WALKER CONSULTANTS

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April 1, 2019

Mr. Luis Campos
City Administrator
City of Easton
123 South 3rd Street
Easton, PA 18042

Re: Parking Feasibility Study
Easton, PA

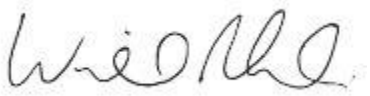
Dear Luis:

Walker is pleased to submit the following report of the City of Easton parking study.

We appreciate the opportunity to be of service to you on this project. If you have any questions or comments, please do not hesitate to call.

Sincerely,

WALKER CONSULTANTS



Will Rhodin
Senior Consultant

BUILDING ENVELOPE

CONSULTING

FORENSIC RESTORATION

PARKING DESIGN

PLANNING

Parking Feasibility Study

City of Easton

Easton, PA

April 1, 2019

WALKER CONSULTANTS

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EXECUTIVE SUMMARY

In anticipation of planned and proposed redevelopment within the downtown, the City of Easton engaged Walker Consultants to prepare a comprehensive parking study addressing short- and long-term parking needs. While the City wished for our analysis to consider the parking system as a whole, there were two major events on the planning horizon anticipated to significantly impact parking conditions within the downtown community. First, the Pine Street Garage was reaching the end of its useful life, with demolition of the 569-space structure planned within the next five years. The garage was the primary parking resource for the Crayola Experience, a major tourist attraction in the region that generated significant demand during the peak season.

In addition to the loss of a major parking resource, a new attraction is expected to increase the need for parking in the downtown area. The Da Vinci Science City project is expected to open in late 2022 on the former site of the Days Inn at the corner of 3rd Street and Larry Holmes Drive. Preliminary projections provided by the City estimated a peak hour parking demand of approximately 300 vehicles. While a small (50 space) garage would be provided on site, the remaining parking needs would need to be met in public parking facilities.

To better understand the impact of these events, as well as the overall economic growth in the community on the parking system, the City of Easton engaged Walker to assess current and future parking conditions, review and recommend changes to current parking management and operating practices, and identify options to strategically increase the available parking supply to meet future parking needs.

PARKING SUPPLY AND DEMAND ANALYSIS

Walker confirmed the existing parking supply and observed parking occupancy at public and private parking facilities during the week of September 3rd, 2018. Three occupancy counts were taken on a weekday and a Saturday; a limited on-street license plate survey was also conducted to better understand parking turnover and length of stay. The six municipally-owned public parking facilities were 38% utilized during the peak weekday count, while on-street parking was 61% occupied. Peak Saturday parking occupancy was also observed during the afternoon count, with 38% of the municipally-owned parking supply occupied. It is important to note that the public off-street parking facilities experiencing the highest levels of activity varied between the weekday and Saturday survey despite resulting in similar overall occupancy rates. Additionally, on-street parking was significantly more utilized than off-street sources during the Saturday count.

Based on discussions with the City, Walker understands there is significant seasonal variation within the downtown parking system, specifically in the Pine Street Garage due to the Crayola Experience attraction. Limited annual data was available, but anecdotal data suggests the Pine Street Garage experiences a notable increase in occupancy rates during the peak summer season. To understand parking occupancy and adequacy during the peak season, Walker modeled design day conditions for both a weekday and a Saturday. During design conditions, we assumed the overall on-street occupancy on a weekday increased to 73% within the study area. The overall occupancy rate for the six municipal facilities was projected to increase from 38% to 75%. Similar findings were projected from Saturday conditions.

While the current public and private occupancy rates, even during design conditions, do not suggest a parking shortage, there are a few “hot spots” of activity where occupancy rates on a specific block, during a specific time, or for a specific category of parking exceeded 85 percent of capacity. When occupancy exceeds this level, patrons may experience delays and frustration while searching for a space. Therefore, the parking supply may be perceived as inadequate even though there are some spaces available in the parking system.

Walker also projected parking demand associated with new development within the downtown over a ten-year planning horizon. Based on the building program for planned or proposed projects identified by the City, Walker determined the parking occupancy rate on a block by block basis on both a weekday and a Saturday. Many of the proposed projects are being developed on existing municipal parking sites. While the developments are expected to eliminate existing parking facilities, new garages are also proposed, resulting in an overall increase in the public off-street parking supply. Our analysis of future conditions focused primarily on the public parking needs. The table below summarizes our findings.

Municipal Parking Summary

	Survey Day		Design Day	
	Weekday	**Saturday**	**Weekday**	**Saturday**
Public Off-Street Parking Supply	1,332	1,332	1,332	1,332
Effective Parking Supply	1,199	1,199	1,199	1,199
Existing Public Demand	397	396	788	731
Projected Demand[1]	1,109	777	1,109	777
Displaced On-Street Demand[2]	17	17	17	17
Total Future Parking Demand	1,523	1,190	1,914	1,525
% Occupied	114%	89%	144%	114%
Adequacy	(324)	9	(715)	(326)
Adequacy Without the Entertainment Project (Block 13)	**(74)**	**259**	**(465)**	**(76)**

Note:[1]Projected future parking demand based on the proposed developments provided to Walker by the City of Easton. Walker accounted for the availability of private parking associated with the DaVinci Science City and the Pine Street project when projecting public parking demand.
[2]The Church Street Redevelopment project is expected to displace 17 on-street spaces along Church street.

Source: Walker Consultants, 2019

Assuming the proposed development comes to fruition, including the replacement of the Pine Street Garage and the development of a garage on the Church Street Lot, a minimum of 715 additional municipal off-street parking spaces are needed on a weekday to meet design day conditions. However, if the Da Vinci Science City project does not come to fruition, the deficit is reduced to approximately 465 spaces. Should the Da Vinci Science City project not be realized on Block 13, we assume the property will support another development and will generate public parking demand.

It is important for the City to consider how often design day conditions are expected to occur before pursuing a structured parking facility of any size. Design day conditions are predicated on occupancy of the Pine Street Garage nearing capacity, but Walker could not confirm the number of times this event occurs. If design conditions occur only a handful of times a year, the City could consider developing a smaller structure and prepare an alternative management plan for days with higher activity.

SITE FEASIBILITY

Based on the projected deficits associated specifically with these two events, Walker considered several alternatives to meet to potential shortages. Six alternatives were considered as part of our site feasibility study, including four structured solutions and two surface parking options. The options are summarized in the table below.

Parking Alternatives

Alternative	Gross Capacity	Net Capacity	Order of Magnitude Construction Cost[2, 3] (Per Space/ Total)
North Fourth Street Lot	480	424	$20,000 / $9.6M
North Third Street Lot	260	189	$25,000 / $6.5M
South Third Street Garage Horizontal Expansion	236	224	$25,000 / $5.9M
Pine Street Garage Replacement	720	720[1]	$20,000 / $14.4M
Lehigh Drive lot	84	84	$6,000 / $504,000
Canal Park Lot	55	55	$6,000 / $330,000

[1]Walker assumed the Pine Street Garage would be demolished within five years regardless of whether a new parking structure is built on the site. Therefore, the gross capacity of the new structure was not adjusted to account for net gain.
[2]Construction costs excluded the cost associated with land/building acquisition, environmental remediation that may or may not be needed, utility relocation costs, geotechnical engineering impacts, demolition costs, and other soft costs such as design or financing fees. Additionally, the cost per space can vary significantly depending on the architectural "look" of the garage. A simple structure could be constructed for less than our estimated range; however, extensive façade work could increase the price.
[3]Soft costs typical range between 18% and 28% of construction costs.

Source: Walker Consultants, 2018

The final determination of the relative attractiveness of the alternative solutions must rest with the City of Easton. However, this site analysis provides a reasonable and supportable look at the criteria upon which to base such a decision. Based on this analysis, Site 4 – the Pine Street Garage Rebuild was determined to be the highest-ranking solution, followed by the 4th Street Lot and the North 3rd Street Lot options. Walker understands that many of the sites considered for structured parking in our analysis may also be under consideration for other mixed-use redevelopment opportunities and that parking may not be the highest and best use of the parking structure. Additionally, we recognize that more than one alternative may need to be considered to meet short and long-term needs within the City.

PARKING OPERATIONS

Additionally, while preparing this report, Walker spent time with members of the City's various teams responsible for management of the on-street and off-street parking operations, including:

- *City of Easton Police Department* – The City of Easton Police Department oversees parking enforcement activities, meter maintenance, sales of annual parking permits and collection of boot-removal fees, in addition to other duties as detailed.

- *City of Easton Department of Public Services* – The Public Services department manages the day to day off-street parking operations, in addition to providing maintenance support for off-street and on-street parking spaces.

- *City of Easton Department of Finance* – The Department of Finance handles all revenue and expense reporting functions as relates to the on-street and off-street parking operations. Additionally, this department processes all revenue collected and ensures that cash, checks and coins are counted and banked.

Walker provides certain recommendations in this report regarding the on-street and off-street parking operations, with focus on:

- *Security of personnel and funds*
    - Walker recommends changes in the systems used to count and store cash revenue, to minimize the risk of loss.
- *Reporting and accountability systems*
    - Walker suggests that a "parking-only" profit and loss reporting system be developed, encompassing all revenue and expense components from the various involved departments, to reflect a comprehensive depiction of the parking system's financial results.
- *Parking Rates and web-based parking initiatives*, including comparisons of parking systems to local Pennsylvania cities such as Bethlehem, Allentown and Lancaster
    - Easton's on-street meters rates are in sync with comparable cities but are not aligned with the short-term parking rates in the off-street garages.
    - Walker provides comparable-city rates for consideration but observes that many of the daily parking patrons at the Pine Street garage are tourists, many of whom may not be focused on the price of parking, and likely are more concerned with proximity to the Crayola Experience attraction. Thus, adjustment of rates for market reasonability may well cause an adverse effect to the system's cash flow.
- *On and Off-site signage and wayfinding systems*
    - Rate and other advertising signage is lacking at and near the off-street parking facilities.
    - Potential enhancements are addressed in this report.
- *Parking technology (current and proposed)*
    - The WPS parking access and revenue control ("PARCS") equipment in use at the Pine street and South Third Street facilities is not providing adequate revenue control and reporting.
    - Improvement opportunities are detailed in the report.
- Public Outreach observations
    - Walker participated in two meetings, including a public presentation at City Hall and a second meeting the following week, coordinated by the Easton Main Street Initiative, which several local business leaders attended.
    - Walker documents concerns raised by the public at those two meetings in this report.

01 Supply and Demand Analysis

INTRODUCTION

The City of Easton wishes to better understand the current and potential future factors that affect parking availability for the City's residents, local businesses and visitors. To that end, the City contracted Walker Consultants to study Easton's existing parking supply and demand, plus potential future scenarios, including the impact of new demand generators such as the prospective Da Vinci Science City attraction. This report is divided into three sections, including:

1) Supply and Demand (existing and projected future)
2) Parking Operations – Off-street, On-Street and Administration
3) Parking Garage Feasibility Analysis, identifying five potential garage or surface lot improvements.

Walker's Supply and Demand analysis for existing and projected future scenarios follows below:

DEFINITION OF TERMS

Several terms in this section are parking jargon and may not be readily understood by the reader. Definitions of these terms appear below.

- *Demand* – The number of spaces required to satisfy visitor, employee, and resident needs on a given day.
- *Demand Generator* – Any building, structure, business, or attraction that brings individuals into the study area, thereby increasing parking demand and occupancy.
- *Drive Ratio* – How people travel to a destination, listed as a percentage. Typical travel modes include private automobile, car pool, bus, or walking.
- *Effective or Operational Supply* – The inventory adjusted by the optimum utilization factor.
- *Inventory* – The total number of parking spaces counted during survey day observations within the study area.
- *Occupancy (Counts)* – The number of vehicles observed parked on a survey day.
- *Optimum Utilization Factor* – The occupancy rate at which a parking supply operates at peak efficiency. This factor allows patrons to spend less time looking for the last available spaces and allows for the dynamics of vehicles moving in and out of spaces. It also allows for spaces lost to poor or improper parking, snow removal, derelict vehicles, and spaces lost for repair.
- *Parking Adequacy* – The difference between parking supply and demand.
- *Survey Day* – The day that parking occupancy counts were conducted in the study area.

STUDY AREA

The boundaries of the study area were set by the City of Easton and mirror the boundaries of the previous parking study prepared for the City in 2012. The 57-block area is generally bounded by Bushkill Street to the north, Larry Holmes Drive to the east, Washington Street to the south, and 9th/Walnut Street to the west. Walker also observed parking conditions at two remote lots (Blocks 56 and 57).

Within downtown Easton, the density and type of land use on each block can vary significantly, often resulting in different parking conditions. Walker generally identified five zones within the larger study area – residential, courthouse, downtown, core, and remote. Figure 1 shows both boundaries of the study area and the designated zones within the study area.

Figure 1: Study Area with Zones

Source: Google Earth and Walker Consultants, 2018

METHODOLOGY

The findings of the supply and demand phase of the project are the foundation of both the site feasibility study and the management and operations recommendations. Before we can identify opportunities to develop or improve parking or recommend changes to existing parking policies, we must first have a solid understanding of existing conditions within the study area. Our understanding of existing conditions begins with the project kick-off meeting and SWOT analysis with key stakeholders. We also attended a public outreach meeting in order to gain a better understanding of the community's parking habits and preferences and identify the obstacles and opportunities for improvement. These qualitative findings are combined with the parking supply and demand data collected during our field survey to develop a comprehensive picture of parking conditions.

Using the data collected during the week of September 3rd, 2018, Walker established baseline parking conditions for the study area. Parking was inventoried and tabulated by block and categorized as on-street, public off-street, or private off-street for the entire study area. The parking supply was then adjusted to reflect the effective supply, which is slightly less than the actual parking supply. Effective supply is explained in more detail later in the report.

The next step is to determine the parking demand. To do this, we took parking occupancy counts in the study area during a typical weekday and Saturday, resulting in a tabulation of the physical number of vehicles. We took three counts between the hours of 9:00 a.m. and 7:00 p.m. on both survey days. By comparing the supply with the observed occupancy on a block-by-block basis, we were able to determine the occupancy levels and quantify specific parking demand for each block.

Walker next projected parking needs within the Study Area over the next ten years based on known projects identified by the City. Parking supply was also adjusted over the planning horizon based on known developments, such as the loss of the Pine Street Garage. Again, Walker compared the future parking supply with the project parking demand on a block-by-block basis to determine the occupancy levels and identify any parking shortages.

EXISTING CONDITIONS

This section of the report documents our understanding of the current parking characteristics of the study area. The information contained herein serves as the basis for analysis of the current needs of the study area. Included in this section are discussions of parking supply, effective supply, observed parking occupancy, current parking demand, and the dynamics of the parking system.

PARKING SUPPLY

The foundation of a parking supply and demand study is an inventory of the existing parking supply. Parking in the study area is available in several forms. On-street parking is available as paid, single-space metered spaces or uncontrolled spaces. For the most part, on-street parking is signed, and restrictions are marked. It is important to maintain on-street parking areas with fresh paint, maintained curbs, working meters, and good signage, as parking is often the first experience for a visitor to the downtown area.

Off-street parking is available in both surface lots and garages. Public off-street parking facilities included both municipally-owned facilities and publicly-available parking facilities. Publicly available refers to lots and garages

that are privately-owned, but commercially operated. Facilities reserved or signed for an individual business or use were classified as private off-street. Observations indicate that many businesses offer free parking to their visitors.

Based on the data Walker collected, there are approximately 5,191 total spaces in the study area, excluding the remote lots. These spaces can be broken up into 1,312± on-street and 3,879± off-street. Of the off-street spaces, approximately 2,684 spaces are available for private or restricted use, while the remaining 1,195± are public. There are an additional 100± publicly-available spaces in the remote lots.

Table 2 shows the breakdown of the parking supply by district/area. Private off-street parking accounts for 51% of the total parking available within the study area.

Table 1: Existing Parking Supply

Zone	Private Off-Street	Public Off-Street	On-Street	Total
Residential	338	53	372	763
Courthouse	580	0	147	727
Downtown	1,459	390	526	2,375
Core	307	752	267	1,326
Subtotal	**2,684**	**1,195**	**1,312**	**5,191**
Remote Lots	0	100	0	100
Total	**2,684**	**1,295**	**1,312**	**5,291**

Source: Walker Consultants, 2018

Most the public off-street spaces in the study area (88%) are municipally owned. The publicly-available parking facilities include the $5 Our Lady of Lebanon Maronite Catholic Church Lot, the public library lot, and a small garage (Halpin's) on Block 40 offering monthly parking. The remote gravel lots on Blocks 56 and 57 were also counted as public parking. Note, Walker did not include the Northampton County Courthouse garage or lots in the public parking supply.

EFFECTIVE/OPERATIONAL PARKING SUPPLY

The inventory of parking within the Study Area is adjusted to allow for a cushion necessary for vehicles moving in and out of spaces, and to reduce the time necessary to find the last few remaining spaces when the parking supply is nearly full. We derive the effective supply by deducting this cushion from the total parking capacity. The cushion allows for vacancies created by restricting parking spaces to certain users (reserved spaces), mis-parked vehicles, minor construction and debris removal. A parking supply operates at peak efficiency when parking occupancy, including both transient and monthly parking patrons, is 85 percent to 95 percent of the supply. When occupancy exceeds this level, patrons may experience delays and frustration while searching for a space. Therefore, the parking supply may be perceived as inadequate even though there are some spaces available in the parking system.

As a result, the effective or operational capacity is used in analyzing the adequacy of the parking system rather than the total supply or inventory of spaces. Following are some factors that affect the efficiency of the parking system:

- Capacity – Large, scattered surface lots operate less efficiently than a more compact facility, such as a parking structure, which offers consolidated parking in which traffic generally, passes more available parking spaces in a more compact area. Moreover, it is more difficult to find the available spaces in a widespread parking area than a centralized parking facility.
- Type of users – Monthly or regular parking patrons can find the available spaces more efficiently than infrequent visitors because they are familiar with the layout of the parking facility and typically know where the spaces will be available when they are parking.
- On-street vs. off-street – On-street parking spaces are less efficient than off-street spaces due to the time it takes patrons to find the last few vacant spaces. In addition, patrons are typically limited to one side of the street at a time and often must parallel park in traffic to use the space. Many times, on-street spaces are not striped or are signed in a confusing manner, thereby leading to lost spaces and frustrated parking patrons.

The size of the cushion is dependent on the type of user and facility. On-street parking is adjusted by an 85 percent effective supply factor (ESF), because of the relative difficulty of finding an open space while negotiating traffic. Public off-street parking is adjusted by a 90 percent ESF to account for user unfamiliarity and the challenges of safely navigating the area while searching for a space. Private off-street parking is adjusted by a 95 percent ESF because employees or repeat users are familiar with the area and generally park in the same location each day. The study area contains a total of 5,191± spaces (excluding the remote lots) before any adjustments are made to account for an effective supply. After the effective supply factor is applied to the overall supply numbers, the study area's effective supply is 4,748± spaces, as shown in Table 2.

Table 2: Effective Parking Supply

Zone	Supply	Effective Supply	Cushion	Effective Supply Factor
Residential	763	688	75	90%
Courthouse	727	676	51	93%
Downtown	2,375	2,189	186	92%
Core	1,326	1,195	131	90%
Subtotal	**5,191**	**4,748**	**443**	**91%**
Remote Lots	100	90	10	90%
Total	**5,291**	**4,838**	**453**	**91%**

Source: Walker Consultants, 2018

WEEKDAY CONDITIONS

PARKING OCCUPANCY

To determine the parking patterns in the study area, Walker observed parking occupancy rates at most parking facilities in the study area parking facilities on a weekday. An understanding of these parking patterns helps define both patron types and parking locations. Weekday occupancy counts were taken for on- and off-street parking spaces on at 10:00 a.m., 2:00 p.m. and 6:00 p.m. on Thursday, September 6th, 2018.

Table 3 on the following page summarizes the total observed parking occupancy by zone. Peak parking occupancy was observed during the 2:00 p.m. count with approximately 53% of the available supply utilized.

Table 3: Weekday Parking Occupancy Summary

Zone	Supply	Occupancy			% Occupied		
		10:00 AM	2:00 PM	6:00 PM	10:00 AM	2:00 PM	6:00 PM
Residential	763	424	370	293	56%	48%	38%
Courthouse	727	556	561	190	76%	77%	26%
Downtown	2,375	1197	1197	865	50%	50%	36%
Core	1,326	536	631	521	40%	48%	39%
Subotal	**5,191**	**2,713**	**2,760**	**1,870**	**52%**	**53%**	**36%**
Remote Lots	100	0	0	0	0%	0%	0%
Total	**5,291**	**2,713**	**2,760**	**1,870**	**51%**	**52%**	**35%**

Source: Walker Consultants, 2018

A more detailed breakdown of the weekday peak hour occupancy rates by parking type is shown in the following table.

Table 4: Weekday Parking Occupancy Summary by Type

Zone	Private Off-Street Parking			Public Off-Street Parking			On-Street Parking		
	Supply	Occupancy	% Occupied	Supply	Occupancy	% Occupied	Supply	Occupancy	% Occupied
Residential	338	135	40%	53	28	53%	372	207	56%
Courthouse	580	453	78%	0	0	0%	147	108	73%
Downtown	1,459	730	50%	390	163	42%	526	304	58%
Core	307	152	50%	752	301	40%	267	178	67%
Subtotal	**2,684**	**1,470**	**55%**	**1,195**	**492**	**41%**	**1,312**	**797**	**61%**
Remote	0	0	0%	100	0	0%	0	0	0%
Total	**2,684**	**1,470**	**55%**	**1,295**	**492**	**38%**	**1,312**	**797**	**61%**

Source: Walker Consultants, 2018

Based on our observations, on-street parking was more highly utilized than off-street parking with approximately 61% of on-street spaces occupied during the peak hour. During the 2:00 p.m. peak, on-street parking in the courthouse and core zones were approximately 73% and 67% utilized, respectively. Both public and private off-street parking were less utilized with 41% and 55% of capacity occupied during the peak hour, respectively. Walker also noted that except for the courthouse zone, off-street parking did not exceed 55% of capacity.

Current occupancy rates, as a whole, do not indicate a shortage of parking; however, there are a few "hot spots" of activity where occupancy rates on a specific block or for a specific category of parking exceeded 85 percent of capacity. When occupancy exceeds this level, patrons may experience delays and frustration while searching for a space. Therefore, the parking supply may be perceived as inadequate even though there are some spaces available in the parking system

Figure 2 and Figure 3 on the following pages illustrate the peak parking occupancy by block or block face for public and private parking facilities. Color coding is used to show the current occupancy of the entire study area.

Those blocks colored red are experiencing parking occupancy issues, with occupancy at or greater than 85 percent.

