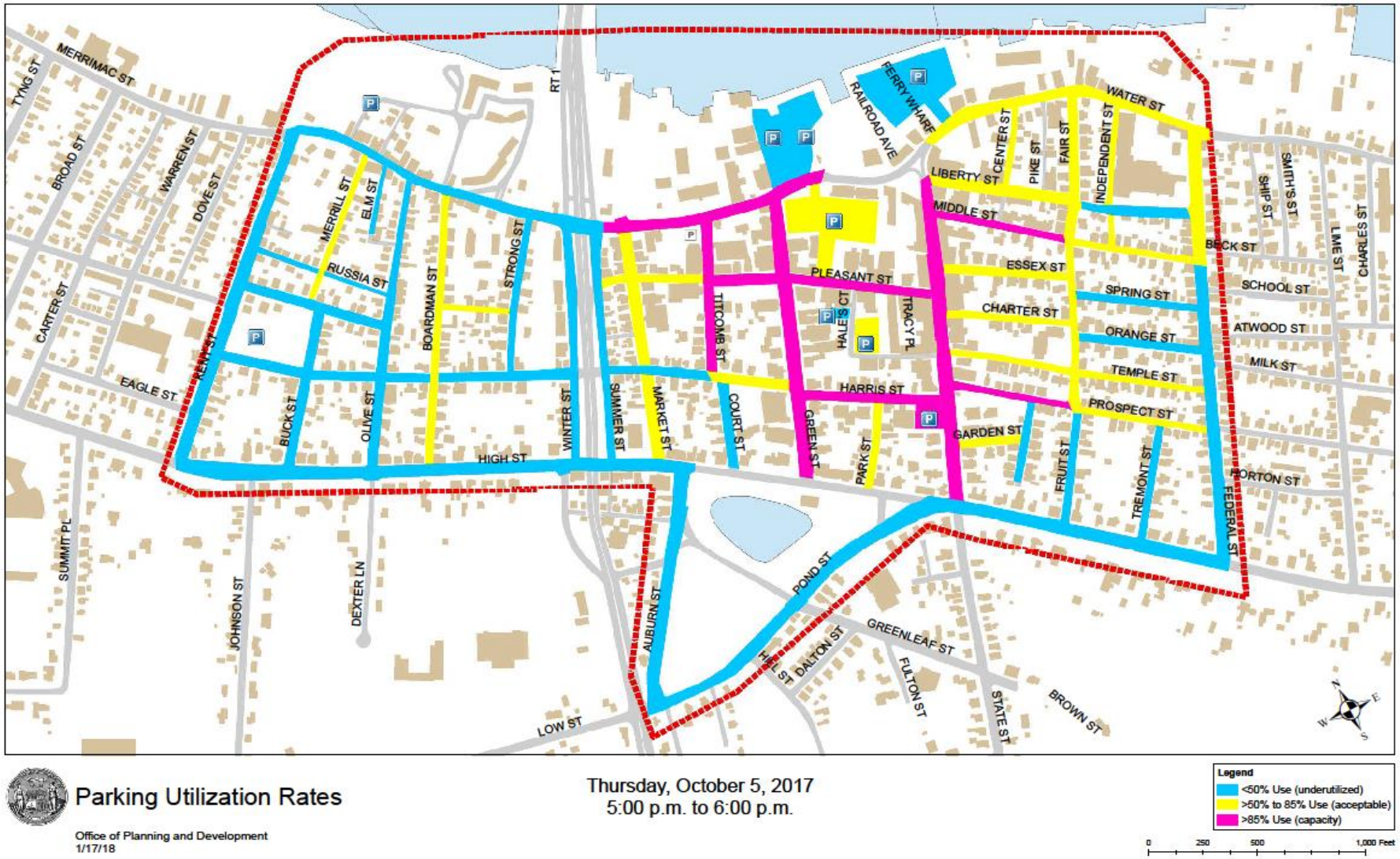
5 p.m. to 6 p.m.
Occupancy rates rise again from 5 to 6 p.m. as residents come home from work and the dinner crowd begins to arrive. Occupancy rates are close, but not quite as high for this period as for the lunchtime period. Parking occupancy rates for the 5 to 6 p.m. period, are graphically presented in **Figure 6**. While the 2-hour parking zone streets in the core commercial areas of downtown continue to exceed effective capacity, the paid parking lots on the waterfront drop significantly in use – all three under 50% used.

6 p.m. to 7 p.m.
In the first hour after paid parking ends, with the dinner hours continuing, parking utilization rates remain high. While the waterfront lots continue to decline in use as it gets darker, use of the Green Street Lot increases. Parking utilization is higher during the 6 to 7 p.m. hour than most other hours of paid parking. This suggests that extending paid parking/enforcement hours beyond 6 p.m. is reasonable and viable.

C. Saturday Occupancy Rates

Parking occupancy rates for Saturday were calculated using the raw occupancy count data in Exhibit 1 and tabularized and included in the Appendix as **Exhibit 3**. The Saturday peak public parking period occurred in the evening between 6 and 7 p.m. when 64.3% of study area public parking spaces were occupied. This peak period is generally consistent with previous parking studies that identified the Saturday peak occurring in the evening at 7 or 8 p.m. The second highest occupancy rates occur during the 12 noon to 1 p.m. lunchtime period and 5 to 6 p.m. evening period. These two periods have nearly identical total average occupancy rates at 59.8% and 59.2%, respectively. A review of each count period is provided below.

7 a.m. to 8 a.m.
Exhibit 3 shows that there were only two street segments that exceeded 85% utilization before 8 a.m. when paid parking goes into effect – Middle Street between State and Fair Street (87.5%) and Otis Place between Prospect and High Street (91.3%). Both of these street segments are in RPP Zone 1. In the case of the Middle Street segment, it accommodates many short-term customers of Starbucks and other nearby coffee/ breakfast locations and therefore the higher utilization rate should be expected. Otis Place is a unique situation as well, being the only one-way street in this area of downtown. It is a very densely-developed residential street. There were several other residential streets in the more densely developed



Parking Utilization Rates

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1/17/18

Thursday, October 5, 2017
5:00 p.m. to 6:00 p.m.

Legend
<50% Use (underutilized)
>50% to 85% Use (acceptable)
>85% Use (capacity)

0 250 500 1,000 Feet

Figure 6: Weekday Evening Parking Utilization Rates

areas between State and Federal Street that were in the range of 80% and 85%, but none exceeding the 85% threshold. As it is assumed most residents are home at this time, along with some overnight visitors, these Saturday morning occupancy rates are quite good. Even where occupancy rates on a certain street are approaching 85%, there is typically plenty of available parking within a one-block walk. For example, Otis Place with a 91.3% occupancy rate is within one block of Garden Street (54.5%) – Otis Place to State Street, and Prospect Street (57.9%) – State to Fair Street.

9 a.m. to 10 a.m.
During this period, a handful of streets located near coffee shops, breakfast restaurants and retail stores exceed the 85% effective capacity threshold including:

- State Street – Liberty to Pleasant Street
- Pleasant Street – State to Green Street
- Liberty Street – State to Fair Street
- Middle Street – State to Fair Street
- Center Street – Water to Middle Street

However, there is generally plenty of available parking downtown during the Saturday morning period.

It is important to note, that all the street segments listed above remain above the 85% effective capacity threshold through most, or all, of the remaining Saturday count periods.

12 noon to 1 p.m.
Using the occupancy rates from Exhibit 3, the 12 noon to 1 p.m. parking period is graphically presented in **Figure 7** below. As compared to the Saturday 6 p.m. to 7 p.m. peak study area occupancy rate of 63.8%, the Saturday lunch-time period has the second highest occupancy rate at 59.8%, just higher than the weekday lunch-time rate of 59.3%. In general, the prime commercial 2-hour limited streets of Green, State and Pleasant are all exceeding 85% utilization as are streets with restaurants nearby, such as Center, Independent, Liberty and Middle Streets. However, there is plenty of available off-street public parking with both NRA lots significantly underutilized and the Green Street lot with over 50 available spaces.

3 p.m. to 4 p.m.
Like the weekday, parking occupancy rates drop significantly from the lunch-time period to this mid-afternoon period. In general, there is plenty of on- and off-street public parking available downtown. Even the street segments exceeding the 85% effective capacity threshold do not exceed it by much. There are no street segments exceeding 90% occupancy. While use of the public parking lots along Water Street continue to increase from the lunchtime period, there are still nearly 200 available spaces combined in the Green Street, NRA lots and Waterfront Trust lots.

5 p.m. to 6 p.m.
As stated earlier, this early evening period has an average overall occupancy rate for the study area that is nearly identical to the lunchtime hour. The distribution of parking is slightly different with on-street occupancy rates slightly higher during the lunchtime hour compared to the 5 to 6 p.m. early evening hour, with the off-street occupancy rates slightly lower. Evening use of the off-street lots starts to build as we get closer to 6 p.m. and beyond. Just like the weekday lunchtime period, the Green Street lot is again full at the same time the NRA East Lot directly across the street is significantly underused. Parking occupancy rates for the 5 to 6 p.m. period, are graphically presented in **Figure 8**.

