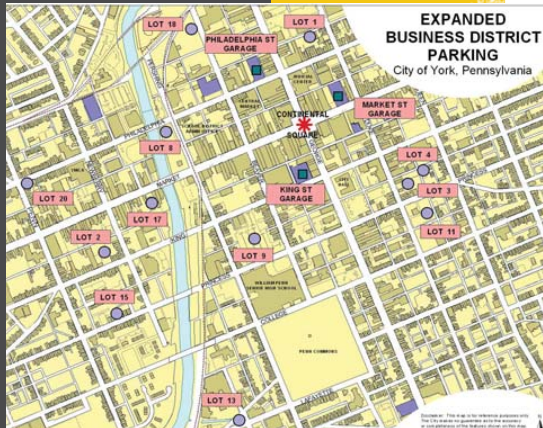


# Strategic Plan for the **City of York** Parking System for Positive Economic Impact

**FINAL REPORT**



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## City of York, PA Parking System Strategic Plan

### EXECUTIVE SUMMARY

The City of York, PA, through the General Authority, retained DESMAN to undertake a comprehensive assessment of the City's municipal parking system, with the goal of producing a parking system master plan for the off-street parking garages and surface lots, as well as the on-street parking meters. The scope of the assessment covered the physical condition, utilization and general adequacy of the supply of parking presently available to serve the downtown area and the surrounding neighborhoods. The efficiency and effectiveness of parking enforcement, property maintenance, revenue collection, and the overall management of the City's parking program were also examined as part of the assessment.

At the outset of the assessment, DESMAN interviewed front line City operations staff, supervisors, and department heads that had direct and indirect association with the parking system and related programs. Officials with the local Board of Education and County Government were interviewed, as were numerous community stakeholders representing a broad array of interests and perspectives. These interviews exposed a commonly held view among the participants that the current organization and administration of the parking system was failing to serve and complement the positive changes occurring and being promoted in downtown. However, there were many different viewpoints on the causes and extent of the system's problems, as well as ideas about how to rectify the problems.

The key findings from the assessment of the existing parking system include the following:

- **The City controls the parking market** – The City's system of on- and off-street parking assets constitutes nearly 85% of the downtown public parking supply. Most privately owned parking facilities provide no public parking or only provide public parking on a monthly lease basis. There are only two private parking facilities that offer daily pay parking to downtown visitors.
- **There is a misconception that more parking is needed in downtown** – The City's off-street parking assets are underutilized. Additionally, the turnover of the most desirable on-street spaces is insufficient and a significant portion of the on-street meter system covers geographical areas where metered parking is no longer warranted due to declining parking demand.
- **The City's parking garages are in good physical condition, but the City's meter system and off-street lots are in fair and poor condition, respectively** – The City's parking lots would benefit from better signage, asphalt resurfacing, striping and, in some cases, better lighting. A significant proportion of the meter system is controlled by 20+ year-old meters, which have been costly and difficult to maintain and keep operational.
- **Technology upgrades are warranted in several key areas** – The most of the on-street meter

inventory is outdated and nearing the end of its useful life. The parking access and revenue control system at the City garages is unreliable and exposes the City to potential revenue leakage. The enforcement technology also needs to be upgraded.

- **Current parking rates and regulations are uncomplimentary and, in some instances, do not promote the desired parking behaviors** – Short-term rates at the City's three parking garages are twice as high as the short-term rates at on-street parking meters in downtown. Combined with a two-hour parking time limit for all on-street metered parking, this results in a significant imbalance between short- and long-term utilization of the City's parking assets.
- **The current administrative organization and daily oversight of the parking system is unfocused and misaligned with the fundamental mission of the program** – The present organizational structure charged with operating and overseeing the City's parking system is fragmented and unfocused. There is not an individual at the City who has overall day-to-day accountability for parking, despite the fact that the parking system, together with the parking enforcement program, generated in excess of \$3.1 million in revenue for the City in 2015.

To address these existing shortcomings, DESMAN has formulated a collection of recommendations for consideration by the City and the General Authority. Implementing these recommendations will optimize the utilization and level of service of the system, reduce operating costs, streamline back office management, and improve the financial and operational performance of the system.

1. Make Changes to Parking Meter Rates and Parking Time Limits
  2. Eliminate Parking Time Limit Restrictions in Low Demand Areas
  3. Reduce the Inventory of Underutilized, Older Meters
  4. Establish a Three-Tiered Structure for Meter Parking Rates
  5. Introduce Pay-by-Phone Payment Service for On-Street Meter Parking
  6. Enact Pay-by-Plate Platform for Parking at On-Street Meters
  7. Transfer Parking Enforcement Program Oversight to the General Authority
  8. Acquire and Implement License Plate Recognition Technology for Parking Enforcement
  9. Reduce Hourly Rates for Short-Term Parking in the Downtown Garages
  10. Expand the Operating Hours of the Parking Garages
  11. Devise and Implement Plans to Convert the Garages to Fully Automated Facilities
  12. Acquire and Install New Access and Revenue Control Equipment for the Garages
  13. Create Single Point of Administrative Accountability for the Parking System
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## TABLE OF CONTENTS

	<i>Page</i>
<b>INTRODUCTION &amp; BACKGROUND .....</b>	<b>1</b>
Study Area .....	1
<b>PARKING SUPPLY/DEMAND AND DEMOGRAPHIC STUDY .....</b>	<b>3</b>
On-Street Spaces.....	3
Off-Street Parking Facilities .....	5
<b>PARKING UTILIZATION SURVEY FINDINGS .....</b>	<b>9</b>
On- and Off-Street Parking Utilization .....	9
On-Street Parking Space Turnover & Duration of Stay.....	18
Existing Supply & Demand Conclusions .....	24
<b>FUTURE SUPPLY/DEMAND BASED ON ECONOMIC DEVELOPMENT PLANS.....</b>	<b>24</b>
Impacts of Planned and Proposed Developments on the Parking System .....	24
<b>EVALUATION OF CURRENT ASSETS.....</b>	<b>27</b>
Parking Garage Condition Assessments .....	27
Parking Lot Condition Assessments .....	31
<b>PARKING SYSTEM TECHNOLOGY ASSESSMENT .....</b>	<b>32</b>
Parking Access and Revenue Control System Technology Assessment .....	32
Parking Meter System Technology Assessment .....	35
Parking Meter System Enforcement Technology Assessment .....	36
<b>PARKING SYSTEM MANAGEMENT REVIEW.....</b>	<b>36</b>
Parking System Organizational and Administrative Oversight.....	36
<b>PARKING SYSTEM FINANCIAL PERFORMANCE REVIEW.....</b>	<b>39</b>
System Financial Performance.....	39
<b>PARKING SYSTEM POLICY &amp; PROGRAM REVIEW .....</b>	<b>41</b>
Parking System Rate Analysis .....	41
Parking Enforcement & Meter Collections .....	44
Parking Garage Operations .....	46

**TABLE OF CONTENTS** *continued*

	<i>Page</i>
<b>PARKING SYSTEM STRATEGIC PLAN RECOMMENDATIONS .....</b>	<b>51</b>
Recommended Parking Meter System Policy, Program & Rates Changes.....	51
Recommended Parking Enforcement Program Enhancement.....	56
Recommended Operational Enhancements for the Parking Garages.....	57
Recommended Organizational Improvements for the General Authority .....	68
<b>PARKING SYSTEM STRATEGIC PLAN BUDGET ESTIMATES .....</b>	<b>70</b>
Parking Meter System Project Budgets .....	70
Parking Garage Project Budget .....	71
<b>PARKING SYSTEM STRATEGIC PLAN IMPLEMENTATION PHASING .....</b>	<b>74</b>
Phase I (Year 1 Action Plan) .....	75
Phase II (Year 2 Action Plan) .....	76
Phase III (Year 3 Action Plan) .....	76
 <b>APPENDIX</b>	

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## Introduction & Background

DESMAN was retained by the City of York (City) and the City of York General Authority (GA) to conduct a comprehensive analysis of the City's Parking System and formulate a **PARKING SYSTEM STRATEGIC PLAN** (the PSSP) for the economic benefit of the municipality. In 1995, the GA acquired certain assets constituting the City of York Parking System and is currently responsible for the management, operations and maintenance of the assets. This Parking System is comprised of 3 high-rise parking garages in the downtown business district, 16 surface parking lots throughout the City and over 600 parking meters in the core business district and surrounding commercial and neighborhood districts. Recently, the GA launched a 30-day pilot program intended to maximize the capabilities of the technology within the parking system and discovered a need for a comprehensive plan to guide its decision-making regarding the long-term operations and management of the system. The City's desire was for the PSSP to: document existing and future parking market conditions, review the physical conditions of the assets, evaluate the operational effectiveness of the System, and identify ways and means to enhance the financial performance and level of service the System provides to the City and its constituencies.

At the outset of this undertaking, the DESMAN project team conducted interviews with key City officials and a host of local stakeholders representing other government entities, public-sector institutions, a wide range of business enterprises, entertainment/visitor attractions, and real estate developers and investors. The purpose of these stakeholder interviews was two-fold: first, they were used as a source of information about the goals and objectives of the study undertaking and, secondly, they provided firsthand knowledge of how various factions from the community view the present accommodations and operating circumstances of the public parking system.

DESMAN also collected and reviewed an extensive amount of data and information relating to the City's Parking System and to the downtown area in general. The next steps in our study process involved verification of the existing inventory of public parking, a survey of the typical utilization of the parking supply and an investigation of how the System is currently being operated and managed.

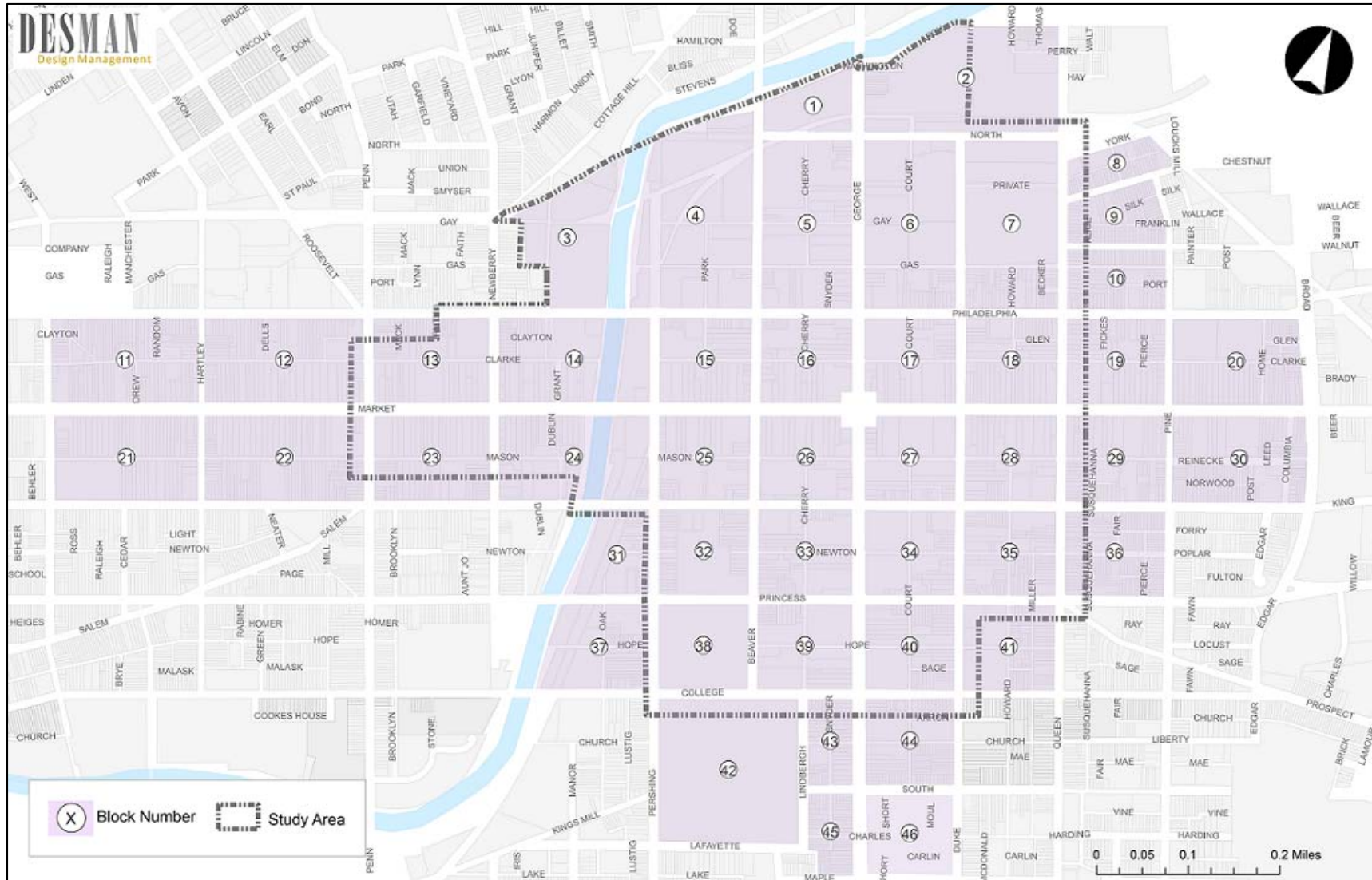
The results of DESMAN's analysis were consolidated and used as the basis for the recommendations contained within the PSSP. It is DESMAN's intent that this document can be used as a roadmap for the City as it seeks to improve its Parking System, provide a higher level of service to its residents, employees and visitors, and put the System on firm financial ground.

### *Study Area*

The study area, which was defined by the City, is congruent with the Business Improvement District (BID) boundary. The study area depicted on **Exhibit 1** generally encompasses the City blocks bounded by the Codorus Creek to the north, Queen Street to the east, College Street to the south, and both Pershing Street and Penn Street to the west. DESMAN assigned a number to each city block within this study area. These same block numbers are included on most of the subsequent maps and tables in the PSSP to provide



**Exhibit 1 Study Area Boundary**



the reader with geographical context when describing variances in the supply and usage of the public parking system.

## Parking Supply/Demand and Demographic Study

### *On-Street Spaces*

**Exhibit 2** depicts the locations and counts of the metered and non-metered on-street parking spaces by city block face within the downtown study area boundary. Within the Central Business District (CBD) study area boundary there are 792 on-street parking spaces, comprised of 679 metered spaces and 113 non-metered spaces.

The same exhibit also shows the locations of most of the metered and non-metered on-street parking spaces outside the CBD study area boundary. These spaces are located along segments of Market Street, George Street, College Street, and Queen Street, which are beyond the CBD study area boundary. The City requested that DESMAN examine whether or not the continued use of parking meters is the most effective way to control and regulate parking activity in areas outside the CBD.