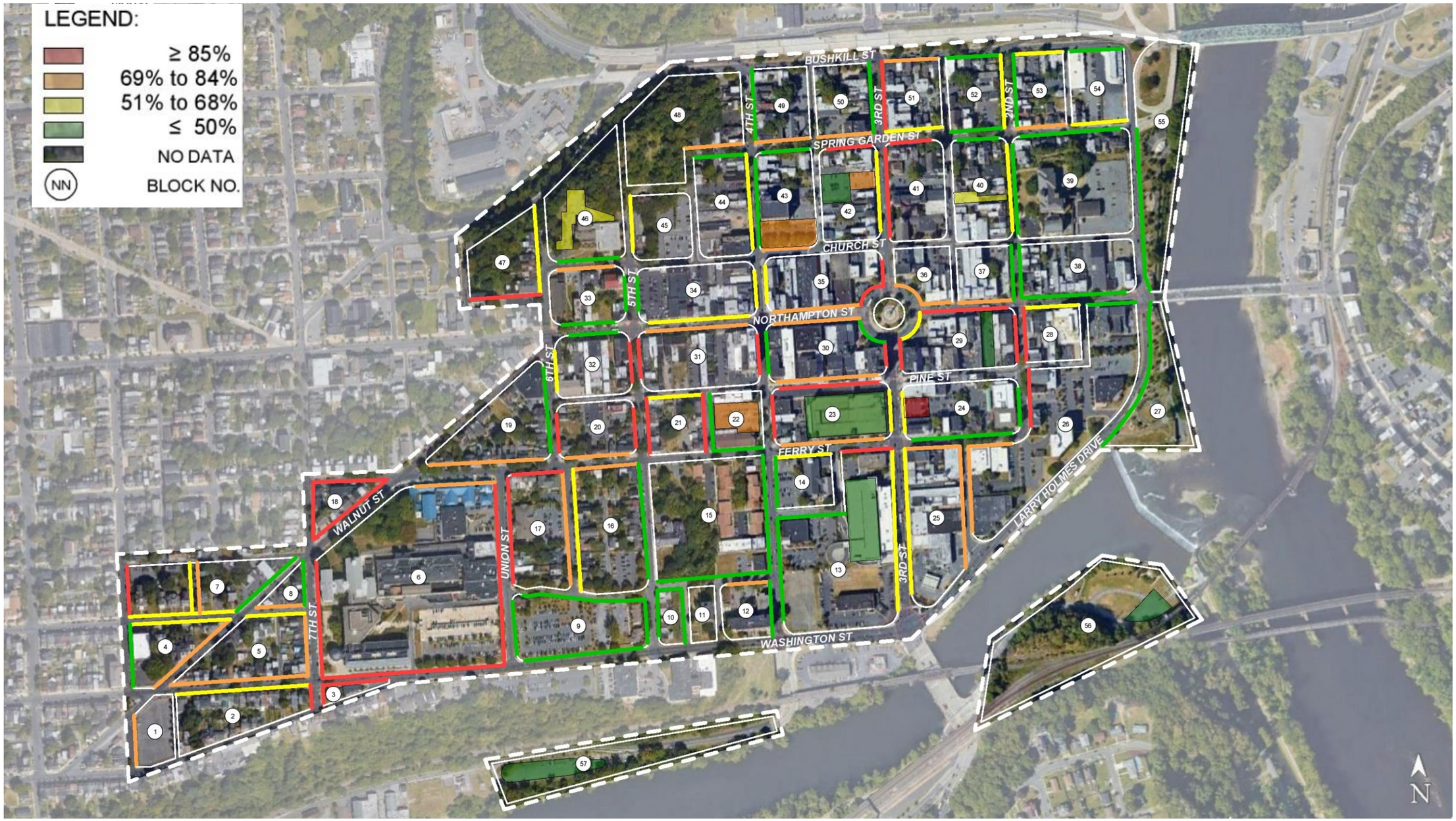
Several of the blocks around the courthouse, as well as the Larry Holmes Plaza are colored orange and red, indicating moderate to high occupancy rates in both public and private categories during the peak hour. However, parking was typically available within a one to two block walk of these areas.

Note, while both public parking garages were less than 50% occupied on the September survey day, we understand that the Pine Street Garage, and the S. 3rd Street Garage to a lesser extent, experience periods of high occupancy. We discuss seasonal changes to occupancy in the Design Day section of the report.

Figure 2: Peak Weekday Private Parking Occupancy

Source: Google Earth and Walker Consultants, 2018

Figure 3: Peak Weekday Public Parking Occupancy



Source: Google Earth and Walker Consultants, 2018

MUNICIPAL OFF-STREET PARKING OCCUPANCY

The City of Easton operates two public parking garages and four lots, totaling 1,053 parking spaces. While public parking facilities are distributed throughout the downtown, 90% of the publicly-owned parking capacity is located to the south of Northampton Street; most of these spaces are in the City's two garages.

Walker performed a more detailed analysis of the occupancy rates at these facilities on our survey day. Overall occupancy of the municipally-owned facilities did not exceed 40% of capacity. While the observed occupancy rates in many of the lots do not indicate a parking shortage, one or two lots were observed to experience demand at or above 85% of capacity at various times throughout the day (indicated in red). As discussed earlier, when occupancy reaches this level, parking may be perceived as inadequate, even though spaces are available.

Table 5: Weekday Parking Occupancy Summary by Type

			10:00 AM		2:00 PM		6:00 PM	
Block	Facility	Supply	Demand	% Occ.	Demand	% Occ.	Demand	% Occ.
13	S 3rd Street Garage	332	120	36%	117	35%	93	28%
23	Pine Street Garage	569	148	26%	184	32%	86	15%
24	S. 3rd Street Lot	19	2	11%	18	95%	15	79%
29	Northampton Street Lot	26	2	8%	9	35%	12	46%
42	N. 3rd Street Lot	26	17	65%	21	81%	17	65%
42	N. 3rdStreet Monthly	45	24	53%	22	49%	11	24%
43	4th Street Lot	36	31	86%	26	72%	34	94%
Total		**1,053**	**344**	**33%**	**397**	**38%**	**268**	**25%**

Source: Walker Consultants, 2018

Parking occupancy rates in both the 3rd Street and Pine Street Garages typically did not exceed 35% of capacity during our survey. We understand the occupancy levels vary in these garages, particularly the Pine Street Garage in relation to seasonal demand from the Crayola Experience. Seasonality and design day conditions are discussed in more detail later.

ON-STREET TURNOVER AND DURATION

In addition to determining occupancy rates at on-street spaces within the study area, Walker also used data collected with an LPR camera on select streets within the study area to calculate duration and turnover on each block face. These two performance measurements, together with occupancy help provide Walker with a more complete picture of parking activity in the downtown. For our purposes, the duration refers to the average length of stay a vehicle is parked on a block face and can be calculated by dividing the total numbers of occupied hours by the total number of cars during a particular survey period; in our case, nine hours. Turnover refers to the number of cars to park in a space over the survey period. Thus, a space that turns over frequently would likely experience shorter parking durations than a space that only turned twice during the day. Both of these measures allow us to measure the efficiency of the parking system.

In central business districts, where there is a lot of activity and demand for convenient parking is high, the goal is to encourage turnover by limiting the number of hours a vehicle is parked. For example, under current parking regulations (three-hour limit, M-S, 9:00 a.m.-8:00 p.m.), one space on Northampton Street could service between three and four customers during an eleven-hour day, assuming the three-hour limit was enforced.

It is important to keep in mind that some streets surveyed do not have any posted time restrictions, while others do. The sampling of time restricted streets included two-, three-, four-, and ten-hour limits. Additionally, within the Centre Square Area (two-hour zone), there are four 15-minute meters; these spaces were not studied separately. Lastly, the on-street sample included streets in the blue or red zones of the residential parking permit program.

Again, because the impetus of the parking study is to address operational issues related to the public parking system in Easton, Walker performed a more in-depth analysis of the parking turnover and duration (average length of stay) data collected to understand parking behaviors and recommend changes. The table below breaks down the on-street parking behaviors based on the time restriction and residential permit type on a particular blockface.

Table 6: Turnover and Duration by Parking Restriction and Permit Type

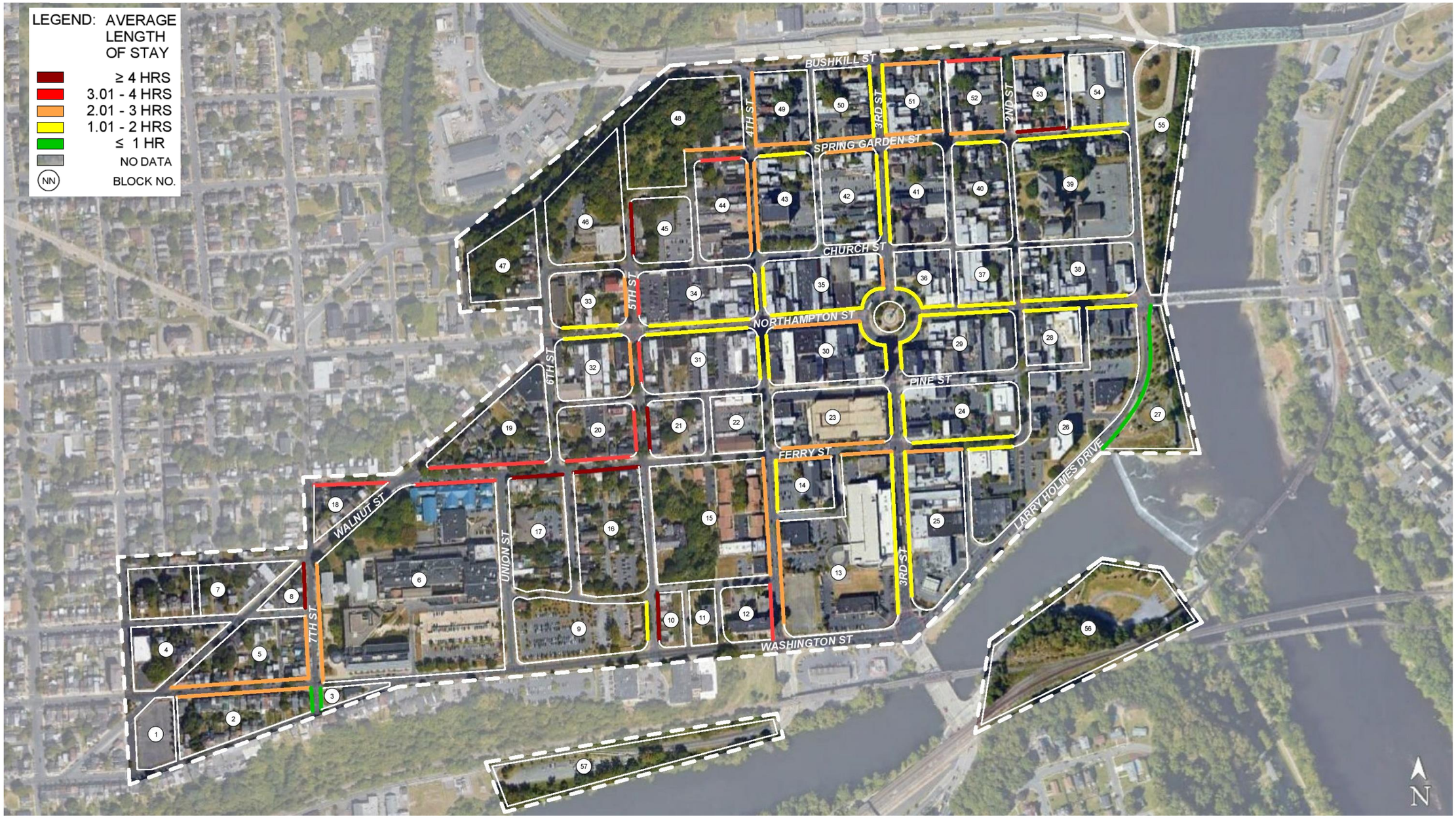
Time Restriction	Residential Permit Type	1 Hr	2 Hrs	3 Hrs	4 Hrs	5 Hrs	6 Hrs	7 Hrs	8 Hrs	9 Hrs	10 Hrs	Total Cars	Total Parked Hours	Average Parked Duration	Turnover
No Limit	Red	30	15	12	9	4	2	3	4	3	4	86	86	1.00	2.21
	Blue	2	1	2	0	0	0	2	0	1	4	12	73	6.08	0.67
	Non	37	8	17	11	8	6	8	4	4	7	110	418	3.80	1.59
2 Hr	Red	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Blue	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Non	172	28	10	9	5	7	1	4	6	13	255	584	2.29	2.36
3 Hr	Red	95	20	12	6	4	2	0	1	0	3	143	143	1.00	2.51
	Blue	150	40	23	10	10	3	5	3	10	9	263	646	2.46	1.79
	Non	570	106	32	12	14	11	8	7	2	8	741	1,228	1.66	2.67
4 Hr	Red	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Blue	8	3	0	1	0	0	1	0	0	2	15	45	3.00	0.94
	Non	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10 Hr	Red	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Blue	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Non	43	24	14	4	1	2	8	2	0	8	106	318	3.00	2.52
Total	**Red**	**125**	**35**	**24**	**15**	**8**	**4**	**3**	**5**	**3**	**7**	**229**	**229**	**1.00**	**0**
	Blue	**160**	**44**	**25**	**11**	**10**	**3**	**8**	**3**	**11**	**15**	**290**	**764**	**2.63**	**0**
	Non	**822**	**166**	**73**	**36**	**28**	**26**	**25**	**17**	**12**	**36**	**1,212**	**2,548**	**2.10**	**2.44**

Source: Walker Consultants, 2018

The average parked duration or length of stay ranged from 1.00 hours to 6.08 hours, when the data was sorted by time restriction and residential permit zone. Generally, the average length of stay did not exceed the posted time restrictions, except for the two-hour zone where the average duration parked was 2.29 hours. This is not to say that there were no vehicles parked longer than the posted limits in other zones in the study area. We cannot comment on whether these cars received a ticket on our survey day.

The figure on the following page shows the average length of stay (duration) for each block face surveyed in our sampling.

Figure 4: Weekday On-Street Parking Duration by Blockface



Source: Google Earth and Walker Consultants, 2018

PARKING ADEQUACY

Parking adequacy is the ability of a parking system to accommodate the parking demand. Walker compared the effective parking supply to the observed parking demand in Easton to determine the operational surplus or deficit (adequacy). Overall, parking in Easton is adequate to support demand. This does not mean that small parking "hot spots" on some blocks within the downtown do not exist. However, adequate parking is available within one or two blocks of any intermittent shortfalls.

Table 7: Survey Day Weekday Parking Adequacy by Zone

	Private Off-Street Parking			Public Off-Street Parking			On-Street Parking			Total		
Zone	Effective Supply	Occupancy	Adequacy	Effective Supply	Occupancy	Adequacy	Effective Supply	Occupancy	Adequacy	Effective Supply	Occupancy	Adequacy
Residential	323	135	188	48	28	20	317	207	110	688	370	318
Courthouse	551	453	98	0	0	0	125	108	17	676	561	115
Downtown	1,388	730	658	351	163	188	450	304	146	2,189	1,197	992
Core	292	152	140	676	301	375	227	178	49	1,195	631	564
Total	**2,554**	**1,470**	**1,084**	**1,075**	**492**	**583**	**1,119**	**797**	**322**	**4,748**	**2,759**	**1,989**
Remote Lots	0	0	0	90	2	88	0	0	0	90	2	88
Total	**2,554**	**1,470**	**1,084**	**1,165**	**494**	**671**	**1,119**	**797**	**322**	**4,838**	**2,761**	**2,077**

Source: Walker Consultants, 2018

System-wide there was an operational surplus of approximately 1,989 spaces during the peak hour of our survey, excluding the remote lots. There were eight blocks in the study area where small parking deficits were observed; typically, these shortages were located on-street.

DESIGN DAY CONDITIONS

There is no perfect day to collect data; conditions in the downtown change daily depending on weather, tourism, holidays, downtown events, etc. While the survey day was judged to adequately represent typical conditions in Easton, we understand the parking system may experience levels of demand greater than observed resulting in stress to the overall system. Of particular concern is the impact the Crayola Experience has to parking occupancy rates in the area, specifically in the Pine Street Garage. It is reported that during the summer months, parking activity generated by the Crayola Experience can result in higher than typically occupancy levels in the Pine Street Garage.

Historic parking volumes were provided for the Pine Street a Garage on a monthly basis. Based on 12 months of data for the Pine Street Garage, the second lowest monthly parking volumes were recorded in September (6,903 vehicles). Compared to the busiest month, the monthly parking volume was approximately 53% lower in September. Walker adjusted our survey day observation in the Pine Street Garage to represent a typically busy day in August (peak) when the garage is at or near capacity.[1] It is important to note that the garage only experienced parking volumes to this degree for two months out of the year; during the remainder of the year, the garage does not regularly reach capacity. Activity in the S. 3rd Street Garage was increased by 20% based on anecdotal comments.

In addition to the activity data for the garages, the City provided Walker with three years' worth of monthly revenue generate by the on- and off-street meter system. Walker used what information was available,

[1] Walker did not review daily parking volumes or other parking occupancy reports to determine how many times a year the Pine Street Garage was at or near capacity. The City reports the garage fills regularly during the peak summer season.

together with our industry experience, to apply a seasonal adjustment factor to the observed weekday peak hour parking demand.

Table 8 summarizes the design day parking occupancy by parking type and zone. On-street parking occupancy is expected to reach 73% of capacity during design conditions, while public off-street occupancy is expected to reach 74% of the available supply. Note, Walker did not model an increase in private off-street parking occupancy during design conditions.

Table 8: Weekday Design Day Parking Occupancy

	Private Off-Street Parking			Public Off-Street Parking			On-Street Parking			Total		
Zone	Supply	Occupancy	% Occupied	Supply	Occupancy	% Occupied	Supply	Occupancy	% Occupied	Supply	Occupancy	% Occupied
Residential	338	135	40%	53	28	53%	372	247	66%	763	410	54%
Courthouse	580	453	78%	0	0	0%	147	130	88%	727	583	80%
Downtown	1,459	730	50%	390	186	48%	526	363	69%	2,375	1,279	54%
Core	307	152	50%	752	669	89%	267	213	80%	1,326	1,034	78%
Subtotal	**2,684**	**1,470**	**55%**	**1,195**	**883**	**74%**	**1,312**	**953**	**73%**	**5,191**	**3,306**	**64%**
Remote	0	0	0%	100	2	2%	0	0	0%	100	2	2%
Total	**2,684**	**1,470**	**55%**	**1,295**	**885**	**68%**	**1,312**	**953**	**73%**	**5,291**	**3,308**	**63%**

Source: Walker Consultants, 2018

On the streets around the courthouse, parking demand during design conditions is expected to exceed 85% of capacity. When occupancy rates exceed this level, patrons may experience delays and frustration while searching for a space. Therefore, the parking supply may be perceived as inadequate even though there are some spaces available in the parking system.

Public off-street parking is expected to reach 89% of capacity in the core zone during design conditions. The table below compares the survey day and design day parking occupancy rates in the municipally-owned parking facilities. During design conditions, demand at four of the seven public off-street facilities is expected to near or exceed the available supply.

Table 9: Weekday Municipal Parking – Survey vs. Design Day

Block	Facility	Supply	Survey Demand	% Occupied	Design Demand	% Occupied
13	S 3rd Street Garage	332	117	35%	140	42%
23	Pine Street Garage	569	184	32%	534	94%
24	S. 3rd Street Lot	19	18	95%	22	116%
29	Northampton Street Lot	26	9	35%	9	35%
42	N. 3rd Street Lot	26	21	79%	25	96%
42	N. 3rdStreet Monthly	45	22	50%	27	60%
43	4th Street Lot	36	26	72%	31	86%
Total		**1,053**	**397**	**38%**	**788**	**75%**

Source: Walker Consultants, 2018

The parking adequacy during design conditions is summarized in the table below. During design conditions, the overall parking system downtown is expected to have a parking surplus of approximately 1,442 spaces.

Table 10: Design Day Weekday Parking Adequacy by Zone

Zone	Private Off-Street Parking			Public Off-Street Parking			On-Street Parking			Total		
	Effective Supply	Occupancy	Adequacy	Effective Supply	Occupancy	Adequacy	Effective Supply	Occupancy	Adequacy	Effective Supply	Occupancy	Adequacy
Residential	323	135	188	48	28	20	317	247	70	688	410	278
Courthouse	551	453	98	0	0	0	125	130	(5)	676	583	93
Downtown	1,388	730	658	351	186	165	450	363	87	2,189	1,279	910
Core	292	152	140	676	669	7	227	213	14	1,195	1,034	161
Total	**2,554**	**1,470**	**1,084**	**1,075**	**883**	**192**	**1,119**	**953**	**166**	**4,748**	**3,306**	**1,442**
Remote Lots	0	0	0	90	2	88	0	0	0	90	2	88
Total	**2,554**	**1,470**	**1,084**	**1,165**	**885**	**280**	**1,119**	**953**	**166**	**4,838**	**3,308**	**1,530**

Source: Walker Consultants, 2018

While the existing parking supply is expected to be sufficient to support design day conditions in most zones on most blocks, small parking shortages are anticipated on a specific block or block face, or for a specific category of parking. **Under design conditions, approximately 16 blocks are expected to experience a public parking shortage, including the Pine Street Garage.** However, adequate parking is available within one or two blocks of any intermittent shortfalls.

SATURDAY CONDITIONS

PARKING OCCUPANCY

Walker also observed parking occupancy rates at most parking facilities in the study area parking facilities on a Saturday to better understand parking patterns. Data was collected for on- and off-street parking spaces on at 10:00 a.m., 2:00 p.m. and 6:00 p.m. on Saturday, September 8th, 2018. Walker's survey captured the parking activity associated with the weekly Easton Farmer's Market. The Farmer's Market operates in Centre Square from 9:00 a.m. to 1:00 p.m. between May and October. Based on our observations, no on-street parking is closed as a result of the Farmer's Market.

Table 11 summarizes the total observed parking occupancy by zone. Peak parking occupancy was observed during the 2:00 p.m. count with approximately 43% of the available supply utilized. During the weekday survey, Walker observed higher activity during the morning and afternoon counts, consistent with a more office/business driven environment; however, during the Saturday survey, patterns shifted, and occupancy rates were higher in the afternoon and evening. It is likely this shift is a result of increased entertainment/restaurant activity.

Table 11: Saturday Parking Occupancy Summary

Zone	Supply	Occupancy			% Occupied		
		10:00 AM	2:00 PM	6:00 PM	10:00 AM	2:00 PM	6:00 PM
Residential	763	307	315	312	40%	41%	41%
Courthouse	727	160	181	164	22%	25%	23%
Downtown	2,375	883	999	1027	37%	42%	43%
Core	1,326	521	717	686	39%	54%	52%
Subotal	**5,191**	**1,871**	**2,213**	**2,190**	**36%**	**43%**	**42%**
Remote Lots	100	13	16	5	13%	16%	5%
Total	**5,291**	**1,884**	**2,229**	**2,195**	**36%**	**42%**	**41%**

Source: Walker Consultants, 2018

A more detailed breakdown of the weekday peak hour occupancy rates by parking type is shown in the following table. Based on our observations, on-street parking was more highly utilized than off-street parking with approximately 68% of on-street spaces occupied during the peak hour. Within the core zone, on-street parking was 85% utilized, likely associated with Farmer's Market activity. Both public and private off-street parking were less utilized at 37% and 32% of capacity, respectively. Walker also noted that off-street parking did not exceed 50% of capacity.

Table 12: Saturday Parking Occupancy Summary by Type

Zone	Private Off-Street Parking			Public Off-Street Parking			On-Street Parking		
	Supply	Occupancy	% Occupied	Supply	Occupancy	% Occupied	Supply	Occupancy	% Occupied
Residential	338	76	22%	53	20	38%	372	219	59%
Courthouse	580	135	23%	0	0	0%	147	46	31%
Downtown	1,459	494	34%	390	103	26%	526	402	76%
Core	307	148	48%	752	343	46%	267	226	85%
Subtotal	**2,684**	**853**	**32%**	**1,195**	**466**	**39%**	**1,312**	**893**	**68%**
Remote Lots	0	0	0%	100	16	16%	0	0	0%
Total	**2,684**	**853**	**32%**	**1,295**	**482**	**37%**	**1,312**	**893**	**68%**

Source: Walker Consultants, 2018

Similar to our weekday observed, the current occupancy rates, as a whole, do not indicate a shortage of parking; however, there are a few "hot spots" of activity where occupancy rates on a specific block or for a specific category of parking exceeded 85 percent of capacity. When occupancy exceeds this level, patrons may experience delays and frustration while searching for a space. Therefore, the parking supply may be perceived as inadequate even though there are some spaces available in the parking system

Figure 5 and Figure 6 on the following pages illustrate the peak parking occupancy by block or block face for public and private parking facilities. Color coding is used to show the current occupancy of the entire study area. Those blocks colored red are experiencing parking occupancy issues, with occupancy at or greater than 85 percent.