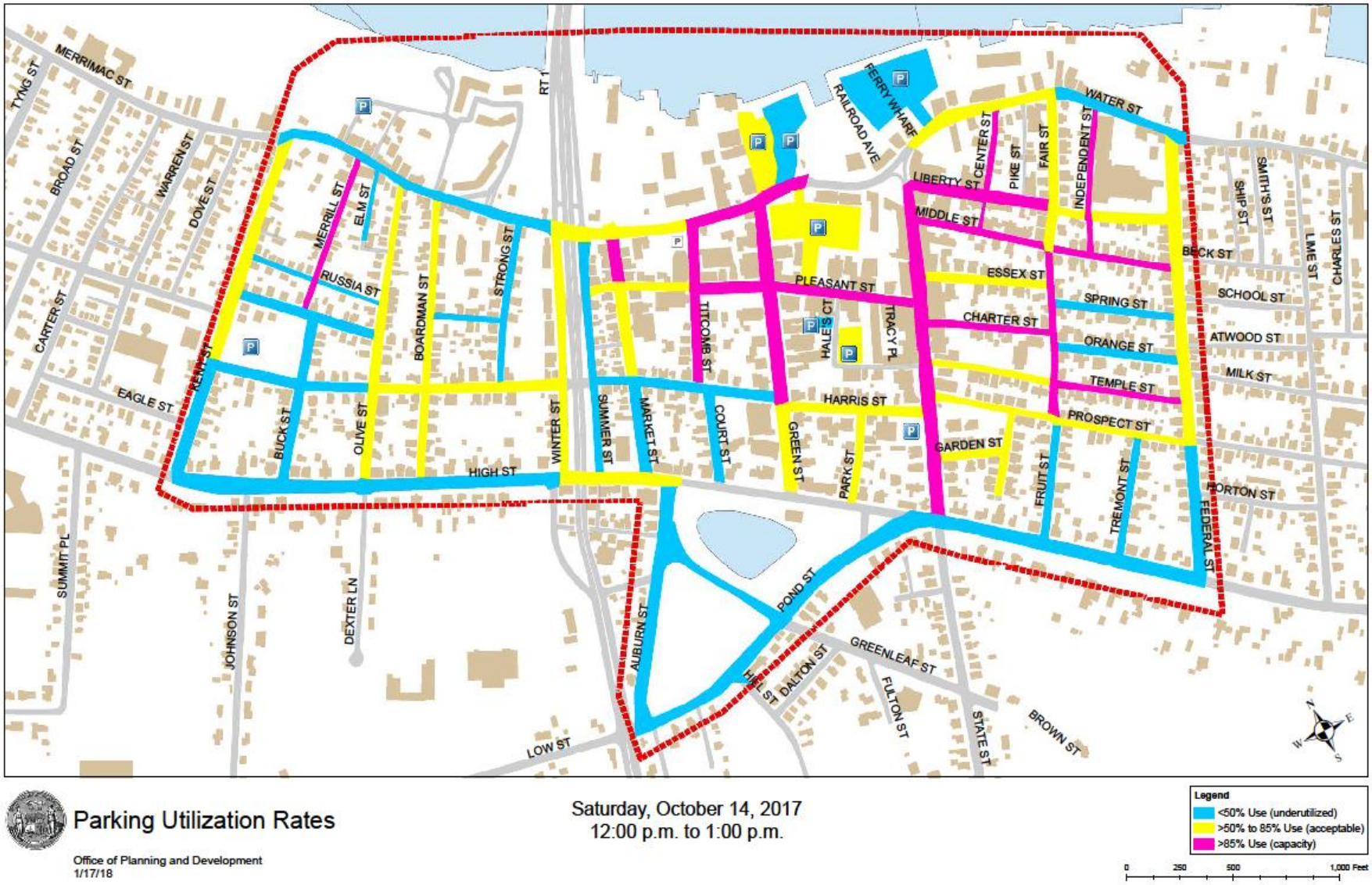


Figure 7: Saturday Lunchtime Parking Utilization Rates

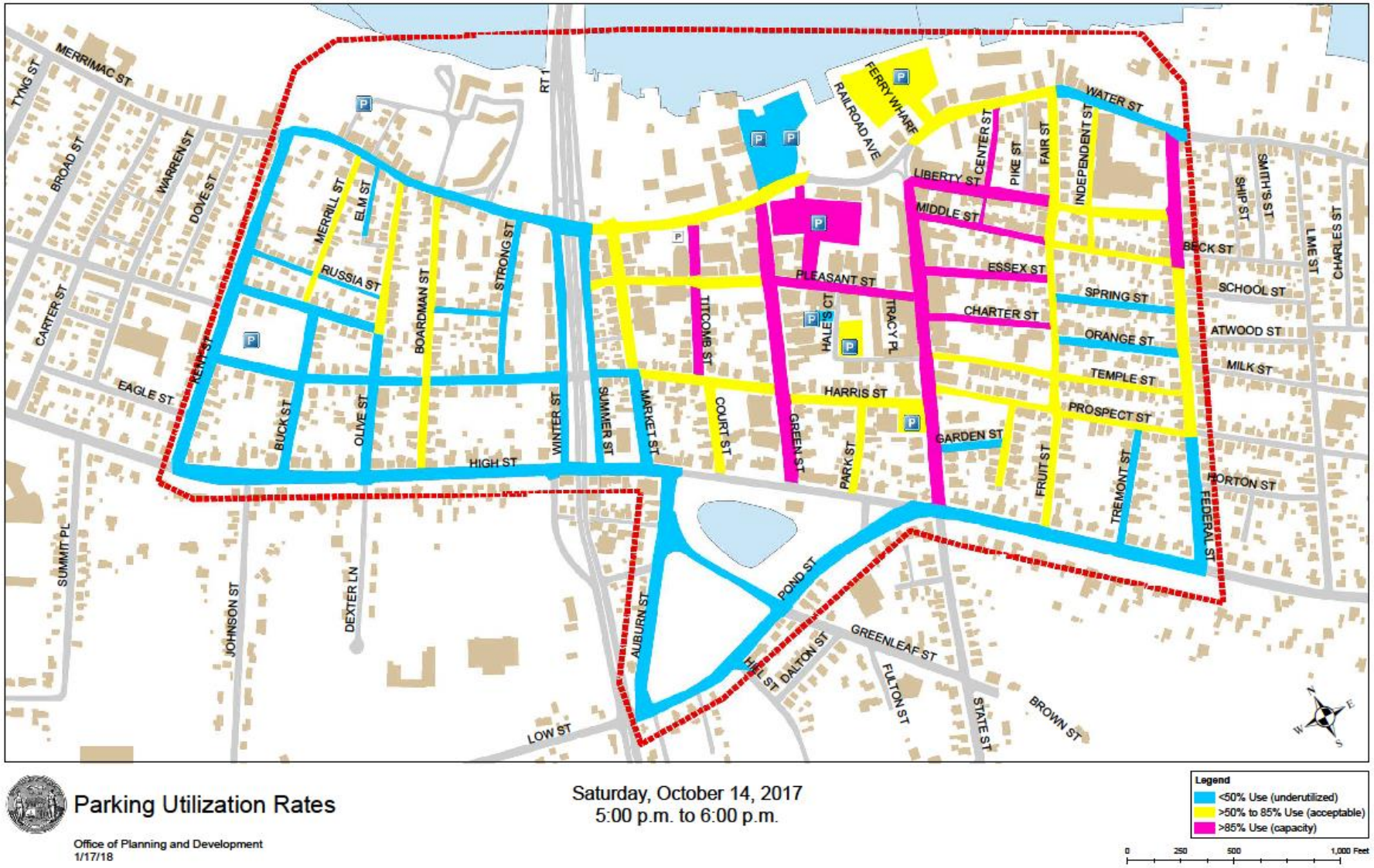


Figure 8: Saturday Evening Parking Utilization Rates

6 p.m. to 7 p.m.

In the first hour after paid parking ends, during the dinner period prior to weekend entertainment events beginning, it is not surprising to see daily parking utilization rates peak. In fact, the actual peak parking hour likely occurs somewhat after 7 p.m. as it does in other New England seacoast communities. Sunset on this Saturday occurred at 6:03 p.m. - so visitors are tending to try and park closer to their destinations. The Green and Harris Street lots are over 95% occupied. Would-be parkers hunt for available spaces in both lots. Meanwhile, the NRA East and NRA West lots still have plenty of availability.

D. Long-Term Public Parking Availability

Tables 2 and **3** below show the number of parking spaces available in the paid public parking lots throughout the weekday and Saturday counted in October.

Table 2: Long-Term Paid Parking Lot Availability - # of spaces available, Thurs., Oct. 5, 2017

Parking Lot	Long-Term Spaces (#)	7-8 am	9-10 am	12-1 pm	3-4 pm	5-6 pm	6-7 pm
Waterfront Trust	59	58	53	17	30	49	44
NRA West	98	92	57	4	11	72	69
NRA East	203	201	171	110	88	136	165
Prince Place	37	13	1	0	4	14	26
Total Available	**397**	**364**	**282**	**131**	**133**	**271**	**304**

Table 3: Long-Term Paid Parking Lot Availability - # of spaces available, Sat., Oct. 14, 2017

Parking Lot	Long-Term Spaces (#)	7-8 am	9-10 am	12-1 pm	3-4 pm	5-6 pm	6-7 pm
Waterfront Trust	59	59	47	11	15	40	51
NRA West	98	98	92	68	49	60	30
NRA East	203	185	171	93	61	72	58
Prince Place	37	16	14	10	10	10	2
Total Available	**397**	**358**	**324**	**182**	**135**	**182**	**141**

For the weekday period, the total number of available spaces in the long-term paid lots never drops below 131 spaces. For the Saturday period, it never drops below 135. There are also some free, all-day parking spaces located on downtown peripheral streets, including outer-Federal Street, High Street (Federal to Winter Streets), Summer Street and Winter Street, as well as on streets across High Street including Auburn, Pond and Greenleaf Streets.

E. Short-Term Public Parking Availability

Tables 4 and **5** below show the number of available parking spaces in the 3-hour and 2-hour time-restricted, paid parking lots downtown throughout the weekday and Saturday counted in October.

Table 4: Short-Term Paid Parking Lot Availability - # of spaces available, Thurs., Oct. 5, 2017

Parking Lot	Short-Term Spaces (#)	7-8 am	9-10 am	12-1 pm	3-4 pm	5-6 pm	6-7 pm
Green Street Lot	231	201	110	1	42	102	66
State Street Lot	31	29	18	3	3	3	14
Hales Court Lot	18	15	8	5	5	9	7
Prince Place Lot	6	3	5	0	3	2	1
Total Available	**286**	**248**	**141**	**9**	**53**	**116**	**88**

*All lots are 3-hr. time restricted parking except for 20+, 2-hr. head-in spaces on the Unicorn Street section of the Green Street lot and the six (6) 2-hr. spaces in the Prince Place lot.

During both the weekday lunch-time and Saturday evening peak-period, there is a shortage of available short-term, public parking when the 2-hour time-restricted sections of Green Street, State Street, Pleasant Street, Harris Street, as well as several side streets to State Street, are exceeding effective capacity as is the 3-hour time-restricted Green Street Lot. At these same times, there is plenty of parking availability in the long-term, NRA East and West Lots. A key strategy here would be to identify ways to shift some parking demand from the over-used Green Street Lot and the surrounding streets listed, to these under-utilized waterfront lots and/or the future parking garage following the waterfront park expansion.

Table 5: Short-Term Paid Parking Lot Availability – # of spaces available, Sat., Oct. 14, 2017

Parking Lot	Short-Term Spaces (#)	7-8 am	9-10 am	12-1 pm	3-4 pm	5-6 pm	6-7 pm
Green Street Lot	231	201	158	58	57	30	2
State Street Lot	31	28	21	18	12	12	1
Hales Court Lot	18	18	17	16	18	17	13
Prince Place Lot	6	2	5	6	4	4	3
Total Available	**286**	**249**	**201**	**98**	**91**	**63**	**19**

*All lots are 3-hour time restricted parking except for 20+, 2-hr. head-in spaces on the Unicorn Street section of the Green Street lot and the six (6) 2-hr. spaces in the Prince Place lot.

F. Parking Use in Vicinity of Future Parking Garage

The following three (3) street segments surrounding the future parking garage exceeded the 85% effective capacity threshold for most of the weekday period but are not currently in a RPP Zone:

- Titcomb Street – Merrimac to Pleasant Street
- Merrimac Street – Market to Green Street
- Market Street – Merrimac to Pleasant Street

These street segments are currently not posted for time restrictions and are therefore popular with employees seeking free, all-day parking. As previously noted, the adjacent segment of Merrimac Street is designated a 1-hour time zone in City Ordinance, but it is not currently posted.

RPP Zone #4 with a 2-hour time restriction already includes Titcomb Street, between Pleasant and Washington Street, and Pleasant Street, between Green and Titcomb Street.

One other street segment exceeding the 85% effective capacity threshold for much of the weekday period but not in a RPP Zone is:

- Harris Street - Green to State Street

Harris Street is positioned between RPP Zone #1 and #4.

G. Under-utilized RPP Zone Streets

For the most part, the City's 2-hour, time-restricted RPP Zones were well used on both the weekday and Saturday counted. But there were two (2) street segments within RPP Zone 1 that were significantly underutilized (under 50% use) through the peak parking periods of both days and during almost all hours counted. Those two street segments are:

- Spring Street – Fair to Federal Street
- Orange Street – Fair to Federal Street

The City should re-confirm the need for including these streets in the RPP Zone.

H. Parking Use in Residential Areas West of Route 1

In general, the residential streets located west of Route 1 have plenty of parking availability. Therefore, there does not appear to be any need for residential permit parking. The only street that exceeds an 85% occupancy rate during any of the weekday and Saturday peak periods is Merrill Street from Merrimac to Congress Street, and that is only for the Saturday lunch-time period between 12 noon and 1 p.m.

I. Seasonal Impacts on Parking Occupancy Rates

As mentioned earlier, the parking occupancy counts from October are higher than an average month of the year, but somewhat lower than the peak-summer months of July and August. The summer weekday afternoon peak-period has occupancy rates fairly close to late spring and early fall weekday afternoon rates, but Friday evening, Saturday and Sunday occupancy rates in July and August are typically much higher than they are for the same periods during the spring and fall months.

Modest Increases in Summer Weekday Afternoon Use: Parking surveys conducted in downtown Newburyport in 2012 showed that average weekday afternoon parking utilization in the two NRA parking lots was only 11.4% higher for counts conducted in August 2012 than it was in March and April, 2012[1]. In fact, the percentage use of the NRA lots during the 12 noon to 1 p.m. weekday period for counts conducted in October 2017 were nearly identical to those for the same period in August 2012 – 62% occupied versus 61%, respectively.

Significant Increases in Summer Weekend Use: In contrast, average Saturday afternoon occupancy in the NRA lots in July 2012 were 84.2% compared to just 43.1% in April 2012. The percentage use of the NRA lots during the 12 noon to 1 p.m. Saturday period for counts conducted in October 2017 was less dramatic at 46.5% compared to 56.3% for the same period in July 2012. However, percentage utilization in the NRA lots for the 6 p.m. to 7 p.m. Saturday period for the October 2017 counts was 70.8% compared to 92.8% for the July 2012 counts.

In summary, parking utilization during the (weekday) workday has much less seasonal variability when compared to weekday evenings, Saturdays and Sundays. Summer weekend peak-periods occur on good-weather Friday nights and Saturdays when summer tourist and visitor parking peaks downtown. These infrequent summer peaks are estimated to occur on less than 5% of the days of the year and are characteristic of special event parking conditions. During these times, when the current waterfront parking lots can be expected to be at or approaching capacity, customer expectations regarding the convenience and location of available parking would be lower than they are under typical conditions.

VI. Current Parking System Pricing Review

The City implemented paid parking in 2011 with a goal of keeping on-street parking free, yet accessible, and off-street parking reasonably priced for tourists & out-of-town customers/visitors, but deeply discounted for residents and employees. With a unique pricing structure that provides free on-street parking for all, and near-free off-street parking for residents and employees, there needs to be a much greater emphasis on enforcement to ensure that parking time limits are not abused allowing longer-term parkers to displace retail customers in convenient short-term spaces. This is most important, given the City's heavy reliance on meter revenue from the tourist and out-of-town customer to support the overall parking program.

Given the planned waterfront park expansion, the overall parking program gains much needed supply with the new parking garage but gets more expensive with its construction. This in turn, increase the need for consistent, efficient enforcement. Most downtown public parking garages in small City markets rely on

[1] Parking Impact Study Proposed Mixed-Use Development NRA Lots, John Burke, Parking Consultant, 10/9/12

revenues from the parking garage as well as revenues from the rest of the parking program including meters, permits and/or citation revenue to offset parking garage operational costs and construction debt.

This review considers the interrelationship between monthly garage and surface lot rates, current monthly permit sales and pricing, and the market rates in comparable, nearby New England Cities.

A. Parking Rates in Comparably-Sized Massachusetts Parking Programs

Table 6 below lists the off-street parking rates for relatively small parking programs in the cities of Lowell, Salem, Haverhill and the Town of Plymouth. The first three cities listed already have public parking garage(s) in their downtown. Plymouth, like Newburyport, is planning to begin construction on their first paid public parking garage later this year.

Table 6: Current Off-Street Parking Rates

Municipality	Garage Monthly Rate	Garage Daily Rate*	Employee Parking Lot Annual Permit	Resident Parking Lot Annual Permit	Senior Res. Parking Lot Annual Permit	Hourly Meter Rate
Lowell	$64	$8	$768	$576	$312	$1.00
Salem	$65	$6	$300	$300	$300	$0.75
Haverhill	$80	$4	$150	$150	$150	$0.50
Newburyport	-----	-----	**$100**	**$5**	**$0**	**$1.00**
Plymouth	-----	-----	$200	$100	$50	$1.00

*Based on an 8-hour day

As for parking garage discounts, Haverhill and Salem do not offer resident discounts on their monthly parking passes. Salem only offers senior residents a discount, and it's 70% off the regular rate. Lowell offers a 25% discount to residents in the garage and a 46% discount to senior residents.

As for discounted parking lot permits, Salem and Haverhill do not differentiate discounts between their residents, senior residents and out-of-town employees – all enjoy the same discounted permit rate. Plymouth offers its best discount to senior residents, second best to residents and third best discount to out-of-town employees. The City of Lowell charges the same monthly fee and discounts to park in the lots as it does in the garages.

As for annual permit costs, the City of Newburyport has by far the lowest rates for employees, residents and senior residents. Monthly permit costs for off-street lots tends to be higher in communities that are supporting public parking garages. The cost of the monthly permits and passes obviously impacts the number of permits sold. When permit pricing discounts are too deep, they can result in a saturation of available downtown parking – squeezing out cash-paying customers from certain lots – and undermining the overall program.

Table 7 below shows the number of monthly parking permits sold and number of permit parking lot spaces in Haverhill and Plymouth compared to Newburyport where permits are much cheaper or in the case of senior residents, free. Haverhill has the highest permit prices for residents of the three municipalities but offers the highest level of service and availability with 1.3 issued permits for every permit lot parking space. Plymouth has the highest permit price for out-of-town employees but offers the second highest level of service with 2.3 issued permits for every permit lot parking space. Newburyport has the lowest permit prices and offers the lowest level of service with 14.6 issued permits for every permit lot parking space.

Table 7: Number of Parking Permits Sold vs. Permit Lot Spaces

Municipality	Resident	Resident Senior	Employee	Total Permits (A)	Total Off-Street Permit Spaces (B)	Permit Holders Per Space (A÷B)
Haverhill*	-----	-----	-----	841	638	1.3
Plymouth	870	717	301	1,888	825	2.3
Newburyport	5,789	3,747	732	10,268	704	14.6

***Haverhill permit pricing for lot use is the same for resident, resident senior and employee.*

Table 8 below lists the highest hourly parking rates in New England seacoast cities and towns with heavy tourist/seasonal visitation. Newburyport, along with Plymouth, has the lowest hourly parking rates of the communities listed.