The count of on-street parking spaces along each of these street segments are listed below:

- 245 Meters on West Market Street, from Penn Street to Carisle Avenue (not shown)
- 96 Meters on East Market, from Queen Street to Broad Street
- 57 Meters on South George Street, from College Avenue to Maple Street
- 17 Non-Meter Spaces on Queen Street, from Princess Street to College Street
- 14 Non-Meter Spaces on College Street, from Duke Street to Queen Street

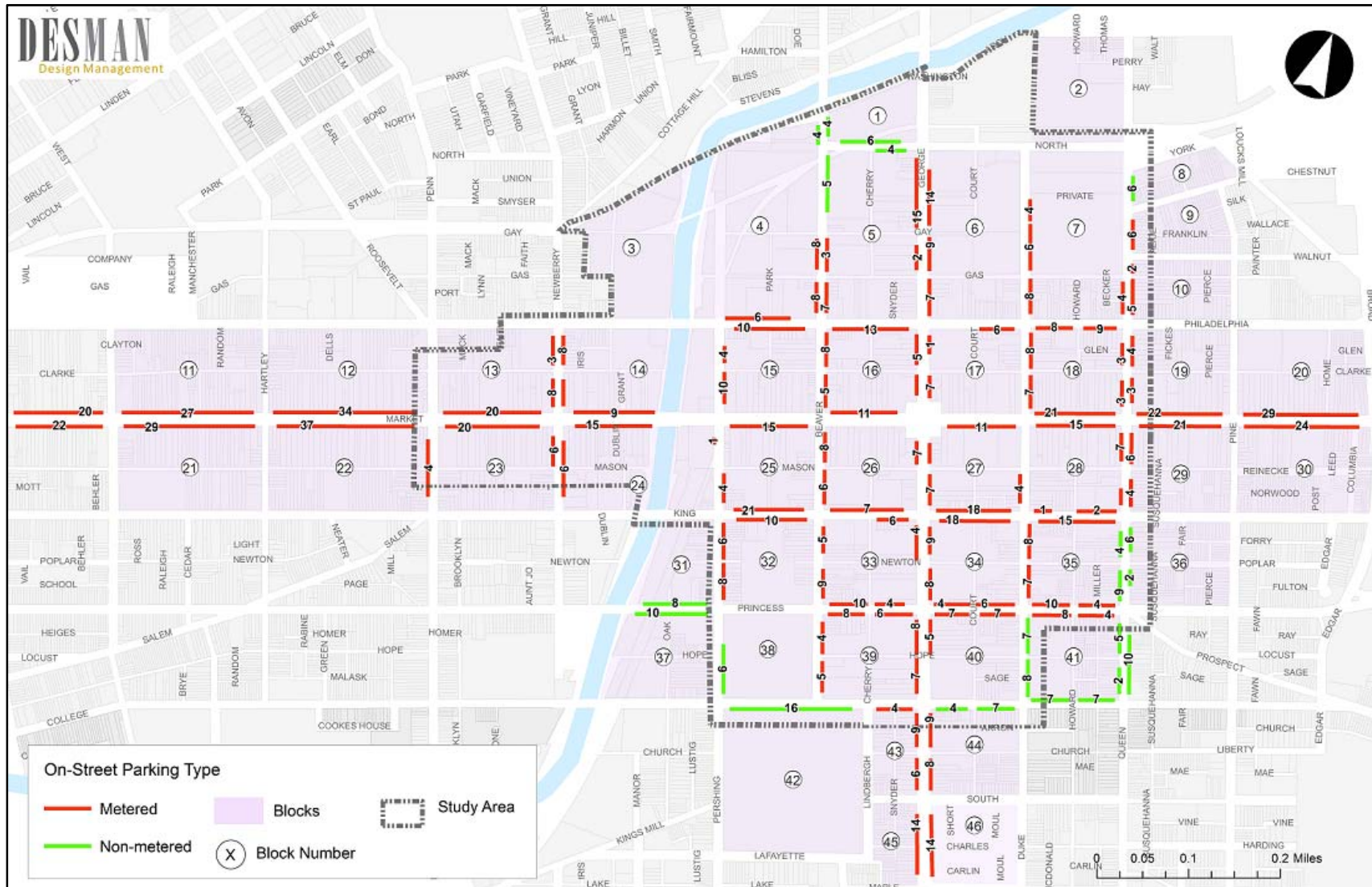
**Table 1 On-Street Parking Supply Summary**

#### **On-Street Parking Supply**

679	Metered Spaces
113	Non-Metered Spaces
<b>792</b>	<b>On-Street Spaces within CBD Study Area</b>
426	Metered Spaces
31	Non-Metered Spaces
<b>457</b>	<b>On-Street Spaces outside CBD Study Area</b>
<b>1,249</b>	<b>TOTAL ON-STREET SUPPLY SUBJECT TO ANALYSIS</b>



**Exhibit 2 Inventory of On-Street Parking Spaces by City Block in Downtown York PA**



## Off-Street Parking Facilities

**Exhibit 3** depicts the locations of all the City-controlled off-street parking facilities located within and in close proximity to the CBD study area. The list includes 14 lots and 3 garages which are managed by the City of York's General Authority (GA) and one garage and 3 lots which are owned by the City of York's Redevelopment Authority (RDA). The collection of off-street facilities controlled by the GA, along with Lots 12, 18 and 20 owned by the RDA, constitute the public parking system of the City of York. Though the RDA owns parking garage located at the Susquehanna Commerce Center, the garage leased to a condominium association that which manages the commercial complex.

It is significant to note that the GA and the RDA own several off-street parking facilities which are not shown on Exhibit 3 (denoted in the table with an \*). These other parking facilities have been omitted from the facility location map because they are located well beyond the CBD parking study area.

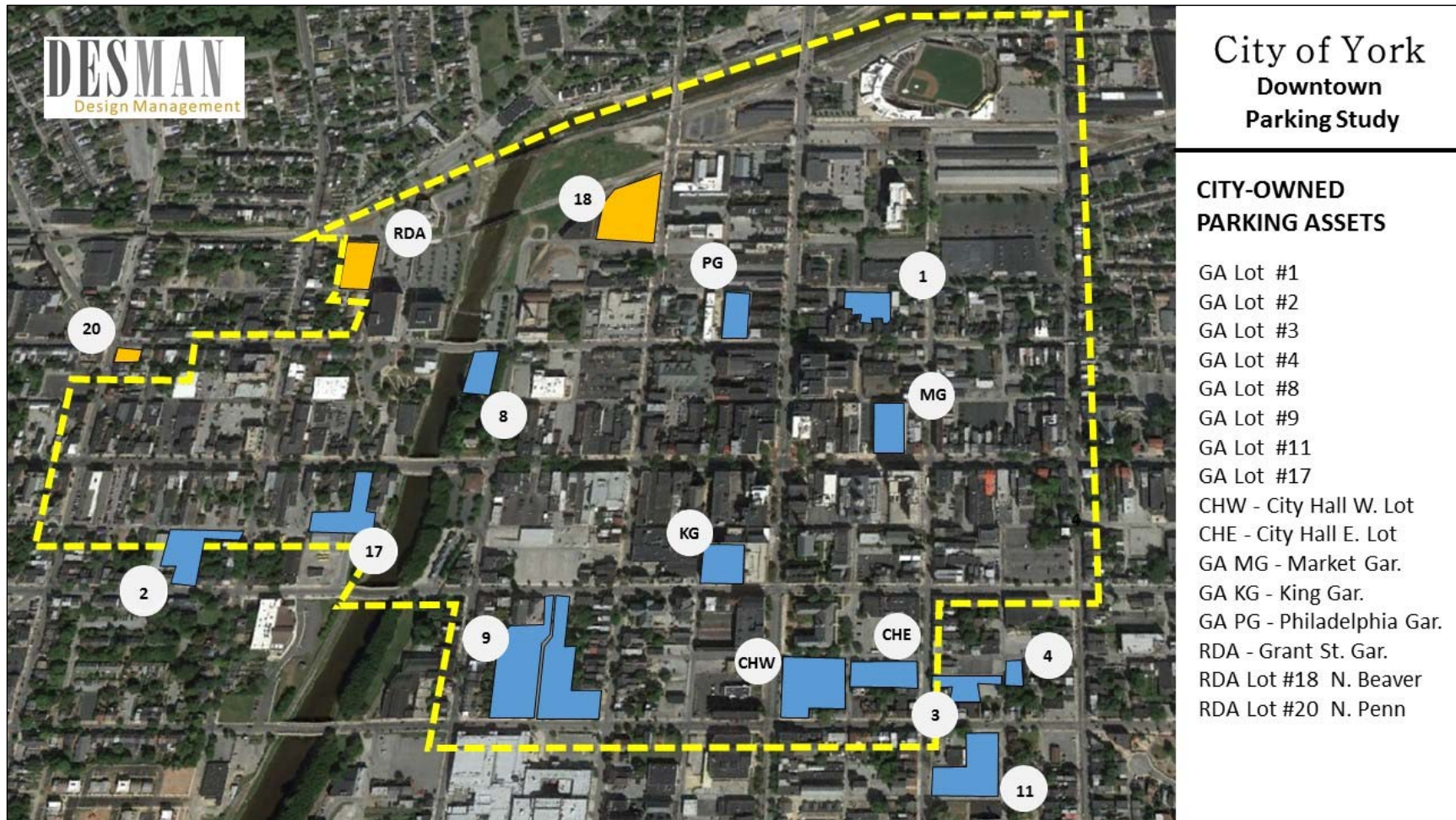
**Table 2 Off-Street Parking Supply Summary**

<b>Off-Street Parking Supply</b>	
Lot - 1 100 Block of E. Gas Ave.	44
Lot - 2 300 W. King St.	81
Lot - 3 143 S. Duke St.	64
Lot - 4 Howard & Newton	32
Lot - 7 600 W. Mason Ave.	39
Lot - 8 Lafayette Plaza	75
Lot - 9 200 Block between E. King/ E. Princess	128
Lot - 11 100 Block E. Princess	110
Lot - 13 Kings Mill & Manor *	21
Lot - 14 St. Paul & Penn*	95
Lot - 15 300 W. Princess *	10
Lot - 17 200 W. Mason Ave	68
City Hall West Lot (CHW)	75
City Hall East Lot (CHE)	60
Market Garage (MG)	438
Philadelphia Garage (PG)	281
King Garage (KG)	541
<b>Subtotal GA-Operated Off-Street Parking Supply</b>	<b>2,162</b>
RDA Garage - Susquahenna Center	314
RDA Lot - 12 700 E. Mason *	50
RDA Lot - 18 Northwest Triangle N. Beaver	74
RDA Lot - 20 376 W. Philadelphia	13
<b>Subtotal RDA-Owned Off-Street Parking Supply</b>	<b>451</b>
<b>Total City-Owned Off-Street Parking Supply</b>	<b>2,613</b>

\* Denotes parking facilities not shown on **Exhibit 3**.



**Exhibit 3 Inventory of Off- Street Parking in Downtown York. PA**



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**Exhibit 4** depicts the locations of the downtown parking facilities that are accessible by the general public. Aside from the GA and RDA parking facilities, the exhibit shows the off-street facilities that are privately-operated, used by institutions (i.e. schools, churches, non-profits, etc.) and those that are exclusively used by York County employees and visitors.

The following is a list of the privately-operated and licensed parking facilities, including two of the RDA facilities (#11 and #12 in the list), that offer daily or monthly parking to the public. Collectively, these 19 privately operated facilities account for nearly 30% of all off-street parking spaces accessible to the general public in the CBD. These off-street facilities were not included in the parking occupancy survey conducted by DESMAN.

**Table 3 Off-Street Parking Facilities Licensed by the City in 2016**

<b>2016 City Licensed Pay Parking Facilities in the CBD</b>		
1	135 North George Street	16
2	34 North Beaver Street	20
3	223 N. George Street - Elks Lodge 213	36
4	135 N. Beaver Street	131
5	34 W. Philadelphia Street	101
6	135 S. Duke Street	24
7	140 W. Market Street	22
8	132 N. George Street - Rodeway Inn	15
9	130 North Duke Street	100
10	40 N. Queen Street	11
11	376 W. Philadelphia Street - RDA Lot 20	13
12	200 Block N. Beaver Street - RDA Lot 18	74
13	Central Market Street Garage (Lower Level)	90
14	221 West Philadelphia Street - Susquehanna Ctr.	318
15	East King St. and South Queen St.	134
16	Beaver St. - York Co. Human Svcs Ctr Lot	158
17	Parklane Plaza - York Co. Leased Portion of GA Lot 9	156
18	Thomas Somerville Lot - York Revolution	50
19	221 North Duke St	25
<b>None-City Operated Public Parking Supply</b>		<b>1494</b>



Exhibit 4 Inventory of Off-Street Parking in Downtown York, PA



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## Parking Utilization Survey Findings

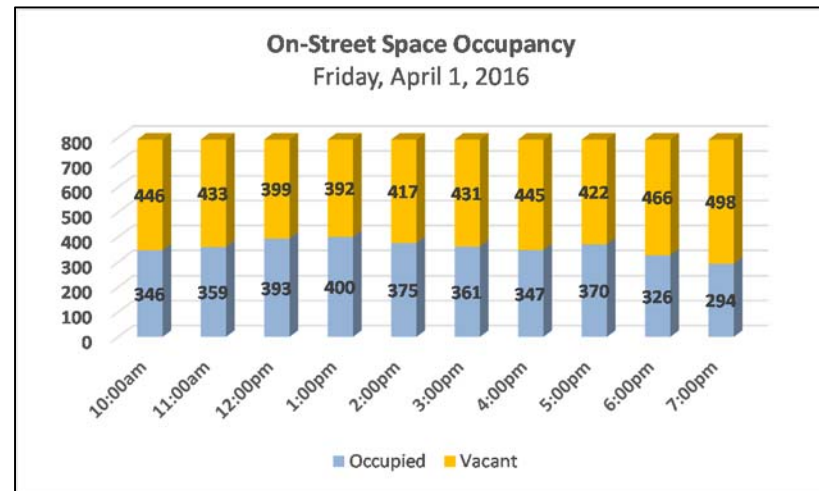
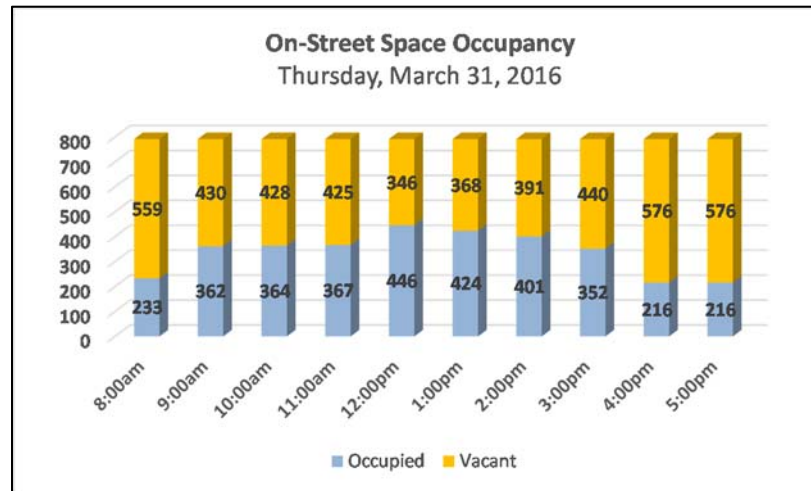
### *On- and Off-Street Parking Utilization*

DESMAN surveyed the prevailing utilization of selected on-street parking spaces and public off-street parking facilities within and abutting the Central Business District study area boundary on two different days. The surveys were conducted on Thursday, March 31, 2016, between the hours of 9:00am and 5:00pm and on Friday, April 1, 2016, between the hours of 10:00am and 7:00pm. During these timeframes, the survey team documented the hour-to-hour occupancy of all on-street spaces and in all public parking lots and garages. The occupancy of the privately controlled RDA garage and the Central Market Garage was documented along with all of the GA's parking lots and garages.