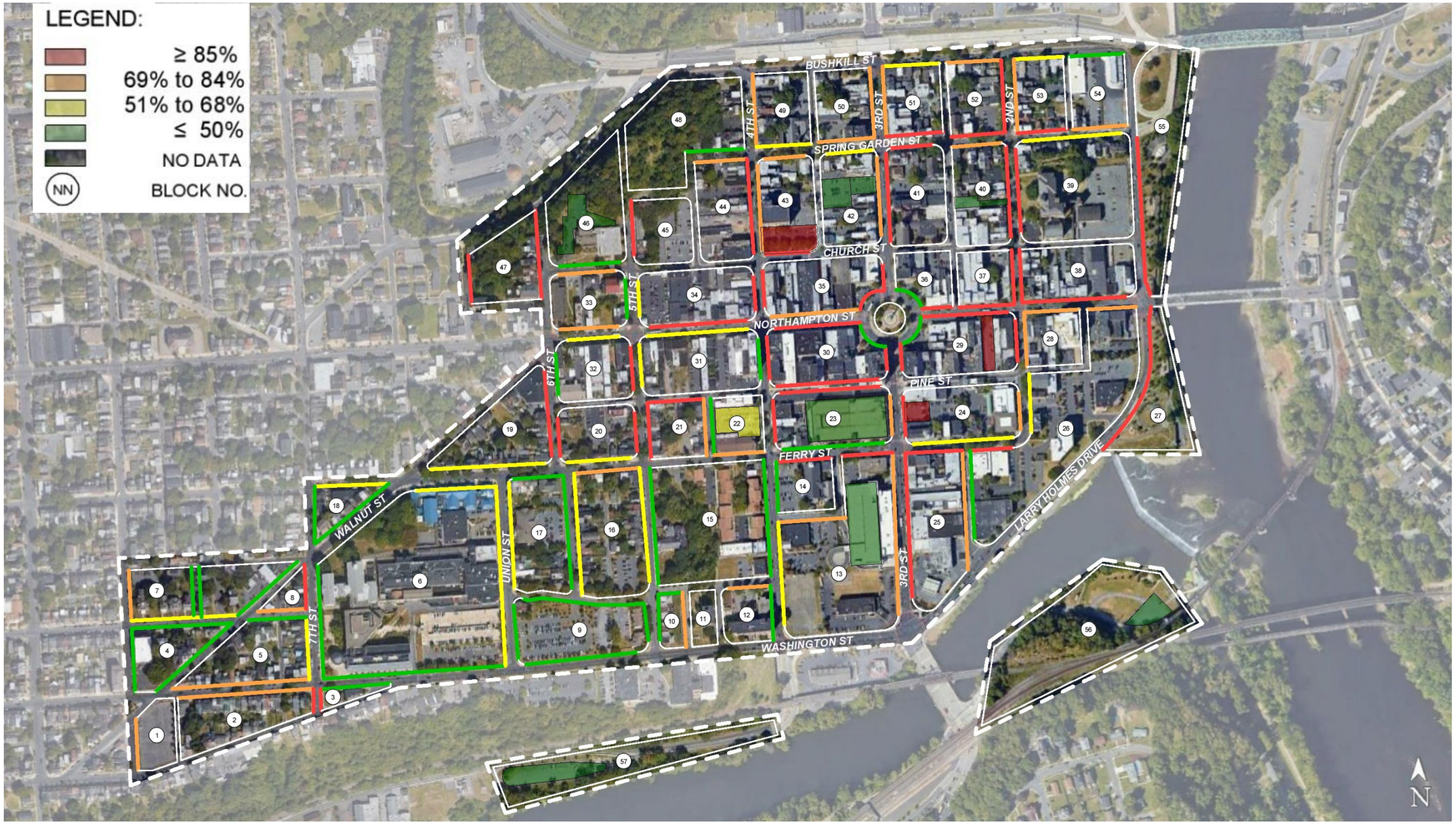
Both on-street and public off-street parking experienced high occupancy levels in the core of the study area during the 2:00 p.m. peak; however surplus capacity was available in both garages on the survey day.. When compared to the weekday occupancy, private off-street facilities were less utilized during the Saturday survey, especially around the Courthouse area.

Walker also noted that on-street parking and public surface lots, especially in the core zone, were more utilized than the Pine Street or S. 3rd Street Garages. Saturday design conditions are discussed in more detail in a later section.

Figure 5: Peak Saturday Private Parking Occupancy

Source: Google Earth and Walker Consultants, 2018

Figure 6: Peak Saturday Public Parking Occupancy



Source: Google Earth and Walker Consultants, 2018

MUNICIPAL OFF-STREET PARKING OCCUPANCY

Walker also performed a more detailed analysis of the occupancy rates at these facilities during the Saturday survey. Overall occupancy of the municipally-owned facilities did not exceed 40% of capacity. While there is surplus capacity in both the Pine Street and S 3rd Street Garages throughout most of the day, several of the lots were observed to experience demand at or above 85% of capacity at various times throughout the day (indicated in red). As discussed earlier, when demand exceeds this level of capacity, parking becomes more difficult to find and drivers must spend more time searching for the last few remaining spaces.

Table 13: Saturday Parking Occupancy Summary by Type

			10:00 AM		2:00 PM		6:00 PM	
Block	Facility	Supply	Demand	% Occ.	Demand	% Occ.	Demand	% Occ.
13	S 3rd Street Garage	332	59	18%	65	20%	61	18%
23	Pine Street Garage	569	38	7%	232	41%	190	33%
24	S. 3rd Street Lot	19	9	47%	19	100%	19	100%
29	Northampton Street Lot	26	10	38%	10	38%	9	35%
42	N. 3rd Street Lot	26	26	100%	25	96%	24	92%
42	N. 3rdStreet Monthly	45	11	24%	11	24%	18	40%
43	4th Street Lot	36	34	94%	34	94%	35	97%
Total		**1,053**	**187**	**18%**	**396**	**38%**	**356**	**34%**

Source: Walker Consultants, 2018

It is interesting to note that both the N. and S. 3rd Street lots, and on-street parking in the immediate vicinity of Centre Square, were at or near capacity multiple times throughout the Saturday survey. While the Pine Street Garage was only 41% utilized during the peak hour, it was the highest level of occupancy Walker observed in the facility. Although the surface parking options were occupied first, visitors did utilize the Pine Street Garage.

As with the weekday analysis, Walker recognizes that parking occupancy in Easton is impacted by seasonal factors such as visitors to the Crayola Experience. Walker will discuss Saturday design conditions in a later section.

PARKING ADEQUACY

Walker also estimated the parking adequacy in Easton on a Saturday by comparing the effective supply or operational capacity to the peak parking demand. System-wide there was an operational surplus of more than 2,500 spaces during the peak hour on Saturday. This does not mean that small parking "hot spots" on some blocks within the downtown do not exist. Walker identified 15 blocks where small (less than five space) deficits occurred in on category of parking. Generally, adequate parking was available within one or two blocks to accommodate the shortage.

Table 14: Current Saturday Parking Adequacy by Zone

Zone	Private Off-Street Parking			Public Off-Street Parking			On-Street Parking			Total		
	Effective Supply	Occupancy	Adequacy	Effective Supply	Occupancy	Adequacy	Effective Supply	Occupancy	Adequacy	Effective Supply	Occupancy	Adequacy
Residential	323	76	247	48	20	28	317	219	98	688	315	373
Courthouse	551	135	416	0	0	0	125	46	79	676	181	495
Downtown	1,388	494	894	351	103	248	450	402	48	2,189	999	1,190
Core	292	148	144	676	343	333	227	226	1	1,195	717	478
Total	**2,554**	**853**	**1,701**	**1,075**	**466**	**609**	**1,119**	**893**	**226**	**4,748**	**2,212**	**2,536**
Remote	0	0	0	90	16	74	0	0	0	90	16	74
Total	**2,554**	**853**	**1,701**	**1,165**	**482**	**683**	**1,119**	**893**	**226**	**4,838**	**2,228**	**2,610**

Source: Walker Consultants, 2018

DESIGN DAY CONDITIONS

Walker also projected design day conditions for a Saturday in downtown Easton. Again, based off historic data, we assumed demand in the Pine Street Garage would be at or near capacity. Demand in the S. 3rd Street Garage and on-street spaces was projected to be 20% higher during design day conditions. Walker did not adjust private off-street parking occupancy.

Table 15 summarizes the design day parking occupancy by parking type and zone. On-street parking occupancy is expected to reach 82% of capacity during design conditions, with occupancy rates in both the downtown and core zones near or above 100% of the available supply. Public off-street occupancy is expected to reach 67% of the available supply; however, in the core zone public off-street occupancy is projected at 88%.

Table 15: Saturday Design Day Parking Occupancy

Zone	Private Off-Street Parking			Public Off-Street Parking			On-Street Parking			Total		
	Supply	Occupancy	% Occupied	Supply	Occupancy	% Occupied	Supply	Occupancy	% Occupied	Supply	Occupancy	% Occupied
Residential	338	76	22%	53	20	38%	372	264	71%	763	360	47%
Courthouse	580	135	23%	0	0	0%	147	55	37%	727	190	26%
Downtown	1,459	494	34%	390	116	30%	526	482	92%	2,375	1,092	46%
Core	307	148	48%	752	665	88%	267	269	101%	1,326	1,082	82%
Subtotal	**2,684**	**853**	**32%**	**1,195**	**801**	**67%**	**1,312**	**1,070**	**82%**	**5,191**	**2,724**	**52%**
Remote Lots	0	0	0%	100	19	19%	0	0	0%	100	19	19%
Total	**2,684**	**853**	**32%**	**1,295**	**820**	**63%**	**1,312**	**1,070**	**82%**	**5,291**	**2,743**	**52%**

Source: Walker Consultants, 2018

The table below compares the survey day and design day parking occupancy rates in the municipally-owned parking facilities on a Saturday. During design conditions, demand at four of the seven public off-street facilities is expected to near or exceed the available supply. Note, most of the surface lots are projected to exceed capacity; we assume overflow demand would be redirected to one of the parking garages.

Table 16: Saturday Municipal Parking – Survey vs. Design Day

Block	Facility	Supply	Survey Demand	% Occupied	Design Demand	% Occupied
13	S 3rd Street Garage	332	65	20%	78	23%
23	Pine Street Garage	569	232	41%	534	94%
24	S. 3rd Street Lot	19	19	100%	23	121%
29	Northampton Street Lot	26	10	38%	12	46%
42	N. 3rd Street Lot	26	26	100%	31	119%
42	N. 3rdStreet Monthly	45	10	22%	12	27%
43	4th Street Lot	36	34	94%	41	114%
Total		**1,053**	**396**	**38%**	**731**	**69%**

Source: Walker Consultants, 2018

Table 17 shows the parking adequacy during Saturday design conditions. While the overall parking system is expected to have a parking surplus, on-street parking deficits are projected in the downtown and core zones.

Table 17: Design Day Saturday Parking Adequacy by Zone

	Private Off-Street Parking			Public Off-Street Parking			On-Street Parking			Total		
Zone	Effective Supply	Occupancy	Adequacy	Effective Supply	Occupancy	Adequacy	Effective Supply	Occupancy	Adequacy	Effective Supply	Occupancy	Adequacy
Residential	323	76	247	48	20	28	317	264	53	688	360	328
Courthouse	551	135	416	0	0	0	125	55	70	676	190	486
Downtown	1,388	494	894	351	116	235	450	482	(32)	2,189	1,092	1,097
Core	292	148	144	676	665	11	227	269	(42)	1,195	1,082	113
Total	**2,554**	**853**	**1,701**	**1,075**	**801**	**274**	**1,119**	**1,070**	**49**	**4,748**	**2,724**	**2,024**
Remote Lots	0	0	0	90	19	71	0	0	0	90	19	71
Total	**2,554**	**853**	**1,701**	**1,165**	**820**	**345**	**1,119**	**1,070**	**49**	**4,838**	**2,743**	**2,095**

Source: Walker Consultants, 2018

In addition to the projected deficits in the downtown and core on-street parking supply, small parking shortages are expected in the Pine Street Garage, South 3rd Street Lot, and 4th Street Lot. While several of the public facilities are projected to experience shortages, a surplus of parking is expected in the S. 3rd Street Garage.

EXISTING CONDITIONS SUMMARY

Based on both the historic data provided and additional anecdotal data provided by the City, we understand parking needs in the City of Easton vary due to seasonal factors, specifically tourism associated with the Crayola Experience. Walker analyzed parking occupancy on a block-by-block and zone-by-zone basis for the downtown area during both survey day and design day conditions to better quantify the parking needs under these two scenarios. The tables below summarizes our overall findings.

Table 18: Weekday Parking Summary

		Supply	Effective Supply	Demand	% Occupied	Adequacy
Survey Day	Private Off-Street	2,684	2,554	1,470	55%	1,084
	Public Off-Street[1]	1,195	1,075	492	41%	583
	On-Street	1,312	1,119	797	61%	322
	Total	**5,191**	**4,748**	**2,759**	**53%**	**1,989**
Design Day	Private Off-Street	2,684	2,554	1,470	55%	1,084
	Public Off-Street[1]	1,195	1,075	883	74%	192
	On-Street	1,312	1,119	953	73%	166
	Total	**5,191**	**4,748**	**3,306**	**64%**	**1,442**

Note:[1]Public Off-Street Parking excludes the supply and demand in the remote lots (approximately 100 spaces)

Source: Walker Consultants, 2018

During the weekday survey day, the public off-street parking supply was approximately 41% occupied; however, the public off-street parking occupancy rate increases to 74% during design conditions. While the overall public off-street parking occupancy does not indicate a shortage, specific facilities were reported to experience demand at or near capacity during design conditions. It is important to note that the historic data provided to data did not quantify the number of times a year the City experiences design conditions, specifically as it relates to parking demand in the Pine Street Garage.

Table 19: Saturday Parking Summary

		Supply	Effective Supply	Demand	% Occupied	Adequacy
Survey Day	Private Off-Street	2,684	2,554	853	32%	1,701
	Public Off-Street[1]	1,195	1,075	466	39%	609
	On-Street	1,312	1,119	893	68%	226
	Total	**5,191**	**4,748**	**2,212**	**43%**	**2,536**
Design Day	Private Off-Street	2,684	2,554	853	32%	1,701
	Public Off-Street[1]	1,195	1,075	801	67%	274
	On-Street	1,312	1,119	1,070	82%	49
	Total	**5,191**	**4,748**	**2,724**	**52%**	**2,024**

Note:[1]Public Off-Street Parking excludes the supply and demand in the remote lots (approximately 100 spaces)

Source: Walker Consultants, 2018

Similar to weekday conditions, the public off-street and on-street parking was greater during design conditions.

02 Future Demand Analysis

FUTURE DEMAND CONDITIONS

In order to project future demand conditions within the study area, Walker obtained proposed land use information from the Client, modeled future parking demand associated with these land uses, and overlaid this information with current parking demand conditions at the 2:00 peak demand period to obtain a conceptual projection of future parking demand in the study area. The analysis was performed for both the survey day and the design day.

PROPOSED FUTURE DEVELOPMENT

Walker utilized proposed land use information that was provided by the Client in February, 2019. Table 20 on the following page provides a list of the proposed future developments that were included in the analysis, as well as any parking supply that was gained or lost in association with each development. For planning purposes, Walker's future scenario assumes full building out of the development projects identified within a 10-year planning horizon.

Except for the changes to the parking supply noted in Table 20 on the following page, Walker assumed no additional private or public parking supply will be introduced in downtown Easton based on discussions with the City. Walker's analysis does not include an assessment of the required parking for each development per the City's Zoning Code, as we are using shared parking methodology.

New development and redevelopment is expected to eliminate all existing off-street public parking resources with the exception of the S. 3rd Street Garage – a loss of approximately 721 spaces. In addition to the off-street public parking loss, 17 on-street parking spaces are expected to be lost as a result of redevelopment.

Based on discussion with the City, Walker understands two public parking facilities are being considered, totaling 1,060 spaces[2], as well as a small 50 space garage below the proposed entertainment venue on Block 13.

[2] We understand 60 of these spaces will be reserved/private within the Pine Street Garage replacement facility.

Table 20: Proposed Developments

Block	Location	Land Use	Quantity	Parking Lost	Parking Gained
13	185 S 3rd St[1]	Entertainment	N/A	0	50
23	Pine St Garage[2]	Family Restaurant	8,127 SF	569	660
		Fine/Casual Restaurant	8,128 SF		
		Residential	125 Units		
25	136-42 S 3rd	Office[3]	45,000 SF	30	0
43	N 4th St Lot[4]	Office	39,150 SF	53	400
42	56 N 3rd Lot	Retail	5,210 SF	71	0
		Residential	70 Units		
31	428 Northampton	Office	3,360 SF	0	0
		Family Restaurant	2,040 SF		
		Residential	4 Units		
34	403 Northampton	Office	2,394 SF	0	0
50	130 N 3rd St	Hotel	18 Keys	0	0
39	Wolf Parking Lot	Retail	6,100 SF	50	0
		Fine/Casual Restaurant	6,100 SF		
34	State Theatre	Office	6,666 SF	0	0
26	108-16 Northampton "Kaplan Building"	Retail	1,872 SF	4	0
		Office	3,036 SF		
		Residential	40 Units		
29	118-20 Northampton Parking Lot	Office	3,660 SF	26	0
		Residential	15 Units		
24	S 3rd St Lot	Retail	5,283 SF	19	0
		Residential	50 Units		
35	353 Northampton	Office	4,162 SF	0	0
34	411 Northampton	Fine/Casual Restaurant	3,660 SF	0	0
		Office	3,660 SF		
		Residential	1 Units		
35	11 N 4th ST upper floors	Retail	4,162 SF	0	0
		Office	5,332 SF		
		Residential	1 Units		
34	401 Northampton	Family Restaurant	1,911 SF	0	0
		Office	1,911 SF		
		Residential	1 Units		
30	Alpha Building[5]	Office	N/A	0	0

Note:[1]Per program data provided by the City, DaVinci Science City is expected to generate peak parking demand of 300 spaces. The facility is also only planning to provide 50 on-site spaces in a below grade parking facility.
[2]The Pine Street Garage is expected to be demolished within the next 5 years. An RFP for a P3 development is being considered for the site. Based on discussions with the City, for planning purposes Walker assumed a 660-space garage is built. Of the 660 spaces, 600 spaces would be municipally-owned and publicly-available, while the remaining 60 spaces would be reserved for private use.
[3]The Hearst Redevelopment project will lease 225 spaces in the S. 3rd Street Garage.
[4]An RFP for a P3 development on the N 4th Street Lot site is being considered. Based on discussion with the City, a possible 400 space garage could be developed on this site.
[5]The space leased by Lafayette University In the Alpha Building is not fully occupied. An additional 35-40 cars are expected when fully occupied.

Source: Walker Consultants, 2019

FUTURE DEMAND MODELING

In order to model for future parking demand, Walker utilized Shared Parking methodology to project approximate parking demand for each proposed development project in the study area. The shared parking analysis and corresponding conclusions presented below are based on recommendations and data presented by the Urban Land Institute (ULI), the Institute of Traffic Engineers (ITE), the International Council of Shopping Centers (ICSC), and specifically ULI's shared parking methodology, using ITE- and ULI-supplied data as presented in *Shared Parking,* as well as Walker's experience in similar municipalities.

The shared parking methodology was developed in the 1980s and has been a widely-accepted industry standard for rightsizing parking facilities over the past 30+ years. Adopted by municipalities and developers throughout the United States, and codified in zoning ordinances as acceptable practice, shared parking is endorsed by the ULI, the ICSC, the American Planning Association (APA), and the National Parking Association (NPA), as an acceptable method of parking planning and management. Shared parking allows for the sharing of parking spaces among uses in a mixed-use environment in lieu of providing a minimum number of parking spaces for each individual land use. Shared parking commonly results in a reduction of required parking spaces. This reduction, which can be significant, depends on the quantities and mix of uses and local code requirements.

Shared parking is defined as the ability to use the same parking resource by multiple nearby or adjacent land uses without encroachment. The basic premise is that in a mixed-use area, the combination of land uses will usually result in less parking being needed than would be the case if those same land uses were all stand-alone developments building to their individual peak needs. The reason for the reduction is two-fold:

- Different types of land uses have different usage patterns. If an office (active during the day on weekdays) needs 500 spaces and a cinema (busy during the evening and on weekends) needs 500 spaces, they don't need 1,000 spaces if they are near each other because they will never be full simultaneously.
- Land uses that benefit from a "captive market" of people already parked in the area who create demand for the land uses without creating parking demand. For example, a sandwich shop located in an office tower generates very little, if any, parking demand even if it's crowded, since its customers are employees in the building who are already parked for the day.

Shared parking takes into account the parking demand for more than 45 different land uses; the availability and use of alternative modes of transportation; captive market effects; and daily, hourly, and seasonal variations. In the case of the developments proposed for the City of Easton, the shared parking analysis recognizes the interrelationship of parking among retail, food and beverage, residential, and office land uses.

A shared parking analysis begins first by taking the land use quantities of a development, e.g. number of residential dwelling units, and multiplying by a base demand ratio. Base parking demand ratios, as found in the ULI Shared Parking model and in some cases refined through additional research by Walker, are used as a starting point in the analysis. Based on research on the parking generation rates for free-standing developments, these industry standards are later adjusted to reflect site-specific conditions.

The base ratios are next adjusted to account for time of daily and seasonality. It is expressed as a percentage of potential demand modified for time of day and time of year. The parking demand for each land use may peak at different times, which generally means that fewer parking spaces are needed for the combination of land uses in a project than would be required if each land use were considered separately.

Walker also applies two additional adjustments to the base parking demand ratios; one to reflect an estimate of the local transportation modal split (called the drive ratio) and another to account for the best estimate of captive market effects (called the non-captive ratio). The following graphic provides an illustrative view of the steps involved in the shared parking analysis.

Table 21: Steps of Shared Parking Analysis

Land Use Units (Number of rooms, square footage, etc.)	X	Standard or Base Parking Generation Ratio	X	Hourly Factor	X	Seasonal Factor	X	Driving Ratio	X	Non-Captive Ratio	= TOTAL

Source: Walker Consultants, 2018

The key goal of a shared parking analysis is to find the balance between providing adequate parking to support a development from a commercial and operational standpoint and protect the interests of neighboring property owners, while minimizing the negative aspects of excessive land area or resources devoted to parking. The ultimate goal of a shared parking analysis is to find a reasonably predictable, peak period worst case scenario, or design day condition.

Allowing multiple land uses and entities to share parking spaces has allowed for and led to the creation of many popular real estate developments and areas, resulting in the combination of office, residential, retail, hotel, and entertainment districts that rely heavily on shared parking for economic viability while providing parking accommodations to meet the actual demand generated by the development. Traditional downtowns in large and small cities alike have depended on the practice in order to be compact, walkable, and economically viable.

Table 22 illustrates the base parking demand ratios Walker utilized when projecting future demand in the study area.