Table 8: Highest Hourly Parking Rates
New England Seacoast Cities and Towns

City/Town	Meter Rate
Boston, MA	$3.75*
Portsmouth, NH	$2.00
York, ME	$2.00
Newport, RI	$2.00
Onset, MA	$2.00
Hampton, NH	$2.00
Salem, MA	$1.50
Portland, ME	$1.25
Providence, RI	$1.25
Plymouth, MA	$1.00
Newburyport, MA	**$1.00**

*demand based parking pilot

B. Parking Violation Amounts in Comparably-Sized Massachusetts Parking Programs

The two key parking violations that assist in enforcing parking program goals, revenue objectives and regulatory compliance for any paid parking program are the expired meter and the overtime parking violation. **Table 9** below shows the violation fine amount for each for comparable municipalities. The City of Newburyport has the lowest expired meter fine and overtime parking fine amount of the comparable municipal parking systems.

Table 9: Parking Violation Fine Amounts

Municipality	Expired Meter Fine Amount	Overtime Parking Fine Amount
Lowell	$15	$30
Salem	$25	$25
Haverhill	$25	$25
Plymouth	$20	$20
Newburyport	**$15**	**$15**

VII. Compliance with Posted Time-Limits

A limited license plate survey was conducted on Monday, November 13, 2017 in the 3-hour time-restricted Green Street Lot, and on the adjacent 2-hour time-restricted streets of Green Street (between Pleasant and

Water Street) and Pleasant Street (between State and Green Street). The weather was seasonably cool with a light rain. The purpose of the survey was to determine customer compliance with posted time limits. The number of permits parked in the Green Street lot was also noted. Because this lot is in close walking distance to the future parking garage, time zone compliance is important to ensure that deeply-discounted permitholders don't park all day in the 3-hour lot instead of the NRA lots (or the future parking garage) where all day parking is allowed and should be encouraged.

The license plate survey was conducted by making three rounds of the lot and streets starting at 9:00 a.m., then again at 12:30 p.m., and finally at 4:00 p.m.

A. Green Street Lot

Peak occupancy occurred during the 12:30 p.m. count when the lot was 62.0% full. 38.7% of parkers in the lot were permitholders. City staff estimates that the percentage of permitholders in the lot can be as high as 50% during the summer. A total of 29.2% of customers parked in the lot during the 12:30 p.m. count had already parked over 3 hours or would eventually park over 3-hours - in violation of posted time limits. 7.3% of customers parked in the lot during the 12:30 p.m. count would end up parking more than 7-hours.

The number of permitholders parking in violation of the posted time limit in the Green Street Lot is quite high. That may be due to reduced time-zone enforcement given the light rain, low occupancy levels and time of year. The City does not typically experience significant parking problems in November and that, along with the inclement weather, typically results in reduced time-zone enforcement levels. Also, City parking staff advises that customers (permitholders or cash paying) who move their cars within the lot before 3 hours expire have not been issued tickets for then parking over 3 hours. This is because it is difficult, from an enforcement standpoint, to know if a customer parked in the lot for 3 hours, left for a period, and then returned or whether they simply moved their car from one space to another.

B. Green Street and Pleasant Street 2-Hour Parking

Peak occupancy on these two street segments was approximately 80%. Approximately 15% of on-street parkers on the 2-hour sections of Green Street and Pleasant Street parked for more than 3 hours. The 15% rate of non-compliance is relatively high – again, which may be due in part to lower seasonal and weather-related time-zone enforcement levels.

VIII. Future Development Considerations

City staff was consulted for projects that are either in planning or development that could impact future parking supply and demand or use of the new parking garage. Three potential projects were identified with a brief description as follows.

A. Waterfront Park Expansion

Several planning studies and years of public input have determined that parking on the central waterfront should be reduced to expand the waterfront park. The parking garage was advanced by the City as an alternative to the large dirt and gravel parking lots surrounding the central waterfront. The NRA's waterfront parking lots, with over 300 parking spaces, would be reduced in size to make way for an expanded park with increased walkable open space and public amenities.

The NRA has provided a letter of intent to the City to decommission at least 100 parking spaces in the lots to allow for the park expansion once the new parking garage is opened. Tables 4 through 7 showed that the paid public parking lots always had at least 140 parking spaces available between 7 a.m. and 7 p.m. during both the weekday and Saturday counted in October. Of course, on a good-weather Saturday evening in July and August, the number of available spaces in the lots would be expected to shrink to

less than 50, which is why the initial phase of the park expansion would wait until after the City constructs the new 207-space parking garage. Future expansion of the park, beyond the initial phase, is anticipated to require as many as 200+ parking spaces ultimately removed from the NRA lots.

B. Redevelopment of Former Davis Auto Parts Building

The owner of the Black Cow Tap & Grill has been renovating the building at 40 Merrimac Street to open a 442-seat restaurant and bar there in early 2018. The new restaurant would be located directly adjacent to the Waterfront Trust Lot and in close walking distance to the new parking garage. The proposed project calls for 315 inside seats and 127 outside seats (seasonal) for a total of 442. If the 250-seat Black Cow Tap & Grill closes and moves from its currently leased location to the 40 Merrimac Street building, reuse of the leased building as a restaurant would seem likely[2].

C. Waterfront West Development

Located on the north side of Merrimac Street directly across from the new parking garage on land owned by New England Development (NED), this potential private, mixed-use development is in the very early conceptual stage of discussions with the City. The mixed-use development concept could include a hotel, condominiums, a modest amount of retail/restaurant uses, and parking. How much onsite parking would be provided to satisfy the demand generated by the development is not known at that this time, but the so-called "Waterfront West Overlay District" zoning ordinance would require any major development scheme to provide required parking on-site, without any credit for nearby public parking spaces.

IX. Recommendations

The following recommendations are designed to maximize use of the new parking garage and achieve a more balanced, efficiently-used, and financial-sound parking system. Recommendations include program changes to parking pricing, hours of operation, time limits, management policies and practices, enforcement actions, technology needs, signage, as well as a new rate structure for the new parking garage.

A. Off-Street Permit Program Changes

Increase 2011 Permit Fees as follows:

- Employee Lot Permit – increase from $100/year to $200/year; offer quarterly permit at $60
- Resident Lot Permit – increase from $5/year to $100/year; offer quarterly permit at $30
- Senior Lot Permit – remains free or charge $10/year to cover administrative cost
- RPP Zone Street Permit – remains free or charge $10/year to cover administrative cost

When the hourly meter rate doubled in 2017 from $0.50/hr. to $1.00/hr., there was no corresponding doubling of the permit rate. In fact, there has been no permit rate increase in the seven (7) years since the paid parking program began. By doubling the hourly meter rate while holding the permit rate constant, the permit discount effectively doubled, compounding the inefficiency of a permit rate that was already way below market rates. This has contributed to a proliferation of permit sales as shown in Table 7, and more importantly, a saturation of permits in the lots, where paying visitors have been displaced.

The original parking analysis that led to implementation of the paid parking program in 2011, recommended a $100 annual rate for the Employee Lot Permit and a $50 annual rate for the Resident Lot Permit. The recommended employee permit rate was adopted but the Resident Lot Permit was

[2] A provision in the Newburyport Zoning Ordinance provides that new businesses may utilize nearby public parking (within 300') to meet parking requirements. The Ordinance was recently updated to require an impact mitigation payment of $7,500 per space so utilized on a *prospective* basis (i.e. in the future), recognizing that certain existing uses are "grandfathered."

reduced to just $5/year. The City's financial feasibility analysis of the new parking garage conducted in 2016 found this rate to be an "…*unusual segment of our rate structure that is not in itself financially sustainable*." The recommendation here is to double the original $50 recommended Resident Permit rate from 2011. Even with these recommended rate increases, Newburyport would still have the overall lowest permit prices of the comparable parking programs listed in Table 6, when considering all permit rate types: employee, resident, and senior resident.

It is also recommended that employee and resident permits be sold both on a quarterly and annual basis to provide valued flexibility to the customer. Quarterly permits are most advantageous to seasonal and short-term employees.

Eliminate Permit Stickers and Replace with Virtual Permits tied to the License Plate: In 2018, the City plans to convert its off-street kiosks from "pay-and-display" to "pay-by-plate" metered parking. Customers will no longer have to walk back to their cars after paying to place a receipt on their dashboard. They will simply enter their license plate number into the pay kiosk and go on their way. This allows the City to eliminate its outdated, manual permit sticker system and replace it with a virtual permit tied to the license plate. Through automated license plate recognition (LPR) scanning, enforcement will be able to check whether a customer has a permit, paid at the kiosk, or paid through the City's pay-by-phone app. This process will be discussed later under enforcement recommendations.

The virtual permit will eliminate administrative costs associated with purchasing, printing and distributing the sticker permits and make (online) permit renewals easier. It will also allow the City to offer quarterly permits (at a premium) to seasonal workers.

B. Parking Enforcement Changes

Implement Mobile License Plate Recognition (LPR) Enforcement: With a mature residential permit program, over 10,000 parking permits in circulation, and an abundance of free, time-restricted parking, Newburyport is an ideal candidate for mobile LPR enforcement. By retrofitting parking enforcement vehicles with LPR cameras that can quickly scan license plates, parking enforcement efficiency and productivity will increase substantially.

Today's LPR technology allows an enforcement vehicle to be driven at or near posted speeds downtown, reading, with great accuracy, vehicle license plates on both sides of the street (depending on street widths). The LPR system informs the parking enforcement officer whether the owner of a vehicle has a valid permit, is a paid customer, or is in violation. It also replaces the need for manually "chalking" of vehicles in free 2-hour zones and in the paid 3-hour lots. Manual chalking time zones is time consuming and inefficient for a parking system with free, time-restricted on-street spaces and paid off-street spaces.

Mobile LPR will increase time-zone compliance downtown, create more on-street availability, and move longer-term parkers to the long-term surface lots and the new parking garage. It would be used in the RPP zones, other on-street time zones and the surface lots.

Improve Compliance with 3-Hour Time Limit in the Green St. Lot: The 3-hour, time restricted, Green Street Lot fills-to-capacity during both the weekday lunchtime period and extended Saturday evening period as depicted in Figures 5 & 8 of this report. Previous parking studies have shown this also occurs during the weekday evening and Saturday lunchtime periods in summer. When the lot fills, downtown customers are displaced. They can be observed circling through the parking lot hunting for spaces, and then either wait in an aisle until a space opens-up, or exit.

The results of a license plate survey conducted on a weekday in November, and presented in Section VII.A. of this report, showed that 29.3% of parkers in the lot exceeded the 3-hour time limit and 7.3%

parked all day. City parking staff advises that it is difficult to know if a customer parked in the lot for 3 hours, left for a period, and then returned to another space or simply moved their car from one space to another to avoid getting a ticket after a 3-hour parking session. Since the Green Street Lot fills routinely during several months of the year, it is important to make sure that long-term employee parkers (who should be parking in the waterfront lots, or soon, in the new garage) are not displacing would be retail customers from the lot.

It is recommended that the City' Parking Committee discuss the potential of either (1) passing an "Anti-Car-Shuffling" Ordinance requiring movement of a parked vehicle a specified minimum distance after an initial parking session (see below); (2) limiting permitholders to no more than one free parking session (up to 3 hours) per day with the permitholder paying the full hourly rate for any additional parking sessions; (3) limiting the number of parking spaces in the lot made available to permitholders on a first-come-first-serve basis; or (4) installing fixed LPR cameras at the three (3) entrance/exits to the lot, which would inform parking enforcement personnel of exactly how long a permit customer parked in the lot and when they are in violation of time restrictions - without having to "chalk" the vehicle.

Reduce Employee "Car Shuffling" in 2-Hour On-Street Parking Zones: Car shuffling is when a downtown employee parks in one of the free, 2-hour, on-street parking spaces and simply moves their vehicle every two hours through the workday to avoid paying for parking or getting a $15 ticket. This action displaces would-be customers from convenient on-street spaces. The City should consider an Anti-Car-Shuffling Ordinance prohibiting vehicles parking in the 2-hour street or 3-hour lot zones from simply moving their car on the same block-face to avoid paying for parking. A sample of several such Municipal Ordinances are included in the Appendix as **Exhibit 4**. The case of Highland Park, Illinois addresses time-restricted paid parking lots such as the Green Street Lot.

Increase Expired Meter and Overtime Violation Fine from $15 to $20: Newburyport is the only municipality of similar parking programs listed in Table 9 of this report that has an overtime violation fine as low as $15. The other communities listed set fine amounts at $20, $25 or $30 per violation. Arguably, Newburyport is most in need of a higher citation fine amount for this offense as it has the most-free, time-restricted, on-street parking of them all. The higher fine amount should help drive time-zone and meter compliance. It is also needed because the new garage is proposed to have a maximum daily rate of $15, for those parking over 10 hours, as discussed later under the parking garage rate structure section. The citation and overtime violation should be set higher than this max daily rate to prevent people from simply parking where they want regardless of time restrictions and paying a fine amount they find reasonable for daily parking.

C. Parking Garage Rate Structure

The new parking garage is ideally located along a gateway street into the City (Merrimac Street) with very good pedestrian connections to the waterfront and downtown. Much of the waterfront, City Hall, residential neighborhoods, and the downtown retail district including Market Square, are within a 5-minute walk radius of the new garage. As such, it has the potential to serve multiple markets including, but not limited to – the visiting tourist, the downtown office worker, the lunch-time and dinner customer coming in to enjoy the nearby waterfront restaurants and entertainment venues when the City is at its busiest. The garage should attract a good mix of transient and regular daily customers over time.

Considering the planned, future development discussed in Chapter VIII, parking demand for the garage should continue to increase with time. In the near term, the elimination of 100 gravel parking spaces on the waterfront to make way for an expanded waterfront park should create some waterfront visitor demand for the garage while shifting some employee parking from the waterfront to the garage. Additional new restaurants that are in planning or coming on-line soon will also increase current demand for the garage. And of course, the Waterfront West Development, located directly across the street,

should it advance, could have a profound impact on demand as well as the types of customers served at the facility, even if the developer meets "required" on-site parking standards under local zoning.

Establish Hourly and Max Daily Rate: It is recommended that the parking garage hourly rate be set consistent with the off-street meter rate at $1.00/hr., up to a daily maximum of $15.00. A recommended daily rate structure for the garage based on one-dollar hourly increments after the first two hours is shown below.