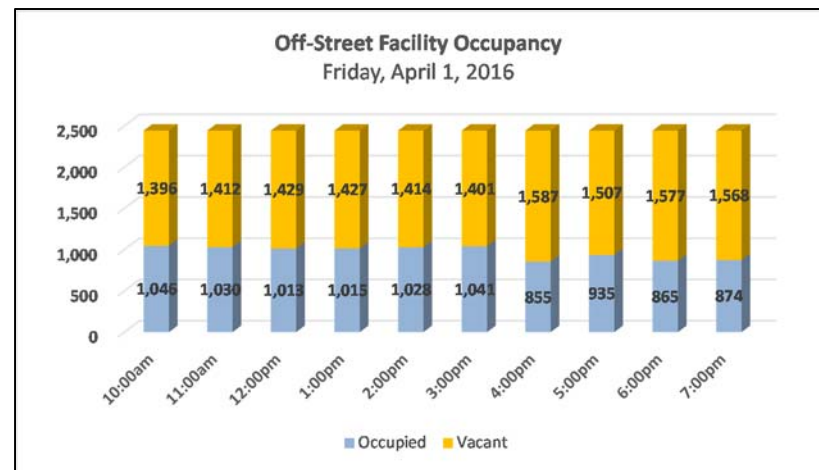
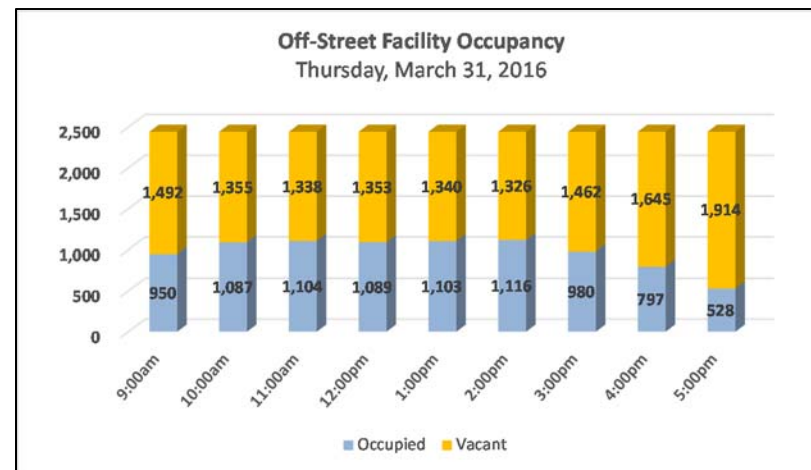
The series of data tables and exhibits on the following pages reveal that there does not appear to be a parking supply deficit in the downtown area. The following are the highlights of the parking survey:

1. Overall on-street parking space occupancy in the CBD never exceeded 57%
2. Overall off-street parking space occupancy in the lots and garage never exceeded 45%
3. On- and off-street parking occupancy generally peaked between the hours 12:00pm and 2:00pm
4. Occupancy at the King Garage peaked at approximately 57%
5. Occupancy at the Market Garage peaked at approximately 29%
6. Occupancy at the Philadelphia Garage peaked at approximately 49%
7. The highest and most consistent utilization of on-street parking spaces was observed in the following areas:
  - Market Street between Beaver and Duke
  - George Street between Gas and King
  - Philadelphia Street between Pershing and George

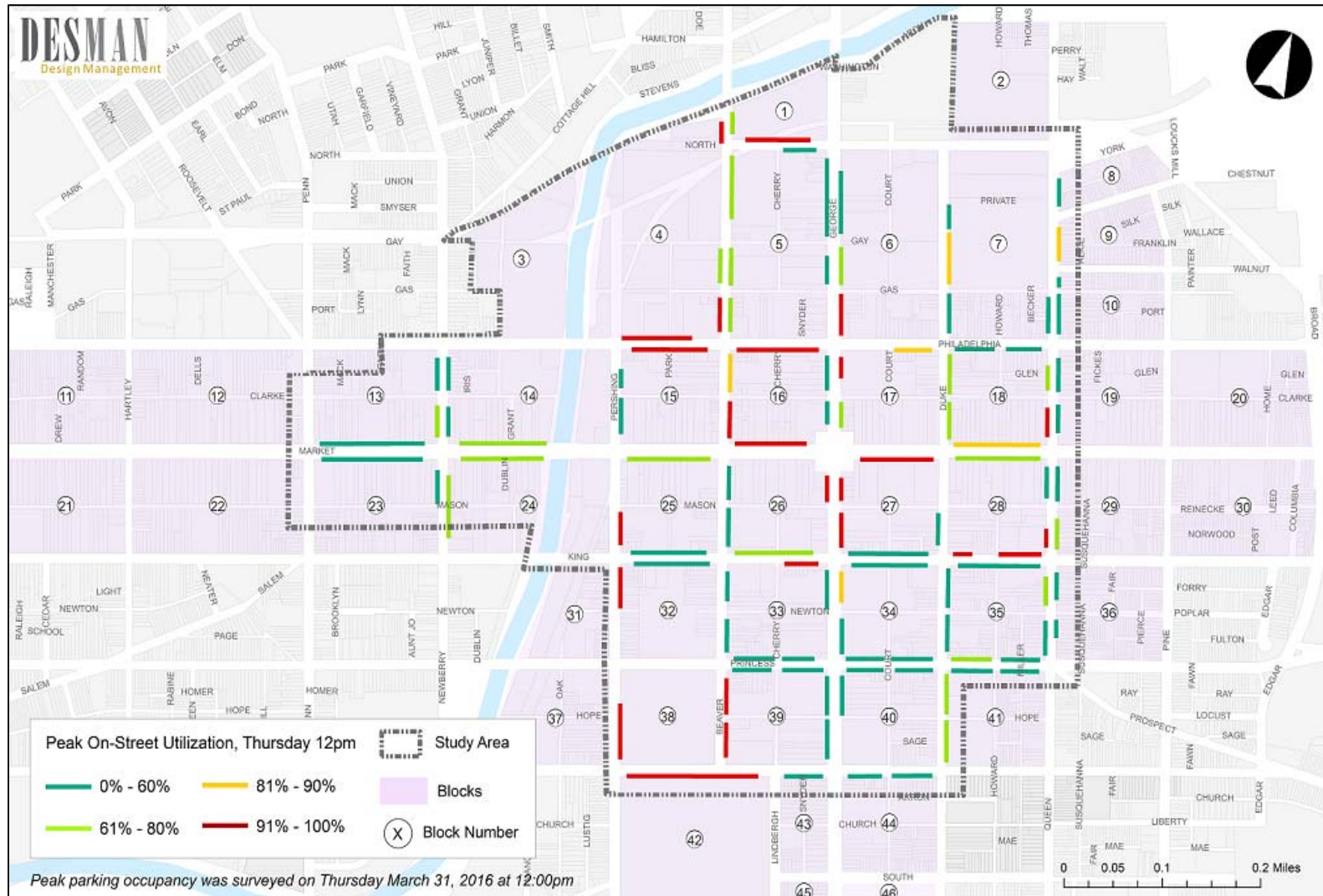
**Exhibit 5 Summary of Hourly On-Street Parking Utilization in Downtown York, PA**



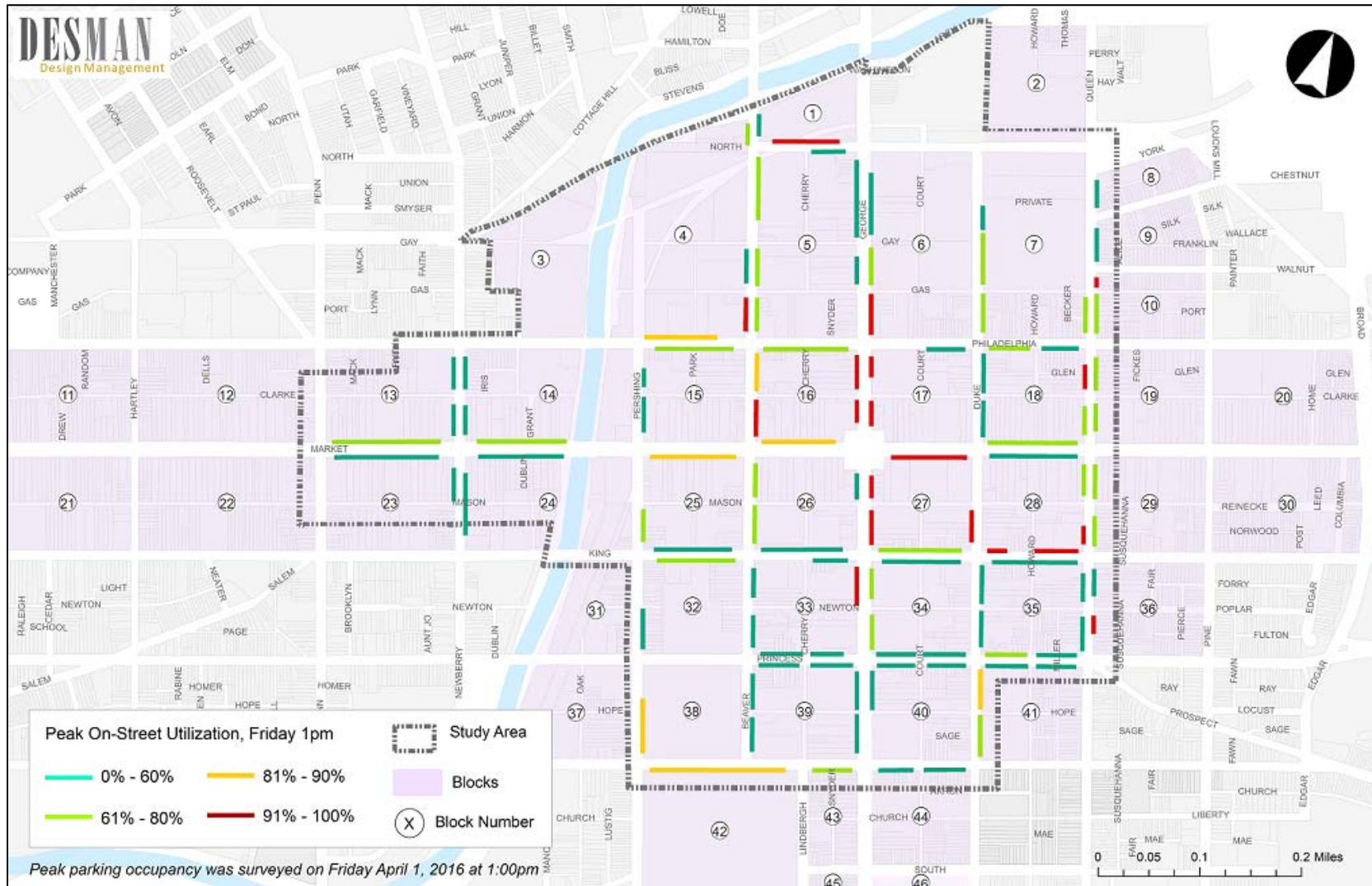
**Exhibit 6 Summary of Hourly Off-Street Parking Utilization in Downtown York, PA**



**Exhibit 7 Occupancy of On- Street Parking Spaces at Peak Hour on Thursday, March 31, 2016 (12:00pm)**



**Exhibit 8 Occupancy of On- Street Parking Spaces at Peak Hour on Friday, April 1, 2016 (1:00 pm)**



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**Table 4 On-Street Parking Space Occupancy by Street on Thursday, March 31, 2016**

STREET NAME	SIDE OF STREET	FROM	TO	All Spaces	Mech. Type	Smart Type	Non-Meter	9 AM	10 AM	11 AM	12 PM	2 PM	3 PM	4 PM	5 PM
Beaver	E	North	College	89	40	26	23	65%	66%	72%	81%	72%	64%	64%	54%
College	S	Pershing	George	20	0	0	20	95%	90%	95%	90%	85%	85%	55%	50%
Duke	E	North	College	67	52	0	15	45%	46%	43%	48%	48%	42%	48%	12%
George	W	North	College	124	22	102	0	48%	48%	48%	60%	48%	39%	34%	25%
King	N	River	Queen	98	98	0	0	47%	40%	32%	46%	42%	41%	35%	17%
Market	N	Penn	Queen	137	64	73	0	42%	39%	37%	63%	61%	49%	42%	20%
Newberry	W	Philadelphia	King	30	30	0	0	23%	37%	30%	43%	53%	23%	27%	30%
North	N	Beaver	George	10	0	0	10	60%	60%	70%	70%	80%	90%	30%	30%
Pershing	E	Gay	College	41	35	0	6	39%	44%	34%	44%	56%	63%	68%	68%
Philadelphia	N	River	Queen	52	39	13	0	54%	60%	71%	79%	56%	40%	42%	48%
Princess	N	Beaver	Cherry	92	52	0	40	33%	36%	38%	35%	28%	27%	26%	10%
Queen	N	North	Princess	76	49	0	27	55%	59%	57%	46%	37%	37%	53%	36%
<b>TOTALS</b>				<b>836</b>	<b>481</b>	<b>214</b>	<b>141</b>	<b>43%</b>	<b>48%</b>	<b>48%</b>	<b>57%</b>	<b>51%</b>	<b>45%</b>	<b>43%</b>	<b>29%</b>