Table 22: Base Parking Demand Ratios

Land Use	Unit	Weekday Ratio	Weekend Ratio
Retail	Spaces/1,000 SF	3.6	4
Fine/Casual Restaurant	Spaces/1,000 SF	12	12
Family Restaurant	Spaces/1,000 SF	10.5	10.5
Residential	Space/Dwelling Unit	1.5	1.5
Office	Spaces/1,000 SF	3.5	0.35
Hotel	Space/Key	1.15	1.18

Source: Walker Consultants, 2018

Additionally, Walker applied the following adjustments to the base parking demand ratios, as shown in Table 23 on the following page.

Table 23: Additional Demand Adjustments

Land Use	Modal Split	Time of Year	Weekday Time of Day Adjustment	Saturday Time of Day Adjustment	Non-Captive
Retail	95%	64%	95%	100%	80%
Fine/Casual Restaurant	95%	91%	65%	45%	75%
Family Restaurant	95%	91%	50%	65%	75%
Residential	100%	100%	50%	50%	100%
Office	95%	100%	100%	60%	100%
Hotel	90%	75%	60%	60%	100%

Source: Walker Consultants, 2018

The seasonal and time of day adjustment factors reflect the survey day conditions (September at 2:00 p.m.). Finally, to account for a growing economy and positive economic development in the area, Walker applied an organic growth rate factor of 1% annually to current parking demand on-street in the study area.

FUTURE DEMAND ANALYSIS – WEEKDAY

OCCUPANCY

As stated previously, Walker's future scenario assumes full build-out of the proposed development projects identified by the City in Table 20. The parking demand projected for each proposed development was overlaid on to the existing 2:00 pm peak demand conditions documented in September 2018. Survey day conditions are summarized by zone and parking type in the table below.

If all the proposed developments come to fruition, the public off-street parking supply is expected to be 100% utilized during the peak hour, excluding the remote lots on Lehigh Drive and at the Delaware Canal State Park. The high public off-street parking occupancy also assumes the City and/or the developer(s) do not pursue any shared parking agreements with existing private parking owners with excess capacity in their lots.

Table 24: Weekday Future Parking Occupancy Summary

	Private Off-Street Parking			Public Off-Street Parking			On-Street Parking		
Zone	Supply	Occupancy	% Occupied	Supply	Occupancy	% Occupied	Supply	Occupancy	% Occupied
Residential	338	135	40%	53	28	53%	372	231	62%
Courthouse	580	453	78%	0	0	0%	147	120	82%
Downtown	1,425	749	53%	390	828	212%	526	336	64%
Core	367	212	58%	1,031	745	72%	250	198	79%
Subtotal	**2,710**	**1,549**	**57%**	**1,474**	**1,601**	**109%**	**1,295**	**885**	**68%**
Remote Lots	0	0	0%	100	2	2%	0	0	0%
Total	**2,710**	**1,549**	**57%**	**1,574**	**1,603**	**102%**	**1,295**	**885**	**68%**

Source: Walker Consultants, 2019

Note, this future scenario also assumes that five of the six existing public parking facilities are demolished and replaced with two new garages.

On-street parking supply is expected to experience a 68% occupancy rate during peak weekday conditions. While the overall and even most zonal occupancy rates do not indicate a parking shortage, several blocks/block faces within the study area are projected to experience parking demand at or near capacity, especially public parking in the downtown zone.

It is important to reiterate that Walker's projections in the table above assume the entertainment venue is built on Block 13. Per the City, the development is expected to generate demand for 300 parking spaces daily, while providing approximately 50 on-site spaces. If the project does not come to fruition, the public off-street parking occupancy rate in the downtown core would still exceed capacity with 148% of the supply occupied during the peak hour. Similarly, without the Da Vinci Science City project, the overall public off-street parking occupancy rate in the study area would be decrease to approximately 86% of capacity during the peak hour.

Lastly, if the Da Vinci Science City project is not developed on the Block 13 property, it is likely another project would be developed on the approximately 3-acre property. We assume any new development project would generate a need for additional parking.

ADEQUACY

The future parking adequacy was determined by subtracting the projected parking demand from the future parking supply. While adequate private off-street and on-street parking is expected during the peak hour, the public off-street parking supply is projected to experience a parking shortage.

Table 25: Weekday Future Parking Adequacy Summary

	Private Off-Street Parking			Public Off-Street Parking			On-Street Parking		
Zone	Effective Supply	Occupancy	Adequacy	Effective Supply	Occupancy	Adequacy	Effective Supply	Occupancy	Adequacy
Residential	323	135	188	48	28	20	317	231	86
Courthouse	551	453	98	0	0	0	125	120	5
Downtown	1,356	749	607	351	828	(477)	450	336	114
Core	349	212	137	928	745	183	212	198	14
Subtotal	**2,579**	**1,549**	**1,030**	**1,327**	**1,601**	**(274)**	**1,104**	**885**	**219**
Remote Lots	0	0	0	90	2	88	0	0	0
Total	**2,579**	**1,549**	**1,030**	**1,417**	**1,603**	**(186)**	**1,104**	**885**	**219**

Source: Walker Consultants, 2019

During typical conditions, the public off-street parking supply is projected to experience an approximately 274-space deficit system wide, excluding the remote lots. While the downtown zone is the only area projected to experience an overall deficit, localized shortages are expected on several blocks.

Again, if the entertainment venue on Block 13 is NOT developed, the public off-street parking demand is expected to be 250[3] cars fewer. The projected public off-street deficit in the downtown zone decreases to

[3] Da Vinci Science City is expected to generate 300 spaces daily, 250 of which are expected to utilize public parking. The remaining 50 spaces are expected to parking in an on-site facility.

approximately 230 spaces. Additionally, without the entertainment venue, the overall off-street public parking supply is projected to experience a 64-space surplus.

The following figures graphically illustrate the public parking adequacy on a block by block basis. For each block, Walker noted the public effective supply, peak demand, and adequacy. The figures are designed to illustrate both the location and magnitude of the projected shortages to better understand the relationship between demand generators and existing (and future) parking supply.

On several blocks, a new development project displaced the existing public (or private) parking facility, while also increasing parking demand on the block. We expect 10 blocks to experience localized parking shortages.

Figure 7: Weekday Future Projected Parking Adequacy – Public Off-Street

Source: Google Earth and Walker Consultants, 2019

Figure 8: Weekday Future Projected Parking Adequacy – On-Street

Source: Google Earth and Walker Consultants, 2019

FUTURE DEMAND ANALYSIS – SATURDAY

OCCUPANCY

Walker also projected peak parking demand during typical Saturday conditions. During the peak hour, public off-street parking within the study area is expected to reach 84% of capacity; however, the downtown core is expected to exceed the supply.

While the overall projected public off-street parking rates do not indicate a shortage of parking, there are "hot spots" of activity where occupancy rates on a specific block or for a specific category of parking exceeded 85 percent of capacity. When occupancy exceeds this level, patrons may experience delays and frustration while searching for a space. Therefore, the parking supply may be perceived as inadequate even though there are some spaces available in the parking system

Table 26: Saturday Future Parking Occupancy Summary

	Private Off-Street Parking			Public Off-Street Parking			On-Street Parking		
Zone	Supply	Occupancy	% Occupied	Supply	Occupancy	% Occupied	Supply	Occupancy	% Occupied
Residential	338	76	22%	53	20	38%	372	219	59%
Courthouse	580	135	23%	0	0	0%	147	46	31%
Downtown	1,425	544	38%	390	564	145%	526	262	50%
Core	367	208	57%	1,031	658	64%	250	98	39%
Subtotal	**2,710**	**963**	**36%**	**1,474**	**1,242**	**84%**	**1,295**	**625**	**48%**
Remote Lots	0	0	0%	100	16	16%	0	0	0%
Total	**2,710**	**963**	**36%**	**1,574**	**1,258**	**80%**	**1,295**	**625**	**48%**

Source: Walker Consultants, 2019

Walker also considered how Saturday parking conditions would be impacted if the entertainment venue on block 13 was not developed. The occupancy rate in the downtown zone would decrease to 81%. Similarly, the overall public off-street parking occupancy would decrease to approximately 67%. As discussed previously, if the Da Vinci Science Center project was not built, we assume another project on the same site would be developed and would require parking.

On-street parking supply is expected to experience a 48% occupancy rate during peak weekend conditions. While the overall and even zonal occupancy rates do not indicate a parking shortage, several blocks/block faces within the study area are projected to experience parking demand at or near capacity.

ADEQUACY

Like the future weekday analysis, Walker compared the projected parking demand from the future parking supply to determine parking adequacy.

Overall, adequate parking is expected during the peak hour for all parking categories. However, it is important to note that the public off-street parking supply is projected to experience a 213-space deficit in the downtown zone. Adequate parking is available within the core to support the projected deficit.

Table 27: Saturday Future Parking Adequacy Summary

Zone	Private Off-Street Parking			Public Off-Street Parking			On-Street Parking		
	Effective Supply	Occupancy	Adequacy	Effective Supply	Occupancy	Adequacy	Effective Supply	Occupancy	Adequacy
Residential	323	76	247	48	20	28	317	219	98
Courthouse	551	135	416	0	0	0	125	46	79
Downtown	1,356	544	812	351	564	(213)	450	262	188
Core	349	208	141	928	658	270	212	98	114
Subtotal	**2,579**	**963**	**1,616**	**1,327**	**1,242**	**85**	**1,104**	**625**	**479**
Remote Lots	0	0	0	90	16	74	0	0	0
Total	**2,579**	**963**	**1,616**	**1,417**	**1,258**	**159**	**1,104**	**625**	**479**

Source: Walker Consultants, 2019

Without the development of the entertainment venue on Block 13, adequate public off-street parking supply is expected in the downtown area during typical Saturday conditions.

Public parking adequacy on a block by block basis is shown in the figures below. For each block, Walker noted the public effective supply, peak demand, and adequacy. Significant public parking deficits are projected on several blocks.

Figure 9: Saturday Future Projected Parking Adequacy – Public Off-Street

Source: Google Earth and Walker Consultants, 2019

Figure 10: Saturday Future Projected Parking Adequacy – On-Street

Source: Google Earth and Walker Consultants, 2019

DESIGN DAY CONDITIONS

As stated earlier, there is no perfect day to collect data; conditions in the downtown change daily depending on weather, tourism, holidays, downtown events, etc. While the survey day was judged to adequately represent typical conditions in Easton, we understand the parking system may experience levels of demand greater than observed, resulting in stress to the overall system. Based on both the historic data provided and anecdotal information provided by the City, Walker projected future parking conditions during design conditions on both a weekday and a Saturday. In this instance, a design day reflects peak summer tourism.

WEEKDAY OCCUPANCY AND ADEQUACY

During design conditions, public off-street parking demand is expected to exceed the parking supply in two zones during the peak hour. Similarly, the on-street parking demand is projected near capacity in several zones during design conditions.

In the downtown zone, the projected occupancy rate exceeds 200%. It is important to remember that the proposed entertainment venue, with a public demand of approximately 250 spaces, is planned for this zone. If the project on Block 13 is NOT developed, the public off-street occupancy rate in the downtown zone is decreased to approximately 154%.

Table 28: Weekday Future Parking Occupancy Summary – Design Conditions

	Private Off-Street Parking			Public Off-Street Parking			On-Street Parking		
Zone	Supply	Occupancy	% Occupied	Supply	Occupancy	% Occupied	Supply	Occupancy	% Occupied
Residential	338	135	40%	53	28	53%	372	275	74%
Courthouse	580	453	78%	0	0	0%	147	143	97%
Downtown	1,425	749	53%	390	851	218%	526	401	76%
Core	367	212	58%	1,031	1,113	108%	250	235	94%
Subtotal	**2,710**	**1,549**	**57%**	**1,474**	**1,992**	**135%**	**1,295**	**1,054**	**81%**
Remote Lots	0	0	0%	100	2	2%	0	0	0%
Total	**2,710**	**1,549**	**57%**	**1,574**	**1,994**	**127%**	**1,295**	**1,054**	**81%**

Source: Walker Consultants, 2019

The parking adequacy was also determined for weekday design conditions. Table 29 below summarizes the parking adequacy by zone for each parking type. Small parking shortages in some zones are expected on-street. However, assuming the proposed development projects come to fruition, the public off-street parking system could experience a 665-space deficit, excluding the remote lots. As discussed earlier, this deficit also assumes no shared parking agreements are arranged between existing private off-street parking owners and the City or future developers.

The magnitude of the deficit is reduced but not eliminated if the entertainment venue planned for Block 13 is not developed. The projected deficit is reduced to 415 spaces during peak conditions.

Table 29: Weekday Future Parking Adequacy Summary – Design Conditions

Zone	Private Off-Street Parking			Public Off-Street Parking			On-Street Parking		
	Effective Supply	Occupancy	Adequacy	Effective Supply	Occupancy	Adequacy	Effective Supply	Occupancy	Adequacy
Residential	323	135	188	48	28	20	317	275	42
Courthouse	551	453	98	0	0	0	125	143	(18)
Downtown	1,356	749	607	351	851	(500)	450	401	49
Core	349	212	137	928	1,113	(185)	212	235	(23)
Subtotal	**2,579**	**1,549**	**1,030**	**1,327**	**1,992**	**(665)**	**1,104**	**1,054**	**50**
Remote Lots	0	0	0	90	2	88	0	0	0
Total	**2,579**	**1,549**	**1,030**	**1,417**	**1,994**	**(577)**	**1,104**	**1,054**	**50**

Source: Walker Consultants, 2019

SATURDAY OCCUPANCY AND ADEQUACY

Saturday design conditions assume increased demand in all public parking facilities before factoring in demand from future development. Assuming full build-out of the proposed building program, both the public off-street and on-street parking supply is expected to experience demand at or above capacity in most zones.

Table 30: Saturday Future Parking Occupancy Summary – Design Conditions

Zone	Private Off-Street Parking			Public Off-Street Parking			On-Street Parking		
	Supply	Occupancy	% Occupied	Supply	Occupancy	% Occupied	Supply	Occupancy	% Occupied
Residential	338	76	22%	53	20	38%	372	264	71%
Courthouse	580	135	23%	0	0	0%	147	55	37%
Downtown	1,425	544	38%	390	577	148%	526	482	92%
Core	367	208	57%	1,031	980	95%	250	269	108%
Subtotal	**2,710**	**963**	**36%**	**1,474**	**1,577**	**107%**	**1,295**	**1,070**	**83%**
Remote Lots	0	0	0%	100	19	19%	0	0	0%
Total	**2,710**	**963**	**36%**	**1,574**	**1,596**	**101%**	**1,295**	**1,070**	**83%**

Source: Walker Consultants, 2019

Without the development of the entertainment venue in the downtown zone, the public off-street parking occupancy rate is expected to be approximately 90%. As stated previously, when occupancy rates reach approximately 85% of capacity, it becomes difficult to find a parking spaces and the parking is perceived as fall.

Similar to previous analyses, Walker compared the projected demand to the future parking supply to determine the adequacy of the parking system. A 250-space public off-street parking shortage is projected, while a small 34-space on-street surplus is anticipated system wide.

Table 31: Saturday Future Parking Adequacy Summary – Design Conditions

Zone	Private Off-Street Parking			Public Off-Street Parking			On-Street Parking		
	Effective Supply	Occupancy	Adequacy	Effective Supply	Occupancy	Adequacy	Effective Supply	Occupancy	Adequacy
Residential	323	76	247	48	20	28	317	264	53
Courthouse	551	135	416	0	0	0	125	55	70
Downtown	1,356	544	812	351	577	(226)	450	482	(32)
Core	349	208	141	928	980	(52)	212	269	(57)
Subtotal	**2,579**	**963**	**1,616**	**1,327**	**1,577**	**(250)**	**1,104**	**1,070**	**34**
Remote Lots	0	0	0	90	19	71	0	0	0
Total	**2,579**	**963**	**1,616**	**1,417**	**1,596**	**(179)**	**1,104**	**1,070**	**34**

Source: Walker Consultants, 2019

Without the event venue, the public off-street parking system is expected to have adequate an supply during Saturday design conditions.

MUNICIPAL OFF-STREET PARKING SUMMARY

The public off-street parking supply includes both municipally-owned facilities, such as the 3rd Street Garage, and privately-owned but commercially available parking facilities. To help the City better under the municipal parking needs in downtown Easton, Walker performed a more detailed analysis of the occupancy rates in these facilities during survey and design conditions on both a weekday and a Saturday.

It is important to note that Walker assumed the loss of five of the six municipal parking facilities as part of redevelopment efforts, including the Pine Street Garage. Additionally, we understand two new municipal facilities[4] are proposed to replace the lost parking and support new development, resulting in a net increase of the public off-street capacity from 1,053 spaces to 1,332 spaces.

Projected parking demand associated with the new developments was added to the existing municipal parking demand to determine the future municipal parking demand. The total future parking demand also included the 17 on-street spaces on Church Street that will be lost because of redevelopment on the block.

The total future parking demand was compared to the future parking supply on both a weekday and a Saturday under both survey and design conditions. Assuming all the redevelopment is realized, a municipal parking shortage is anticipated under most conditions. During design conditions, the deficit is significant.

It is important for the City to assess how often design conditions occur, specifically how often the Pine Street Garage nears or reaches capacity, as this directly factors into the magnitude of the projected deficit and the capacity of any additional parking facility(s).

[4] Through public private partnership.

Table 32: Municipal Parking Summary

	Survey Day		Design Day	
	Weekday	Saturday	Weekday	Saturday
Public Off-Street Parking Supply	1,332	1,332	1,332	1,332
Effective Parking Supply	1,199	1,199	1,199	1,199
Existing Public Demand	397	396	788	731
Projected Demand[1]	1,109	777	1,109	777
Displaced On-Street Demand[2]	17	17	17	17
Total Future Parking Demand	1,523	1,190	1,914	1,525
% Occupied	114%	89%	144%	114%
Adequacy	(324)	9	(715)	(326)
Adequacy Without the Entertainment Project (Block 13)	**(74)**	**259**	**(465)**	**(76)**

Note:[1]Projected future parking demand based on the proposed developments provided to Walker by the City of Easton. Walker accounted for the availability of private parking associated with the DaVinci Science City and the Pine Street project when projecting public parking demand.
[2]The Church Street Redevelopment project is expected to displace 17 on-street spaces along Church street.

Source: Walker Consultants, 2019

Walker also determined the future parking adequacy of the public off-street parking system if the proposed entertainment venue is not developed on Block 13. Excluding the project is expected to reduce demand during peak conditions by approximately 250 public spaces. Without the project, significant deficits are still expected during most peak design conditions.

FUTURE CONDITIONS SUMMARY

Based on the data provided by the City, there are several major development and redevelopment projects proposed for downtown Easton, many of which will be built on existing municipal parking sites; only some of these proposed projects include on-site parking. In addition, the DaVinci Science City, to be located at the corner of Washington and 3rd Streets, is another major development project with the potential to significantly impact parking needs in downtown Easton over the planning horizon. With an understanding of the proposed development within the study area, Walker projected future parking demand and adequacy under several different scenarios.

Our analysis of future conditions is summarized below:

- Assuming all of the development projects come to fruition, the City is expected to lose 738 public parking spaces, including 17 on-street spaces along Church Street. The S. 3rd Street Garage would be the only facility not undergoing redevelopment.
- Two newer municipal garages are planned as part of redevelopment projects on the Church Street Lot and Pine Street Garage, totaling 1,000+ spaces.
    - Should the garage portion of the new development on the Church Street Lot not be built, we assume either the capacity of the Pine Street Garage would be increased from approximately 660 spaces to 1,060 spaces, or a second garage would be built to support future demand. Concerning a potential 1,060-space structure, Walker observes that parking patrons navigating garages more than seven levels in height may experience "parking fatigue."
- The net municipal parking supply is expected to be 1,332 spaces.
- Based on survey day conditions, a public off-street parking shortage is expected during weekday conditions. If the DaVinci City is not developed, the overall study area is still expected to experience a small parking shortage, primarily in the downtown zone.
- During design conditions, significant public off-street parking shortages are expected on both a weekday and a Saturday, primarily in the core and downtown areas.
- If the DaVinci Science Center is not developed, a deficit is only expected during peak weekday conditions.
- To meet design day parking needs, a minimum of 714 additional municipal off-street parking spaces are needed on a weekday.
    - However, we recommend the City consider how often design conditions are expected to occur before pursuing a structured parking solution of any size.
    - Design day conditions are predicated on occupancy of the Pine Street Garage nearing capacity, but Walker could not confirm the number of times this event occurs. Unfortunately, Walker received monthly parking volumes, but not daily figures.
    - If design conditions occur only a handful of times a year, the City could consider developing a smaller structure and an alternative management plan for days with higher activity.
    - We typically recommend planning for 85th percentile level of activity rather than designing for the absolute peak. In this case, the 85th percentile may represent a day when the garage is 50% or 75% occupied.

03 Operations

CITY OF EASTON PARKING OPERATIONS

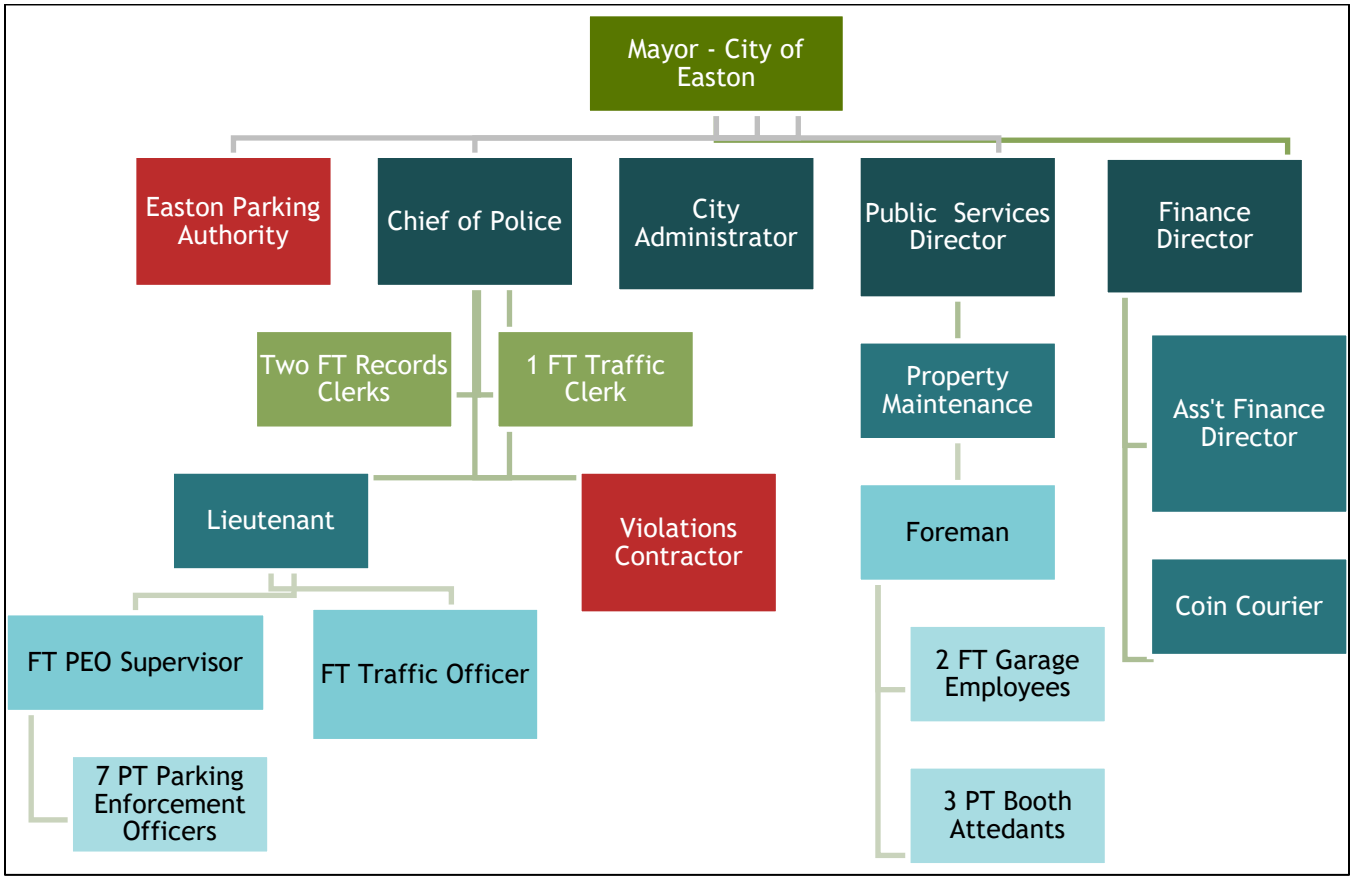
This report will address the following components of the on-street and off-street parking operations for the City of Easton. Existing conditions are described, as are recommended modifications to the existing operating plan.