0 to 1 hour	$ 2.00
1 to 3 hours	$ 3.00
3 to 4 hours	$ 4.00
4 to 5 hours	$ 5.00
5 to 6 hours	$ 6.00
6 to 7 hours	$ 7.00
7 to 8 hours	$ 8.00
8 to 9 hours	$ 9.00
9 to 10 hours	$10.00
10 to 24 hours	$15.00 (max daily rate)

This rate structure reflects the fact that there is already a large supply of free, short-term on-street parking, so it acts as an incentive for short-term parkers to use more convenient turnover spaces on-street. The pricing also reflects that the garage is perhaps better suited for providing a premium, covered-parking experience for medium-stay and longer-term parkers.

Establish Contract Monthly Garage Rates for Introductory Period: With the opening of a new garage, it is usually best to initially limit the total number of monthly passes sold (which are typically priced at a discount off the hourly price), until such time that the demand for full cash-paying transient customers is fully understood. Monthly passes, while an important revenue stream to the garage, can dampen maximum use of, and revenue generated by, the facility if too many are sold too soon, before garage demand stabilizes. Therefore, it is recommended that during this initial, introductory period of say 3 to 6 months, the number of contract monthly passes sold in the garage be limited to 50 to 75.

During the introductory period, a new parking garage is often priced in the lower range of market rates. These lower introductory rates are set to attract parkers to the new facility and allow the parking manager time to adjust rates as actual demand and use is realized. A limit on how long such rates will continue should be pre-determined and made known to parkers at the outset. As garage occupancy builds, rates can be increased to market levels. For the planned new garage, demand may change rapidly given the development projects discussed in Chapter VIII that are either in planning or coming online soon.

Monthly parking garage rates are often set at a 25 to 50 percent discount over the daily rate to attract long-term parkers. For example, a full-time employee working 40 hours/week paying the $1/hour rate would pay approximately $160/month. A discount on the hourly rate at the higher-end of the range (50%) would result in a regular monthly pass rate of $80. Providing an additional 25% resident discount, as done in the City of Lowell, would result in a resident monthly pass rate of $60/month.

It is recommended the City offer a monthly parking pass at an introductory rate of $80/month, which is within the range of garage rates charged in nearby Massachusetts cities as listed in Table 6. While this

is largely a policy decision, a 25% discount to residents would yield a $60/month introductory resident pass rate. Following the introductory period, and a review of the garage utilization by time-period for transient cash and monthly pass sales, the City should refine the monthly pass rate as necessary.

Plan for Other Discount Garage Rates: Over time, the City may also consider other discounted rate structures that may be warranted such as a separate weekday monthly pass, early bird and evening rates if needed, to augment use during times of lower occupancy, again, based upon utilization trends at the garage and a cost/benefit analysis. There may also be a discounted rate for MVRTA bus riders who use the facility and a premium rate for others using the most convenient first-floor level with access directly off Merrimac Street. It is common for municipalities to offer "large block agreements" with employers and developers willing to secure a larger number of monthly passes for a discounted rate for a specified time-period. The City should also consider developing a merchant validation and loyalty program at the garage for customers who receive discounted parking for patronizing participating downtown restaurant/retail establishments.

Establish Special Event Rate: During major special events, it is advantageous to have customers pre-pay a flat rate fee to speed payments and exiting from the garage when the event ends. A Special Event Rate for the garage, would typically be set at the max daily rate ($15) or higher.

D. Parking Garage Access Control, Payments and Management

The new garage will be a cashier-less, automated facility with the ability to remain open 24 hours/day, 7 days/week, like the parking lots, but with CCTV security cameras and remote access capabilities to a parking attendant for customer service issues, or the Newburyport Police Department for emergencies.

Gateless Garage Concept: The City is advancing a cost-efficient "gateless" garage concept whereby the customer does not have to stop and pull a ticket, or in the case of a monthly parker, use a proximity card to raise the gates and enter the facility. Instead, the two (2) garage entrance/exits would be affixed with LPR cameras to read license plates, noting time of entry. A grace period would be afforded customers to park and pre-pay for parking – either at one of the facility's payment kiosks, located on each floor of the garage, or via the City's pay-by-phone app. If the customer did not pay within the grace period, a notification would be sent to the enforcement personnel. Similarly, if the customer parks beyond the period paid for, a notification is sent to enforcement personnel. A paying customer's license plate is also "read" by the fixed LPR camera on exit. The LPR system also identifies monthly passholders, whose access credential, like permitholders in the parking lots, are their license plates. This type of access control and payment system eliminates delays and back-ups at the facility's driveways.

Integrated On- & Off-Street Parking Management Systems: The parking garage LPR fixed-camera system, payment kiosk, pay-by-phone app., and monthly pass program would be integrated with the back-office management software controlling the rest of the parking program including mobile LPR enforcement, citation management, the parking lot kiosk, and virtual permit system.

Parking Guidance and Space Availability Signage: A unique challenge with the new garage is that due to site geometrics and topography, the 39-space lower level, with access from Merrimac Street, is not connected to the 168 spaces on the upper levels of the garage that are served by a single driveway on Titcomb Street. A concern is that once all 39 spaces on the lower level are unavailable, there needs to be a way to ensure that customers do not continually pull into the entrance only to find no available spaces, causing backups impacting traffic flow on Merrimac Street. The Merrimac street entrance and lower level is shown in **Figure 9** below.

There are at least two solutions the City may wish to consider addressing these concerns as follows:

1. Designate the lower level for monthly parkers only and control the number of monthly passes assigned so there are never more parkers than spaces. Although these passes could be sold at a premium amount given the convenient first-floor access to Merrimac Street, it is inherently inefficient since not all contract parkers would be in the facility at the same time – and the opportunity for "over selling" the spaces given how few spaces exist on this level is limited. This option would however, simplify traffic and access management of this driveway.

2. Open the lower level to pay-by-plate public parking and post an electronic space-availability sign at the Merrimac Street entrance informing parkers, in real-time, how many spaces are available in the lower level as well as in the upper levels from Titcomb Street with a directional arrow to Titcomb Street. This type of parking guidance and space availability sign can be automated through integration with the LPR camera system previously described. The fixed LPR cameras would keep track of how many vehicles enter and exit the facility and how many are within the facility in real-time. This is the more efficient, and projected higher revenue producing option of the two. A couple of examples of electronic space availability signs are depicted in **Figure 10** below.

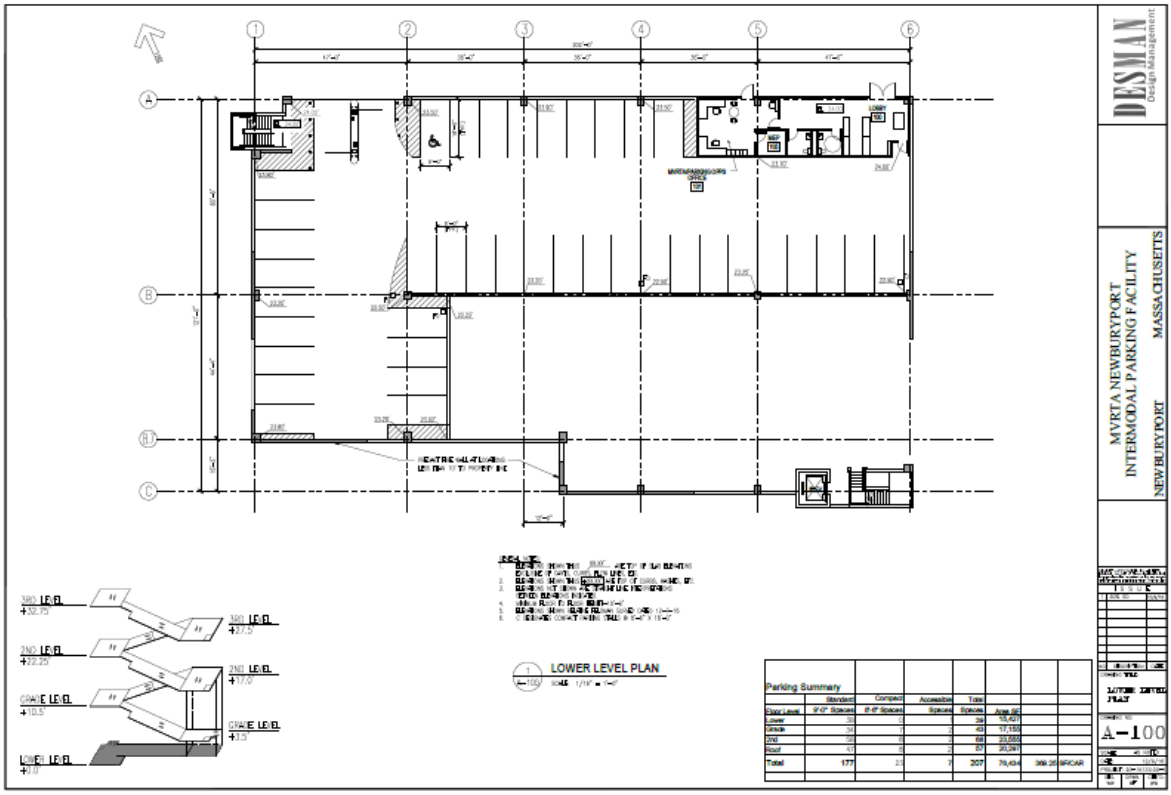


Figure 9: Newburyport Intermodal Parking Facility Lower Level (Merrimac Street Entrance)

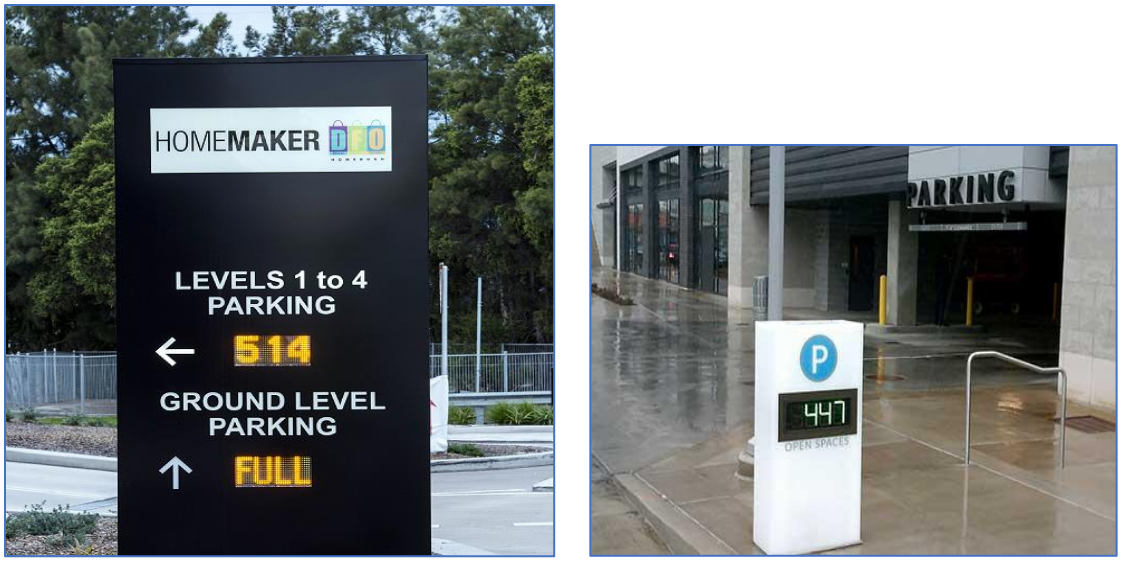


Figure 10: Examples of Space Availability Signs

Wayfinding Signage: The garage will rely heavily on transient parkers including tourists and other visitors who may be unfamiliar with the downtown. Therefore, the space availability signs described above, could be integrated with wayfinding signage to the garage from various routes including Route 1, Route 113, Merrimac Street and Water Street. This would also be an opportune time to install standardized, branded, monument signs at the public parking lots. Several of the lots may not be immediately recognizable as public lots to visitors unfamiliar with Newburyport. The Hales Court Lot being one example.

E. Time Regulation Changes

Extend Paid Parking to 8 p.m.: The parking occupancy survey shows that parking demand downtown generally increases after paid parking ends at 6 p.m. In the early evening, numerous on- and off-street facilities are at capacity at a time when residents are home and dinner/evening activities are peaking. Parking demand for the 6 to 7 p.m. period counted was high for both the weekday and Saturday condition. Previous parking studies show that parking demand actually increases after 7 p.m. on Friday and Saturday evenings. Other nearby cities with active and successful restaurant districts, and relatively new parking garages, have found it advantageous to expand the hours of paid parking and enforcement to 8 p.m. or beyond, including:

Portsmouth, NH (8 p.m.)
Haverhill, MA (8 p.m.)
Salem, MA (8 p.m.)
Plymouth, MA (7 p.m.)[3]

Expanding the hours of paid parking will improve overall parking management and compliance in resident permit and time-zones. It will also increase program revenues and drive higher utilization rates in the new parking garage when it is most needed. Increased program revenues associated with expanding paid parking hours could be used to increase lighting in the paid public parking lots – particularly on the waterfront.

[3] Park Plymouth, the Town's parking operator, is currently considering extending paid parking to 8 p.m. when their new parking deck is opened later in 2018.

Add the street segments surrounding the New Parking Garage to the 2-hour RPP Zone #3: Leaving free, unregulated, all-day parking in an area immediately outside the parking garage will have negative impacts on garage use and revenue. The following unregulated, heavily-used street segments on the same block as the new garage should be added to the 2-hr. RPP Zone:

- Titcomb Street – Merrimack to Pleasant Street
- Pleasant Street – Titcomb to Market Street
- Market Street – Merrimac to Pleasant Street

Post-construction, the City should continue monitoring utilization of residential streets south of Pleasant Street for potential inclusion in RPP Zone #3 if they begin to exceed effective capacity.

Create Bus Loading Zone on Merrimac Street in front of New Parking Garage: This bus loading zone on the south side of Merrimac Street between Titcomb and Market Street will be constructed with the new parking garage. It will need to be committed to Ordinance. **Figure 11** below depicts the modified configuration of parking spaces surrounding the new parking garage after construction is complete in late 2018 or early 2019. Curb "bump-outs" have been added to increase pedestrian safety and ensure adequate visibility for vehicles entering/exiting the facility. Several spaces will also be removed from Merrimac St. to allow for pick-up/drop-off at two (2) bus stops in front of the facility.

Eliminate 1-hour time restriction (currently unposted) in City Ordinance on the following streets:

- Washington Street - Kent and Olive Street
- Congress Street – Kent to Olive Street
- Buck Street – High to Washington Street
- Market Street (west side) just north of Washington Street

It appears these 1-hour restrictions in the Ordinance date back to a time when abutting commercial uses justified the time restriction.