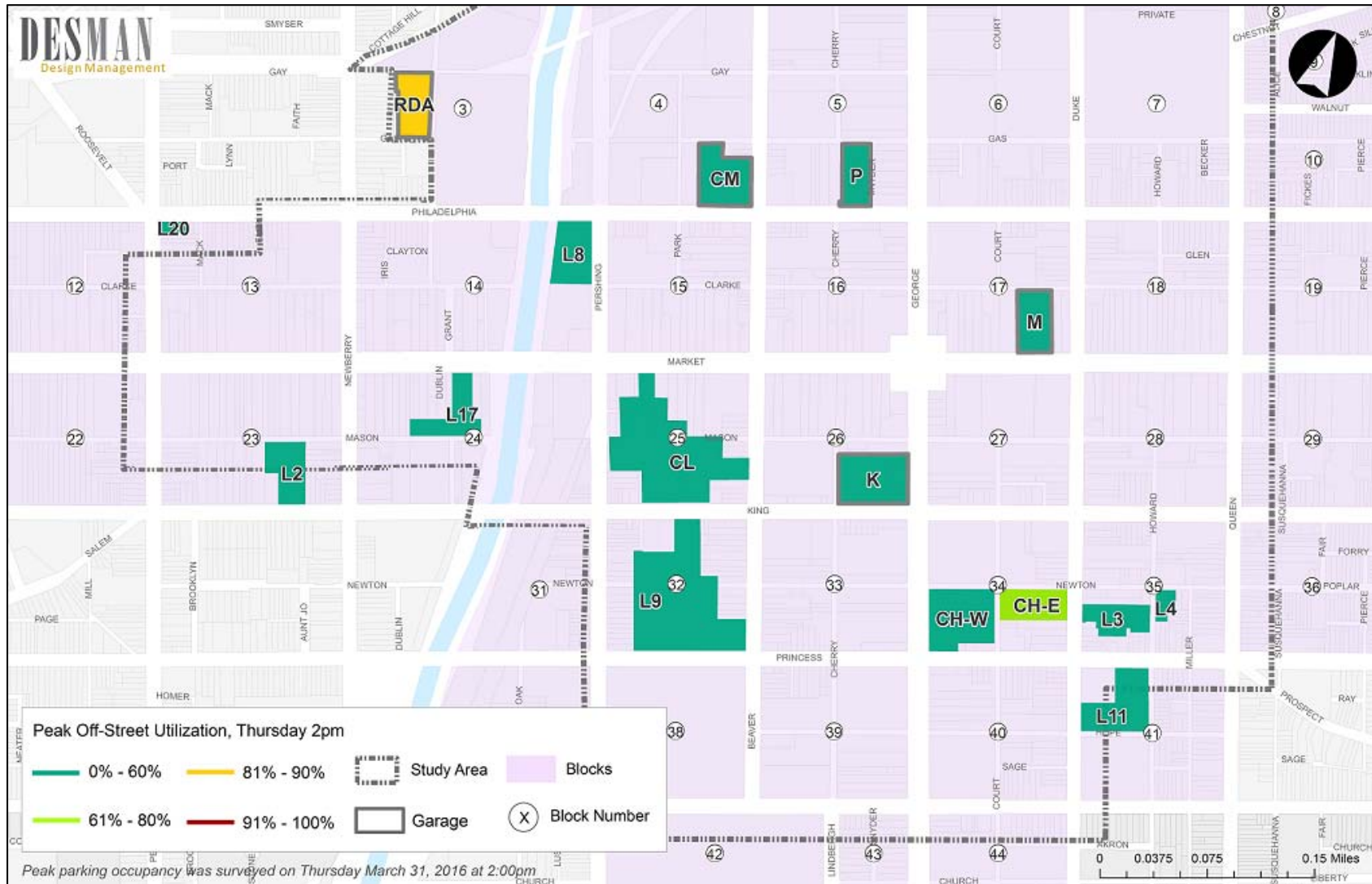
**Table 5 On-Street Parking Space Occupancy by Street on Friday, April 1, 2016**

STREET NAME	SIDE OF STREET	FROM	TO	All Spaces	Mech. Type	Smart Type	Non-Meter	10 AM	11 AM	12 PM	1 PM	2 PM	4 PM	5 PM	6 PM	7 PM
Beaver	E	North	College	89	40	26	23	58%	47%	61%	58%	55%	58%	58%	53%	55%
College	S	Pershing	George	20	0	0	20	80%	70%	85%	75%	65%	65%	35%	20%	20%
Duke	E	North	College	67	52	0	15	45%	57%	49%	55%	43%	39%	27%	43%	36%
George	W	North	College	124	22	102	0	45%	48%	58%	62%	52%	47%	59%	34%	27%
King	N	River	Queen	98	98	0	0	38%	41%	47%	37%	45%	38%	38%	36%	39%
Market	N	Penn	Queen	137	64	73	0	42%	45%	48%	58%	53%	47%	50%	61%	53%
Newberry	W	Philadelphia	King	30	30	0	0	37%	17%	20%	27%	20%	10%	13%	37%	37%
North	N	Beaver	George	10	0	0	10	60%	60%	60%	60%	80%	40%	40%	0%	0%
Pershing	E	Gay	College	41	35	0	6	49%	54%	54%	41%	27%	44%	78%	73%	73%
Philadelphia	N	River	Queen	52	39	13	0	40%	48%	56%	73%	60%	67%	85%	37%	37%
Princess	N	Beaver	Cherry	92	52	0	40	34%	36%	36%	30%	43%	36%	25%	20%	11%
Queen	N	North	Princess	76	49	0	27	59%	0%	0%	0%	43%	41%	39%	51%	36%
<b>TOTALS</b>				<b>836</b>	<b>481</b>	<b>214</b>	<b>141</b>	<b>39%</b>	<b>34%</b>	<b>38%</b>	<b>38%</b>	<b>39%</b>	<b>37%</b>	<b>39%</b>	<b>33%</b>	<b>29%</b>





**Exhibit 9 Peak Hour Occupancy of Off-Street Parking Facilities on Thursday, March 31, 2016 (2:00 pm)**



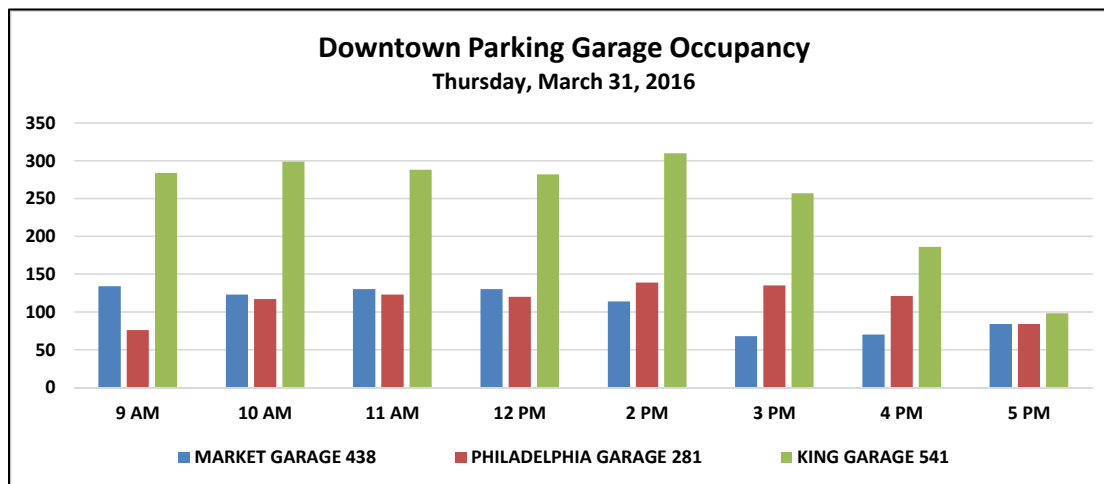
**Exhibit 10 Peak Hour Occupancy of Off-Street Parking Facilities on Friday, April 1, 2016 (5:00 pm)**



**Table 6 Hourly Occupancy at Selected Off-Street Parking Facilities on Thursday, March 31, 2016**

OFF-STREET LOTS / GARAGES	Space Count	Block #	9 AM	10 AM	11 AM	12 PM	1 PM	2 PM	3 PM	4 PM	5 PM
CITY HALL WEST	75	34	24	45	45	40		34	36	36	25
CITY HALL EAST	60	34	38	41	47	41		38	36	38	33
<b>Subtotal City Hall Lot Occupancy</b>	<b>135</b>		<b>62</b>	<b>86</b>	<b>92</b>	<b>81</b>		<b>72</b>	<b>72</b>	<b>74</b>	<b>58</b>
<i>% Occupied</i>			<i>46%</i>	<i>64%</i>	<i>68%</i>	<i>60%</i>		<i>53%</i>	<i>53%</i>	<i>55%</i>	<i>43%</i>
LOT 2	81	23	13	25	21	16		21	27	24	8
LOT 3	64	35	4	3	3	3		4	3	4	2
LOT 4	32	35	0	0	0	0		0	0	1	1
LOT 8	75	14	9	16	13	12		18	18	14	11
LOT 9	128	32	66	62	64	63		62	48	31	24
LOT 11	110	41	13	12	10	10		14	9	11	9
LOT 17	68	24	18	19	18	20		19	17	16	6
LOT 20	13	13	3	2	3	3		3	2	3	2
<b>Subtotal GA Lot Occupancy</b>	<b>571</b>		<b>126</b>	<b>139</b>	<b>132</b>	<b>127</b>		<b>141</b>	<b>124</b>	<b>104</b>	<b>63</b>
<i>% Occupied</i>			<i>22%</i>	<i>24%</i>	<i>23%</i>	<i>22%</i>		<i>25%</i>	<i>22%</i>	<i>18%</i>	<i>11%</i>
MARKET GARAGE	438	17	134	123	130	130		114	68	70	84
PHILADELPHIA GARAGE	281	5	76	117	123	120		139	135	121	84
KING GARAGE	541	26	284	299	288	282		310	257	186	98
<b>Subtotal GA Garage Occupancy</b>	<b>1260</b>		<b>494</b>	<b>539</b>	<b>541</b>	<b>532</b>		<b>563</b>	<b>460</b>	<b>377</b>	<b>266</b>
<i>% Occupied</i>			<i>39%</i>	<i>43%</i>	<i>43%</i>	<i>42%</i>		<i>45%</i>	<i>37%</i>	<i>30%</i>	<i>21%</i>
RDA GARAGE	314	3	213	237	242	240		264	283	202	111
Central Mkt Garage Lower Level	90	4	53	81	86	85		70	39	38	30
Central Mkt Garage Upper Level	72	4	2	5	11	24		6	2	2	0
<b>Subtotal Private Garage Occupancy</b>	<b>476</b>		<b>268</b>	<b>323</b>	<b>339</b>	<b>349</b>		<b>340</b>	<b>324</b>	<b>242</b>	<b>141</b>
<i>% Occupied</i>			<i>56%</i>	<i>68%</i>	<i>71%</i>	<i>73%</i>		<i>71%</i>	<i>68%</i>	<i>51%</i>	<i>30%</i>

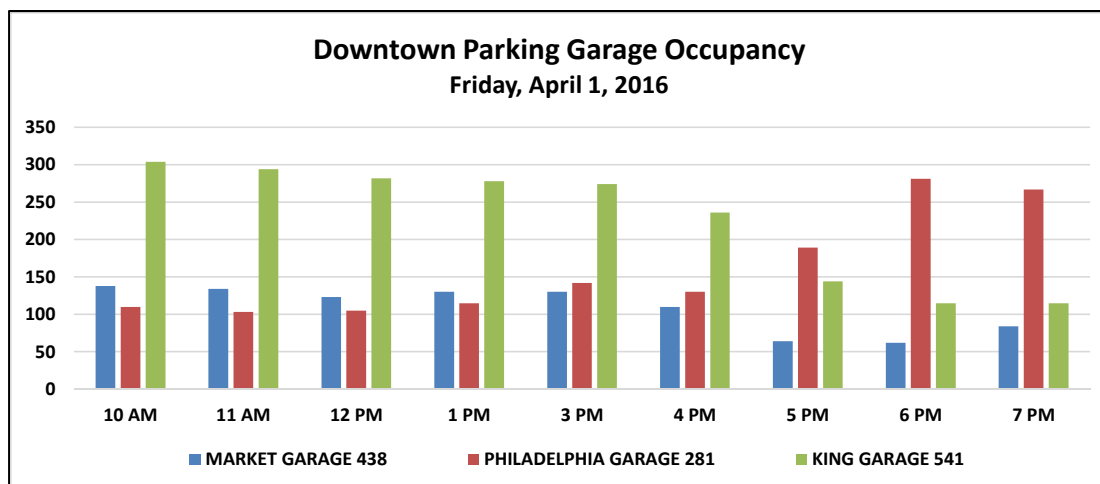
**Exhibit 11 GA Parking Garage Occupancy on Thursday, March 31, 2016**



**Table 7 Hourly Occupancy at Selected Off-Street Parking Facilities on Friday, April 1, 2016**

OFF-STREET LOTS / GARAGES	Space Count	Block #	10 AM	11 AM	12 PM	1 PM	2 PM	3 PM	4 PM	5 PM	6 PM	7 PM
CITY HALL WEST	75	34	37	47	48	36		36	27	14	15	33
CITY HALL EAST	60	34	52	45	31	34		36	29	22	17	18
<b>Subtotal City Hall Lot Occupancy</b>	<b>135</b>		<b>89</b>	<b>92</b>	<b>79</b>	<b>70</b>		<b>72</b>	<b>56</b>	<b>36</b>	<b>32</b>	<b>51</b>
<b>% Occupied</b>			<b>66%</b>	<b>68%</b>	<b>59%</b>	<b>52%</b>		<b>53%</b>	<b>41%</b>	<b>27%</b>	<b>24%</b>	<b>38%</b>
LOT 2	81	23	23	19	29	25		25	12	9	6	5
LOT 3	64	35	4	4	3	3		3	3	23	0	2
LOT 4	32	35	1	2	1	1		1	2	1	0	2
LOT 8	75	14	8	11	12	11		11	11	59	75	73
LOT 9	128	32	61	62	58	56		56	42	15	13	14
LOT 11	110	41	7	12	8	11		11	12	10	16	16
LOT 17	68	24	22	22	18	16		16	11	3	5	3
LOT 20	13	13	3	3	4	4		4	2	1	3	2
<b>Subtotal GA Lot Occupancy</b>	<b>571</b>		<b>129</b>	<b>135</b>	<b>133</b>	<b>127</b>		<b>127</b>	<b>95</b>	<b>121</b>	<b>118</b>	<b>117</b>
<b>% Occupied</b>			<b>23%</b>	<b>24%</b>	<b>23%</b>	<b>22%</b>		<b>22%</b>	<b>17%</b>	<b>21%</b>	<b>21%</b>	<b>20%</b>
MARKET GARAGE	438	17	138	134	123	130		130	110	64	62	84
PHILADELPHIA GARAGE	281	5	110	103	105	115		142	130	189	281	267
KING GARAGE	541	26	304	294	282	278		274	236	144	115	115
<b>Subtotal GA Garage Occupancy</b>	<b>1260</b>		<b>552</b>	<b>531</b>	<b>510</b>	<b>523</b>		<b>546</b>	<b>476</b>	<b>397</b>	<b>458</b>	<b>466</b>
<b>% Occupied</b>			<b>44%</b>	<b>42%</b>	<b>40%</b>	<b>42%</b>		<b>43%</b>	<b>38%</b>	<b>32%</b>	<b>36%</b>	<b>37%</b>
RDA GARAGE	314	3	227	217	226	235		236	121	219	91	73
Central Mkt Garage Lower Level	90	4	48	51	60	56		55	85	90	94	95
Central Mkt Garage Upper Level	72	4	1	4	5	4		5	22	72	72	72
<b>Subtotal Private Garage Occupancy</b>	<b>476</b>		<b>276</b>	<b>272</b>	<b>291</b>	<b>295</b>		<b>296</b>	<b>228</b>	<b>381</b>	<b>257</b>	<b>240</b>
<b>% Occupied</b>			<b>58%</b>	<b>57%</b>	<b>61%</b>	<b>62%</b>		<b>62%</b>	<b>48%</b>	<b>80%</b>	<b>54%</b>	<b>50%</b>

**Exhibit 12 GA Parking Garage Occupancy on Friday, April 1, 2016**



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### *On-Street Parking Space Turnover & Duration of Stay*