- City of Easton Parking Organization
- Description of Existing Operations
- Revenue Management and Reporting
- Revenue Control and Technology
- Parking Internet Presence
- Parking Rates and Marketing
- Parking Mix
- Public Outreach Observations
- Organizational Recommendations

CITY OF EASTON PARKING ORGANIZATION

Today, parking-related responsibilities for the City of Easton are divided between several different City departments, including full-time and part-time City employees, plus an outside contractor managing aspects of the violations process and a semi-autonomous Parking Authority, which owns certain parking facilities and administers the parking violations appeals process. A summarized City of Easton Parking organizational chart appears in Figure 11.

Figure 11: City of Easton Parking Organizational Chart



Source: Walker Consultants, 2018

Revenue management and collection, day to day operations, meter enforcement, violations adjudication and reporting are handled by different City departments or outside entities. There is some benefit to this structure, as it creates a level of separation of duties, a critical component of any successful parking operation. However; the decentralized effort, with no single individual monitoring all aspects of the on-street and off-street operations and reporting, can result in a situation where the overall success of the venture is not readily measured as a stand-alone profit and loss center. The key departments, entities and individuals involved in the City of Easton's parking efforts, each with their related tasks are:

- Mayor of City of Easton – The Mayor oversees all City departments, with ultimate responsibility for each department's performance in the off-street and on-street parking areas.

- City Administrator – City Administrator is "second in command" for all departments in the City of Easton, with overall responsibility for the performance of the parking operations.

- City of Easton Chief of Police – The Chief of Police oversees the *parking enforcement* efforts city-wide. Key personnel reporting to the Chief are:

    - Lieutenant with City of Easton Police Department. The Lieutenant oversees the following parking enforcement-tasked employees:

        - The Parking Enforcement Supervisor is a fulltime employee overseeing seven part-time Parking Enforcement Officers.

            - Seven part-time (targeted to work 28 hours per week) Parking Enforcement Officers ("PEO's) handle enforcement tasks including issuance of parking violations (overstaying or not paying meter, parking in handicap space without credential and parking in no-parking zone, etc.)

                - PEO's enforce parking regulations from approximately 9:00 AM to 8:00 PM, seven days a week.
                - One of the seven PEO's handles meter maintenance, including replacement of meter heads where applicable.

        - Traffic Officer – This full-time Traffic officer has responsibility for certain items such as bagging meters, among other tasks.

    - The police department does handle limited revenue-related tasks, including:

        - Sale of City of Easton resident parking permits.
        - Boot-removal fees for cars that have been immobilized due to accrual of more than $200 in unpaid parking violations.

    - The police department *does not otherwise collect parking violations*. Day-to-day parking violations collection is handled by an outside contractor.

- City of Easton Director of Public Services – Day to day *off-street* (Pine Street garage, South Third Street garage and North Third Street lot) parking operations and maintenance of the facilities comes under the Director's purview. His responsibilities do not include parking revenue management or reporting. Key personnel reporting to the Director include:

    - Bureau of Property Maintenance Supervisor – Bureau oversees parking operations in addition to overall maintenance activities.

        - Bureau of Property Maintenance Foreman reports to the Supervisor. The following employees report to the Foreman:

- Two full-time parking employees, both of whom are members of AFSCME union Local 447. Key tasks of these two individuals include off-street parking facility maintenance and cash transport from the facilities to City Hall.

- Three part-time booth attendants, all of whom handle onsite parking cashiering activities at the Pine Street garage only, between them covering a scheduled 1:00 PM to 6:00 PM shift daily, seven days a week. The booth attendants collect parking fees and handle the onsite daily reporting associated with fees paid *at the booth* only.

- City of Easton Director of Finance – The Finance department processes all off-street and on-street parking revenue and enters all parking-related revenue and expense transactions in the City's general ledger system. The key individuals reporting to the Director of Finance regarding parking are:

    - City of Easton Assistant Director of Finance – The Assistant Director of Finance administers all parking revenue and expense reporting, including cash and credit revenue and all incurred expenses, and ensures that funds are stored while awaiting courier pickup (for on-street meter revenue) or police department-escorted employee delivery to the bank (for off-street parking revenue.)

    - One full-time cash collection employee, who removes all coinage from meters between once and twice weekly and delivers such revenue to a deposit room in City Hall, from which it is later picked up, counted and deposited in the bank by a contracted armored courier service.

- Violations Administration Contractor – The City of Easton utilizes an outside contractor to administer back-office and violations management components for its on-street meter parking operations. This firm is under contract with the City of Easton to provide Easton's PEO's with hand-held violations units and Bluetooth printers, utilized to write tickets when parkers do not comply with stated parking regulations. Additionally, the company collects the payments for such violations, remitting to the City all violations revenue collected net of its approximately $4.00 *per ticket* processing fee.

- City of Easton Parking Authority – Easton has in place a five-person semi-autonomous parking authority with defined responsibilities, including:

    - The Parking Authority owns the two above-ground parking facilities and leases such garages back to the City.
    - The Parking Authority handles "first-level" adjudication of parking violation appeals, hearing such appeals in person at its once-monthly board meeting.
    - The Parking Authority *does not* play a role in the day-to-day off-street or on-street parking operations, nor does it have revenue reporting or similar responsibilities.

DESCRIPTION OF EXISTING OPERATIONS

OFF-STREET GARAGES AND LOTS

The City of Easton's Department of Public Services Operates the following parking facilities:

PINE STREET GARAGE

This 569-space above ground parking facility was built in approximately 1970. The self-park garage serves local businesses, residents and attractions, including the Crayola Experience, which is a significant demand generator throughout the year and particularly in the summer when schools are out of session. Crayola has a pedestrian entrance on Pine Street, immediately across from the garage, making this an ideally situated parking facility for visitors to that attraction.

The Pine Street garage is outfitted with an outdated WPS parking access and revenue control system ("PARCS"), the functionality of which is detailed in a different section of this document. Daily parking patrons are issued a time and date-stamped bar-coded parking ticket by the automated entry station. Patrons then park in one of the above-ground lined parking spaces. Parkers are instructed to bring their ticket with them and to pay for parking at the ground level automated pay station, prior to returning to their car. The pay station accepts cash and credit card payments. Additionally, Pine Street is staffed with a booth attendant seven days a week, from approximately 1:00 PM to 6:00 PM, enabling patrons to pay for parking without using the pay station.

Hourly parking fees for cars entering the facility prior to 5:00 PM are charged based on length of stay. Current *daily parking* rates are:

- $3.00 per hour for cars entering from 5:00 AM to 5:00 PM
- $1.00 flat fee for cars entering after 5:00 PM and exiting before 5:00 AM
- $24.00 daily Maximum rate
- $50.00 is charged to patrons who lose their parking ticket.
    - The "lost ticket" rate is designed to remind patrons to save their parking ticket. Lost tickets need to be much more the exception than the rule, as some unscrupulous parking customers will park for multiple days, then claim they lost their ticket, hoping to exit the garage for a single day's parking fee *or even less.* Lost tickets are even more problematic when there is no employee on duty in the cashier booth, when a parker may need to call the police department non-emergency number to be let out of the garage, as the ticket is needed to vend the exit gate.

A limited number of Monthly Contract parkers use the Pine Street garage. Monthlies pay $70.00 per month (unless part of an authorized discounted group account.) Monthlies access the garage entry/exit plazas by scanning their proximity access card at the card readers, one of which is in every entry or exit lane.

There are very few "validated" rates offered at the Pine Street garage. Based on WPS transaction reports provided to Walker for review by the City, the most popular rate in terms of car volume is the $1.00 "after 5:00 PM" rate.

The condition of the Pine Street garage is lacking, the prevailing opinion being that the garage is reaching the end of its useful life. The City is considering potential next steps concerning the garage, including soliciting public-private-partnership ("P-3") development proposals for replacement of the facility, possibly with a retail/parking mix.

Although the PARCS equipment is not fully consistently functioning, the City recently installed a new Parking Logix facility vehicle-counting system, providing visible indicators to the parking public as to space availability at any given time.

Walker observed the facility to be no more than 41% full during our September 2018 off-season occupancy study.

Parking rates, advertising and operating procedure recommendations are addressed further in subsequent sections of this document.

SOUTH THIRD STREET GARAGE

The South Third Street garage is a 332-space self-park facility adjacent to Easton City Hall. Opened in 2015, the facility is part of an intermodal transportation development, with the Easton bus terminal occupying the ground floor of the garage.

Whereas the Pine Street garage benefits from visitor parking demand generated by Crayola, daily parking demand at South Third Street is marginal, with much of the occupied spaces being utilized by monthly parkers. Walker observed the garage to be no more than 35% full during our recent off-season occupancy study. The City anticipates that future area developments, including the Heritage Lanes project, across South Third Street from City Hall, will generate additional parking demand. South Third Street will almost certainly benefit should the Da Vinci Science City project come to fruition in the Days Inn property, immediately south of the garage.

South Third Street shares the WPS PARCS with Pine Street, and the systems unfortunately do not function separately when needed. Thus, functional problems with the Pine Street PARCS equipment has caused the South Third Street garage system to be out of order multiple times in recent months. Given that daily parking demand is light, and the garage is not typically staffed with cashiers, parking gates have been raised into the "up" *inactive* position, allowing patrons to park free in those circumstances.

Hourly parking fees for cars entering the facility prior to 5:00 PM are charged based on length of stay. Current *daily parking* rates are:

- $2.00 per hour for cars entering from 5:00 AM to 5:00 PM
- $1.00 flat fee for cars entering after 5:00 PM and exiting before 5:00 AM
- $16.00 daily Maximum rate
- $50.00 is charged to patrons who lose their parking ticket.
    - The "lost ticket" rate is designed to remind patrons to save their parking ticket. This is even more critical than as applies with Pine Street, as there are no cashiers scheduled each week at this garage. Thus, every lost ticket transaction requires involvement from City Hall employees, who can observe the garage exit via video, or the police department, who must be called by telephone.

Monthly parking is available at South Third Street for $70.00 per space per month, with discounts provided to authorized group accounts as noted. Today, about 40 City employees park monthly in South Third Street. Pomeroy and the Express-Times rent a combined approximately 150 spaces at a discount of $5 from regular rates.

Signage advertising parking availability and/or parking rates is *not displayed* to the parking public at the South Third Street garage. Rate signs are posted at the ticket dispenser (at the top of the entrance ramp – not visible from the street.)

Parking rates, advertising and operating procedure recommendations are addressed further in subsequent sections of this document.

SPECIAL EVENT PARKING

Special Event parking procedures are employed at both garages, and at the "Days Inn" lot, located immediately south of City Hall, on an event-specific basis.

Special events are handled two ways in the Easton parking facilities, as follows:

- State Theater Events – Major events at the State Theater can bring up to 300 cars into the Pine Street garage. Understanding that processing transactions at the pay station or in the exit lane will be problematic post-event, the City encourages patrons to prepay at the ground level cashier booth after parking but before walking to (or taking a shuttle to) the theater. Patrons are provided with a receipt after paying.

  After the event, parking personnel are posted at the garage exit. Patrons are asked to show their payment receipt as they approach one of the cashier booths, and the garage personnel immediately open the gate. Monthly parkers scan their passes as usual. There is likely some loss of revenue as the garage employees will lean towards keeping the traffic flowing uninterrupted.

- Major City-Wide Events (Garlic Fest, Bacon Fest) - Special Event procedures dictate collection of the applicable parking fee *in advance*. City personnel are posted at one or both garages (and/or lot, as applicable) entrances, collecting a $10.00 flat rate for city-wide events such as the Garlic Fest and the Bacon Fest. Tickets are issued to for each transaction after patron pays the special event fee, such that the revenue reconciles with the number of cars parking in the garage, and the exit gates are raised to expedite egress.

  In the case of both State Theater events and city-wide events, monthly parkers run the risk of being "out of sequence" with the PARCS equipment's "anti-passback" controls if they exit the facility without scanning their proximity card credential. "Anti-passback" requires access cards to be used in the right order (i.e. used to enter the garage and then exit the garage, but cannot be used to drive out of the garage and then exit again without coming back in first, etc.) Any monthly who leaves in this manner will find that they cannot enter the garage the next day because the card use is out of sync. The City's parking staff are resetting the monthly parkers' "status" after each major event to mitigate the risk of a monthly being locked out.

  If monthly parker status is not reset after events, a potential result is that monthlies may take a ticket to get back in (since the PARCS thinks they are *still in the garage*) and then use the card as usual to exit. The ticket is disposed of in most of these cases, resulting in a growing inventory of "missing" tickets – ones that were issued and never processed as part of an exit transaction. Missing tickets can be indicative of a problem with revenue control.

CITY-OPERATED SURFACE PUBLIC PARKING LOTS

- **North Third Street Lot** - The City owns and operates a 71-space surface parking lot on North Third Street, on the site of what was the Boyd Theater until the 1970's. The 45-space rear portion of the lot is monthly card access-only (and managed by the City.) The section of the lot that fronts along North Third

Street is controlled by single-space parking meters, and is thus enforced by the police department, as all meters are part of the "on-street" parking operation procedurally. There is a ten-hour limit for parking on the 26-space metered portion of the lot.

The monthly parking portion of the surface lot is controlled via use of a card access system. The monthly parkers are invoiced along with the garage monthlies by the Orchard accounts receivable system.

From a square footage perspective, this property is an attraction option for a future parking garage development.

- **North Fourth Street Lot** - The City owns and operates an approximately 56-space surface lot on at the corner of 4th and Church Streets. This site, which extends from Fourth Street to N. Bank Street, has been identified as a potential development site for a new garage, as it is located close to Northampton Street and the Crayola Experience. Requests for proposals have been issued and received from developers interested in pursuing this site as a public-private partnership. There is a ten-hour time limit for the Fourth Street lot.

- **Additional City-Owned Public Parking Lots** - The City owns and operates a 19-space four-hour meter surface lot on South Third Street, across the street from the Pine Street garage, and a 26-space ten-hour parking lot on the 200 block of Northampton Street.

Functionally, the metered City surface parking lots are managed as part of the on-street parking system described below. Enforcement, maintenance and revenue collection mirror that of the on-street meter operations described below.

ON-STREET PARKING OPERATIONS

The City operates approximately 600 to 700 IPS digital single-space parking meters that accept quarters, credit cards and the MobileNow! app for payment. Meters are located primarily on core downtown Easton Streets but are also installed in the surface parking lots described previously. The digital meters replaced coin-only meter heads previously employed on the City streets and lots and were a great value when purchased, as IPS provided the $500 to $600 units for the cost of shipping only. Existing meter poles were reused.

Parking meter rates are typically $1.00 per hour, with time limits ranging from 15 minutes (at four meters located immediately on Center Square) to ten hours (on the City surface lots and less central on-street blocks). Most of the metered on-street spaces feature two or three-hour parking time limits, the shorter time limits designed to encourage turnover of spaces located near commercial and retail demand generators. Major tasks associated with the meter operations includes:

- **Enforcement** - Parking regulations relating to the on-street and off-street parking *meter operations* and are enforced by the City of Easton Police Department. Enforcement hours are approximately 9:00 AM to 8:00 PM, seven days a week. The previously-detailed team of seven part-time Parking Enforcement Officers ("PEO's") monitor the meters city-wide and issue parking violations as applicable. PEO's issue tickets not only for meter time-limit non-compliance but also for parking in no-parking zones, in handicap spaces without credentials, parking too close to corners and near fire hydrants, etc. PEO's enforce *not only metered spaces* but also non-metered on-street spaces.

The City employs the services of a subcontracted firm to assist in the administration of parking violations processing, to provide resources and to handle certain tasks fundamental to the on-street parking management effort. The subcontractor provides the City hand-held violations units, with Bluetooth printers. PEO's issue violations and place physical tickets on vehicle windshields. Infraction-specific violations data is then uploaded to the contractor's software platform. The subcontractor then collects all payments due and remits those amounts to the City, net of an approximately $4.00 per-ticket processing fee as reported by the City. The hand-held units and the software platform are the property of the violations administration firm. If the City ever decided to terminate its relationship with the subcontractor, the hand-held units and any associated equipment would be returned to its owner. The City must maintain a certain volume of violations to maintain the current per-ticket processing costs.

The police department places vehicle immobilizers ("boots") on cars if a vehicle owner accrues $200 or more in unpaid violations. Although the violations administration firm collects violations revenue, the police department collects the boot removal fee prior to releasing the vehicle. The police department employs three full-time clerks (two are designated as "records clerks" and the other is a "traffic clerk", but there is crossover between these employees' tasks.) The clerks have multiple responsibilities, many of which are not related to parking violations, but they handle the administrative end of parking-related citations in the police department's office. Easton *resident* zone-specific parking permits are also sold via the police department, at a cost of $100 per permit.

The City reports that it issues approximately 2,500 to 3,000 violations monthly. Based on the previously noted approximate per-ticket cost, it is estimated that the City could spend about $132,000 annually for the violations subcontractor "per violation" services. The Easton Chief of Police reports that about 50% of violations are written by a single PEO, and that most of this individual's tickets are written during the evening hours. Additionally, he notes that a successful parking violations process achieves a balance between diligent enforcement and flexibility.

About $2,000,000 is collected annually in combined meter and violations revenue.

- **Revenue Collection** - Although the police department handles enforcement tasks as described, the City's Finance Department manages collection of meter revenue, including accounting for credit card revenue and MobileNow! phone-app payments. The coin collection courier, who reports to the Department of Finance Director, is responsible for removing the coin cannisters from the meters and for transporting such to City Hall. The contents of meter-coin cannisters are deposited into a larger wheeled cannister for transport. The coin courier typically picks up the money alone, without a security escort. The coin cannister is brought to the Department of Finance. The coin courier then brings the cannister into a secured room and transfers the coins out of the cannister into coin bags. The bags are kept in that storage area until the armored courier company picks them up, once or twice weekly, volume dependent.

  The armed courier company signs for the bags that they are removing, and they bring the coin bags to their remote facility, where they count the revenue, after which time they transport it to the bank.

  The revenue collection process is discussed in more detailed in the Revenue Collection and Reporting section of this document.

- **Meter and Parking Space Maintenance** – Although the volume of coin collection is reducing and being offset by growth in credit card and Mobile-Now! payments, periodic maintenance of the units is necessary. One of the Police Department PEO's is adept at meter maintenance, removing malfunctioning meters from poles and installing working units in their place. The City's Department of Public Works otherwise maintains the parking spaces, repainting them and replacing signs as needed.

RECOMMENDATIONS

- **Meter Operations** - Walker provides recommendations below concerning cash counting and revenue security. In general, the meter operations procedure is sound, with strong separation of duties (one department enforces and maintains the meter heads, once department handles cash and one department maintains the parking spaces and signage). Meter enforcement appears to be rigorous without being overbearing. Walker's recommendations regarding meter operations are limited to cash handling procedures and security, detailed below.

- **Parking Garage Operations** – Walker details recommendations concerning multiple facets of the off-street parking facility operations later in this report, including:

    - Security and cash handling
        - There are gaps in the cash handling chain of custody, as well as general security concerns.
    - Parking access and revenue control equipment ("PARCS")
        - The existing PARCS has very limited features and functions poorly, with frequent outages.
    - Parking rates
        - Monthly and meter parking rates are in line with comparable local cities, but daily rates in the Pine Street garage in particular exceed average rates in three Pennsylvania cities surveyed.
    - Marketing and advertising
        - Onsite garage rate advertising is not in place.
        - Internet attraction-based links, enabling tourists to pre-purchase parking via links on the attraction web site are not in place.
    - Parking mix
        - Occupancy of the facilities is on the average low *during the off-peak season*, but parking mix becomes a more critical issue as new attractions and demand generators come on line.
    - Internet presence
        - The City's parking web site is not intuitive and lacks user-friendly features.
    - Signage and wayfinding
        - On-premise signage is addressed in marketing and advertising section.
        - City-threshold-located facility parking availability signs can be considered.

    The parking garages are partially automated. Replacement of the existing PARCS will enable the City to benefit from more modern parking technology, including not just fully automated parking revenue collection but internet-based advance parking ticket sales, and comprehensive transaction-level real-time management reporting.

REVENUE MANAGEMENT AND REPORTING

TRANSIENT PARKING REVENUE

Transient parking garage revenue is handled as follows:

1) The parking booth attendant in the Pine Street garage deposits his or her collected funds, in a cash envelope, into a *combination safe* located in the office of the Pine Street garage, at the end of each work shift. The attendant also prints a shift report from the WPS parking system, which shows total revenue per ticket collected, including not just what was collected at the booth but also what was generated in the pay-on-foot machines. Additionally, he or she produces a manual report showing what was collected at the booth during the shift.
2) Two full-time parking employees empty the combination safe in the Pine Street garage and bring all collected funds back to the Department of Finance, where the parking garage revenue is stored in a locked closet under video surveillance.
3) Deputy Director of Finance Rebecca Dilts and the two full-time parking employees empty the automated pay stations at both the Pine Street and South Third Street garages between once and twice a week, parking demand-dependent.
4) Revenue is subsequently counted by Finance Department personnel, and then brought to the bank at least weekly, by one of the fulltime parking employees and a police escort, for safety.
5) Credit card revenue is accounted for on daily WPS reports, and the Department of Finance confirms such numbers with Nationwide Payments System, the credit card processing company handling Easton's credit card parking revenue.
6) Finance Department personnel enter all revenue totals (cash, credit card, MobileNow! app, check or other) in the City's Revenue Management System ("RMS"), for accounting purposes.

MONTHLY PARKING REVENUE

Monthly parking garage revenue is handled as follows:

1) Monthly parkers are invoiced through the City's *Orchard* accounts receivable system.
2) Patrons pay online via ACH or automatic debit of credit cards, or by check via the mail or in person at the front window of the Department of Finance. Patrons can pay by cash at that same customer service window.
3) Monthly parkers are invoiced by email on the 7th of the *prior month.* The WPS parking system in place at the garages is set up to automatically deactivate monthly parking access if the account is still unpaid by the 7th of the current month, when the billing takes place for the following month. Monthly parking revenue is posted manually to the City's RMS system. There is no interface between Orchard and RMS.