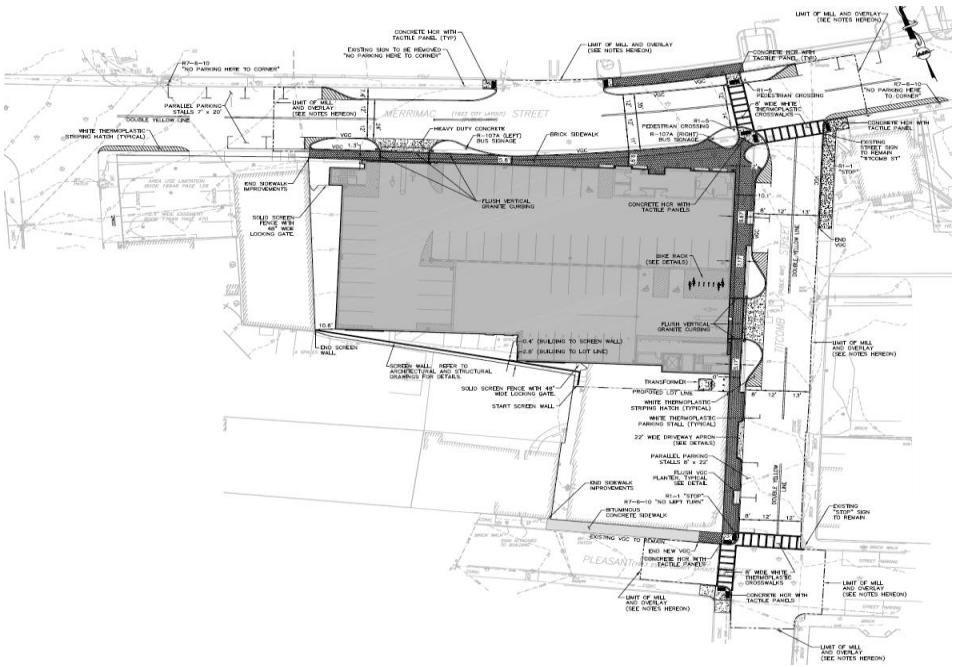


Figure 11: Planned adjustments to on-street parking spaces abutting the new parking garage.

Post missing 1-hour parking signs: The streets listed below were missing sign notifications of the 1-hour time restriction included in City Ordinance. The section of Merrimac Street adjacent to the new parking garage was at capacity for much of the weekday counted.

- Merrimac Street – Market to Green Street
- Center Street – Water to Liberty Street
- Merrimac Street (south side) – Strong Street westerly toward Foundry Square

Reconfirm decision to include Spring and Orange Streets in RPP Zone but leave Harris Street out. Neither Spring Street nor Orange Street in RPP Zone #1 exceeded 50% use during the peak weekday and Saturday periods, while Harris Street, which is not in the RPP Zone exceeded 85% use for the entire weekday/workday period (9 a.m. and 5 p.m.).

Consider Posting a few 15-Minute Parking Spaces on Liberty and Middle Streets: On both count days, numerous cars were observed driving down heavily-used Middle Street from State Street and then circling back on heavily-used Liberty Street searching for parking spaces near coffee shops. By installing a couple of 15-minute spaces on each street near their intersections with State Street, the City may be able to reduce traffic congestion and improve access/business to abutting coffee shops. Over a decade ago, the City of Portsmouth installed four (4) 15-minute spaces on High Street (a side street in Market Square) adjacent to two coffee shops, which reduced the impacts of circling traffic through Market Square while improving access to the coffee shops.

Figure 12 below depicts the updated/recommended time-restricted parking regulations downtown.

F. Other Pricing Changes

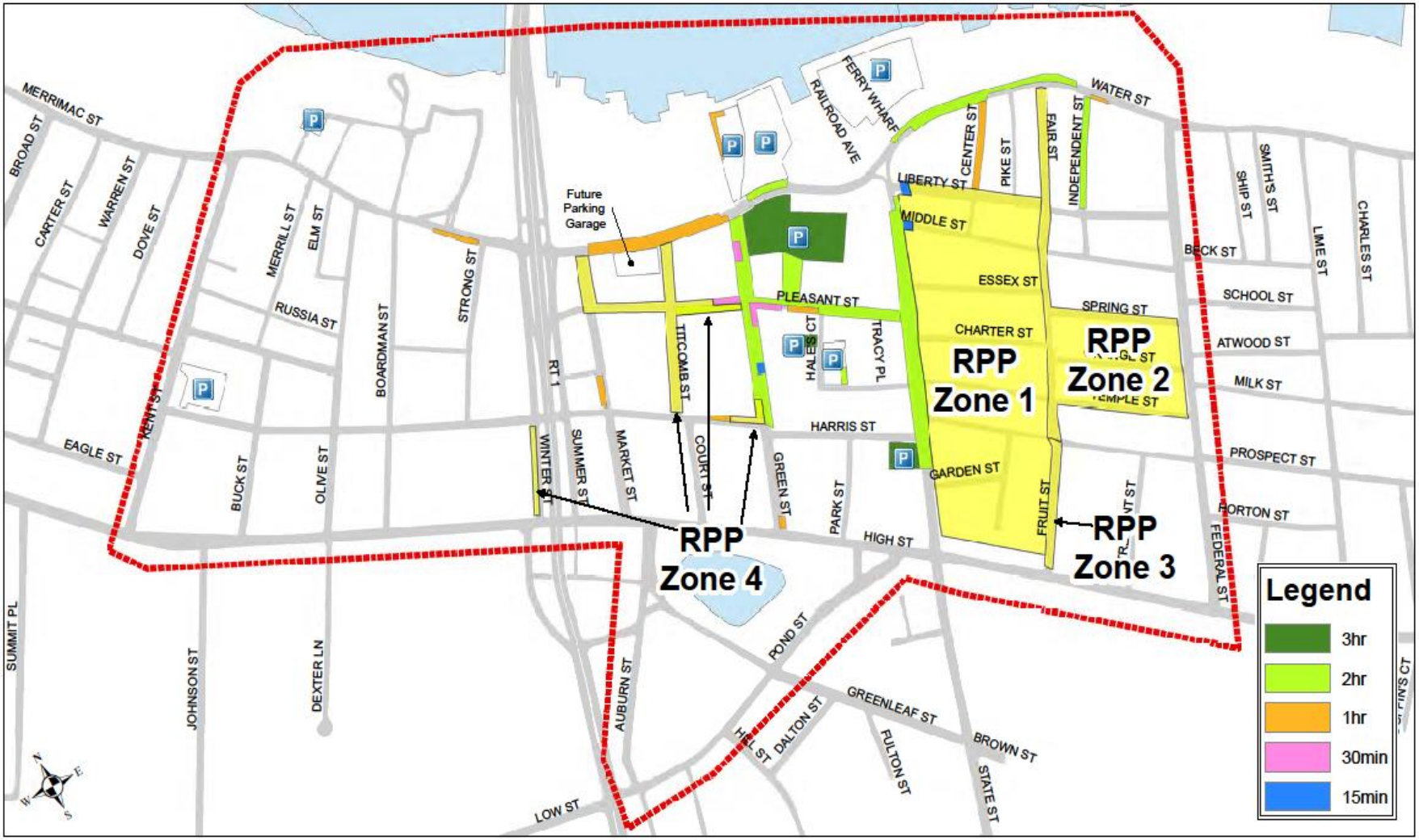
Consider Increasing the Hourly Rate in Parking Lots close to Downtown Demand Center – Newburyport has the lowest hourly parking rates of comparable coastal New England Cities (see Table 8). By increasing the hourly rate from $1.00/hour to say, $1.50 or $2.00/hour in the parking lots, the City could drive higher use of the NRA East Lot (which would remain at $1.00/hour) and efficient use of the new Parking Garage (set at $1.00/hour), which are both a short walk to the current demand center bounded by State Street, Pleasant Street, Green Street and Water Street.

G. Longer-Term Recommendations

Secure Shared-Lot Parking/Lease Agreements: On Saturday afternoon and evening when many streets and off-street facilities are at effective capacity, many private lots were observed to be underutilized. In fact, some larger off-street lots at schools, banks, legal offices and other businesses were almost completely empty. It is not unusual for the private supply of off-street parking to be lower utilized than the public supply in downtown areas, but the observed disparity is significant.

It is recommended that the City actively pursue public use of private and institutionally-owned parking lots through direct lease and/or shared-lot agreements. Banks, legal offices and schools for example, often do not fully use there lots on weekends, and churches often do not fully use their lots on weekdays. Municipalities often enter into shared-lot agreements with these private and institutional organizations to use the lots for long-term, off-street public parking – usually at a tiny fraction of the cost of constructing parking spaces. These shared-lot agreements are most useful in supplementing off-street:

1) public parking during infrequent, extreme-use periods (summer nights and weekends); and
2) permit parking areas often in locations a short walk to the commercial core areas of downtown.



Time Restricted Parking

3/20/18

Figure 12: Recommended Time Restricted Parking
7

Conduct Regular Parking Rate and Regulatory Reviews: Since the 2011 inception of paid parking in Newburyport, there have only been minor adjustments to parking rate structure. As previously noted, permit rates have not increased in seven (7) years. Downtown parking demand is highly changeable with the economy, new development and individual changes of use. Therefore, it is important that parking rates and regulations be reviewed on regular, consistent basis - at least every two years. This will allow the City's parking staff, Parking Commission and City Council to consider rate and regulatory changes based on supply and demand, to ensure optimal operational and financial performance of the overall parking system. Alternatively, the City may want to consider regular, gradual (%) rate increases every two or three years tied to its operating and capital plans. This may be preferable to waiting longer periods of time and then having to double the rates.

Consider Implementing Demand-Based Parking Pricing After the Garage Opens: In recent years, with improved meter and payment monitoring and reporting technology, many Cities are moving to a more dynamic, demand-based pricing. This type of pricing strategy recognizes that parking demand varies by location as well as by time-of-day, day-of-week, and month-of-year, and therefore parking rates should change accordingly to optimize performance of the overall parking system. The general concept is that demand-based pricing charges the lowest possible parking rate at a facility to achieve efficient 85% target utilization rates, better aligning price and demand to ensure that there is always an available parking space.

Demand-based parking pricing is the opposite of a "one-size-fits-all" pricing strategy that charges the same hourly rate or permit fee in a parking lot that is routinely overflowing with customers as it does in a lot that is half-empty. The "one-size-fits-all" strategy charges the same parking rate in the dead of winter as it does in the peak of summer. It is recommended the City consider moving to a demand-based strategy at the end of the introductory rate period for the new parking garage that was discussed earlier.

APPENDIX

Exhibit 1: Tabulated Weekday and Saturday Parking Counts

PARKING OCCUPANCY COUNTS: **DATE: Thursday, October 5, 2017**

Newburyport, MA **CONDITIONS**: High of 75 degrees F, sunny

#	LOCATION	Spaces	7-8 a.m.	9-10 a.m.	12-1 p.m.	3-4 p.m.	5-6 p.m.	6-7 p.m.
1	**High St. – Winter to Olive**							
	NORTH SIDE	**29**	12	8	9	12	10	8
	SOUTH SIDE	**24**	---	---	---	4	9	5
2	**High St. - Olive to Kent**							
	NORTH SIDE	**20**	10	5	6	6	10	10
	SOUTH SIDE	**9**	2	1	2	5	0	0
3	**Kent St. - High to Congress**							
	EAST SIDE	**24**	9	1	4	7	7	7
	WEST SIDE	**24**	8	4	4	5	7	4
4	**Kent St. – Congress to Merrimac**							
	EAST SIDE	**18**	10	3	4	3	7	7
	WEST SIDE	**22**	12	10	6	5	3	5
5	**Merrimac St. – Kent to Boardman**							
	SOUTH SIDE	**4**	1	3	1	1	0	0
6	**Merrimac St. – Boardman to Winter**							
	SOUTH SIDE	**16**	4	6	6	4	4	2
7	**Winter St. – Merrimac to High**							
	WEST SIDE	**40**	13	18	15	12	17	18
8	**Washington St. – Winter to Olive**							
	NORTH SIDE	**23**	12	13	10	10	15	17
	SOUTH SIDE	**22**	8	6	8	10	7	11
9	**Washington St. – Olive to Kent**							
	NORTH SIDE	**24**	8	8	6	6	4	7
	SOUTH SIDE	**20**	4	2	2	3	5	4
10	**Congress St. – Olive to Kent**							
	NORTH SIDE	**19**	7	4	2	3	5	10

#	LOCATION	Spaces	7-8 a.m.	9-10 a.m.	12-1 p.m.	3-4 p.m.	5-6 p.m.	6-7 p.m.
	SOUTH SIDE	**19**	6	4	4	3	2	8
11	**Russia St. – Merrill to Kent**							
	NORTH SIDE	**10**	8	6	3	3	1	7
12	**Merrill St. – Merrimac to Congress**							
	WEST SIDE	**22**	12	10	10	8	13	14
13	**Buck St. – Congress to High**							
	EAST SIDE	**20**	4	4	3	3	2	2
	WEST SIDE	**28**	6	6	3	2	7	6
14	**Olive St. – High to Congress**							
	EAST SIDE	**21**	8	10	6	6	6	9
	WEST SIDE	**21**	10	8	5	6	7	7
15	**Olive St. – Congress to Merrimac**							
	EAST SIDE	**24**	14	8	13	11	12	16
16	**Boardman St. – Merrimac to Washington**							
	EAST SIDE	**34**	20	12	15	17	22	21
17	**Boardman St. – Washington to High**							
	WEST SIDE	**12**	10	7	6	7	8	9
18	**Elm St. – Plumb to Merrimac**							
	EAST SIDE	**0**	1	1	0	1	0	0
	WEST SIDE	**5**	5	4	3	4	5	4
19	**Strong St. – Merrimac to Washington**							
	WEST SIDE	**23**	13	10	8	6	10	11
20	**Atkinson St. – Merrimac to Washington**							
	NORTH SIDE	**12**	10	9	7	8	8	9
21	**Washington St. - Winter to Market**							
	NORTH SIDE	**9**	3	4	3	3	4	3
	SOUTH SIDE	**11**	1	1	2	2	3	3