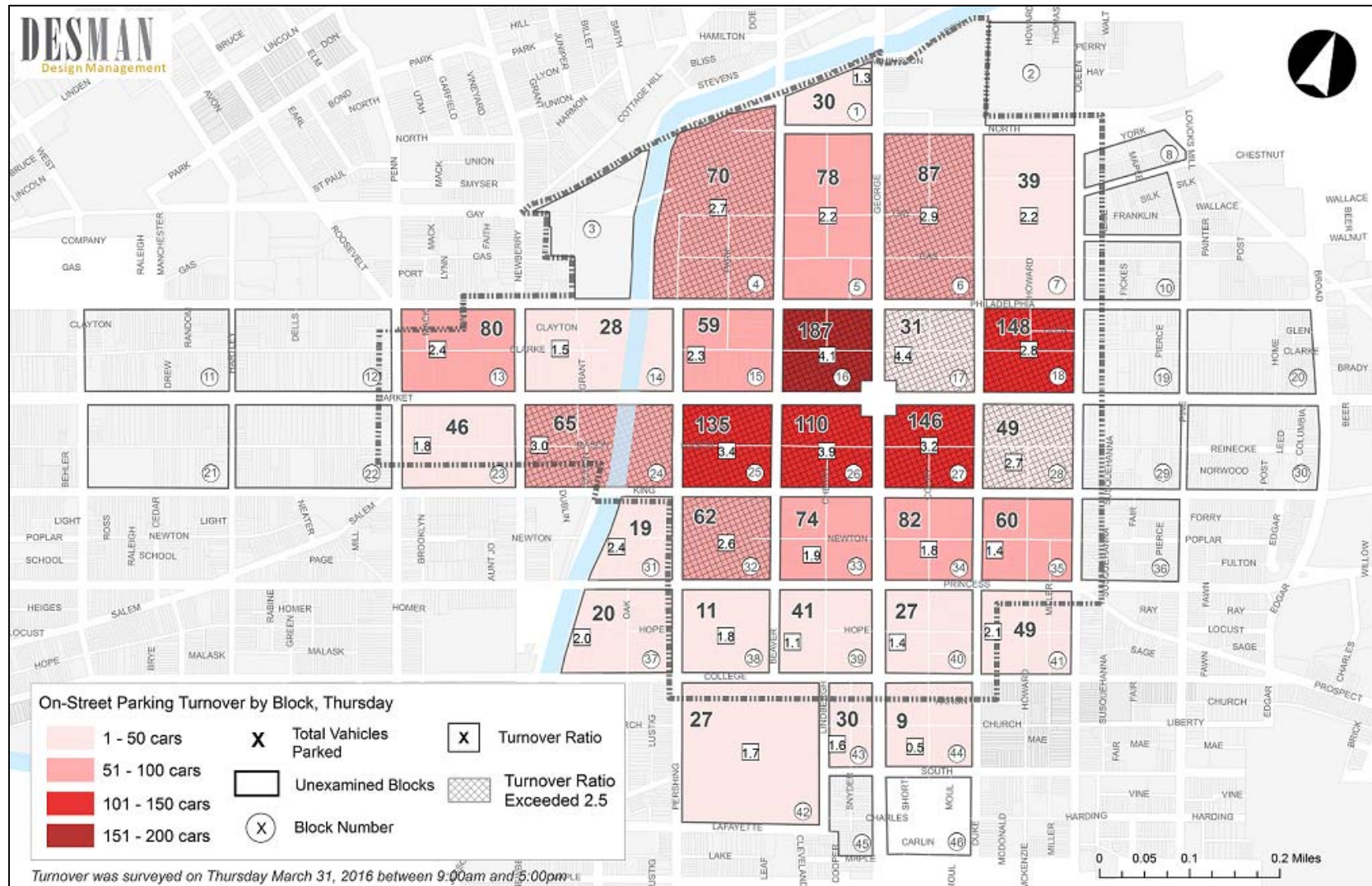
DESMAN's survey team also documented the turnover of parking spaces and duration of stay for parkers at all metered and non-metered spaces on-street within the CBD area. This was accomplished by recording the license plates of each vehicle found parked at each on-street space every hour. This documentation allowed the team to determine how long each vehicle remained parked at each space and how many different vehicles parked at each space throughout the day-long survey period. Since the current parking regulations throughout the downtown area restrict on-street parking to a limit of two hours, theoretically, no vehicle should have occupied any on-street parking space for more than two hours. The degree to which on-street parking spaces turnover during a typical weekday is a reflection of the scope of the prevailing short-term parking demand.

This type of survey normally can provide an indication of whether or not the two-hour parking time limit regulation is or is not being adhered to by on-street parkers. However, because the City has issued 189 all-day, on-street parking permits to downtown residents, many of the parkers found to be parking longer than two hours were do so legally, rather than violating the time limit restriction. Nevertheless, the team was able to document both the day-long count of different vehicles occupying on-street spaces and the count of total vehicles, by block, that parked for 1, 2, 3, etc. hours in the same on-street space.

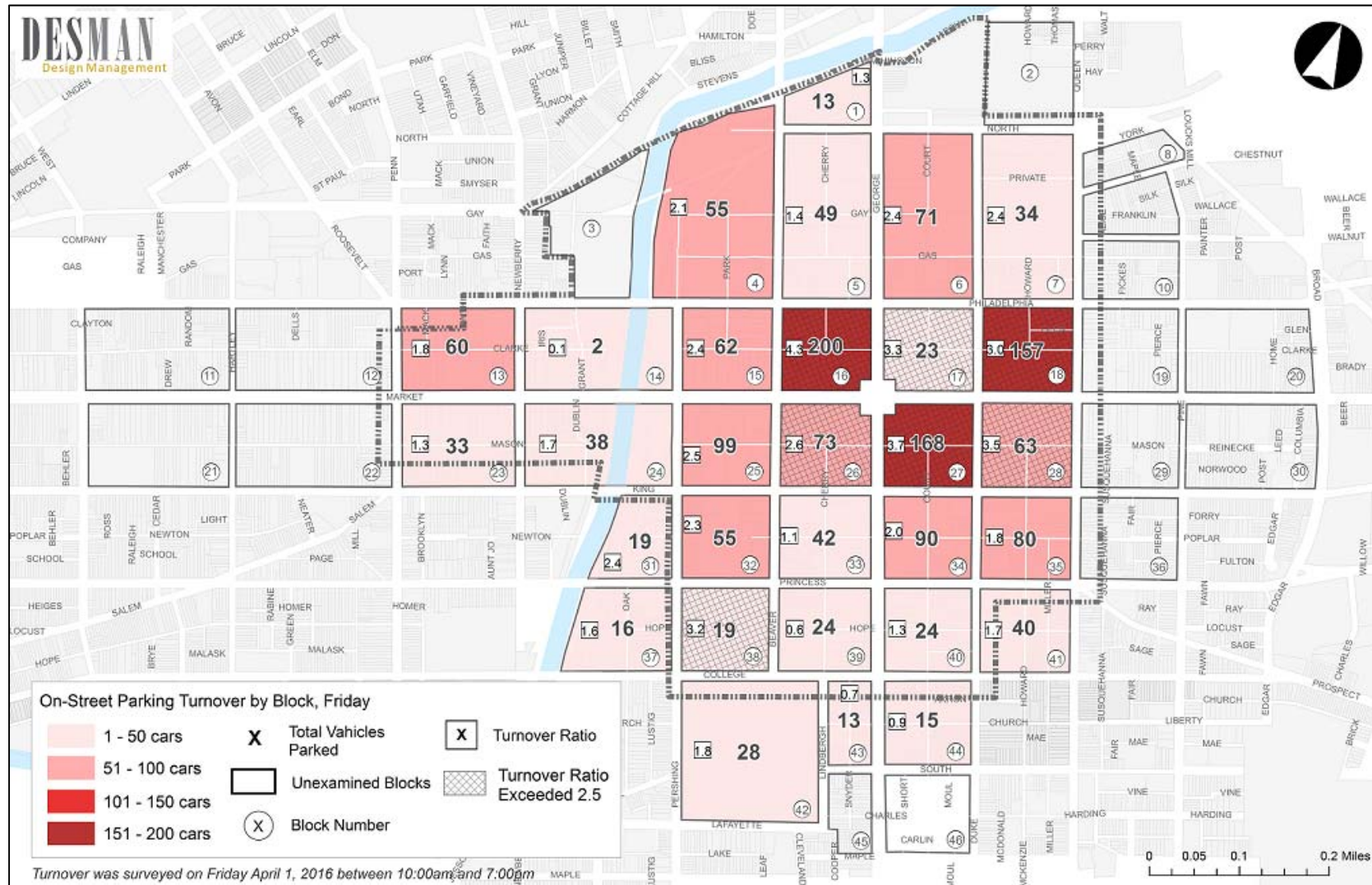
**Exhibits 13 and 14** depict the total volume of different vehicles that parked in each city block during the two survey days. By dividing the total count of vehicles parked by the count of on-street parking spaces on each block, the space turnover ratio for each block was determined. The on-street space turnover on most blocks was below three turns, meaning that, on average, fewer than three different vehicles parked in each space throughout the course of the survey period. The on-street space turnover and total vehicle count volumes were highest in the blocks bounded by Philadelphia, King, Beaver, and Duke Street, which happens to be where the three GA parking garages are located.



**Exhibit 13 Parking Supply Turnover by City Block on Thursday, March 31, 2016**



**Exhibit 14 Parking Supply Turnover by City Block on Friday, April 1, 2016**



**Tables 8 and 9** provide a block-by-block tabulation of the on-street parking space occupancy, duration of stay and space turnover.

On Thursday, March 31<sup>st</sup> a total of 1,882 different vehicles parked on-street in the CBD study area. Of the total, 69% (1,304 vehicles) parked for one hour, 17% (315 vehicles) parked for two hours, and 14% (263 vehicles) parked for more than two hours in the same space.

On Friday, April 1<sup>st</sup> a total of 1,665 different vehicles parked on-street in the CBD study area. Of the total, 61% (1,011 vehicles) parked for one hour, 28% (458 vehicles) parked for two hours, and 12% (196 vehicles) parked for more than two hours in the same space.

**Table 8 Occupancy & Vehicle Duration of Stay at On-Street Spaces on Thursday, March 31, 2016**

Block #	Space Count	Hour-to-Hour On-Street Space Occupancy								Parked Vehicle's Duration of Stay									Total Veh.	Turnover Ratio
		9 AM	10 AM	11 AM	12 PM	2 PM	3 PM	4 PM	5 PM	1 Hr	2 Hrs	3 Hrs	4 Hrs	5 Hrs	6 Hrs	7 Hrs	8 Hrs	9 Hrs		
1	10	9 90%	9 90%	9 90%	9 90%	10 100%	10 100%	5 50%	4 40%	2 15%	0 0%	0 0%	0 0%	0 0%	0 0%	6 46%	3 23%	2 15%	13	1.3
4	26	11 42%	12 46%	20 77%	25 96%	14 54%	14 54%	10 38%	9 35%	53 76%	7 10%	1 1%	4 6%	1 1%	2 3%	0 0%	2 3%	0 0%	70	2.7
5	36	15 42%	17 47%	22 61%	21 58%	17 47%	17 47%	8 22%	20 56%	56 72%	6 8%	8 10%	4 5%	1 1%	0 0%	0 0%	3 4%	0 0%	78	2.2
6	30	19 63%	14 47%	13 43%	18 60%	13 43%	9 30%	7 23%	11 37%	67 77%	11 13%	8 9%	0 0%	0 0%	0 0%	1 1%	0 0%	0 0%	87	2.9
7	18	2 11%	6 33%	4 22%	10 56%	4 22%	5 28%	1 6%	5 28%	37 95%	0 0%	1 3%	1 3%	0 0%	0 0%	0 0%	0 0%	0 0%	39	2.2
13	34	20 59%	14 41%	9 26%	16 47%	13 38%	7 21%	18 53%	9 26%	51 64%	21 26%	4 5%	3 4%	1 1%	0 0%	0 0%	0 0%	0 0%	80	2.4
14	19	0 0%	6 32%	1 5%	9 47%	5 26%	2 11%	2 11%	3 16%	28 100%	0 0%	0 0%	0 0%	0 0%	0 0%	0 0%	0 0%	0 0%	28	1.5
15	26	8 31%	16 62%	11 42%	12 46%	8 31%	13 50%	14 54%	15 58%	32 54%	16 27%	6 10%	2 3%	1 2%	0 0%	0 0%	2 3%	0 0%	59	2.3
16	46	29 63%	38 83%	15 33%	40 87%	42 91%	28 61%	32 70%	14 30%	146 78%	29 16%	3 2%	3 2%	3 2%	0 0%	2 1%	1 1%	0 0%	187	4.1
17	7	7 100%	4 57%	0 0%	5 71%	7 100%	3 43%	4 57%	0 0%	29 94%	0 0%	1 3%	1 3%	0 0%	0 0%	0 0%	0 0%	0 0%	31	4.4
18	53	26 49%	12 23%	32 60%	35 66%	34 64%	26 49%	30 57%	10 19%	120 81%	15 10%	4 3%	5 3%	2 1%	0 0%	0 0%	2 1%	0 0%	148	2.8
23	26	5 19%	3 12%	3 12%	3 12%	12 46%	7 27%	5 19%	8 31%	38 83%	6 13%	2 4%	0 0%	0 0%	0 0%	0 0%	0 0%	0 0%	46	1.8
24	22	0 0%	14 64%	13 59%	14 64%	11 50%	9 41%	7 32%	15 68%	44 68%	21 32%	0 0%	0 0%	0 0%	0 0%	0 0%	0 0%	0 0%	65	3.0
25	40	23 58%	23 58%	4 10%	24 60%	29 73%	29 73%	29 73%	12 30%	99 73%	20 15%	7 5%	4 3%	5 4%	0 0%	0 0%	0 0%	0 0%	135	3.4
26	28	14 50%	11 39%	19 68%	21 75%	23 82%	25 89%	21 75%	19 68%	71 65%	25 23%	8 7%	2 2%	4 4%	0 0%	0 0%	0 0%	0 0%	110	3.9
27	46	32 70%	22 48%	31 67%	34 74%	27 59%	23 50%	4 9%	5 11%	119 82%	9 6%	14 10%	2 1%	2 1%	0 0%	0 0%	0 0%	0 0%	146	3.2
28	18	10 56%	5 28%	15 83%	15 83%	15 83%	9 50%	10 56%	0 0%	39 80%	5 10%	0 0%	1 2%	1 2%	0 0%	1 2%	2 4%	0 0%	49	2.7
31	8	7 88%	8 100%	7 88%	7 88%	5 63%	6 75%	3 38%	6 75%	8 42%	2 11%	3 16%	2 11%	1 5%	0 0%	2 11%	1 5%	0 0%	19	2.4
32	24	9 38%	7 29%	8 33%	8 33%	12 50%	14 58%	16 67%	11 46%	35 56%	14 23%	9 15%	4 6%	0 0%	0 0%	0 0%	0 0%	0 0%	62	2.6
33	38	16 42%	13 34%	20 53%	19 50%	12 32%	9 24%	12 32%	14 37%	44 59%	20 27%	3 4%	2 3%	2 3%	2 3%	1 1%	0 0%	0 0%	74	1.9
34	45	15 33%	22 49%	16 36%	20 44%	14 31%	12 27%	9 20%	3 7%	58 71%	16 20%	1 1%	2 2%	1 1%	0 0%	4 5%	0 0%	0 0%	82	1.8
35	44	18 41%	17 39%	17 39%	12 27%	12 27%	10 23%	20 45%	0 0%	36 60%	15 25%	0 0%	1 2%	2 3%	1 2%	5 8%	0 0%	0 0%	60	1.4
37	10	8 80%	7 70%	9 90%	8 80%	6 60%	5 50%	6 60%	2 20%	8 40%	5 25%	2 10%	0 0%	0 0%	0 0%	1 5%	4 20%	0 0%	20	2.0
38	6	6 100%	6 100%	6 100%	6 100%	6 100%	6 100%	4 67%	6 100%	3 27%	2 18%	1 9%	0 0%	1 9%	0 0%	0 0%	4 36%	0 0%	11	1.8
39	38	11 29%	13 34%	11 29%	11 29%	14 37%	11 29%	13 34%	5 13%	20 49%	8 20%	2 5%	2 5%	2 5%	0 0%	4 10%	3 7%	0 0%	41	1.1
40	19	6 32%	5 26%	8 42%	6 32%	5 26%	4 21%	7 37%	0 0%	15 56%	9 33%	0 0%	1 4%	1 4%	0 0%	1 4%	0 0%	0 0%	27	1.4
41	23	13 57%	17 74%	14 61%	12 52%	12 52%	15 65%	10 43%	0 0%	18 37%	18 37%	1 2%	3 6%	4 8%	0 0%	5 10%	0 0%	0 0%	49	2.1
42	16	16 100%	16 100%	16 100%	16 100%	15 94%	15 94%	9 56%	8 50%	3 11%	7 26%	1 4%	0 0%	2 7%	0 0%	0 0%	14 52%	0 0%	27	1.7
43	19	7 37%	7 37%	11 58%	7 37%	4 21%	7 37%	12 63%	2 11%	20 67%	4 13%	0 0%	0 0%	0 0%	2 7%	0 0%	2 7%	0 0%	30	1.6
44	17	0 0%	0 0%	3 18%	3 18%	0 0%	2 12%	4 24%	0 0%	5 56%	4 44%	0 0%	0 0%	0 0%	0 0%	0 0%	0 0%	0 0%	9	0.5
	792	362 46%	364 46%	367 46%	446 56%	401 51%	352 44%	332 42%	216 27%	1304 69%	315 17%	90 5%	49 3%	39 2%	5 0%	35 2%	43 2%	2 0%	1882	2.4