METER REVENUE

1) Parking meter revenue as noted is delivered in a wheeled coin cannisters to City Hall, where it is kept in a locked cabinet until removed from Dunbar at the end of the week. Unlike the garage cash storage vault, the may be no camera in the coin vault room.
2) The parking revenue agent who delivers the coin cannister to the coin storage vault does not sign any document to verify the amount of money being delivered to the vault.
3) Dunbar signs for the number of coin bags their firm picks up each week,

CONSOLIDATED REPORTING

There is no consolidated "parking-only" profit and loss statement for either the parking meter operation, the off-street parking garage operation, or the combined overall parking venture. Parking revenue line items exist in the City's overall P&L reporting structure. Parking-related expenses are combined with other City expense line items. As noted, different departments, including the Public Services, Finance and Police departments each play distinct roles in parking's day to day operation. Analysis of Parking's profitability versus budget expectations or prior period results would require digging deep into City-level financial reports and creating custom reports.

Further complicating matters;

1) All credit card revenue for the two garages is reported as Pine Street garage revenue. South Third Street shows no transient credit card revenue, although most or all daily revenue collected in that facility is credit card.
2) All Special Event revenue (generally $10.00 per car and collected in advance for Garlic Fest and Bacon Fest, etc.), even though much of it is collected in the Pine Street or South Third Street garages, appears in its own non-location-specific revenue "bucket."
3) The WPS parking system activity reports, including system-generated reports of car volume by rate, by hour and by day, etc., do not appear to be accurate, as different WPS reports show different car volume totals for the same month. This matter is addressed further in the section of this report detailing the parking access and revenue control system ("PARCS") and its capabilities and shortcomings. Thus, today the WPS reports cannot be counted upon to be a "one-stop shop" to measure parking performance.

Rebecca Dilts reports that, despite these location-specific reporting concerns, the City's parking operation has performed well in recent annual audits.

RECOMMENDATIONS

Walker makes the following recommendations regarding revenue management and revenue and expense reporting for the City of Easton parking operations:

1) **Profit and Loss Reporting** – As noted, Easton's parking revenue and expense reporting is difficult to assemble into a consolidated report of the system's performance. Thus, performance-based operational changes may end up being made based on intuitive decision-making. Understanding that the City has its own reporting system, within which Parking occupies several revenue and expense line items, it is suggested that a P&L format be developed for parking. The developers of the City's RMS may need to be consulted, as would the City's IT department, but a reporting structure as described below would be intended to consolidate reporting while creating and maintaining improved visibility of each component of the system's performance:

a. Proposed Reporting Framework

i. Consolidated P&L, with all revenue and expense items coded to parking, including the following reports:
   1. *Non-Metered Parking Facilities* revenue and expenses
      a. South Third Street garage – full revenue and expense report
      b. Pine Street garage - full revenue and expense report
      c. North Third Street Monthly Lot – full revenue and expense report
      d. All Three Facilities - consolidated
   2. *Parking Meters* (and all off-street metered location) consolidated revenue and expenses
      a. Meter operations full revenue and expense report, with:
         i. Meter revenue, violations revenue (via violations management subcontractor's reporting and police department collections)
         ii. Police department expenses
         iii. Department of Finance expenses
         iv. Department of Public Services expenses
         v. Net Income – Meter Operations
   3. Full consolidated P&L, combining all on-street and off-street operations and associated expenses, on a line-item-specific basis
   4. P&L Revenue Categories should include:
      a. Transient revenue
      b. Monthly parking revenue
      c. Meter revenue
      d. Other revenue
      e. Write-offs / adjustments
      f. Total revenue
   5. Backup for monthly reporting should include:
      a. Revenue Summary report (all revenue sources combined, each day)
      b. Summary of Postings showing:
         i. Payroll labor distribution
         ii. General ledger
   6. Variance reporting
      a. MTD and YTD Performance vs. budget
      b. MTD and YTD performance vs. prior year
   7. Accounts receivable report
      a. Monthly parker A/R aging report, by customer
      b. Validation parking A/R, by purchasing entity

Please see Figure 12, detailing a potential profit and loss statement format:

Figure 12: Potential Profit and Loss Statement Format

Garage XYZ - Monthly Statement	MTD October 2018	MTD October 2017	Variance MTD	YTD October 2018	YTD October 2017	Variance YTD
Revenue						
Monthly Revenue			0.00	0.00	0.00	0.00
Transient Revenue			0.00	0.00	0.00	0.00
Special Event Revenue			0.00	0.00	0.00	0.00
Total Revenue	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**
Expenses						
Payroll			0.00	0.00	0.00	0.00
Payroll Taxes			0.00	0.00	0.00	0.00
Worker's Compensation			0.00	0.00	0.00	0.00
Medical Insurance			0.00	0.00	0.00	0.00
Total Payroll Expenses	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**
Credit Card Commission			0.00	0.00	0.00	0.00
Payroll Processing			0.00	0.00	0.00	0.00
Liability - Insurance			0.00	0.00	0.00	0.00
Security Systems			0.00	0.00	0.00	0.00
Telephone			0.00	0.00	0.00	0.00
Repair & Maintenance			0.00	0.00	0.00	0.00
Garage Supplies			0.00	0.00	0.00	0.00
Printing Supplies			0.00	0.00	0.00	0.00
Tickets			0.00	0.00	0.00	0.00
Loss & Damage			0.00	0.00	0.00	0.00
Advertising			0.00	0.00	0.00	0.00
Licenses & Permits			0.00	0.00	0.00	0.00
Online Discounters Fee			0.00	0.00	0.00	0.00
Dues & Subscriptions			0.00	0.00	0.00	0.00
Billing & Postage			0.00	0.00	0.00	0.00
Bank Charges			0.00	0.00	0.00	0.00
Elevators			0.00	0.00	0.00	0.00
Property Taxes			0.00	0.00	0.00	0.00
Depreciation			0.00	0.00	0.00	0.00
Total Other Expenses	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**
Total Expenses	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**
Net Available Income	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

Source: Walker Consultants, 2018

Ideally, the existing RMS reporting structure allows for development of cross-departmental reporting as described above.

Such reports would be produced monthly, with periodic review sessions involving the involved departmental leaders to ensure that the City's combined parking operations are meeting or exceeding stated goals.

The capabilities of the existing PARCS format are addressed later in this document. Walker advises that reporting changes be reviewed holistically prior to deployment. Revenue or expense management tasks that are being completed manually today due to the PARCS or other system limitations should be reviewed. Implementation of 21st Century technology to improve controls and streamline operations should be prioritized.

2) **Cash Handling Procedures and Security -** Walker observed that the City has in place significant separation of duties and security initiatives in its on-street and off-street parking operations, which is very positive. However; there are gaps in some of the controls as relates to cash handling that should be considered, as follows:

   a. *Cash Transport Security* - The City may want to consider bringing in a Security consultant to advise on cash handling and storage procedures in place at the Department of Finance. Walker can only advise from a parking perspective, but makes these parking-related cash security observations:

      i. *Video Surveillance at Pine Street Garage* – Today, the exit lanes at the Pine Street garage are outfitted with video cameras, but are only observed in the parking garage office, whereas most other video feeds for both garages are digitally recorded in the City Hall IT room. Pine Street should be similarly watched. An unscrupulous employee or customer could take advantage of this lack of centralized monitoring.
      ii. *Office safe at Pine Street garage* – The City is very diligent about ensuring that at least two people are involved in every money pickup. The existing safe is combination-only, which means that open individual could go in there and open the safe. The City may want to consider converting this to a key safe, or key and combination, such that no one can open it without the proper authorization.
      iii. *Meter Coin Transport* – The individual who is emptying the meter cannisters in the field should be accompanied by another employee, who can watch the surrounding areas while the revenue agent retrieves the coins.
      iv. *Drop logs and cash pickup sign-off at Pine Street garage* – Logs should be in place at each garage, which booth attendants should complete whenever dropping money. Each money drop should be witnessed by a second person if feasible. Cash pickup personnel should then sign off on removal of each drop. Numerically sequenced cash drop envelopes are recommended, such that drops are signed for (and picked up) on an envelope-specific basis.
      v. *Cash Pre-Drop Procedures* – Today, booth attendants make one single cash drop at the end of their shift. A system of periodic drops (every $500 collected, for example) should be implemented, to reduce loss in the event of a robbery.
      vi. *Drop logs (both garage and meter cash storage)* – Drop logs should be in place for any cash deliveries made to the department of finance, whether from meters, garage pay stations or the Pine Street garage safe. These drops should be witnessed, in writing. Similarly, any removals of cash for bank drops should be logged and witnessed.

1. Dunbar currently signs for removal of coins for counting and banking, but this is not in place regarding the off-street parking revenue.

b. *Department of Finance Security* – Walker observes that the current cash storage plan in place may create undue risk for the City and its employees. Today, cash is stored for up to a week at a time in locked storage vaults within the department. Vault doors are locked. The off-street revenue vault is monitored by video, but the meter storage vault *is not video monitored*. The front window of the department is not bullet-resistant, creating a potential weak link in the security of the office. Parking revenue is being counted in the front of the office, where all activity is under video surveillance but as noted the glass window could be compromised.

   i. *Courier Safes* - At a minimum, two-key safes (also called courier safes) could be utilized for all cash storage onsite. The City would keep one key onsite and the armored cash courier would hold the second key. Access to cash in the vault would be thus severely curtailed, potentially lessening the risk of loss.

   ii. *Onsite Money Counting* - Today, Dunbar picks up and counts all meter coinage, but the City counts and deposits all off-street parking revenue. The City may want to consider handing off the cash counting responsibilities to Dunbar for the off-street facilities as well. Then, no secure cash counting space is needed in the office. A secured vault/closet, monitored by video, equipped with a two-key courier safe, is recommended to minimize the risk of loss. City employees would be able to make logged cash drops into the courier safe, but they would not be able to open it without the armored courier present.

   If money must be counted onsite, the preferred scenario includes establishing a secure money counting room, with no windows, monitored by cameras. Two people would work together, witnessing and verifying each other's work.

Walker advises that the City consult a security professional to further review this matter.

REVENUE CONTROL AND TECHNOLOGY – GARAGES

PARKING ACCESS AND REVENUE CONTROL ("PARCS")

The City utilizes a WPS parking access and revenue control system ("PARCS") at the Pine Street and South Third Street parking facilities. The system, which is housed in the Pine Street garage but also serves the South Third Street facility, is approximately 11 years old, although the components deployed in the South Third Street facility were installed in 2015.

The garage entrances are controlled by the following PARCS components:

1) Parking barrier gates
2) Barcode ticket dispensers
3) Free-standing proximity card readers (for monthly parking)

Garage exits feature the following equipment:

1) Parking barrier gates
2) Barcode exit verifiers
    a. Third Street garage exit verifier allows for in-lane credit card payment
3) Free-standing proximity card readers
4) Parking booths with cashier workstations (although only Pine Street garage booths are regularly manned)

There is an automated parking payment ("pay-on-foot", or "POF") station on the ground floor of each garage. Customers are informed to pay for parking at a POF before returning to their cars.

Parking patrons can pay the POF, can pay directly in the lane (at the South Third Street garage only) or can pay the Pine Street booth attendant, which as noted is on site from 1:00 PM to 6:00 PM daily.

If a patron attempts to leave the garage after the Pine Street booth attendant has left for the day, and has lost his or her ticket, or for any reason cannot achieve automated egress from the garage, instructions are provided to call the Easton Police Department non-emergency number. A police vehicle will be dispatched, and in many cases the gate is raised for exit. Officers are not instructed to collect parking fees. Similarly, if a patron cannot exit the South Third Street facility they are instructed to call the police department for assistance. In many cases, City Hall employees can be dispatched to address the situation in that garage, as City Hall is right next door and the garage is monitored by video cameras.

Walker has observed that the PARCS system for the combined two-garage operation is unreliable, with gates being raised due to PARCS malfunctions regularly.

Our firm recommends replacement of the WPS system (*once the future of the Pine Street garage is settled upon and/or a new parking facility is built on Fourth Street or elsewhere*) with a more modern platform, one that will be not only consistently functional but will offer the following desirable features *at the minimum*:

1) Barcode ticket dispenser with scanner for prepaid parking reservation vouchers and mobile phone QR codes. This will enable automated acceptance of prepaid parking transactions and e-validations from local business and retailers.
2) PCI-DSS-compliant acceptance of credit card transactions, with future EMV (Europay) capability. This will ensure that the latest credit card data security standards are in place for parking transactions.
3) Ticketless credit card and prepaid parking voucher "in/out" transactions.
4) Dashboard reporting, including mobile apps, allowing the City to monitor parking volume and revenue results on a real-time 24/7 basis. Example reports include:
    a. Transient and monthly occupancy by hour
    b. Transient and monthly occupancy by length of stay
    c. Transient and monthly occupancy by day of week
    d. Tickets by rate
    e. Exception transactions (lost tickets, split denomination tickets, etc.)
5) Advanced intercom capabilities, enabling the police department or remote manager as designated to address situation (even collecting remotely for a lost ticket or for an unpaid monthly parking account) and open the barrier gate as needed, without having to dispatch a patrol car to the garage.

6) Access control system, utilizing proximity card access or RFID (radio frequency identification – like EZ Pass) credentials, with anti-passback capabilities.
7) Integration with local attractions (Crayola Experience, future Da Vinci Science City), enabling patrons to purchase parking while buying tickets for the attraction. This would be done by installing a button on the attraction's web site. Patrons would click on that link and would be brought to a second web site through which they can securely purchase parking.
8) Validation system, enabling local businesses to validate patrons' parking, including full and partial validations of physical parking tickets and rate modification via mobile QR codes.
9) Facility counting system, with exterior display signage to inform the parking public of space availability on a garage-specific basis.
    a. This same parking availability information would be available to the parking public via a web app, to be developed, enabling a patron to be directed to the desired parking facility in downtown Easton.

Walker can assist the City at the appropriate time, as an additional service, with development of site-specific specifications for the above-noted PARCS equipment and can administer an RFP process, evaluating RFP responses and providing detailed comparisons for the City's review and consideration.

PARCS is a rapidly changing technology area, and so any RFP process would consider practical improvements over today's leading systems that develop over the upcoming period. PARCS is becoming less dependent on specific hardware systems and more based on software systems that can integrate with different hardware platforms. This trend is expected to continue and even to accelerate.

A key to a successful PARCS implementation is the assurance that the system will be maintained consistently by an available and qualified service company. To that end, Walker advises that the following PARCS equipment platforms are recommended as qualified to submit proposals for a future City of Easton PARCS system. All these companies have well-regarded equipment and a substantial market and service presence in the Philadelphia/New Jersey/New York metropolitan markets, and as such would be suitable for consideration in Easton.

1) TIBA (Precision Technology – Rob Bell, Ambler, PA)
2) Skidada (Jim Meany, New Brunswick, NJ)
3) Amano McGann (Sam Allison, Rockville, MD.)
4) ParkingSoft (Michael Lapidus, Norcross, GA)
5) ZEAG (Mark Buccelli, Upper Marlboro, MD)
6) Designa (David High, Bowie, MD)

AUTOMATED PARKING GUIDANCE SYSTEM ("APGS")

APGS systems are often used to advise patrons of the number of available spaces on a certain level of a parking garage, or even in a specific aisle. They are widely used at airports, where the garages can be vast and the parking patrons unfamiliar.

Although the "level-specific" counting capabilities of an APGS system may not be needed in Easton, it has already been shown that the *Parking Logix* counting system in place at the Pine Street garage is a valuable tool in the patron's parking-decision-making process. Parkers know before even driving into the garage that there are a certain number of spaces available, enabling that customer to confidently proceed into the facility.

Easton has increasingly become a tourism destination. Thus, many parking patrons arrive each day without the benefit of knowing what the available parking options are. To that end, the City may want to consider, in conjunction with establishing where new facilities will be constructed to service new attractions such as the Da Vinci Science City and other future venues, installation of multi-facility space-availability display signage at the primary "thresholds" of the City (perhaps at the bridge over the Lehigh River at the base of South Third Street and/or at the intersection of North Third Street and Bushkill Drive.) Patrons would be advised as to where space is available and would be directed by static signage or phone web apps to the appropriate garage entrances. Please see Figure 13 below, showing examples of such signage:

Figure 13: Multi-Facility Space Availability Sign Examples

Source: Q Free 2018 and Walker Consultants, 2018

Multiple companies provide facility-counting systems and associated signage. Potential suppliers include:

1) Parking Logix (Easton, PA system provider)
2) Q Free (Dave Radford, Sudbury MA)
3) Park Assist (Gary Neff, NYC)

Parking Logix is of course the first that recently installed the new counting system in the Pine Street garage. Park Assist and Q Free are both major providers of APGS-related equipment. Walker has worked with Park Assist and Q Free on multiple projects and can assist with development and procurement of such as system if desired.

Some APGS/wayfinding systems are simultaneously pushing space availability to web apps, advising the parker on his or her phone where spaces are available.

PARKING INTERNET PRESENCE

The City of Easton maintains a *Parking* page on the www.Easton-PA-gov website, addressing subjects such as the location of off-street parking facilities, daily and monthly off-street parking rates, and general garage and lot parking procedures. There is a link on the site to on-street parking-related documents, including the Parking Ticket Appeal Protocol and the 2013 Meter Transition Plan, but otherwise the page deals primarily with off-street parking facilities. Meter rates are not referenced on the web site.

Walker advises that, as Easton formulates its plan for continued growth of the City and increasing tourism, a more robust web site be developed, one that includes the following features:

1) *Facility Details* – Facility-specific web pages should be developed, referencing any attractions or validations that may apply at one facility and not the other. Today, all rates are listed one after the other, for both garages, in the same section of the page. Photos of the parking facilities would enhance familiarity to the parking public.
2) *Parking Payments* – Today, patrons can pay online for parking violations and boot removal fees but cannot sign up for or pay for monthly parking online. It is to the City's and the patrons' advantage to be able to handle the monthly parking signup process, including setting up recurring payments, from start to finish online. The City can perform a final review of the prospective parker's application and can either mail the access card to the parker's home or make the card available for pickup at City Hall.
3) *Internet Parking Advance Sales* – Many periodic parkers would prefer to pay for parking in advance and be issued a prepaid parking voucher or a mobile QR code to access the garage at the prearranged time and date. This creates an improved comfort level on the part of the patron, and the City is paid in advance. This may be heavily used during special events and can be an asset in the traffic management effort. For example, the City could presell the entire Days Inn lot for major City event such as Bacon Fest, and the City then does not have to supply personnel for revenue collection purposes.
    a. Prepaid internet parking reservations can be provided through a web site that the City would develop or can be handled through use of third party parking aggregator websites such as SpotHero.com or ParkingPanda.com. These web sites charge a fee to the property owner (can be 15% of the parking fee but is subject to negotiation) on a per-transaction basis. While there is a cost to the City, participation in the Spot Hero, etc., parking web sales sites exposes the parking system to the more internet-savvy customer base who may choose to pay for parking before driving into town.
4) *APGS Integration* – The enhanced parking web site (and an accompanying parking mobile web app) can interface with the parking counting system, advising patrons where space is available before driving into Easton. If a prospective patron sees that there are only 30 spaces available in the preferred City parking facility, and the ability to purchase parking online is offered to that same patron, he or she may choose to pay in advance.
5) *Customer Service Updates* – The new parking web site can be a forum for the City to keep tourists and the local community informed as to pertinent happenings that may impact parking, such as garage construction, street closures, special events and special offers.

As an example, the nearby City of Bethlehem (population 75,135 as of 2014) has a comprehensive parking web site (www.bethpark.org), addressing many of the factors outlined above, including location-level details, the enforcement appeals process, retailer parking validations and even valet parking. Although the City of Easton's parking system is smaller than Bethlehem's the customer service-focused site maintained by Bethlehem can be a model for an improved Easton web presence.

Likewise, the City of Lancaster, PA (population 59,322) maintains a robust and informative parking web site (www.lancasterparkingauthority.com), providing data on multiple off-street parking facilities and on-street meter operations. Lancaster allows patrons to pay for their monthly parking lease online, in addition to paying for parking violations and residential parking permits. The website also describes retailer validation programs and event parking details.

Allentown PA (population 118,032) maintains the www.allentownparking.com web site, offering detailed information about parking options, including daily parking, monthly parking, validated free parking and pay-by-cell MobileNow! parking.

Although these three Pennsylvania cities are measurably larger than the City of Easton, the functionality of each city's parking web site is indicative of what a municipality of any size may want to expect, as it provides a high level of customer service to the parking patron.

RECOMMENDATION

Walker advises that the City of Easton prioritize development of a new parking web site, one which can be a customer service-focused "one-stop shop" to the greatest extent possible, allowing all user-groups (residents, tourists, commuters and operators of local businesses and attractions) to research parking matters as needed and to pay for parking services online by credit card.

PARKING RATES AND MARKETING

COMPARATIVE PARKING RATES

Walker surveyed the public parking rates listed on the websites not only for the Easton parking facilities but for the following Pennsylvania cities:

- Bethlehem
- Allentown
- Lancaster

Walker makes the following observations regarding parking rates *when comparing Easton's rates to the subject cities*:

1) *Parking Meter Rates and Time Limits* - Easton's on-street (or metered lot) meter rates are in line with the comparative cities. The $1.00 per hour rate and time limits including *two-hours* (Center Square area, promoting fast turnover of spaces), three-hour (most of core CBD, less demand for turnover) and ten-hour (peripheral metered lots and spaces, minimal turnover required) make sense as is. **No change recommended.**

2) *Pine Street and South Third Street Garage Daily and Monthly Rates* –

   a. *Monthly Off-Street Rates* – Monthly parking rates for the Easton garages ($70.00 for an individual parker, discounts offered for groups) are in line with comps, with the and surface parking lot rate ($55.00) being slightly higher than comparable cities. **No change recommended for monthly parking rates at this time.**

b. *Annual Resident Permit Rates* – Bethlehem, Allentown and Lancaster charge a range of $10.00 to $30.00 annually for resident permits. At $100.00 annually, the Easton resident parking rates are far higher than the comparable cities. The City would need to decide if the $100.00 annual rate places an undue burden on its residents. **If revenue generation is the priority, no change is recommended at this time** as any lowering of the annual permit rate would likely have a considerable impact on the City's revenue stream.

c. *Daily Garage Rates* – The daily parking rate structure at the Pine Street garage in particular is **not in line** with comparable (in fact larger) area cities. Pine Street garage rates, at $3.00 per hour with a $24.00 daily maximum rate, are the highest in the market. For comparison, Allentown and Bethlehem charge $1.00 per hour for parking and Lancaster charges $2.00 per hour, with daily maximum rates of $10.00 and $15.00 respectively.

   The best way to compare the current rate structure to potential alternative rates is to analyze statistical historical reports. To that end, Walker reviewed the WPS transaction reports provided by the City for January 2018, to understand how the listed rates translate into car volume and revenue. The reports, however, do not appear to consistently reflect fully accurate data.

   It is apparent that that the $1.00 flat rate for evenings after 5:00 PM was by far the most popular rate during the month studied, with 29% (2,073 $1.00 tickets out a total of 7,141) of all patrons paying $1.00. It is arguable that this rate is too low, and that the market could easily withstand an increase to $2.00, especially given that the City deploys manpower to collect parking fees in advance for State Theater events.

   Walker is not able to advise, based on information received to date, if a modification of the daily parking rates for the garages would negatively affect the City's cash flow. Intuitively, however, we believe it would affect revenue negatively, as a measurable percentage of the Pine Street garage daily parkers are visiting the Crayola Experience, which attracts many tourists and first-time parkers, user-groups likely to be more concerned about proximity to the attraction than the applicable parking rate.

   Our firm recommends that a sampling of the tickets and rates for Pine Street be studied further before any rate change is implemented. Please see Table 14 for a survey of current rates charged and a potential revised rate schedule *for both* the City of Easton's parking garages, based primarily on the comparative city rate survey.