#	LOCATION	Spaces	7-8 a.m.	9-10 a.m.	12-1 p.m.	3-4 p.m.	5-6 p.m.	6-7 p.m.
22	**Washington St. - Market to Titcomb**							
	NORTH SIDE	**11**	4	6	5	6	6	7
	SOUTH SIDE	**11**	6	9	8	7	5	6
23	**Washington St. - Titcomb to Green**							
	NORTH SIDE	**13**	4	6	5	5	8	6
	SOUTH SIDE	**3**	1	2	0	1	2	1
24	**Green St. – Washington to High**							
	EAST SIDE	**16**	9	14	16	14	12	13
	WEST SIDE	**17**	13	15	17	12	13	11
25	**High St. – Market to Winter**							
	NORTH SIDE	**10**	1	3	3	3	4	4
	SOUTH SIDE	**13**	5	8	6	5	6	6
26	**Summer St. - High to Washington**							
	EAST SIDE	**14**	3	7	6	4	5	3
27	**Summer St. – Washington to Pleasant**							
	EAST SIDE	**12**	4	6	2	2	2	2
28	**Summer St. – Pleasant to Merrimack**							
	EAST SIDE	**9**	5	7	3	3	3	6
29	**Merrimac St. - Market to Titcomb**							
	NORTH SIDE	**8**	2	5	7	8	7	5
	SOUTH SIDE	**7**	0	6	7	7	6	6
30	**Merrimac St. – Titcomb to Green**							
	NORTH SIDE	**9**	2	8	9	8	8	9
	SOUTH SIDE	**8**	0	7	8	7	7	8
31	**Green St. – Washington to Pleasant**							
	EAST SIDE	**14**	8	11	14	14	14	13
	WEST SIDE	**14**	5	8	13	13	14	13

#	LOCATION	Spaces	7-8 a.m.	9-10 a.m.	12-1 p.m.	3-4 p.m.	5-6 p.m.	6-7 p.m.
32	**Green St. – Pleasant to Merrimac**							
	EAST SIDE	**16**	6	15	14	14	12	16
	WEST SIDE	**15**	6	12	13	14	14	12
33	**Pleasant St. – Green to Titcomb**							
	NORTH SIDE	**9**	4	5	7	7	9	9
	SOUTH SIDE	**12**	1	3	12	11	12	11
34	**Pleasant St. - Titcomb to Summer**							
	NORTH SIDE	**16**	8	11	14	11	10	9
	SOUTH SIDE	**17**	4	10	14	12	10	10
35	**Market St. – Merrimac to Pleasant**							
	EAST SIDE	**7**	1	4	5	5	4	6
	WEST SIDE	**9**	4	3	6	7	5	6
36	**Market St. – Pleasant to Washington**							
	EAST SIDE	**18**	10	10	14	9	13	12
	WEST SIDE	**14**	10	13	9	6	10	8
37	**Market St. – Washington to High**							
	EAST SIDE	**16**	7	9	8	3	8	8
	WEST SIDE	**16**	6	4	6	6	9	8
38	**Court St. – High to Washington**							
	EAST SIDE	**15**	6	9	10	9	6	6
39	**Titcomb St. - Washington to Pleasant**							
	EAST SIDE	**14**	11	8	8	7	11	13
	WEST SIDE	**16**	7	5	11	10	14	15
40	**Titcomb St. – Pleasant to Merrimac**							
	EAST SIDE	**8**	3	7	7	6	6	6
	WEST SIDE	**13**	8	13	13	12	12	13

#	LOCATION	Spaces	7-8 a.m.	9-10 a.m.	12-1 p.m.	3-4 p.m.	5-6 p.m.	6-7 p.m.
41	Waterfront Trust Lot	**59**	1	6	42	29	10	15
42	NRA West Lot	**99**	7	42	95	88	27	30
43	NRA East Lot	**223**	22	52	113	135	87	58
44	Green St. Lot	**231**	30	121	230	189	129	165
45	**Merrimac St. - Green to State**							
	NORTH SIDE	**8**	1	3	8	6	8	8
46	**Water St. – State to Fair**							
	NORTH SIDE	**13**	1	1	9	4	8	8
	SOUTH SIDE	**15**	1	6	13	8	12	11
47	**Water St. – Fair to Federal**							
	NORTH SIDE	**16**	0	10	14	12	12	7
	SOUTH SIDE	**10**	0	6	6	5	8	5
48	**Federal St. – Water to Middle**							
	EAST SIDE	**18**	3	10	13	12	13	9
	WEST SIDE	**15**	8	10	13	13	14	6
49	**Federal St. – Middle to Prospect**							
	EAST SIDE	**28**	8	10	10	10	13	11
	WEST SIDE	**25**	13	12	15	15	17	12
50	**Federal St. – Prospect to High**							
	EAST SIDE	**20**	4	3	3	3	7	9
	WEST SIDE	**24**	5	7	7	9	10	8
51	**High St. – Federal to Fruit**							
	NORTH SIDE	**25**	0	2	0	2	3	7
52	**High St. – Fruit to State**							
	NORTH SIDE	**5**	0	1	1	1	1	3
	SOUTH SIDE	**8**	3	2	4	4	5	7

#	LOCATION	Spaces	7-8 a.m.	9-10 a.m.	12-1 p.m.	3-4 p.m.	5-6 p.m.	6-7 p.m.
53	**Pond St. – High to Greenleaf**							
	NORTH SIDE	**28**	6	17	19	16	11	11
	SOUTH SIDE	**18**	6	6	8	7	7	4
54	**Greenleaf St. – Pond to High**							
	NORTH SIDE	**41**	8	17	14	15	7	6
55	**Auburn St. – Pond to High**							
	WEST SIDE	**33**	8	7	8	7	10	6
56	**Park St. – High to Harris**							
	WEST SIDE	**13**	7	9	11	11	11	11
57	**Harris St. – Green to State**							
	NORTH SIDE	**23**	15	21	21	18	21	17
	SOUTH SIDE	**18**	13	17	16	17	15	10
58	**State St. – High to Prospect**							
	EAST SIDE	**11**	8	11	11	10	10	9
	WEST SIDE	**3**	2	3	3	3	3	3
59	**State St. – Prospect to Pleasant**							
	EAST SIDE	**13**	8	11	11	9	12	13
	WEST SIDE	**17**	8	13	15	14	17	15
60	**State St. – Pleasant to Liberty**							
	EAST SIDE	**14**	10	13	14	13	14	13
	WEST SIDE	**14**	11	12	14	12	12	13
61	**Prince Place Lot**	**43**	27	41	43	36	27	16
62	**Hales Court Lot**	**18**	3	10	13	13	9	11
63	**State Street Lot**	**31**	2	13	28	28	28	17
64	**Pleasant St. – State to Green**							
	NORTH SIDE	**21**	4	19	20	18	20	20
	SOUTH SIDE	**22**	7	16	22	12	20	20

#	LOCATION	Spaces	7-8 a.m.	9-10 a.m.	12-1 p.m.	3-4 p.m.	5-6 p.m.	6-7 p.m.
65	**Independent St. – Water to Middle**							
	WEST SIDE	**17**	9	11	14	12	12	10
66	**Fair St. – Water to Middle**							
	EAST SIDE	**20**	11	13	15	14	16	15
	WEST SIDE	**23**	8	8	13	14	13	14
67	**Center St. – Water to Middle**							
	EAST SIDE	**11**	9	8	7	7	9	9
68	**Liberty St. – Federal to Fair**							
	NORTH SIDE	**18**	10	16	15	16	9	9
	SOUTH SIDE	**16**	4	7	12	11	7	6
69	**Liberty St. – Fair to State**							
	NORTH SIDE	**23**	16	21	22	19	17	16
	SOUTH SIDE	**13**	9	12	11	10	11	11
70	**Middle St. – Federal to Fair**							
	SOUTH SIDE	**16**	9	11	13	12	10	13
71	**Middle St. – Fair to State**							
	NORTH SIDE	**16**	12	16	14	15	16	15
72	**Fair St. – Middle to Prospect**							
	WEST SIDE	**20**	10	13	13	15	14	13
73	**Fruit St. – Prospect to High**							
	EAST SIDE	**16**	6	6	7	7	8	8
	WEST SIDE	**19**	5	5	4	4	6	7
74	**Tremont St. – High to Prospect**							
	EAST SIDE	**17**	6	6	4	5	6	9
	WEST SIDE	**18**	4	3	3	4	7	7
75	**Garden St. – State to Otis**							
	NORTH SIDE	**11**	3	3	3	3	7	6
	SOUTH SIDE	**11**	8	5	3	4	6	7

#	LOCATION	Spaces	7-8 a.m.	9-10 a.m.	12-1 p.m.	3-4 p.m.	5-6 p.m.	6-7 p.m.
76	**Otis Place – Prospect to High**							
	EAST SIDE	**12**	9	7	6	6	5	10
	WEST SIDE	**11**	4	5	5	4	5	6
77	**Prospect St. – State to Fair**							
	SOUTH SIDE	**19**	6	10	16	15	19	13
78	**Prospect St. – Fair to Federal**							
	SOUTH SIDE	**20**	14	12	16	15	16	18
79	**Temple St. – State to Fair**							
	SOUTH SIDE	**19**	12	10	12	14	15	13
80	**Temple St. – Fair to Federal**							
	SOUTH SIDE	**19**	11	9	13	14	11	12
81	**Orange St. – Federal to Fair**							
	NORTH SIDE	**19**	7	6	5	5	4	5
	SOUTH SIDE	**17**	12	10	7	3	4	4
82	**Charter St. – Fair to State**							
	SOUTH SIDE	**20**	12	15	16	15	16	17
83	**Spring St. – Fair to Federal**							
	NORTH SIDE	**21**	8	12	9	6	9	9
	SOUTH SIDE	**18**	4	5	3	3	5	8
84	**Essex St. – State to Fair**							
	NORTH SIDE	**20**	12	15	17	19	16	18
	SOUTH SIDE	**20**	9	13	19	20	14	19

PARKING OCCUPANCY COUNTS: **DATE: Saturday, October 14, 2017**

Newburyport, MA **CONDITIONS**: High of 73 degrees F, partly cloudy

#	LOCATION	Spaces	7-8 a.m.	9-10 a.m.	12-1 p.m.	3-4 p.m.	5-6 p.m.	6-7 p.m.
1	**High St. – Winter to Olive**							
	NORTH SIDE	**29**	9	11	4	5	6	6
	SOUTH SIDE	**24**	---	---	---	3	6	6
2	**High St. - Olive to Kent**							
	NORTH SIDE	**20**	8	7	9	9	8	8
	SOUTH SIDE	**9**	3	3	2	2	2	2
3	**Kent St. - High to Congress**							
	EAST SIDE	**24**	6	5	5	4	4	4
	WEST SIDE	**24**	10	10	9	9	10	8
4	**Kent St. – Congress to Merrimac**							
	EAST SIDE	**18**	12	11	13	12	11	13
	WEST SIDE	**22**	12	11	11	9	8	10
5	**Merrimac St. – Kent to Boardman**							
	SOUTH SIDE	**4**	0	0	0	1	1	1
6	**Merrimac St. – Boardman to Winter**							
	SOUTH SIDE	**16**	4	4	7	3	2	2
7	**Winter St. – Merrimac to High**							
	WEST SIDE	**40**	15	13	22	16	11	22
8	**Washington St. – Winter to Olive**							
	NORTH SIDE	**23**	15	14	20	15	12	15
	SOUTH SIDE	**22**	14	14	15	10	10	13
9	**Washington St. – Olive to Kent**							
	NORTH SIDE	**24**	9	9	9	7	7	7
	SOUTH SIDE	**20**	13	13	6	4	5	4
10	**Congress St. – Olive to Kent**							
	NORTH SIDE	**19**	8	12	7	7	6	8

#	LOCATION	Spaces	7-8 a.m.	9-10 a.m.	12-1 p.m.	3-4 p.m.	5-6 p.m.	6-7 p.m.
	SOUTH SIDE	**19**	4	6	4	4	5	6
11	**Russia St. – Merrill to Kent**							
	NORTH SIDE	**10**	8	7	5	6	2	7
12	**Merrill St. – Merrimack to Congress**							
	WEST SIDE	**22**	14	12	20	17	14	14
13	**Buck St. – Congress to High**							
	EAST SIDE	**20**	5	4	2	1	3	6
	WEST SIDE	**28**	6	6	8	6	6	7
14	**Olive St. – High to Congress**							
	EAST SIDE	**21**	10	10	14	9	9	8
	WEST SIDE	**21**	8	8	16	9	9	6
15	**Olive St. – Congress to Merrimac**							
	EAST SIDE	**24**	18	16	16	13	14	14
16	**Boardman St. – Merrimac to Washington**							
	EAST SIDE	**34**	26	25	18	21	24	24
17	**Boardman St. – Washington to High**							
	WEST SIDE	**12**	5	5	9	6	7	7
18	**Elm St. – Plumb to Merrimac**							
	EAST SIDE	**0**	1	0	0	0	0	0
	WEST SIDE	**5**	4	3	1	1	2	2
19	**Strong St. – Merrimac to Washington**							
	WEST SIDE	**23**	12	11	9	8	7	7
20	**Atkinson St. – Merrimac to Washington**							
	NORTH SIDE	**12**	7	7	6	5	5	6
21	**Washington St. - Winter to Market**							
	NORTH SIDE	**9**	1	4	1	2	3	4

#	LOCATION	Spaces	7-8 a.m.	9-10 a.m.	12-1 p.m.	3-4 p.m.	5-6 p.m.	6-7 p.m.
	SOUTH SIDE	**11**	1	4	2	1	4	4
22	**Washington St. - Market to Titcomb**							
	NORTH SIDE	**11**	6	5	7	6	7	7
	SOUTH SIDE	**11**	4	4	4	9	5	4
23	**Washington St. - Titcomb to Green**							
	NORTH SIDE	**13**	9	5	6	7	6	9
	SOUTH SIDE	**3**	1	1	1	1	2	3
24	**Green St. – Washington to High**							
	EAST SIDE	**16**	1	2	15	14	15	15
	WEST SIDE	**17**	0	1	10	10	16	16
25	**High St. – Market to Winter**							
	NORTH SIDE	**10**	6	4	7	3	0	0
	SOUTH SIDE	**13**	6	7	7	4	6	3
26	**Summer St. - High to Washington**							
	EAST SIDE	**14**	5	13	8	3	3	4
27	**Summer St. – Washington to Pleasant**							
	EAST SIDE	**12**	4	6	3	3	4	5
28	**Summer St. – Pleasant to Merrimac**							
	EAST SIDE	**9**	7	7	6	5	6	6
29	**Merrimac St. - Market to Titcomb**							
	NORTH SIDE	**8**	1	4	6	7	4	2
	SOUTH SIDE	**7**	0	3	5	5	5	1
30	**Merrimac St. – Titcomb to Green**							
	NORTH SIDE	**9**	1	6	8	6	5	7
	SOUTH SIDE	**8**	0	3	8	6	5	7
31	**Green St. – Washington to Pleasant**							
	EAST SIDE	**14**	3	8	11	11	13	13