**Table 9 Occupancy & Vehicle Duration of Stay at On-Street Spaces on Friday, April 1, 2016**

		Hour-to-Hour On-Street Space Occupancy									Parked Vehicle's Duration of Stay									Total Veh.	Turnover Ratio
Block #	Space Count	10 AM	11 AM	12 PM	1 PM	2 PM	4 PM	5 PM	6 PM	7 PM	1 Hr	2 Hrs	3 Hrs	4 Hrs	5 Hrs	6 Hrs	7 Hrs	8 Hrs	9 Hrs		
1	10	9 90%	7 70%	7 70%	7 70%	7 70%	6 60%	4 40%	0 0%	0 0%	5 38%	1 8%	0 0%	0 0%	0 0%	3 23%	2 15%	2 15%	0 0%	13	1.3
4	26	15 58%	12 46%	16 62%	19 73%	14 54%	15 58%	22 85%	18 69%	18 69%	24 44%	22 40%	2 4%	0 0%	0 0%	2 4%	1 2%	4 7%	0 0%	55	2.1
5	36	13 36%	15 42%	19 53%	18 50%	17 47%	16 44%	23 64%	0 0%	0 0%	18 37%	19 39%	4 8%	0 0%	0 0%	1 2%	1 2%	6 12%	0 0%	49	1.4
6	30	12 40%	16 53%	21 70%	21 70%	16 53%	10 33%	20 67%	0 0%	0 0%	37 52%	26 37%	2 3%	1 1%	0 0%	3 4%	1 1%	1 1%	0 0%	71	2.4
7	18	10 56%	10 56%	11 61%	11 61%	7 39%	6 33%	1 6%	0 0%	0 0%	5 15%	27 79%	0 0%	2 6%	0 0%	0 0%	0 0%	0 0%	0 0%	34	1.9
13	34	12 35%	14 41%	21 62%	21 62%	11 32%	9 26%	18 53%	17 50%	10 29%	25 42%	28 47%	1 2%	4 7%	1 2%	0 0%	0 0%	0 0%	1 2%	60	1.8
14	19	0 0%	0 0%	0 0%	0 0%	0 0%	2 11%	0 0%	0 0%	0 0%	2 100%	0 0%	0 0%	0 0%	0 0%	0 0%	0 0%	0 0%	0 0%	2	0.1
15	26	11 42%	11 42%	14 54%	14 54%	10 38%	11 42%	24 92%	15 58%	15 58%	36 58%	15 24%	7 11%	1 2%	1 2%	1 2%	1 2%	0 0%	0 0%	62	2.4
16	46	40 87%	41 89%	35 76%	39 85%	35 76%	39 85%	36 78%	45 98%	44 96%	132 66%	49 25%	6 3%	4 2%	7 4%	0 0%	1 1%	1 1%	0 0%	200	4.3
17	7	6 86%	6 86%	4 57%	7 100%	6 86%	7 100%	4 57%	7 100%	6 86%	13 57%	6 26%	2 9%	0 0%	2 9%	0 0%	0 0%	0 0%	0 0%	23	3.3
18	53	4 8%	27 51%	24 45%	30 57%	32 60%	35 66%	27 51%	15 28%	12 23%	130 83%	17 11%	4 3%	1 1%	2 1%	1 1%	2 1%	0 0%	0 0%	157	3.0
23	26	6 23%	2 8%	5 19%	9 35%	8 31%	2 8%	9 35%	21 81%	20 77%	23 70%	10 30%	0 0%	0 0%	0 0%	0 0%	0 0%	0 0%	0 0%	33	1.3
24	22	7 32%	5 23%	7 32%	9 41%	6 27%	6 27%	6 27%	18 82%	17 77%	28 74%	9 24%	1 3%	0 0%	0 0%	0 0%	0 0%	0 0%	0 0%	38	1.7
25	40	20 50%	16 40%	16 40%	17 43%	21 53%	14 35%	21 53%	27 68%	27 68%	80 81%	17 17%	0 0%	0 0%	1 1%	0 0%	0 0%	1 1%	0 0%	99	2.5
26	28	13 46%	11 39%	20 71%	15 54%	18 64%	18 64%	20 71%	20 71%	27 96%	44 60%	23 32%	2 3%	0 0%	1 1%	2 3%	1 1%	0 0%	0 0%	73	2.6
27	46	31 67%	25 54%	32 70%	38 83%	36 78%	31 67%	24 52%	24 52%	22 48%	106 63%	55 33%	1 1%	2 1%	1 1%	1 1%	1 1%	1 1%	0 0%	168	3.7
28	18	12 67%	13 72%	12 67%	11 61%	11 61%	11 61%	7 39%	0 0%	0 0%	41 65%	17 27%	3 5%	1 2%	1 2%	0 0%	0 0%	0 0%	0 0%	63	3.5
31	8	7 88%	7 88%	5 63%	3 38%	5 63%	7 88%	4 50%	4 50%	2 25%	10 53%	5 26%	1 5%	0 0%	0 0%	1 5%	2 11%	0 0%	0 0%	19	2.4
32	24	15 63%	15 63%	14 58%	11 46%	5 21%	17 71%	19 79%	21 88%	18 75%	21 38%	29 53%	3 5%	1 2%	1 2%	0 0%	0 0%	0 0%	0 0%	55	2.3
33	38	6 16%	3 8%	10 26%	9 24%	14 37%	5 13%	8 21%	15 39%	15 39%	31 74%	9 21%	0 0%	0 0%	2 5%	0 0%	0 0%	0 0%	0 0%	42	1.1
34	45	14 31%	12 27%	17 38%	18 40%	21 47%	17 38%	13 29%	9 20%	7 16%	62 69%	22 24%	2 2%	3 3%	0 0%	1 1%	0 0%	0 0%	0 0%	90	2.0
35	44	17 39%	21 48%	12 27%	14 32%	16 36%	14 32%	14 32%	12 27%	13 30%	50 63%	22 28%	4 5%	3 4%	0 0%	0 0%	0 0%	1 1%	0 0%	80	1.8
37	10	7 70%	5 50%	8 80%	7 70%	8 80%	8 80%	3 30%	2 20%	2 20%	8 50%	0 0%	2 13%	0 0%	1 6%	0 0%	5 31%	0 0%	0 0%	16	1.6
38	6	6 100%	6 100%	6 100%	5 83%	4 67%	2 33%	3 50%	2 33%	2 33%	13 68%	1 5%	4 21%	0 0%	0 0%	0 0%	1 5%	0 0%	0 0%	19	3.2
39	38	9 24%	12 32%	10 26%	7 18%	6 16%	9 24%	6 16%	4 11%	2 5%	10 42%	6 25%	4 17%	0 0%	3 13%	0 0%	1 4%	0 0%	0 0%	24	0.6
40	19	3 16%	4 21%	9 47%	6 32%	8 42%	3 16%	10 53%	10 53%	6 32%	17 71%	1 4%	3 13%	1 4%	0 0%	0 0%	2 8%	0 0%	0 0%	24	1.3
41	23	17 74%	16 70%	12 52%	13 57%	14 61%	11 48%	9 39%	9 39%	3 13%	15 38%	11 28%	3 8%	3 8%	5 13%	0 0%	1 3%	2 5%	0 0%	40	1.7
42	16	14 88%	12 75%	14 88%	12 75%	10 63%	10 63%	4 25%	1 6%	1 6%	6 21%	7 25%	6 11%	3 11%	3 11%	0 0%	1 4%	2 7%	0 0%	28	1.8
43	19	7 37%	9 47%	10 53%	8 42%	5 26%	6 32%	8 42%	6 32%	4 21%	8 62%	0 0%	0 0%	0 0%	1 8%	2 15%	2 15%	0 0%	0 0%	13	0.7
44	17	3 18%	6 35%	2 12%	1 6%	4 24%	0 0%	3 18%	4 24%	1 6%	11 73%	4 27%	0 0%	0 0%	0 0%	0 0%	0 0%	0 0%	0 0%	15	0.9
	792	346	359	393	400	375	347	380	326	294	1011	458	67	30	33	18	26	21	1	1665	2.1
		44%	45%	50%	51%	47%	44%	47%	41%	37%	61%	28%	4%	2%	2%	1%	2%	1%	0%		



### *Existing Supply & Demand Conclusions*

The preceding analysis dispels the common perception that downtown York has an inadequate supply of public parking. The reality is that there are plenty of available on-street parking spaces at the periphery of the downtown core area and ample space in the City's garages, given the observed peak occupancies ranging from 29% to 57% of capacity.

The following have been identified as the key contributors to the prevailing misperception about the lack of available parking in downtown:

- 1) The majority of the most convenient on-street parking spaces in the high traffic areas of downtown are quickly consumed early in the day and remain heavily occupied throughout the busiest hours of day. Many of these spaces are being consumed by downtown residents who have permits which allow them to park long-term at meters, while the standard time limit for all other users is 2-hours.
- 2) Generally, short-term parkers prefer parking on-street where their final destination is within view of their parking space, which means that potential parkers will cruise in search of a vacant space near their destination, rather than park in a more remote on-street space or in an off-street facility.
- 3) Short-term parkers generally prefer parking on-street or in surface parking lots rather than inside a parking garage. When they do choose to park in one of the City garages, they can only find vacant spaces on the uppermost levels of garages because all of the most convenient spaces on the lower levels are either reserved for, or occupied early in the day by, monthly parkers and rarely turnover throughout the day.
- 4) Unfamiliar visitors to downtown are usually frustrated by the current design of the way-finding signage scheme, the network of one-way streets and the prohibition against certain left turn movements. All of these conditions make it difficult to follow a logical and direct path to the entrances of the parking garages.
- 5) Regular visitors to downtown are well aware that it is less costly to park for 2 hours or less at an on-street meter than inside in one of the City's garages, resulting in greater demand for those spaces.

## **Future Supply/Demand based on Economic Development Plans**

### *Impacts of Planned and Proposed Developments on the Parking System*

DESMAN met with and interviewed numerous individuals representing organizations and private sector entities engaged in the planning and implementation of various downtown projects that have the potential to alter the supply of and demand for public parking in the future. Some of the project specifics that were sought during these interviews included estimates of the degree to which a project might add to the existing peak period population of employees, residents and/or visitors and business patrons in the downtown area and whether or not the projects included new parking inventory or would likely eliminate existing parking spaces.

Because the likelihood that all of the planned development projects becoming a reality within the foreseeable future was uncertain, DESMAN relied on the staff of the City's Economic Development Department to reduce the list of potential developments down to only those projects destined for completion or those that had strong potential to be undertaken within the next few years. The future development projects in and around downtown York that were deemed to become a reality between 2017 and 2020 are listed in **Table 10** and located on the map labelled **Exhibit 15**.