   Based on the comparative rate survey only, the City may want to consider lowering certain hourly parking rates*, if the intent is to be in line with rates charged in other local cities*. Concerning the flat $1.00 evening rate, we have received feedback from members of the local business community, including the State Theater, that the evening parking rate would be a more attractive option if the "start time" was 4:00 PM rather than 5:00 PM, as venue and restaurant employees need to be on duty prior to 5:00 PM. Thus, a revision of the evening rate "start time" and an increase in that rate from the current $1.00 to $2.00, may be beneficial. Please see Table 33. Additionally, the City may want to consider implementing a State Theater Special Events rate, increasing the flat evening rate from the $1.00 currently charged to, for example, $5.00 per car, in order to more effectively cover the additional manpower costs that the City incurs when major theater events occur.

Table 33: Comparative Parking Rates and Potential Rate Structure

Rate Descriptions	Easton Parking Rates				Comparable City Parking Rates			Potential Rate Structure
Off-Street Parking Facilities	Pine St. Garage	So. Third St. Garage	No. Third St. Lot	Meters	Bethlehem	Allentown	Lancaster	Easton Parking System
Hourly Rates								
0-1 Hr	$3.00	$2.00			$1.00	$1.00	$2.00	$2.00
1-2 Hrs	$3.00	$2.00			$1.00	$1.00	$2.00	$2.00
Each Add'l Hr	$3.00	$2.00			$1.00	$1.00	$1.00	$2.00
24 Hr Max	$24.00	$16.00			$10.00	$8.00	$15.00	$16.00
Lost Ticket	$50.00	$50.00					$26.00	$20.00
Special Rates								
Evening Rate (after 5 PM)	$1.00	$1.00					$5.00	$2.00 - double current rate - *start at 4:00 PM*
Saturday/Sunday						Free Sunday	$5.00	Maintain regular rates
Garage Monthly Parking (individual)	$70.00	$70.00			$40 to $65	$75.00	$45 to $70	$70 - no change
Lot Monthly Parking (individual)			$55.00			$20 to $65		$55 - no change
Special Event Parking	$10.00	$10.00						$10.00 - no change
State Theater Events	$1.00							Range of $2.00 to $5.00, *event size-specific* - start at 4:00 PM
Annual Resident Permit (on-street)	$100.00				$10.00 to $20.00	$20 to $25	$20 to $30	$100.00 - no change, but note far above comps
15-Minute Meters								
Up to 6 minutes				$0.05				$.25 - default to 15 minutes
Up to 10 minutes				$0.10				$.25 - default to 15 minutes
Up to 15 minutes				$0.25			$0.25	$0.25
2 Hr, 3 Hr, 4 Hr, 10 Hr Meters								
Rate per hour				$1.00	$1.00	$1.00 to $2.00	$1.00	$1.00 - no change
Bethlehem meters 3 hrs to 10 hrs							*$.25 per 1/4 hr*	
Lancaster meters 2 hrs								
Allentown - no stated limit								

Source: Walker Consultants, 2018

As noted, further study of historical performance at current rates is recommended, such that informed decisions can be made by the City regarding the parking rate structure. Based on the number of occasional or tourist parkers utilizing the Pine Street garage, however, it is very possible that lowering the rates to be in line with comparable cities would result in a reduction in revenue from current levels.

ONSITE RATE ADVERTISING

Public parking garages frequently display rate signs at entrances to the facilities, advising the parking public as to what the applicable fees will be to park in that location. Such signage may include the 'regular" hourly rates, or special rates intended to attract new customers. Additionally, some facilities take advantage of open and available exterior wall space to communicate specials rates or programs to the public.

Today, the only sign posted that our firm has observed that is visible before a customer "commits" to parking is the $1.00 "5:00 PM to 5:00 AM" A-frame sign that is stored against the south wall of City Hall on South Third Street. Although it is displaying an important message, the sign was not posted in clear view during Walker's occupancy surveys and during subsequent visits to the site.

Walker advises that the City post the parking fee structure outside of the threshold of each facility, in addition to prominently advertising special rates and messages, such as the fact that credit cards are accepted for payment. Parking garages often have the unique benefit of highly visible and unused wall space. Please see Figure 14 and Figure 15, displaying potential advertising messages:

Figure 14: South Third Street Garage Wall Advertising

Source: Walker Consultants, 2018

Figure 15: Pine Street Garage Wall Advertising

Source: Walker Consultants, 2018

PARKING MIX

Walker's occupancy reports reflect significant available parking capacity during off-season peak demand hours at both the Pine Street and South Third Street garages, the exception being during major city-wide festivals or large State Theater events.

Monthly parker volume and revenue as of 8/31/18, per reports provided by the City, were as shown in Table 34:

Table 34: Monthly Parking Volume and Revenue as of 8/31/18

Facility	Volume	Rev / Month	Rev / Annualized	Avg. Rate	Comments
Pine Street Garage	279	$15,950	$191,400	$57.17	Pomeroy and Alpha Accounts $50. all others $70
S Third Street Garage [1]	97	$6,385	$76,620	$65.82	Valor Account $35, Express-Times $65, all others $70
N. Third Street Lot	35	$1,925	$23,100	$55.00	All accounts $55

[1] *Adding 35 Dept. of Human Services and 70 Heritage Lanes Development to So. Third Street*

Source: Walker Consultants, 2018

These totals exclude any City vehicles that park in either of the garages at a $0.00 rate.

Based on total peak hour occupancies as counted by Walker, the parking facilities were only 35% occupied during a peak off-season weekday hour, and 33% occupied during an off-season Saturday peak hour. See Table 35:

Table 35: Summarized "Off-Street" Parking Facilities Peak Occupancy

Facility - Weekday Peak Hour	Supply	Peak Occ. %	Peak Occ. Cars	Availability
Pine Street Garage	569	32%	184	385
S. Third Street Garage	322	36%	117	205
N. Third Street Lot Monthly	45	49%	22	23
"Off-Street" Total	936	35%	323	613
Facility - Saturday Peak Hour	Supply	Peak Occ. %	Peak Occ. Cars	Availability
Pine Street Garage	569	41%	232	337
S. Third Street Garage	322	20%	65	257
N. Third Street Lot Monthly	45	24%	11	34
"Off-Street" Total	936	33%	308	628

Source: Walker Consultants, 2018

Based on the existing parking supply (excluding metered spaces), the City should not expect to approach full parking occupancy other than during the summer months or during major events as described in this report. When considering next steps, the City may want to think about *average revenue per vehicle parked* and focus its marketing efforts accordingly. For example, the average "daily" rate for monthly parkers (total volume / total monthly revenue / 21 average business days per month) is about **$4.69 per day per monthly parker**. However, utilizing the WPS "*Dollar Value by Pmt*" reports, the average transient parking transaction in January 2018 at the combined South Third Street and Pine Street garages generated **$6.97 per day per transient parker** ($55,917 reported revenue / 8,023 total transient cars.)

Based on these averages, and if numbers in these ranges can be maintained as demand increases, it would be to the City's advantage *from a revenue generation perspective* to focus on generating more transient parking volume than to increase the monthly count.

As noted previously in this document, Easton's monthly parking rates are on par with those rates charged in other local cities. Transient rates are high compared to cities surveyed. However, Easton has the unique benefit of having the Crayola Experience attraction located across the street from the Pine Street garage, perhaps enabling it to command rates that may exceed those charged in measurably larger cities.

There is room to add more monthly parkers to each of the parking facilities if there is demand from the local business or residential community, without interfering with the higher revenue-producing tourist parking volume.

Features of an ideal parking mix would include:

- Monthly *rates* (per day) in the range of what a commuter parker would pay to park for that same day.
    - Monthly and Transient rates are out of balance in Easton, but significant changes to correct this are not advised at this time, as this would likely result in rate reductions, not increases, without assurance of increased volume to more than offset those reductions.

- Monthly *volume* that is limited to allow for higher revenue-producing turnover transient parking volume (for example, a 100-car garage with 40 monthlies, with 60 spaces available to turn over three times during the day, etc.) Monthly parkers tend to park all day or even 24-hours, so revenue generated by monthly spot is in effect capped.

The parking mix for Easton's parking facilities will become more of a factor in the future, when additional demand generators such as the Da Vinci Science City come to fruition. There are several moving parts that are likely to impact space availability over the next five years, including:

- Whether or not Da Vinci Science City commits to the Days Inn space, with groundbreaking preliminarily expected in late 2020 and opening the attraction to the public in late 2022.
- Whether or not the Crayola Experience renews its lease for a new ten-year term beginning in 2023.
- Future viability of the Pine street garage, due to structural condition of facility.
- Attractiveness of developer proposals for building garages on North Fourth Street and/or the existing Pine Street site.
- Ability to procure additional parking spaces in downtown core area without full-fledged development of new parking spaces, perhaps metering existing private lots such as the Bank of America lot, the Department of Welfare lot or the Governor Wolf lot.
    - Walker spoke on 11-5-18 with VM Development, the entity that controls the Governor Wolf lot and owns several properties that use the Pine Street garage today (Alpha Building, Pomeroy and Pine Street Lofts, 400 Northampton, etc.) Anticipating that there will likely be a period when the Pine Street garage is closed, VM recently installed barrier gates, access readers and a multi-space at the Governor Wolf lot, planning to make 100 spaces available to the parking public as needed.
- Realization of planned new demand generators such as the Heritage Lanes redevelopment.

PUBLIC OUTREACH OBSERVATIONS

Walker participated in two meetings attended by members of the local residential and business community, including a public presentation at City Hall on October 17th, and a subsequent meeting with Kim Kmetz of the Easton Main Street Initiative, which was attended by several local business owners and managers. Key points made by members of the local community who attended these meetings included:

1) Finding parking during evening or weekend events is challenging.
2) Evening employees at local venues and restaurants would utilize the parking garages, but the 5:00 PM start time for the flat "evening rate" is a challenge. The group requested that the flat rate begin at 4:00 PM.
3) Robust validation programs would help increase parking utilization while benefitting local businesses.
4) Signage and wayfinding is lacking – there are spaces available in garages, but the public can't find them.

5) People are generally resistant to parking in garages. It is a "commitment".
6) Signage for temporary meter closures unclear. Cruise nights are an example. Patrons believe they can't use meters for the entire day when meter closure time is only 5:00 PM to 9:00 PM, for example.
7) More short-term 15-minute spaces would benefit take-out restaurants. It was suggested that business might want to "adopt" the cost of a short-term space to create more availability.
8) Garage utilization could improve if meter rates weren't lower than garage rates.
9) Residents with permits can park at meters, and thus business patrons can't find convenient parking.
10) What Transportation Demand Management ("TDM") plans are in place for City, including focus on ride-sharing services like Uber and Lyft, bike spaces, more robust public transit, downtown shuttles, etc.?
11) How can the City better promote driving-reduction? For example, businesses can be encouraged to hire downtown residents (who don't need to drive to work.)
12) Street cleaning is an issue for residents who work at night. They arrive home late at night and are faced with being issued violations if they park on the side of the street being cleaned, but they can't find close alternative parking spaces.
13) Parking Enforcement Officers would benefit from customer service training.
14) It was suggested that the Pine Street property be redeveloped as a surface lot, with bike parking racks and green space.
15) Construction of a garage on the North Fourth Street lot would create additional traffic congestion in the area.
16) State Theater currently runs a shuttle to Pine Street for events, as people doesn't want to walk from the garage to the theater. The theater can continue to offer this service and expand it in the future.

Walker was primarily there to listen and to document and consider the questions posed by the members of the community attending the meetings.

ORGANIZATIONAL RECOMMENDATIONS

Easton's parking system is managed by multiple departments as noted, including the Parking Authority and the Finance, Police and Public Services departments, each playing an important role in the day-to-day operation of the parking garages, lots and on-street meters. Each department provides support based on its specific areas of expertise. The City benefits from each department's experience and resources. For example:

- Enforcement carries weight because it is administered by the police department.
- Day-to-day facility operations are managed by Public Services, which can use its maintenance resources to ensure that the facilities are clean and safe.
- Finance oversees the revenue management and reporting functions for much of the City's parking system, a role this department is equipment to fulfill, due to its personnel's skill sets and access to reporting systems.
- The Easton Parking Authority owns the facilities and administers the parking violations appeals process.

PARKING SINGLE POINT OF CONTACT

Walker recommends that these various departments continue to manage their current responsibilities regarding parking. Additionally, we advise that the City assign an individual to monitor performance of all aspects of the parking system, working with the heads of each involved department to ensure that the City's parking-related planning, financial, operational, safety and customer service goals are met, day in and day out. Development of

a consolidated P&L reporting structure will be key to the success of this position, as this employee would be tasked with analyzing parking performance, including bottom line financial results. He or she would report directly to the Mayor or the Mayor's designate and would advise on parking matters. Parking-related employees at all levels would maintain their existing reporting structures, at least in the short-term.

Alternatively, the City may want to consider initially filling that role by contracting the services of a well-regarded and experienced professional parking services company, to provide limited services for a specified period, including:

1) Coordination of reporting consolidation
2) Ongoing operations and marketing advice
3) Management oversite of on-street and off-street parking operations
4) Development of operations manuals and other training materials and marketing programs
5) Training of City's designated parking contact

Additionally or alternatively, the City of Easton may want to consider contracting a professional parking operations or consulting firm to perform an annual assessment of parking operations and financial controls, to ensure that the City's parking operation keeps qualitative pace with those of comparable municipalities.

04 Feasibility Analysis

PARKING GARAGE FEASIBILITY ANALYSIS

It is recognized that additional parking spaces will need to be built in Easton if the Da Vinci Science City project comes to fruition. Given the fact that the Pine Street garage is reaching the end of its useful life at almost 50 years old, there will also need to be a plan to address the period during which the Pine Street garage, with its 569 centrally located spaces, is redeveloped.

A potential timeline for the Da Vinci Science City is as follows:

1) Finalize development agreement – ongoing
2) Break ground – late 2020
3) Open to public – late 2022

Thus, a plan needs to be in place to park approximately 500 cars, beyond today's typical demand levels per peak hour for the new attraction *approximately four years from now*. Development of a replacement parking facility, whether on the Pine Street parcel, North Fourth Street lot or elsewhere, would be expected to take about 1 ½ years, possibly more if a complex scenario is chosen that could require assembly of land currently not under City control. This parking space development timeline could be extended an additional period if the Da Vinci project does not take hold, as the primary determining factor would then become the ongoing viability of the Pine Street garage. For example, it is possible that Pine Street can remain in operation for up to ten years, but the annual capital repair cost may become excessive.

Walker evaluated the feasibility of building parking spaces at the following properties:

1) North Fourth Street lot
2) North Third Street lot
3) South Third Street Garage horizontal expansion
4) Pine Street Garage Replacement[5]
5) Lehigh Drive lot
6) Canal Park Lot

Walker also reviewed the dimensions of the South Third Street lot, located on the east side of South Third near Pine Street, and concluded that the site does not have the required width to build a functional parking garage, even if combined with the Post Office lot east of the City property. As a result, no feasibility analysis was completed for that site.

Massing diagrams for each evaluated option are included with this report. Individual site details and comments are shown on each diagram.

[5]Walker's future conditions analysis assumes the Pine Street Garage is demolished and replaced with mixed use development and a new 400-space parking structure. An RFP for the redevelopment of this parcel has been issued, but no building program has been defined at the time of this analysis. Due to the uncertainty of any public/private venture on that parcel, Walker has also included a 700-space, standalone replacement public parking garage in the feasibility analysis.

Walker reviewed the current City of Easton Zoning Code, and identified the following parking-related items of note:

1) Section 595-184 of the Zoning Code specifies that parking space dimensions should be 9'-0" in width and 19'-0" in length, whereas section 595-182 allows for 9'-0" X 18'-0" spaces. Walker utilized the 9'-0" X 18'-0" dimensions in our study, as it made a measurable difference in the operational feasibility of each site.
2) The Zoning Code specifies that new developments should not exceed an 8,000 square foot footprint. Every parking facility considered here far exceeds that size.
3) All Zoning Code-specified setbacks (4'-0" on property sides and 10'-0" on the front and rear of the property) were accounted for in our study.
4) The Zoning Code requires some retail or mixed-use component in any facility being developed; however, no retail components are contemplated in these concepts.
5) The below-noted space counts assume all standard-sized spaces; however, capacities can be increased further if desired as there is an allowance to dedicate up to 25% of total spaces to compact cars. Based on 1'-0" less width in a compact car space than a standard space, one new space can be created for every eight standard-sized spaces converted. However, the level of service provided by compact spaces is less than that of standard spaces, as the smaller parking stalls are not suitable for large cars.

NORTH FOURTH STREET LOT

The existing parcel is occupied by both a public off-street parking lot with a capacity of 36 spaces and 20 angled on-street spaces. During Walker's field survey, both the lot and on-street spaces experience moderate to high occupancy rates throughout the day. The existing parking facilities serve the Easton Public Market, as well as numerous businesses along Northampton Street. Walker also understands the City has taken steps to improve pedestrian access from this site to businesses south of Northampton Street, such as the Crayola Experience by converting Bank Street into a pedestrian friendly walkway between Church Street and Pine Street and adding a crosswalk at Northampton Street.

For discussion purposes, Walker sited a 123' wide by 206' long two-bay, two-way traffic flow garage on the property. Based on our preliminary analysis and the parking geometrics outlined above, Walker expects a seven-level parking facility could be built on this site with a capacity of 480 spaces. Items of note include:

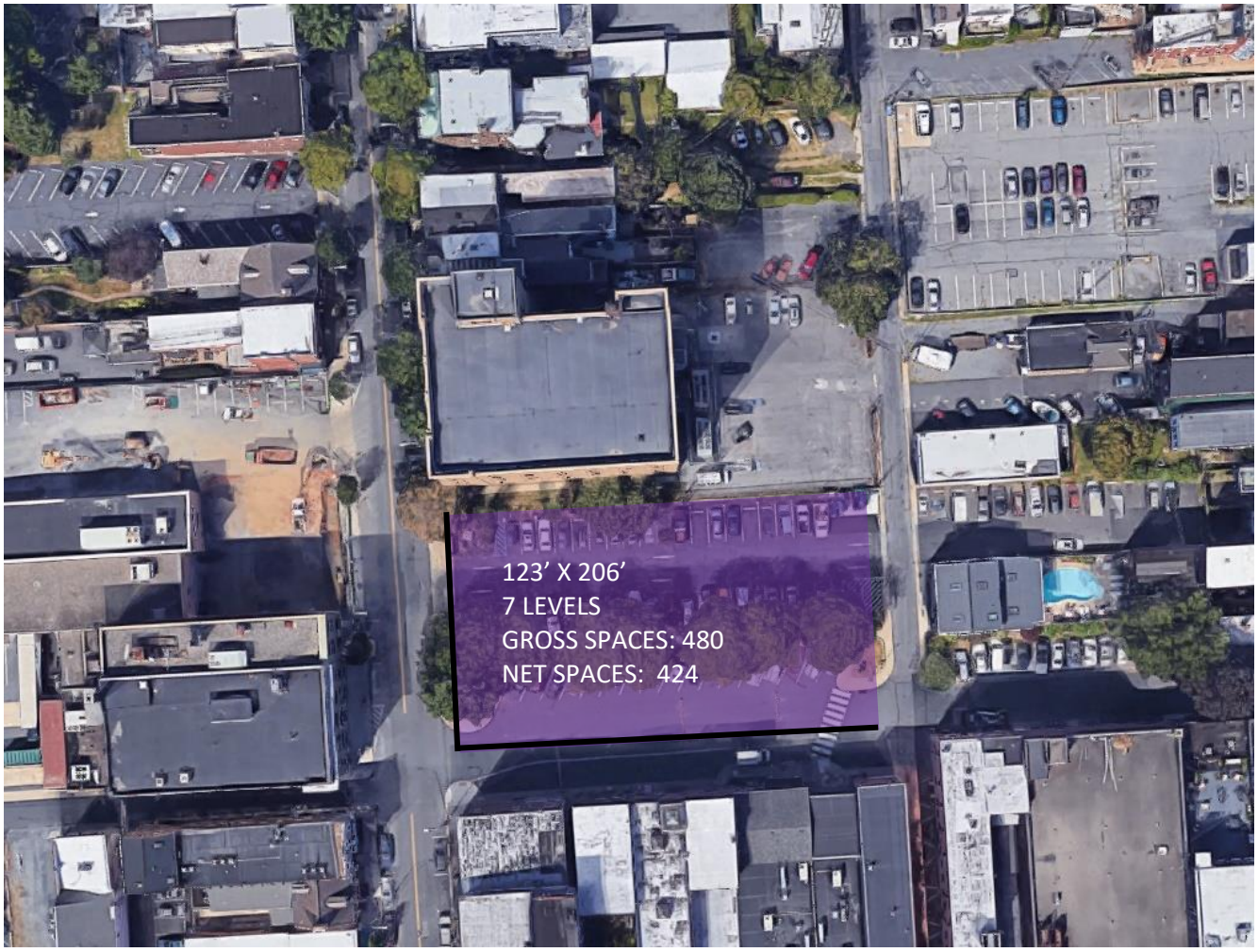
1) The proposed garage would need to be built over Church Street, which would still be open to the driving public, possibly with a different configuration. Note, the current (angled) configuration of Church Street could be problematic.
2) Walker's concept design assumes 4'-0" side yard setbacks and 10'-0" street setbacks.
3) Fire-rated walls would be needed to separate the buildings to the north and south from the new garage. This may cause the facility to be considered enclosed, triggering the need to install sprinklers and related equipment, increasing the per-space cost.
4) The garage design would be a sloped two-way traffic ramp from bottom to top (no flat floors or speed ramps). As a result, the garage entrance/exit plaza would need to be on Fourth Street or N. Bank Street, *but not on both*.
5) Given that the garage would be built on an existing approximately 56-space surface lot and on-street parking, the net number of new spaces realized would be about 424 (480 gross spaces – 56 existing spaces).

6) The estimated order-of-magnitude construction cost per-space is approximately $20,000, excluding the cost associated with land/building acquisition, environmental remediation that may or may not be needed, utility relocation costs, geotechnical engineering impacts, demolition costs, and other soft costs such as design or financing fees[6]. Based on a 480-space facility, the total estimated construction cost is $9,600,000, but could be higher, especially with elaborate architectural treatments.
7) Soft costs could increase the construction cost per space shown above by 18% to 28%.

Please see Figure 16 North Fourth Street Site on the next page:

[6] Note, the cost per space can vary significantly depending on the architectural "look" of the garage. A simple structure could be constructed for less than our estimated range; however, extensive façade work could increase the price.