#	LOCATION	Spaces	7-8 a.m.	9-10 a.m.	12-1 p.m.	3-4 p.m.	5-6 p.m.	6-7 p.m.
	WEST SIDE	**14**	2	6	13	9	12	13
32	**Green St. – Pleasant to Merrimac**							
	EAST SIDE	**16**	2	6	15	14	16	16
	WEST SIDE	**15**	3	2	14	11	11	13
33	**Pleasant St. – Green to Titcomb**							
	NORTH SIDE	**9**	3	3	8	7	6	8
	SOUTH SIDE	**12**	0	3	11	10	9	11
34	**Pleasant St. - Titcomb to Summer**							
	NORTH SIDE	**16**	6	8	13	13	13	12
	SOUTH SIDE	**17**	7	14	14	10	13	11
35	**Market St. – Merrimac to Pleasant**							
	EAST SIDE	**7**	4	7	6	4	5	6
	WEST SIDE	**9**	6	6	8	7	7	9
36	**Market St. – Pleasant to Washington**							
	EAST SIDE	**18**	11	14	16	10	10	10
	WEST SIDE	**14**	8	11	9	6	8	8
37	**Market St. – Washington to High**							
	EAST SIDE	**16**	11	12	6	6	5	6
	WEST SIDE	**16**	13	14	8	5	10	10
38	**Court St. – High to Washington**							
	EAST SIDE	**15**	8	7	7	8	12	7
39	**Titcomb St. - Washington to Pleasant**							
	EAST SIDE	**14**	11	12	12	13	13	12
	WEST SIDE	**16**	11	11	14	13	15	15
40	**Titcomb St. – Pleasant to Merrimac**							
	EAST SIDE	**8**	2	4	7	7	7	5
	WEST SIDE	**13**	2	5	12	10	13	12

#	LOCATION	Spaces	7-8 a.m.	9-10 a.m.	12-1 p.m.	3-4 p.m.	5-6 p.m.	6-7 p.m.
41	Waterfront Trust Lot	**59**	0	12	48	44	19	8
42	NRA West Lot	**99**	0	6	30	49	38	68
43	NRA East Lot	**223**	18	32	110	142	131	145
44	Green St. Lot	**231**	32	75	177	178	203	229
45	**Merrimac St. - Green to State**							
	NORTH SIDE	**8**	2	2	8	7	8	7
46	**Water St. – State to Fair**							
	NORTH SIDE	**13**	1	3	8	9	9	12
	SOUTH SIDE	**15**	2	5	10	11	11	13
47	**Water St. – Fair to Federal**							
	NORTH SIDE	**16**	0	3	4	11	8	12
	SOUTH SIDE	**10**	2	3	5	6	4	5
48	**Federal St. – Water to Middle**							
	EAST SIDE	**18**	7	8	10	10	14	14
	WEST SIDE	**15**	10	12	14	15	15	15
49	**Federal St. – Middle to Prospect**							
	EAST SIDE	**28**	11	10	16	15	18	14
	WEST SIDE	**25**	12	11	14	15	21	17
50	**Federal St. – Prospect to High**							
	EAST SIDE	**20**	10	10	11	9	10	11
	WEST SIDE	**24**	12	11	11	10	12	13
51	**High St. – Federal to Fruit**							
	NORTH SIDE	**25**	2	2	2	1	3	2
52	**High St. – Fruit to State**							
	NORTH SIDE	**5**	0	0	1	0	1	1
	SOUTH SIDE	**8**	3	2	0	1	2	1
#	LOCATION	Spaces	7-8 a.m.	9-10 a.m.	12-1 p.m.	3-4 p.m.	5-6 p.m.	6-7 p.m.

53	**Pond St. – High to Greenleaf**							
	NORTH SIDE	**28**	3	8	7	10	9	10
	SOUTH SIDE	**18**	7	6	8	10	9	5
54	**Greenleaf St. – Pond to High**							
	NORTH SIDE	**41**	3	6	6	3	5	4
55	**Auburn St. – Pond to High**							
	WEST SIDE	**33**	3	3	3	3	5	5
56	**Park St. – High to Harris**							
	WEST SIDE	**13**	5	10	10	9	10	10
57	**Harris St. – Green to State**							
	NORTH SIDE	**23**	11	12	18	15	7	20
	SOUTH SIDE	**18**	8	11	15	11	16	17
58	**State St. – High to Prospect**							
	EAST SIDE	**11**	6	7	10	8	11	10
	WEST SIDE	**3**	0	1	2	1	3	2
59	**State St. – Prospect to Pleasant**							
	EAST SIDE	**13**	7	7	11	12	11	12
	WEST SIDE	**17**	7	10	15	14	15	16
60	**State St. – Pleasant to Liberty**							
	EAST SIDE	**14**	6	13	14	12	13	14
	WEST SIDE	**14**	8	13	13	13	13	13
61	**Prince Place Lot**	**43**	23	28	33	31	33	38
62	**Hales Court Lot**	**18**	0	1	2	0	1	5
63	**State Street Lot**	**31**	3	10	13	19	19	30
64	**Pleasant St. – State to Green**							
	NORTH SIDE	**21**	7	19	21	19	18	19
	SOUTH SIDE	**22**	8	19	19	19	20	20
#	**LOCATION**	**Spaces**	**7-8 a.m.**	**9-10 a.m.**	**12-1 p.m.**	**3-4 p.m.**	**5-6 p.m.**	**6-7 p.m.**

65	**Independent St. – Water to Middle**							
	WEST SIDE	**17**	14	13	15	14	10	15
66	**Fair St. – Water to Middle**							
	EAST SIDE	**20**	14	14	15	14	16	17
	WEST SIDE	**23**	12	10	15	14	14	16
67	**Center St. – Water to Middle**							
	EAST SIDE	**11**	9	10	10	9	10	11
68	**Liberty St. – Federal to Fair**							
	NORTH SIDE	**18**	6	9	11	11	15	16
	SOUTH SIDE	**16**	5	9	8	6	6	8
69	**Liberty St. – Fair to State**							
	NORTH SIDE	**23**	19	22	23	19	22	23
	SOUTH SIDE	**13**	11	11	11	10	10	12
70	**Middle St. – Federal to Fair**							
	SOUTH SIDE	**16**	6	12	15	13	13	14
71	**Middle St. – Fair to State**							
	NORTH SIDE	**16**	14	16	16	14	16	16
72	**Fair St. – Middle to Prospect**							
	WEST SIDE	**20**	15	16	19	14	16	16
73	**Fruit St. – Prospect to High**							
	EAST SIDE	**16**	8	7	8	10	11	11
	WEST SIDE	**19**	12	7	5	6	7	7
74	**Tremont St. – High to Prospect**							
	EAST SIDE	**17**	9	7	9	8	10	10
	WEST SIDE	**18**	5	5	5	5	6	7
75	**Garden St. – State to Otis**							
	NORTH SIDE	**11**	7	7	8	8	6	7
#	**LOCATION**	**Spaces**	**7-8 a.m.**	**9-10 a.m.**	**12-1 p.m.**	**3-4 p.m.**	**5-6 p.m.**	**6-7 p.m.**

	SOUTH SIDE	**11**	5	3	5	5	5	5
76	**Otis Place – Prospect to High**							
	EAST SIDE	**12**	11	10	9	7	8	10
	WEST SIDE	**11**	10	7	4	6	8	10
77	**Prospect St. – State to Fair**							
	SOUTH SIDE	**19**	11	12	14	14	16	12
78	**Prospect St. – Fair to Federal**							
	SOUTH SIDE	**20**	12	11	11	14	14	13
79	**Temple St. – State to Fair**							
	SOUTH SIDE	**19**	13	12	16	15	15	18
80	**Temple St. – Fair to Federal**							
	SOUTH SIDE	**19**	16	15	17	14	16	16
81	**Orange St. – Federal to Fair**							
	NORTH SIDE	**19**	8	7	9	7	7	7
	SOUTH SIDE	**17**	4	2	5	6	6	6
82	**Charter St. – Fair to State**							
	SOUTH SIDE	**20**	17	17	18	18	18	20
83	**Spring St. – Fair to Federal**							
	NORTH SIDE	**21**	11	11	8	6	7	11
	SOUTH SIDE	**18**	11	10	9	7	8	7
84	**Essex St. – State to Fair**							
	NORTH SIDE	**20**	10	11	18	17	18	20
	SOUTH SIDE	**20**	5	11	15	16	18	20

Exhibit 2: Tabulated Weekday Occupancy Rates

City of Newburyport
Weekday Occupancy Rates
Thursday, October 5, 2017

Street/Lot	Segment	7:00 to 8:00 a.m.	9:00 to 10:00 a.m.	12:00 to 1:00 p.m.	3:00 to 4:00 p.m.	5:00 to 6:00 p.m.	6:00 to 7:00 p.m.
High Street	Winter to Olive	-----	-----	-----	30.1	35.8	24.5
	Olive to Kent	41.4	20.7	27.6	37.9	34.5	34.5
Kent Street	High to Congress	35.4	10.4	16.7	25.0	29.1	22.9
	Congress to Merrimac	55.0	32.5	25.0	20.0	25.0	30.0
Merrimac Street	Kent to Boardman	25.0	75.0	25.0	25.0	0.0	0.0
	Boardman to Winter	25.0	37.5	37.5	25.0	25.0	12.5
Winter Street	Merrimac to High	32.5	45.0	37.5	30.0	42.5	45.0
Washington Street	Winter to Olive	44.4	42.4	40.0	44.4	48.9	62.2
	Olive to Kent	27.3	22.7	18.2	20.4	20.4	25.0
Congress Street	Olive to Kent	34.2	21.0	15.8	15.8	18.4	47.4
Russia Street	Merrill to Kent	80.0	60.0	30.0	30.0	10.0	70.0
Merrill Street	Merrimac to Congress	54.5	45.4	45.4	36.4	59.1	63.6
Buck Street	Congress to High	20.8	20.8	12.5	10.4	18.8	16.7
Olive Street	High to Congress	42.9	42.9	26.2	28.6	31.0	38.1
	Congress to Merrimac	58.3	33.3	54.2	45.8	50.0	66.7
Boardman Street	Merrimac to Washington	58.8	35.3	44.1	50.0	64.7	61.8
	Washington to High	83.3	58.3	50.0	58.3	66.7	75.0
Strong Street	Merrimac to Washington	56.5	43.5	34.8	26.1	43.5	47.8
Atkinson Street	Merrimac to Washington	83.3	75.0	58.3	66.7	66.7	75.0
Washington Street	Winter to Market	20.0	25.0	25.0	25.0	35.0	30.0
	Market to Titcomb	45.4	68.2	59.1	59.1	50.0	59.1
	Titcomb to Green	31.1	50.0	31.2	37.5	62.5	43.8
Green Street	Washington to High	66.7	87.9	100.0	78.8	75.8	72.7
High Street	Market to Winter	26.1	47.8	39.1	34.8	43.5	43.5
Summer Street	High to Washington	33.3	50.0	16.7	16.7	16.7	16.7
	Washington to Merrimac	42.8	61.9	23.8	23.8	23.8	38.1
Merrimac Street	Market to Titcomb	13.3	73.3	93.3	100.0	86.7	73.3
	Titcomb to Green	11.8	88.2	100.0	88.2	88.2	100.0
Green Street	Washington to Pleasant	46.4	67.9	96.4	96.4	100.0	92.8
	Pleasant to Merrimac	38.7	87.1	87.1	90.3	83.9	90.3
Pleasant Street	Green to Titcomb	23.8	38.1	90.5	85.7	100.0	95.2

Street/Lot	Segment	7:00 to 8:00 a.m.	9:00 to 10:00 a.m.	12:00 to 1:00 p.m.	3:00 to 4:00 p.m.	5:00 to 6:00 p.m.	6:00 to 7:00 p.m.
Pleasant Street	Titcomb to Summer	36.4	63.6	84.8	70.0	60.6	57.6
Market Street	Merrimac to Pleasant	31.2	43.8	68.8	75.0	56.2	75.0
	Pleasant to Washington	62.5	71.9	71.9	46.9	71.9	62.5
	Washington to High	40.6	40.6	43.8	28.1	53.1	50.0
Court Street	High to Washington	40.0	60.0	66.7	60.0	40.0	40.0
Titcomb Street	Washington to Pleasant	60.0	43.3	63.3	56.7	83.3	93.3
	Pleasant to Merrimac	52.4	95.2	95.2	85.7	85.7	90.5
Waterfront Trust Lot		1.7	10.2	71.2	49.2	16.9	25.4
NRA West Lot		7.1	42.4	96.0	88.9	27.3	30.3
NRA East Lot		9.9	23.3	50.7	60.5	39.0	26.0
Green Street Lot		13.0	52.4	99.6	81.8	55.8	71.4
Merrimac Street	Green to State	12.5	37.5	100.0	75.0	100.0	100.0
Water Street	State to Fair	7.1	25.0	78.6	42.8	71.4	67.8
	Fair to Federal	0.0	61.5	76.9	65.4	76.9	46.2
Federal Street	Water to Middle	33.3	60.6	78.8	75.8	81.8	45.4
	Middle to Prospect	39.6	41.5	47.2	47.2	56.6	43.4
	Prospect to High	20.4	22.7	22.7	27.3	38.6	38.6
High Street	Federal to Fruit	0.0	8.0	0.0	8.0	12.0	28.0
	Fruit to State	23.1	23.1	38.5	38.5	46.2	76.9
Pond Street	High to Greenleaf	26.1	50.0	58.7	50.0	39.1	31.2
Greenleaf Street	Pond to Auburn	19.5	41.5	31.1	36.6	17.1	14.6
Auburn Street	Pond to High	25.8	21.2	25.8	21.2	30.3	19.3
Park Street	High to Harris	53.8	69.2	84.6	84.6	84.6	84.6
Harris Street	Green to State	68.3	92.7	90.2	85.4	87.8	65.8
State Street	High to Prospect	71.4	100.0	100.0	92.8	92.8	85.7
	Prospect to Pleasant	53.3	80.0	86.6	76.7	96.7	93.3
	Pleasant to Liberty	75.0	89.3	100.0	89.3	92.8	92.8
Prince Place Lot		62.8	95.3	100.0	83.7	62.8	37.2
Hales Court Lot		16.7	55.6	72.2	72.2	50.0	61.1
State Street Lot		6.4	41.9	90.3	90.3	90.3	54.8
Pleasant Street	State to Green	25.6	81.4	97.7	70.0	93.0	93.0
Independent Street	Water to Middle	52.9	64.7	82.4	70.6	70.6	58.8
Fair Street	Water to Middle	44.2	48.8	65.1	65.1	67.4	67.4
Center Street	Water to Middle	81.8	72.7	63.6	63.6	81.8	81.8