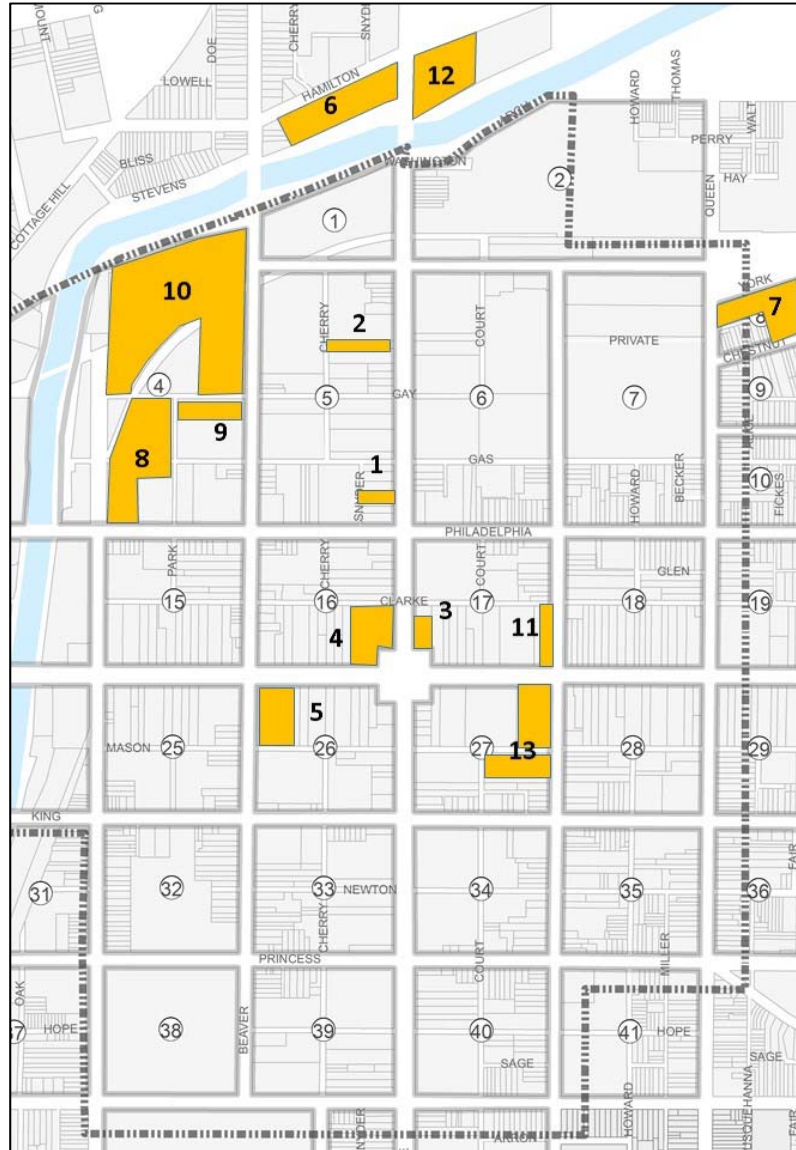
**Table 10 Planned and Proposed Downtown Development Projects 2017-2020**

Map #	Block #	Project Completion	Project Name/ Description	Location/ Address	Project Description	Project Land-uses	Total Project Density	Existing / To Be Added Spaces	ITE (3rd Edition) Peak Pkg. Demand Gen. Factors	Approx. Net Parking Need
1	5	2016	ROCKFISH RESTAURANT	110 N. George St.	Restaurant with commercial office space above	2 floors Restaurant 2 floors Com. Office	20,000 sf 20,000 sf	0	Rest. = 12 spaces Per 1,000 GSF Off. = 2.4 spaces Per 1,000 GSF	0
2	5	2016	PULLMAN APARTMENTS	238 N. George St.	22 Market Rate Apartments Units	Apartments with Restaurant	15,000 SFT	0	Resid. = 1.3 spaces Per Unit	25 spaces
3	17	2016	CITIZEN'S BUILDING	15 N. George St.	14 Market Rate Apartments		25,356	0	Resid. = 1.3 spaces Per Unit	18 spaces
4	16	2016	ONE WEST	1 W. Marketway	45 Market Rate Apartments	Residential/ Commercial	50,000 sq. ft.	100	Resid. = 1.3 spaces Per Unit	65 spaces
5	26	2017	WEST MARKET REVITALIZATION PROJECT Weinbrom Jewelers Bldg F.W. Woolworth Store Zakies Building	54-56 W. Market St. 44-50 W. Market St. 25-27 W. Market St.	Entertainment, Retail, Housing 7 retail space and 1 restaurant 8 one bedroom apartments	Restaunt Retail/ Residential	26,222 SFT	2 spaces	Resid. = 1.2 spaces Per Unit Rest. = 12 spaces Per 1,000 GSF Retail = 2.0 spaces Per 1,000 GSF	Resid. = 9 spaces Rest. = 15 spaces Retail = 35 spaces
6	NC	2017	YORK ACADEMY HIGH SCHOOL Expanded to include 7th-12th	2 N. Hamilton Ave.	High School to occupy Penn-Supreme Dairy Factory across River in 2017 70 Employees	High School	70,741 sq. ft.	70 spaces on site	School = 1 space per employee	0 spaces
7	8	2017	UNITED FIBER & DATA (lot of uncertainty about redevelopment) 2016 Fiber Line to be finished	210 York St.	Office/ Recording Studios/ Apartments 20 Employees	Retail 6 Residential Apartments  Technology Park	55,000 SF Total 16,200 SF Occupied 37,800 SF Unoccupied	15 spaces	Resid. = 1.2 spaces Per Unit Retail = 3.4 spaces Per 1,000 GSF Off. = 2.4 spaces Per 1,000 GSF	Resid. = 8 spaces Off. = 60 spaces Retail = 14 spaces
8	4	2017-18	YORK COUNTY HISTORY CENTER Metropolitan Edison Steam Plant Bldg. timetable 2018-2020	121 N. Pershing Ave.	Consolidation of 3 museum locations 31 Employees	Historical Center/ Green Space	N/A	100 spaces existing on site	Museum = 2.0 spaces Per 1,000 GSF	0 spaces
9	4	2018	TIME GROUP RESIDENTIAL DEVELOPMENT PROJECT	200 Block of N. Beaver St.	130-150 residential apartment units	mixed use single/ multifamily and retail	182,000 sq. ft.	0 spaces	Resid. = 1.7 spaces Per Unit	250 spaces
10	4	2018	RAIL TRAIL PARKWAY DEVELOPMENT/CODORAS CREEK COORIDOR		Bicycling and Walking Trail to run along Northampton Street and N. 3rd Street. The trail follows the Bushkill Creek to N. 13th Street.	Biking and walking trail to run from York College to Revolution Stadium.	N/A	Lot 8 at Lafayette Plaza could be eliminated as part of green space project.		N/A
11	17	2018	LAFAYETTE CLUB	59 E. Market St.	York College Hospitality Mgmt. Ctr.	School of Hospitality/Events	7,144 sq. ft.	0	School = .25 spaces per Employee/ Faculty	20 spaces
12	NC	2018	KID'S SPACE CENTER York Armory Bldg (Army to Relocate)	369 N George St	Kids play center	Kids Play Center Museum	30000 sq. ft.	580+ spaces at Smalls Field	Museum = 2.0 spaces Per 1,000 GSF	0 spaces
13	27	2020	YORKTOWN HOTEL/ OFFICE TOWER & GARAGE	45 E. Market St.	120 room hotel (90 rooms in active use) with ballroom and ground floor restaurant and unusable valet only garage	Restaurant Ballroom/ Conference Room/ 110 Guest Rooms	12,000 Sq.Ft.	Needed Parking Accommodated in Market Street Garage	Hotel = .9 spaces Per Guest Room	90 spaces
			ANONYMOUS CORPORATE HDQTRS.	S. Duke St.	Corporate Office 240 Employees	Corporate Office	85,000 SF	0 spaces	Off. = 2.4 spaces Per 1,000 GSF	200 spaces
Estimate of Potential Future Peak Period Parking Demand										±800 Spaces

NC = Denotes proposed and planned projects that are located outside the downtown parking study area.

**Exhibit 15 Planned and Proposed Downtown Development Projects 2017-2020**

Map #	Block #	Project Completion	Project Name/Description	Approx. Net Parking Need
1	5	2016	ROCKFISH RESTAURANT	0
2	5	2016	PULLMAN APARTMENTS	25 spaces
3	17	2016	CITIZEN'S BUILDING	18 spaces
4	16	2016	ONE WEST	65 spaces
5	26	2017	WEST MARKET REVITALIZATION PROJECT Weinbrom Jewelers Bldg F.W. Woolworth Store Zakies Building	Resid. = 9 spaces Rest. = 15 spaces Retail = 35 spaces
6	NC	2017	YORK ACADEMY HIGH SCHOOL Expanded to include 7th-12th	0 spaces
7	8	2017	UNITED FIBER & DATA (lot of uncertainty about redevelopment) 2016 Fiber Line to be finished	Resid. = 8 spaces Off. = 60 spaces Retail = 14 spaces
8	4	2017-18	YORK COUNTY HISTORY CENTER Metropolitan Edison Steam Plant Bldg. timetable 2018-2020	0 spaces
9	4	2018	TIME GROUP RESIDENTIAL DEVELOPMENT PROJECT	250 spaces
10	4	2018	RAIL TRAIL PARKWAY DEVELOPMENT/CODORAS CREEK COORIDOR	N/A
11	17	2018	LAFAYETTE CLUB	20 spaces
12	NC	2018	KID'S SPACE CENTER York Armory Bldg (Army to Relocate)	0 spaces
13	27	2020	YORKTOWN HOTEL/ OFFICE TOWER & GARAGE	90 spaces
			ANONYMOUS CORPORATE HDQTRS.	200 spaces



DESMAN relied on data contained within the Institute of Transportation Engineers' (ITE) "Parking Generation" (3rd Edition) publication to convert the future development project into an approximate number of parking spaces each project would require to satisfy the peak period demand for parking that each project is expected to generate. Any existing parking spaces that would be lost or new parking spaces that would be gained as a result of each development project were subtracted from, or added to, the same project's estimated peak period parking demand in order to arrive at a net number of future spaces the project would require.

Based on this analysis, it was concluded that if each of these future projects were to be completed as proposed, they would collectively create a need for ±800 additional downtown parking spaces. However,

because the survey of current parking utilization revealed that 43% (359 spaces) of the on-street parking supply and 62% (1,226 spaces) of the City-controlled off-street parking supply is typically unoccupied during the peak demand period (1,585 total spaces), it is quite possible that the  $\pm 800$  space need projected to result from the future development projects could be satisfied by the City's current inventory of parking spaces.

## Evaluation of Current Assets

The evaluation of the GA's parking assets included an assessment of three parking structures and nine of the surface parking lots in the downtown study area. DESMAN also reviewed the condition of the GA's parking meter system and the access control and revenue collection equipment currently installed in parking garages. However, our findings related to the condition of the equipment is discussed in the next section of this report.

The assessments of the three garages involved a site visit and walkthrough inspection by qualified engineers with expertise in structural, mechanical, electric, and plumbing system design and maintenance. The existing state of the physical elements of each parking structure were documented, but no sounding surveys or invasive testing was performed. Based on the surveys and DESMAN's expertise in parking structure restoration and repair, estimates of the probable cost to address needed repairs and system replacements during the next 40 years were formulated. The costs are offered as order of magnitude estimates of likely capital improvement expenditures that the GA will need to make in order to keep the parking structures in good condition, as they were found to be in at the time of this report.

The review of the surface parking lots was limited to an evaluation of the surface condition, striping and general layout. Repair and maintenance estimates for the surface lots are based on the unit costs for standard asphalt paving maintenance and resurfacing treatments, as well as for restriping, applied to the area square footage of each lot over a 40 year period into the future.

### *Parking Garage Condition Assessments*

#### **King Street Parking Garage**

The King Street Parking Garage is a 7-level structure. It appears that the top two levels were a later addition to the structure, but no documentation of a vertical expansion could be located. The garage operates as a 3-bay, single helix with one-way traffic on the double bay side and two-way traffic on the single bay side. The structural system consists of cast-in-place, post-tensioned concrete slabs supported by cast-in-place, post-tensioned concrete beams and cast-in-place, conventionally reinforced concrete columns.

The parking garage is in "Good" condition at this time. Most deficiencies noted could be attributed to normal wear and tear. Potential code violations included minor electrical items such as a missing wall

plate, damaged exit signs, and battery backup for egress lighting. The current vehicle barrier system between the interior ramped bays is not code-compliant. The guardrail in the northwest stair and elevator tower is not code-compliant either. The cost estimate presented in **Table 11** addresses the immediate code items as well as future repairs and upgrades to maintain the safe use of the facility.

**Table 11 Opinion of Probable Capital Repair Costs for the King Street Parking Garage (October 2016)**

Item Description	Near-Term Repair Totals			Near-Term Repair Priority			Long-Term Repair Costs		
	Quantity	Unit Price	Cost	Immediate 0-1 Yr	High 1-5 Yrs	Moderate 6-10 Yrs	11-20 Yrs	21-30 Yrs	31-40 Yrs
<b>1. Structural Repair Work</b>									
a. Concrete Floor Repairs	720 sf x	\$60.00 =	\$43,200	\$0	\$0	\$43,200	\$20,000	\$121,000	\$182,000
b. Vertical Concrete Repairs	70 sf x	\$90.00 =	\$6,300	\$0	\$0	\$6,300	\$0	\$18,000	\$27,000
c. Overhead Concrete Repairs	180 sf x	\$120.00 =	\$21,600	\$0	\$0	\$21,600	\$0	\$48,000	\$72,000
d. Stair Repairs	100 sf x	\$100.00 =	\$10,000	\$0	\$0	\$10,000	\$0	\$15,000	\$23,000
e. Masonry Repairs	200 sf x	\$75.00 =	\$15,000	\$0	\$0	\$15,000	\$0	\$23,000	\$35,000
f. Façade Repairs	100 sf x	\$150.00 =	\$15,000	\$0	\$0	\$15,000	\$0	\$30,000	\$45,000
g. Vehicle Barrier System Upgrades per Code	700 lf x	\$125.00 =	\$87,500	\$87,500	\$0	\$0	\$0	\$0	\$0
<b>Subtotal</b>				<b>\$87,500</b>	<b>\$0</b>	<b>\$111,100</b>	<b>\$20,000</b>	<b>\$255,000</b>	<b>\$384,000</b>
<b>2. Waterproofing Work</b>									
a. Remove and Replace Sealants	1,250 lf x	\$8.00 =	\$10,000	\$0	\$0	\$10,000	\$10,000	\$10,000	\$10,000
b. Remove and Replace Expansion Joints	395 lf x	\$120.00 =	\$47,400	\$0	\$0	\$47,400	\$47,400	\$47,400	\$47,400
c. Clear Penetrating Sealer Application	193,000 sf x	\$0.50 =	\$96,500	\$0	\$0	\$96,500	\$96,500	\$96,500	\$96,500
d. Waterproofing Membrane Application	8,000 sf x	\$5.00 =	\$40,000	\$0	\$0	\$40,000	\$20,000	\$40,000	\$20,000
<b>Subtotal</b>				<b>\$0</b>	<b>\$0</b>	<b>\$193,900</b>	<b>\$173,900</b>	<b>\$193,900</b>	<b>\$173,900</b>
<b>3. Architectural Work</b>									
a. Guardrail Modifications per Code	5 ea x	\$1,000.00 =	\$5,000	\$5,000	\$0	\$0	\$0	\$0	\$0
b. Clean and Repaint Vertical and Overhead Surfaces	54,000 sf x	\$2.00 =	\$108,000	\$0	\$0	\$108,000	\$0	\$108,000	\$0
c. Striping & Traffic Markings	1 ls x	\$19,000.00 =	\$19,000	\$0	\$19,000	\$19,000	\$19,000	\$19,000	\$19,000
d. Wayfinding Signage	1 ls x	\$62,000.00 =	\$62,000	\$0	\$0	\$62,000	\$0	\$62,000	\$0
e. Miscellaneous Items (doors, frames, glazing, tower roofing, handrails, etc.)	1 ls x	\$84,000.00 =	\$84,000	\$0	\$0	\$84,000	\$0	\$112,000	\$0
<b>Subtotal</b>				<b>\$5,000</b>	<b>\$19,000</b>	<b>\$273,000</b>	<b>\$19,000</b>	<b>\$301,000</b>	<b>\$19,000</b>
<b>4. M/E/P/FP Work</b>									
a. Mechanical Work	1 ls x	\$2,600.00 =	\$2,600	\$0	\$2,600	\$0	\$0	\$10,000	\$0
b. Electrical Work per Code	1 ls x	\$17,050.00 =	\$17,050	\$17,050	\$0	\$0	\$0	\$0	\$0
c. Electrical Work (Maintenance and Upgrades)	1 ls x	\$144,800.00 =	\$144,800	\$0	\$0	\$144,800	\$0	\$687,000	\$0
d. Plumbing Work	1 ls x	\$750.00 =	\$750	\$0	\$750	\$0	\$0	\$49,000	\$0
e. Fire Protection Work	1 ls x	\$12,000.00 =	\$12,000	\$0	\$0	\$12,000	\$0	\$201,000	\$0
<b>Subtotal</b>				<b>\$17,050</b>	<b>\$3,350</b>	<b>\$156,800</b>	<b>\$0</b>	<b>\$947,000</b>	<b>\$0</b>
<b>5. Miscellaneous Costs</b>									
a. General conditions (mobilization, de-mob, supervision, miscellaneous work, etc.)	Varies by year based on construction costs			\$11,000	\$3,000	\$74,000	\$22,000	\$170,000	\$58,000
<b>Subtotal</b>				<b>\$11,000</b>	<b>\$3,000</b>	<b>\$74,000</b>	<b>\$22,000</b>	<b>\$170,000</b>	<b>\$58,000</b>
<b>Subtotal</b>				<b>\$120,550</b>	<b>\$25,350</b>	<b>\$808,800</b>	<b>\$234,900</b>	<b>\$1,866,900</b>	<b>\$634,900</b>
Construction Contingency @ 20%				\$24,150	\$5,050	\$161,800	\$47,000	\$373,400	\$127,000
Engineering @ 8%				\$9,600	\$2,000	\$64,700	\$18,800	\$149,400	\$50,800
<b>Total</b>				<b>\$154,300</b>	<b>\$32,400</b>	<b>\$1,035,300</b>	<b>\$300,700</b>	<b>\$2,389,700</b>	<b>\$812,700</b>