Figure 16: North Fourth Street Lot Site



Source: Google Earth and Walker Consultants, 2018

NORTH THIRD STREET LOT

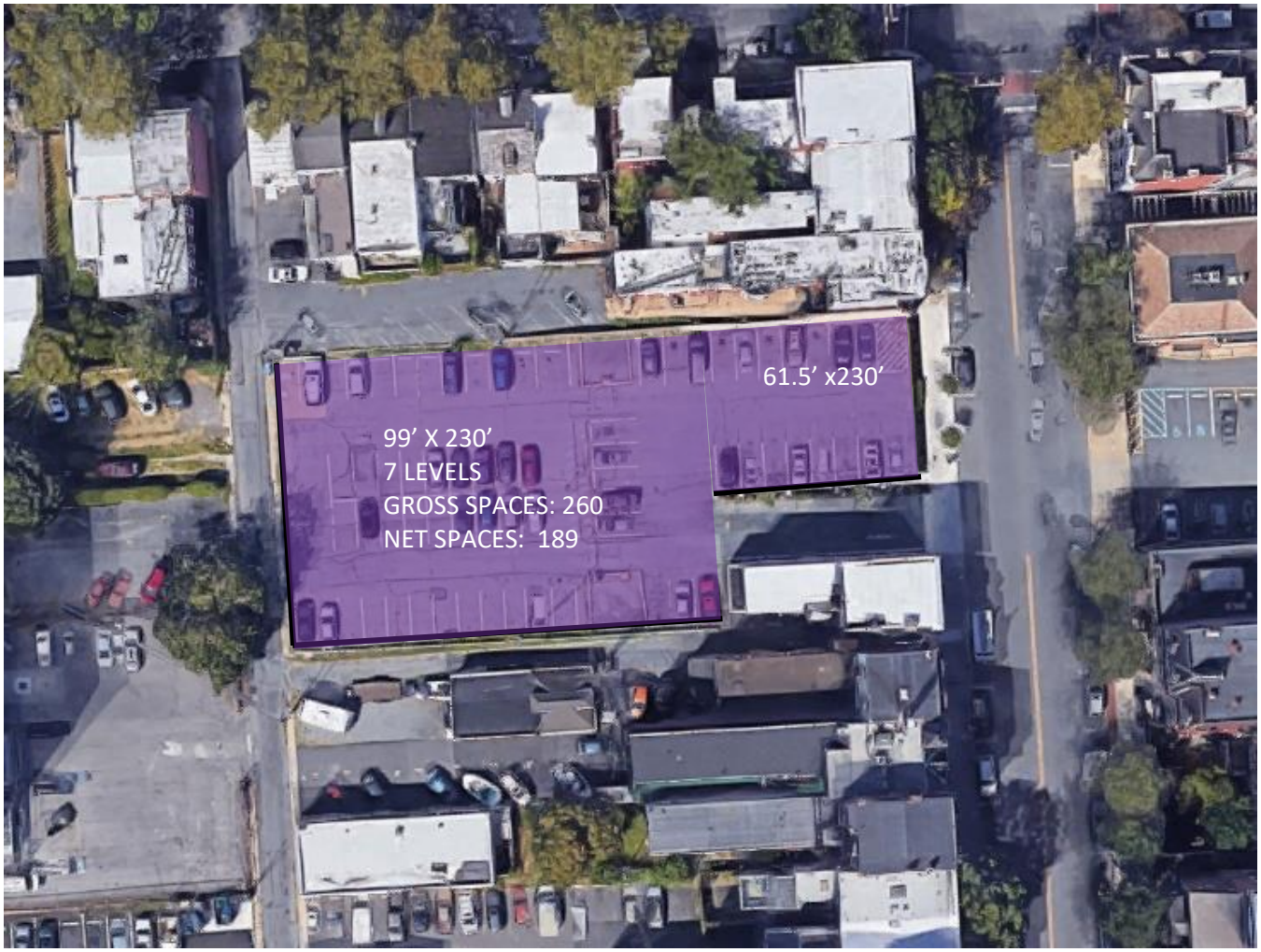
The North Third Street Lot is a municipally owned public parking facility that has been divided into two different lots – a monthly access-controlled lot and a transient metered lot. There is a combined total of 71 spaces in the lot(s). Using the geometrics outlined above, Walker sited a 99' wide by 230' long two-bay, two-way traffic flow garage with a speed ramp on the property. Towards N. 3rd Street, the garage is approximately 61' wide. A seven-level (grade plus six supported tiers) structure on this site could provide approximately 260 parking spaces. Accounting for the existing lot on this property, a net increase of 189 spaces is expected. Items of note include:

1) The estimated order-of-magnitude construction cost per-space is approximately $25,000, excluding the cost associated with land/building acquisition, environmental remediation that may or may not be needed, utility relocation costs, geotechnical engineering impacts, demolition costs, and other soft costs such as design or financing fees[7]. The increase in the cost per space can be attributed to the speed ramp, which adds cost without increasing the parking supply. Based on a 260-space facility, the total estimated construction cost is $6,500,000, but could be higher, especially with elaborate architectural treatments.
2) Soft costs could increase the construction cost per space shown above by 18% to 28%.
3) Walker's concept design assumes 4'-0" side yard setbacks and 10'-0" street setbacks.
4) This property has previously been identified as a residential or mixed-use development opportunity for Easton. As such, there may be hesitation to consider a parking-only structure on this site.
5) Fire-rated walls would be needed to separate the buildings to the north and south from the new garage. This may cause the facility to be considered enclosed, triggering the need to install sprinklers and related equipment, increasing the per-space cost.

See Figure 17 on the next page:

[7] Note, the cost per space can vary significantly depending on the architectural "look" of the garage. A simple structure could be constructed for less than our estimated range; however, extensive façade work could increase the price.

Figure 17: North Third Street Lot Site



Source: Google Earth and Walker Consultants, 2018

SOUTH THIRD STREET HORIZONTAL EXPANSION

The South Third Street garage is a 332-space, two-bay, two-way traffic structure located at the corner of Pine Street and South Thirds Street. Entrance to the garage is gained from Third Street; drivers exit the garage via a helix onto Spruce Street. The garage is ideally situated to provide parking for existing demand generators such as the Crayola Experience, and new attractions such as the Da Vinci Science City.

Walker proposed a two-bay, four-level, horizontal expansion of the existing garage over the plot of land currently occupied by the Social Security Administration parking lot. For discussion purposes, walker sited a 123' by 203' garage on the property with a gross capacity of 236 spaces. The existing lot on this property contains approximately 12 parking spaces, resulting in a net increase in parking of 224 spaces. It should be noted that the existing exit helix ramp would be removed in this scenario and ultimately replaces by a ramp in the west section of the garage leading to Spruce Street.

The estimated order-of-magnitude construction cost per-space is approximately $25,000, excluding the cost associated with land/building acquisition, environmental remediation that may or may not be needed, utility relocation costs, geotechnical engineering impacts, demolition costs, and other soft costs such as design or financing fees[8]. Based on a 236-space facility, the total estimated construction cost is believed to be approximately $5,900,000 but could be higher. Soft costs could increase the construction cost per space shown above by 18% to 28%.

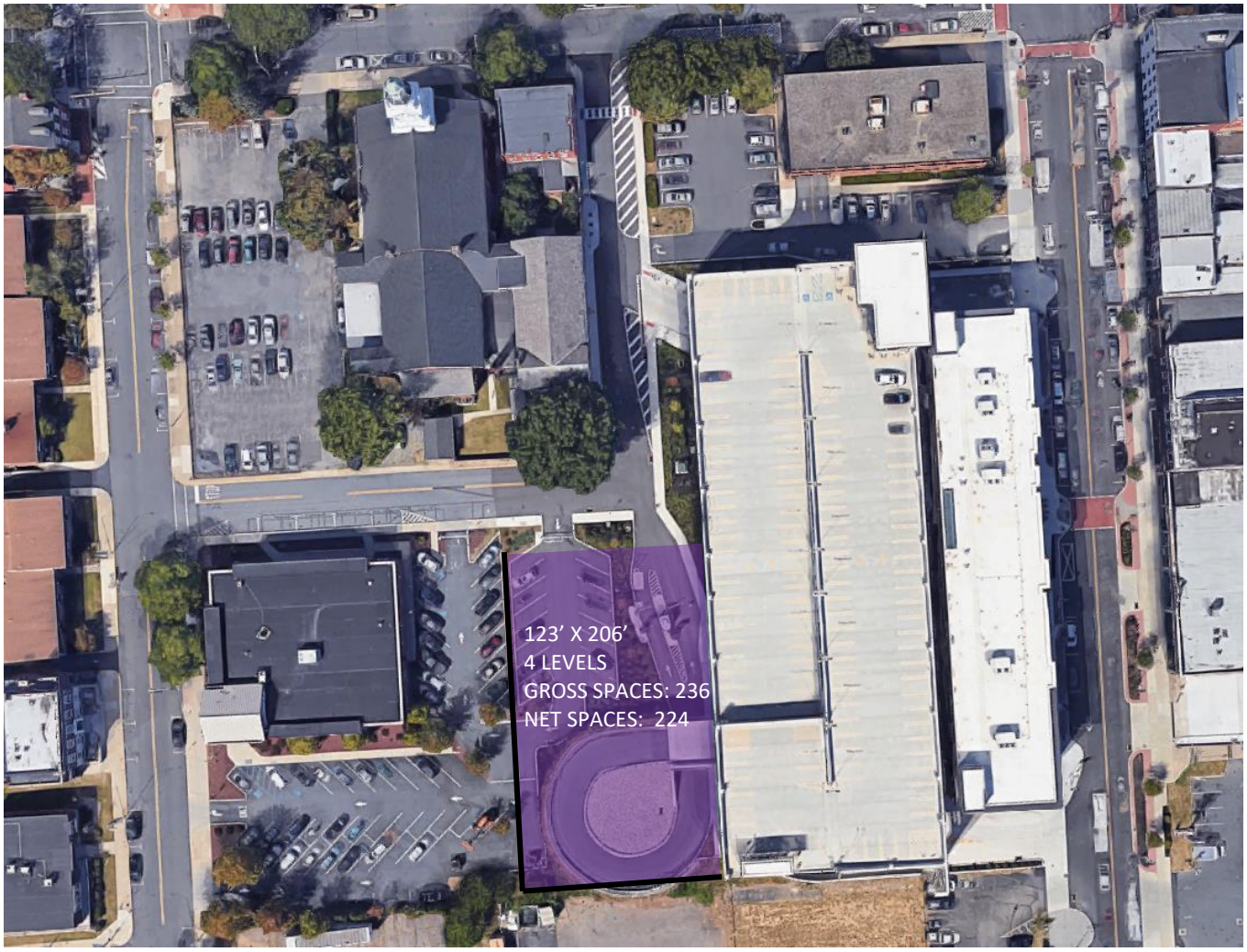
Other issues to note associated with this option include:

1) Given that land would need to be acquired to implement this plan, the time line from start to finish would be longer than with other options, estimating a two-year process.
2) A temporary exit ramp would be required, allowing parking patrons to exit via the north section of the Days Inn property, while the new exit area is built.
3) The assumption is that the users of the existing surface lot would need to be accommodated in the South Third Street garage going forward.
4) An APGS system may be recommended, as this would no longer be a single two-way traffic parking ramp garage.

Figure 18 below shows the conceptual location of the proposed expansion.

[8] Note, the cost per space can vary significantly depending on the architectural "look" of the garage. A simple structure could be constructed for less than our estimated range; however, extensive façade work could increase the price.

Figure 18: South Third Street Horizontal Expansion



Source: Google Earth and Walker Consultants, 2018

PINE STREET GARAGE REBUILD

The City is aware that the Pine Street Garage is nearing the end of its useful life; it is Walker's understanding that the City intends to demolish the structure in the near-term (5± years). At the time of our analysis, an RFP for a public/private development on the Pine Street Garage site had been issued but no official plans have been developed. For the purposes of this analysis, Walker assumed the existing structure was demolished and a new parking structure was built on the same site.

Walker sited a 164' wide by 302' long, three-bay, five-level garage on the property with a gross capacity of 720 spaces. The garage design would include a ramped parking system with one-way traffic flow and 65˚ parking.

The estimated order-of-magnitude construction cost per-space is approximately $20,000, excluding the cost associated with land/building acquisition, environmental remediation that may or may not be needed, utility relocation costs, geotechnical engineering impacts, demolition costs, and other soft costs such as design or financing fees[9]. Based on a 720-space facility, the total estimated construction cost is believed to be approximately $14,400,000 but could be higher. Soft costs could increase the construction cost per space shown above by 18% to 28%.

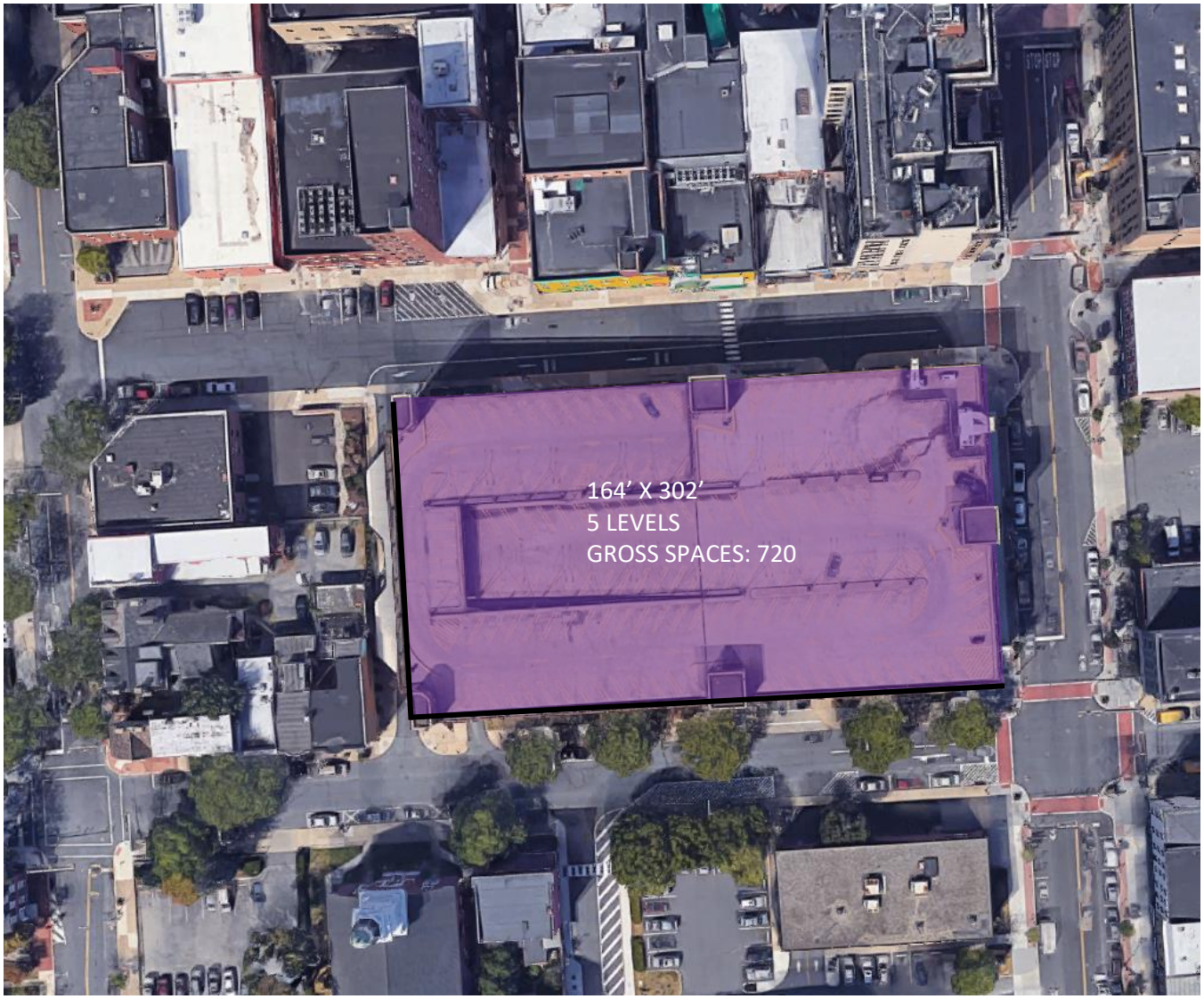
Other issues to note associated with this option include:

1) Our proposed conceptual design and space count is based on Walker recommended parking geometrics, as the Easton Zoning Code doesn't appear to fit the existing width.
2) Walker's concept design assumes 4'-0" side yard setbacks and 10'-0" street setbacks.
3) Entry/exit of the structure can be provided from Pine Street, 3rd Street, and/or Ferry Street.
4) The conceptual design does not include any ground floor retail; incorporating retail into the proposed parking structure would increase the construction cost of the garage.
5) The structure would have a footprint greater than 8,000 square feet.

Figure 19 below shows the conceptual location of the proposed expansion.

[9] Note, the cost per space can vary significantly depending on the architectural "look" of the garage. A simple structure could be constructed for less than our estimated range; however, extensive façade work could increase the price.

Figure 19: Pine Street Garage Rebuild



Source: Google Earth and Walker Consultants, 2018

LEHIGH DRIVE LOT

The existing Lehigh Drive Lot is a gravel lot with wheel stops but no pavement markings. The lot serves as both vehicle storage and parking for people visiting the waterfront. There is currently no pedestrian path of travel from the lot to the downtown area along Lehigh Drive.

This lot is a suitable remote parking area for patrons who cannot find parking closer to the downtown Easton attractions. For discussion purposes, Walker sited a 60' by 378' wide surface lot with a capacity of 84 spaces on the existing unpaved lot. The lot would continue to be accessed by entry/exit portals on the east and west ends of the lot.

The estimated order-of-magnitude construction cost per-space is approximately $6,000, excluding the cost associated with land/building acquisition, environmental remediation that may or may not be needed, utility relocation costs, geotechnical engineering impacts, demolition costs, and other soft costs such as design or financing fees. The estimated per space cost does include engineering and construction, assuming repaving, lighting, striping and drainage, but not landscaping. Based on an 84-space facility, the total estimated construction cost is believed to be approximately $504,000 but could be higher. Other issues to consider relative to this site include:

1) The City would need to build appropriate pedestrian access to the lot from downtown, including ADA-accessible sidewalks and lighting.
2) The lot may be perceived as not secure, as it is not visible from the main downtown area. The City may want to consider operating a shuttle service during peak periods to encourage use of this remote lot.

Figure 20 below shows the relative location and size of the proposed lot.

Figure 20: Lehigh Drive Lot Site

Source: Google Earth and Walker Consultants, 2018

CANAL PARK LOT

Like the Lehigh Drive Lot, the Canal Park Lot is an unpaved gravel lot with some wheel stops indicating parking spaces. There are no pavement markings denoting parking spaces. The lot is current used by visitors to the river front. Entry to the surface lot is gained from South Delaware Drive; a long driveway to the north of the lot allows vehicles to exit back onto South Delaware Drive.

This lot is a suitable remote parking area for patrons who cannot find parking closer to the downtown Easton attractions. For discussion purposes, Walker sited a 120' by 170±' wide surface lot with a capacity of 55 spaces on the existing unpaved lot. The lot would continue to be served by the existing entry/exit portals

The estimated order-of-magnitude construction cost per-space is approximately $6,000, excluding the cost associated with land/building acquisition, environmental remediation that may or may not be needed, utility relocation costs, geotechnical engineering impacts, demolition costs, and other soft costs such as design or financing fees. The estimated per space cost does include engineering and construction, assuming repaving, lighting, striping and drainage, but not landscaping. Based on a 55-space facility, the total estimated construction cost is believed to be approximately $330,000 but could be higher. Other issues to consider relative to this site include:

1) The City would need to build appropriate pedestrian access to the lot from downtown, including ADA-accessible sidewalks and lighting.
2) Although smaller than the above-noted Lehigh Drive lot, this location may benefit from more organic traffic, as Route 611 in this area is a major thoroughfare to I-78. Thus, the perception of security may be improved as the area sees significant ongoing vehicle traffic.

Figure 21 below shows the relative location and size of the proposed lot.

Figure 21: Canal Park Lot Site

Source: Google Earth and Walker Consultants, 2018

SITE FEASIBILITY MATRIX ANALYSIS

Each site being considered as a potential development site is evaluated according to how well it ranks with site selection criteria considerations. Initially, criteria value rankings are somewhat subjectively established by Walker. Different values are exchanged and analyzed to establish a hierarchy that is agreed to by City staff. By this means, a consensus site recommendation can be more easily determined. It is important to note that the members of the City represent different professions and perspectives and all have a vested interest in seeing the entire downtown area of Easton to continue to prosper.

To help prioritize the criteria to consider when judging the various sites, we use a matrix analysis. As agreed upon with the City, we list all the criteria that we want to consider during the evaluation process and assign each a weight (i.e. importance). The alternative's score for the criteria is the weight multiplied by the rating. The summation of scores gives us a final number such that theoretically the highest number is the most preferred scheme and the lowest number is the least preferred. Small variations in the totals can be ignored. **The City should review the weights and ratings because it could easily affect the final recommendation.**

- **Capital Cost** – The construction cost associated with each potential development site does not include things such as property acquisition, tenant relocation, and demolition.
- **Life Cycle Cost** – Over the life of a structure or lot, the maintenance costs can vary significantly.
- **Ability to Generate Revenue** –The location of each potential development site in relation to commercial buildings that are occupied and generate demand for parking during traditional business hours. The representation of land use near each site is considered and the level of reliance a site may have on one or multiple sources of demand. Walker considered the proposed structures proximity to existing business such as the Crayola Experience and City Hall as well as proposed attractions such as the DaVince Science City.
- **Location** –The ability of a driver or pedestrian to locate the parking facility. Many of these sites already contain public or private parking. Is the site already easily located? Can signage be added to the downtown area to aid drivers in locating parking?
- **Traffic Impact** – The traffic impact on the existing traffic patterns and the impact that peak period loading and unloading may have on the surrounding street system.
- **Implementation** - Impact of design, construction, and demolition schedule of each site.
- **Security** – What types of active and passive security considerations need to be incorporated into the garage design? Where is garage located relative to safe surrounding activities?
- **Land Availability/Acquisition Cost** – The land availability associated with each potential development site considers the existing use of the land, whether or not property acquisition is required, and the need for tenant relocation, zoning compliance, and whether or not identified redevelopment plans exist.

  The table on the following page summarizes our preliminary analysis of the proposed surface and structure parking options available to the City of Easton.

Table 36: Matrix Analysis

Criteria	Weight	Site 1 - N. 4th Street Lot		Site 2 - N. 3rd Street Lot		Site 3 - S. 3rd Street Garage Horizontal		Site 4 - Pine Street Garage Rebuild		Site 5 - Lehigh Drive Lot		Site 6 - Canal Park Lot	
		Rating	Score	Rating	Score	Rating	Score	Rating	Score	Rating	Score	Rating	Score
Capital Cost[1]	5	3	15	1	5	2	10	2	10	5	25	5	25
Life Cycle Cost	2	2	4	2	4	2	4	2	4	5	10	5	10
Ability to Generate Revenue	4	5	20	5	20	5	20	5	20	1	4	1	4
Location[2]	5	3	15	4	20	4	20	5	25	1	5	1	5
Traffic Impact	2	2	4	3	6	4	8	5	10	5	10	5	10
Implementation	4	3	12	3	12	1	4	3	12	5	20	5	20
Security	4	4	16	4	16	4	16	4	16	1	4	1	4
Land Acquisition	3	5	15	5	15	1	3	5	15	5	15	5	15
TOTAL			**101**		**98**		**85**		**112**		**93**		**93**

Notes: [1] Rating based on the capital cost per net space gained
[2] Location includes both pedestrian access to major attractions and vehicular visibility

Source: Walker Consultants, 2018

The final determination of the relative attractiveness of the alternative solutions must rest with the City of Easton. However, this site analysis provides a reasonable and supportable look at the criteria upon which to base such a decision. On the basis of this analysis, Site 4 – the Pine Street Garage Rebuild was determined to be the highest-ranking solution, followed by the 4th Street Lot and the North 3rd Street Lot options. Walker understands that many of the site considered for structured parking in our analysis may also be under consideration for other mixed-use redevelopment opportunities and that parking may not be the highest and best use of the parking structure. Additionally, we recognize that more than one alternative may need to be considered to meet short and long-term needs within the City.

We welcome the opportunity to review the criteria identified in the matrix analysis above and further refine the ranking of the alternatives considered above.