Street/Lot	Segment	7:00 to 8:00 a.m.	9:00 to 10:00 a.m.	12:00 to 1:00 p.m.	3:00 to 4:00 p.m.	5:00 to 6:00 p.m.	6:00 to 7:00 p.m.
Liberty Street	Federal to Fair	41.2	67.6	79.4	79.4	47.0	44.1
	Fair to State	69.4	91.7	91.7	80.6	77.8	75.0
Middle Street	Federal to Fair	56.2	68.8	81.2	75.0	62.5	81.2
	Fair to State	75.0	100.0	87.5	93.8	100.0	93.8
Fair Street	Middle to Prospect	50.0	65.0	65.0	75.0	70.0	65.0
Fruit Street	Prospect to High	31.4	31.4	31.4	31.4	40.0	42.8
Tremont Street	High to Prospect	28.6	25.7	20.0	25.7	37.1	45.7
Garden Street	State to Otis	50.0	36.4	27.3	31.8	59.1	59.1
Otis Place	Prospect to High	56.5	52.2	47.8	45.4	45.4	72.7
Prospect Street	State to Fair	31.6	52.6	84.2	78.9	100.0	68.4
	Fair to Federal	70.0	60.0	80.0	75.0	80.0	90.0
Temple Street	State to Fair	63.2	52.6	63.2	73.7	78.9	68.4
	Fair to Federal	57.9	47.4	68.4	73.7	57.9	63.2
Orange Street	Federal to Fair	52.8	44.4	33.3	22.2	22.2	25.0
Charter Street	Fair to State	60.0	75.0	80.0	75.0	80.0	85.0
Spring Street	Fair to Federal	30.8	43.6	30.8	23.1	35.9	43.6
Essex Street	State to Fair	52.5	70.0	90.0	97.5	75.0	92.5

Exhibit 3: Tabulated Saturday Occupancy Rates

City of Newburyport
Saturday Occupancy Rates
Saturday, October 14, 2017

Street/Lot	Segment	7:00 to 8:00 a.m.	9:00 to 10:00 a.m.	12:00 to 1:00 p.m.	3:00 to 4:00 p.m.	5:00 to 6:00 p.m.	6:00 to 7:00 p.m.
High Street	Winter to Olive	-----	-----	-----	15.1	22.6	22.6
	Olive to Kent	37.9	34.5	37.9	37.9	34.5	34.5
Kent Street	High to Congress	33.3	31.2	29.2	27.1	29.2	25.0
	Congress to Merrimac	60.0	55.0	60.0	52.5	47.5	57.5
Merrimac Street	Kent to Boardman	0.0	0.0	0.0	25.0	25.0	25.0
	Boardman to Winter	25.0	25.0	43.8	18.8	12.5	12.5
Winter Street	Merrimac to High	37.5	32.5	55.0	40.0	27.5	55.0
Washington Street	Winter to Olive	64.4	62.2	77.8	55.6	48.9	62.2
	Olive to Kent	50.0	50.0	34.1	25.0	27.3	25.0
Congress Street	Olive to Kent	31.6	47.4	28.9	28.9	28.9	36.8
Russia Street	Merrill to Kent	80.0	70.0	50.0	60.0	20.0	70.0
Merrill Street	Merrimac to Congress	63.6	54.5	90.9	77.3	63.6	63.6
Buck Street	Congress to High	22.9	20.8	20.8	14.6	18.8	27.1
Olive Street	High to Congress	42.8	42.8	71.4	42.8	42.8	33.3
	Congress to Merrimac	75.0	66.7	66.7	54.2	58.3	58.3
Boardman Street	Merrimac to Washington	76.5	73.5	52.9	61.8	70.6	70.6
	Washington to High	41.7	41.7	75.0	50.0	58.3	58.3
Strong Street	Merrimac to Washington	52.2	47.8	39.1	34.8	30.4	30.4
Atkinson Street	Merrimac to Washington	58.3	58.3	50.0	41.7	41.7	50.0
Washington Street	Winter to Market	10.0	40.0	15.0	15.0	35.0	40.0
	Market to Titcomb	45.4	40.9	50.0	68.2	54.5	50.0
	Titcomb to Green	62.5	37.5	43.8	50.0	50.0	75.0
Green Street	Washington to High	3.0	9.1	75.8	72.7	93.9	93.9
High Street	Market to Winter	52.2	47.8	60.9	30.4	26.1	13.0
Summer Street	High to Washington	35.7	92.9	57.1	21.4	21.4	28.6
	Washington to Merrimac	52.4	61.9	42.8	38.1	47.6	52.4
Merrimac Street	Market to Titcomb	6.7	46.7	73.3	80.0	60.0	20.0
	Titcomb to Green	5.9	52.9	94.1	70.6	58.8	82.3
Green Street	Washington to Pleasant	17.8	50.0	85.7	71.4	89.3	92.8
	Pleasant to Merrimac	16.1	25.8	93.5	80.6	87.1	93.5

Street/Lot	Segment	7:00 to 8:00 a.m.	9:00 to 10:00 a.m.	12:00 to 1:00 p.m.	3:00 to 4:00 p.m.	5:00 to 6:00 p.m.	6:00 to 7:00 p.m.
Pleasant Street	Green to Titcomb	14.3	28.6	90.5	81.0	71.4	90.5
Pleasant Street	Titcomb to Summer	39.4	66.7	81.8	69.7	78.8	69.7
Market Street	Merrimac to Pleasant	62.5	81.2	87.5	68.8	75.0	93.8
	Pleasant to Washington	59.4	78.1	78.1	50.0	56.2	56.2
	Washington to High	75.0	81.2	43.8	34.4	46.9	50.0
Court Street	High to Washington	53.3	46.7	46.7	53.3	80.0	46.7
Titcomb Street	Washington to Pleasant	73.3	76.7	86.7	86.7	93.3	90.0
	Pleasant to Merrimac	19.0	42.8	90.5	81.0	95.2	81.0
Waterfront Trust Lot		0.0	20.3	81.3	74.6	32.2	13.6
NRA West Lot		0.0	6.1	30.3	49.5	38.4	68.7
NRA East Lot		8.1	14.3	49.3	63.7	58.7	65.0
Green Street Lot		13.8	32.5	76.6	77.0	87.9	99.1
Merrimac Street	Green to State	25.0	25.0	100.0	87.5	100.0	87.5
Water Street	State to Fair	10.7	28.6	64.3	71.4	71.4	89.3
	Fair to Federal	7.7	23.1	34.6	65.4	46.2	89.3
Federal Street	Water to Middle	51.5	60.6	72.7	75.8	87.9	87.9
	Middle to Prospect	43.4	39.6	56.6	56.6	73.6	58.5
	Prospect to High	50.0	47.7	50.0	43.2	50.0	54.5
High Street	Federal to Fruit	8.0	8.0	8.0	4.0	12.0	8.0
	Fruit to State	23.1	15.4	7.7	7.7	15.4	7.7
Pond Street	High to Greenleaf	21.7	30.4	32.6	43.5	39.1	32.6
Greenleaf Street	Pond to Auburn	7.0	14.0	14.0	7.0	12.2	9.8
Auburn Street	Pond to High	9.1	9.1	9.1	9.1	15.2	15.2
Park Street	High to Harris	38.5	76.9	76.9	69.2	76.9	76.9
Harris Street	Green to State	46.3	56.1	80.5	63.4	56.1	90.2
State Street	High to Prospect	42.8	57.1	85.7	64.3	100.0	92.3
	Prospect to Pleasant	46.7	56.7	86.7	86.7	86.7	93.3
	Pleasant to Liberty	50.0	92.8	96.4	89.3	92.8	96.4
Prince Place Lot		53.5	65.1	76.7	72.1	76.7	88.4
Hales Court Lot		0.0	5.6	11.1	0.0	5.6	27.8
State Street Lot		9.7	32.2	41.9	61.3	61.3	96.8
Pleasant Street	State to Green	34.9	88.4	93.0	88.4	88.4	90.7
Independent Street	Water to Middle	82.3	76.5	88.2	82.3	58.8	88.2
Fair Street	Water to Middle	60.5	55.8	69.8	65.1	69.8	76.7
Center Street	Water to Middle	81.8	90.9	90.9	81.8	90.9	100.0

Street/Lot	Segment	7:00 to 8:00 a.m.	9:00 to 10:00 a.m.	12:00 to 1:00 p.m.	3:00 to 4:00 p.m.	5:00 to 6:00 p.m.	6:00 to 7:00 p.m.
Liberty Street	Federal to Fair	32.4	52.9	55.9	50.0	61.8	70.6
	Fair to State	83.3	91.7	94.4	80.6	88.9	97.2
Middle Street	Federal to Fair	37.5	75.0	93.8	81.2	81.2	87.5
	Fair to State	87.5	100.0	100.0	87.5	100.0	100.0
Fair Street	Middle to Prospect	75.0	80.0	95.0	70.0	80.0	80.0
Fruit Street	Prospect to High	57.1	40.0	37.1	45.7	51.4	51.4
Tremont Street	High to Prospect	40.0	34.3	40.0	37.1	45.7	48.6
Garden Street	State to Otis	54.5	45.4	59.1	59.1	50.0	54.5
Otis Place	Prospect to High	91.3	73.9	56.5	56.5	69.6	87.0
Prospect Street	State to Fair	57.9	63.2	73.7	73.7	84.2	63.2
	Fair to Federal	60.0	55.0	55.0	70.0	70.0	65.5
Temple Street	State to Fair	68.4	63.2	73.7	78.9	78.9	94.7
	Fair to Federal	84.2	78.9	89.5	73.7	84.2	84.2
Orange Street	Federal to Fair	33.3	25.0	38.9	36.1	36.1	36.1
Charter Street	Fair to State	85.0	85.0	90.0	90.0	90.0	100.0
Spring Street	Fair to Federal	56.4	53.8	43.6	33.3	38.5	46.2
Essex Street	State to Fair	37.5	55.0	82.5	82.5	90.0	100.0

Exhibit 4: Samples of Anti-Car Shuffling Municipal Ordinance

Ocala, Florida

Sec. 66-66. - Time limits on certain streets.

(a) When signs are erected giving notice thereof, no person shall stop, stand or park a vehicle for longer than the time designated by such signs at any time between those hours so stated by such signs, on any day except Sundays and full legal holidays.
(b) The changing of the parked position of a vehicle from one parking space within the same block on either side of the street or roadway shall be deemed one continuous time period as designated by such signs specified in subsection (a) of this section. This subsection (b) hall apply only to the area within the municipal district territory as described in the Chapter, Article XIII (Downtown Development Commission), section 13.11 (Municipal district territory; district map).

(Code 1961, § 20-30(6); Code 1985, § 23-76; Ord. No. 1841, § 1, 4-8-86)

St. Petersburg, Florida

Sec. 26-152. - Limitations on parking in the central commercial business area.

(a) It shall be unlawful to park any vehicle between the hours of 8:00 a.m. and 6:00 p.m. on any day, except Saturdays, Sundays and holidays, upon any street in a downtown center zoning district for a period longer than two hours where signs are officially posted, except as provided in section 26-150; however, the POD is authorized to further limit, restrict or prohibit parking within this area or to increase or decrease the two-hour time period where signs are erected giving notice thereof. The changing of the parked position of a vehicle from one parking space direct ly to another parking space within the same block on either side of the street or roadway shall be deemed one continuous parking period.

City of Monroe, Wisconsin

(b) The parking of any vehicle for longer than the legal period of time as posted on official signs shall be unlawful and a violation of this section. No person shall cause, allow, permit or suffer any motor vehicle to be parked beyond the lawful or legal period of time permitted by subsection (a) of this section.
Code 1973, § 27-84; Code 1992, § 26-152; Ord. No. 587-G, § 1, 4-17-2003; Ord. No. 593-G, § 1, 6-19-2003; Ord. No. 752-G, § 1, 9-15-2005

City of Highland Park, Illinois

Revised Parking Ordinance Will Enhance Customer Experience in CBD

On January 10, 2011, the City Council amended the on-street Customer-Only Parking Ordinance with the intention of improving customer parking opportunities within the Central Business District (CBD). Prior to the amendment, the Customer-Only Parking Ordinance only restricted employees of CBD businesses from parking on-street within the CBD while they were performing services and responsibilities as part of their employment. The

intent of the Customer-Only Parking Ordinance was to prevent these employees from parkin on-street within the CBD while they are working and displacing customers who intended to patronize a business.

The revised Customer-Only Parking Ordinance now includes five City parking lots, which is intended to increase parking opportunities for patrons of the CBD. As a result of customer-only parking enforcement, some employees of CBD businesses have utilized non-employee designated City parking lots within the CBD to circumvent employee parking permit requirements and enforcement. Some CBD employees have been observed by business owners, employees, customers and police personnel, "shuffling" vehicles within popular CBD City lots in an effort to avoid timed parking restriction enforcement. In response to ongoing incidents of CBD employees displacing customers from key CBD parking lots, the recent Customer-Only Ordinance Amendment now includes the following City parking lots:

- Second Street South Elm Lot (south of Michael's Chicago Style Red Hots);
- Second Street Central Lot (north of Harris Bank);
- Renaissance Place Lots (south and east of Saks Fifth Avenue).

Signage will be posted at each of the aforementioned City parking lots advising of the amended customer-only parking restrictions. Written warnings will be issued for customer-only parking violations from April 1 to April 14, 2011. Citations will be issued for violations thereafter.

City of Gloucester, Massachusetts

MOTION: On motion by Councilor Mulcahey, seconded by Councilor Tobey, the Ordinance & Administration Committee voted 3 in favor, 0 opposed to recommend to the City Council to Amend GCO Sec. 22-220 (Deposit to Extend Parking time beyond maximum legal time) by ADDING new subsection "Anti-Shuffling":

(c) In order to regulate the practice of shuffling cars from one metered space to the next throughout the workday within the downtown area from Main and Spring Streets to Tally's Corner, the intersection of Main Street and Washington Street, once a meter expires it shall be unlawful to park the car in another metered space within the area all days except Sundays and holidays between the hours of 9:00 a.m. and 6:00 p.m.