**Notes**

- 1) Costs are expressed in 2017 dollars. Inflation and escalation have not been included in the cost estimates.
- 2) The figures are exclusive of annual budgets for operational issues such as light bulb replacement, janitorial services, equipment maintenance contracts, etc.
- 3) The figures are exclusive of revenue control system and security equipment changes, and any abatement of hazardous materials.
- 4) Estimate an additional cost of 10% to 15% if a single work item is divided over multiple years (Not included in the above cost estimate table).

## Philadelphia Street Parking Garage

The Philadelphia Street Parking Garage is a 4 ½-level structure. The garage operates as a double helix with one-way traffic and angled parking. The structural system consists of cast-in-place, post-tensioned concrete slabs supported by cast-in-place, post-tensioned concrete beams and cast-in-place,



conventionally reinforced concrete columns. The exposed roof level has a waterproofing membrane applied to it.

The parking garage is in “Fair-to-Good” condition at this time. Most deficiencies noted could be attributed to normal wear and tear. Potential code violations included minor electrical items such as a missing wall plate, damaged exit signs, and battery backup for egress lighting. The current vehicle barrier system between the interior ramped bays is not code-compliant. The cost estimate presented in **Table 12** addresses the immediate code items as well as future repairs and upgrades to maintain the safe use of the facility.

**Table 12 Opinion of Probable Capital Repair Costs for the Philadelphia Street Parking Garage (October 2016)**

Item Description	Near-Term Repair Totals			Near-Term Repair Priority			Long-Term Repair Costs		
	Quantity	Unit Price	Cost	Immediate 0-1 Yr	High 1-5 Yrs	Moderate 6-10 Yrs	11-20 Yrs	21-30 Yrs	31-40 Yrs
<b>1. Structural Repair Work</b>									
a. Concrete Floor Repairs	900 sf x	\$60.00 =	\$54,000	\$0	\$0	\$54,000	\$0	\$95,000	\$143,000
b. Vertical Concrete Repairs	460 sf x	\$90.00 =	\$41,400	\$0	\$0	\$41,400	\$0	\$43,000	\$65,000
c. Overhead Concrete Repairs	100 sf x	\$120.00 =	\$12,000	\$0	\$0	\$12,000	\$0	\$38,000	\$57,000
d. Stair Repairs	200 sf x	\$100.00 =	\$20,000	\$0	\$0	\$20,000	\$0	\$30,000	\$45,000
e. Masonry Repairs	300 sf x	\$75.00 =	\$22,500	\$0	\$0	\$22,500	\$0	\$34,000	\$51,000
f. Façade Repairs	200 sf x	\$150.00 =	\$30,000	\$0	\$0	\$30,000	\$0	\$60,000	\$90,000
g. Vehicle Barrier System Upgrades per Code	420 lf x	\$125.00 =	\$52,500	\$52,500	\$0	\$0	\$0	\$0	\$0
<b>Subtotal</b>				<b>\$52,500</b>	<b>\$0</b>	<b>\$179,900</b>	<b>\$0</b>	<b>\$300,000</b>	<b>\$451,000</b>
<b>2. Waterproofing Work</b>									
a. Remove and Replace Sealants	480 lf x	\$8.00 =	\$3,840	\$0	\$0	\$3,840	\$3,840	\$3,840	\$3,840
b. Remove and Replace Expansion Joints	72 lf x	\$120.00 =	\$8,640	\$0	\$0	\$8,640	\$8,640	\$8,640	\$8,640
c. Clear Penetrating Sealer Application	76,000 sf x	\$0.50 =	\$38,000	\$0	\$0	\$38,000	\$38,000	\$38,000	\$38,000
d. Waterproofing Membrane Application	29,000 sf x	\$3.00 =	\$87,000	\$0	\$0	\$87,000	\$145,000	\$87,000	\$145,000
<b>Subtotal</b>				<b>\$0</b>	<b>\$0</b>	<b>\$137,480</b>	<b>\$195,480</b>	<b>\$137,480</b>	<b>\$195,480</b>
<b>3. Architectural Work</b>									
a. Clean and Repaint Vertical and Overhead Surfaces	22,000 sf x	\$2.00 =	\$44,000	\$0	\$0	\$44,000	\$0	\$44,000	\$0
b. Striping & Traffic Markings	1 ls x	\$10,000.00 =	\$10,000	\$0	\$10,000	\$10,000	\$10,000	\$10,000	\$10,000
c. Wayfinding Signage	1 ls x	\$32,000.00 =	\$32,000	\$0	\$0	\$32,000	\$0	\$32,000	\$0
d. Miscellaneous Items (doors, frames, glazing, tower roofing, handrails, etc.)	1 ls x	\$62,000.00 =	\$62,000	\$0	\$0	\$62,000	\$0	\$87,000	\$0
<b>Subtotal</b>				<b>\$0</b>	<b>\$10,000</b>	<b>\$148,000</b>	<b>\$10,000</b>	<b>\$173,000</b>	<b>\$10,000</b>
<b>4. M/E/P/FP Work</b>									
a. Mechanical Work	1 ls x	\$3,100.00 =	\$3,100	\$0	\$3,100	\$0	\$0	\$10,000	\$0
b. Electrical Work per Code	1 ls x	\$17,450.00 =	\$17,450	\$17,450	\$0	\$0	\$0	\$0	\$0
c. Electrical Work (Maintenance and Upgrades)	1 ls x	\$145,750.00 =	\$145,750	\$0	\$0	\$145,750	\$0	\$363,000	\$0
d. Plumbing Work	1 ls x	\$2,500.00 =	\$2,500	\$0	\$2,500	\$0	\$0	\$18,000	\$0
e. Fire Protection Work	1 ls x	\$13,000.00 =	\$13,000	\$0	\$0	\$13,000	\$0	\$105,000	\$0
<b>Subtotal</b>				<b>\$17,450</b>	<b>\$5,600</b>	<b>\$158,750</b>	<b>\$0</b>	<b>\$496,000</b>	<b>\$0</b>
<b>5. Miscellaneous Costs</b>									
a. General conditions (mobilization, de-mob, supervision, miscellaneous work, etc.)	Varies by year based on construction costs			\$7,000	\$2,000	\$63,000	\$21,000	\$111,000	\$66,000
<b>Subtotal</b>				<b>\$7,000</b>	<b>\$2,000</b>	<b>\$63,000</b>	<b>\$21,000</b>	<b>\$111,000</b>	<b>\$66,000</b>
<b>Subtotal</b>				<b>\$76,950</b>	<b>\$17,600</b>	<b>\$687,130</b>	<b>\$226,480</b>	<b>\$1,217,480</b>	<b>\$722,480</b>
Construction Contingency @ 20%				\$15,350	\$3,500	\$137,470	\$45,320	\$243,520	\$144,520
Engineering @ 8%				\$6,200	\$1,400	\$55,000	\$18,100	\$97,400	\$57,800
<b>Total</b>				<b>\$98,500</b>	<b>\$22,500</b>	<b>\$879,600</b>	<b>\$289,900</b>	<b>\$1,558,400</b>	<b>\$924,800</b>

**Notes**

- 1) Costs are expressed in 2017 dollars. Inflation and escalation have not been included in the cost estimates.
- 2) The figures are exclusive of annual budgets for operational issues such as light bulb replacement, janitorial services, equipment maintenance contracts, etc.
- 3) The figures are exclusive of revenue control system and security equipment changes, and any abatement of hazardous materials.
- 4) Estimate an additional cost of 10% to 15% if a single work item is divided over multiple years (Not included in the above cost estimate table).

## Market Street Parking Garage

The Market Street Parking Garage is a 7-level structure. The garage consists of split levels, where each level is split in half and each half is offset vertically from the other half. One-way ramps provide vehicular circulation between the split levels. The structural system consists of cast-in-place, pan-joint concrete slabs supported by cast-in-place, conventionally reinforced concrete beams and columns. All structurally supported floors have a waterproofing membrane applied to them.

The parking garage is in “Good” condition at this time. Most deficiencies noted could be attributed to normal wear and tear. Potential code violations included repair to the emergency generator. The current condition of the striping and traffic markings was poor and needs to be re-painted. The cost estimate presented in **Table 13** addresses the immediate code items as well as future repairs and upgrades to maintain the safe use of the facility.

**Table 13 Opinion of Probable Capital Repair Costs for the Market Street Parking Garage (October 2016)**

Item Description	Near-Term Repair Totals			Near-Term Repair Priority			Long-Term Repair Costs		
	Quantity	Unit Price	Cost	Immediate 0-1 Yr	High 1-5 Yrs	Moderate 6-10 Yrs	11-20 Yrs	21-30 Yrs	31-40 Yrs
<b>1. Structural Repair Work</b>									
a. Concrete Floor Repairs	1,400 sf x	\$60.00 =	\$84,000	\$0	\$0	\$84,000	\$20,000	\$61,000	\$92,000
b. Vertical Concrete Repairs	280 sf x	\$90.00 =	\$25,200	\$0	\$0	\$25,200	\$0	\$91,000	\$137,000
c. Overhead Concrete Repairs	840 sf x	\$120.00 =	\$100,800	\$0	\$0	\$100,800	\$0	\$122,000	\$183,000
d. Stair Repairs	50 sf x	\$100.00 =	\$5,000	\$0	\$0	\$5,000	\$0	\$8,000	\$12,000
e. Masonry Repairs	150 sf x	\$75.00 =	\$11,250	\$0	\$0	\$11,250	\$0	\$17,000	\$26,000
f. Façade Repairs	300 sf x	\$150.00 =	\$45,000	\$0	\$0	\$45,000	\$0	\$90,000	\$135,000
<b>Subtotal</b>				<b>\$0</b>	<b>\$0</b>	<b>\$271,250</b>	<b>\$20,000</b>	<b>\$389,000</b>	<b>\$585,000</b>
<b>2. Waterproofing Work</b>									
a. Clear Penetrating Sealer Application	28,980 sf x	\$0.50 =	\$14,490	\$0	\$0	\$14,490	\$14,490	\$14,490	\$14,490
b. Waterproofing Membrane Topcoat Application	173,880 sf x	\$2.00 =	\$347,760	\$0	\$0	\$347,760	\$869,400	\$347,760	\$869,400
<b>Subtotal</b>				<b>\$0</b>	<b>\$0</b>	<b>\$362,250</b>	<b>\$883,890</b>	<b>\$362,250</b>	<b>\$883,890</b>
<b>3. Architectural Work</b>									
a. Clean and Repaint Vertical and Overhead Surfaces	248,000 sf x	\$2.00 =	\$496,000	\$0	\$0	\$496,000	\$0	\$496,000	\$0
b. Striping & Traffic Markings	1 ls x	\$19,000.00 =	\$19,000	\$19,000	\$19,000	\$19,000	\$19,000	\$19,000	\$19,000
c. Wayfinding Signage	1 ls x	\$62,000.00 =	\$62,000	\$0	\$0	\$62,000	\$0	\$62,000	\$0
d. Miscellaneous Items (doors, frames, glazing, tower roofing, handrails, etc.)	1 ls x	\$49,000.00 =	\$49,000	\$0	\$0	\$49,000	\$0	\$70,000	\$0
<b>Subtotal</b>				<b>\$19,000</b>	<b>\$19,000</b>	<b>\$626,000</b>	<b>\$19,000</b>	<b>\$647,000</b>	<b>\$19,000</b>
<b>4. M/E/P/FP Work</b>									
a. Mechanical Work	1 ls x	\$53,300.00 =	\$53,300	\$0	\$0	\$53,300	\$0	\$25,000	\$0
b. Electrical Work per Code	1 ls x	\$2,500.00 =	\$2,500	\$2,500	\$0	\$0	\$0	\$0	\$0
c. Electrical Work (Maintenance and Upgrades)	1 ls x	\$5,000.00 =	\$5,000	\$0	\$0	\$5,000	\$0	\$702,000	\$0
d. Plumbing Work	1 ls x	\$9,000.00 =	\$9,000	\$0	\$9,000	\$0	\$0	\$62,000	\$0
<b>Subtotal</b>				<b>\$2,500</b>	<b>\$9,000</b>	<b>\$58,300</b>	<b>\$0</b>	<b>\$789,000</b>	<b>\$0</b>
<b>5. Miscellaneous Costs</b>									
a. General conditions (mobilization, de-mob, supervision, miscellaneous work, etc.)	Varies by year based on construction costs			\$3,000	\$3,000	\$132,000	\$93,000	\$219,000	\$149,000
<b>Subtotal</b>				<b>\$3,000</b>	<b>\$3,000</b>	<b>\$132,000</b>	<b>\$93,000</b>	<b>\$219,000</b>	<b>\$149,000</b>
<b>Subtotal</b>				<b>\$24,500</b>	<b>\$31,000</b>	<b>\$1,449,800</b>	<b>\$1,015,890</b>	<b>\$2,406,250</b>	<b>\$1,636,890</b>
Construction Contingency @ 20%				\$4,900	\$6,200	\$290,000	\$203,210	\$481,250	\$327,410
Engineering @ 8%				\$2,000	\$2,500	\$116,000	\$81,300	\$192,500	\$131,000
<b>Total</b>				<b>\$31,400</b>	<b>\$39,700</b>	<b>\$1,855,800</b>	<b>\$1,300,400</b>	<b>\$3,080,000</b>	<b>\$2,095,300</b>

### Notes

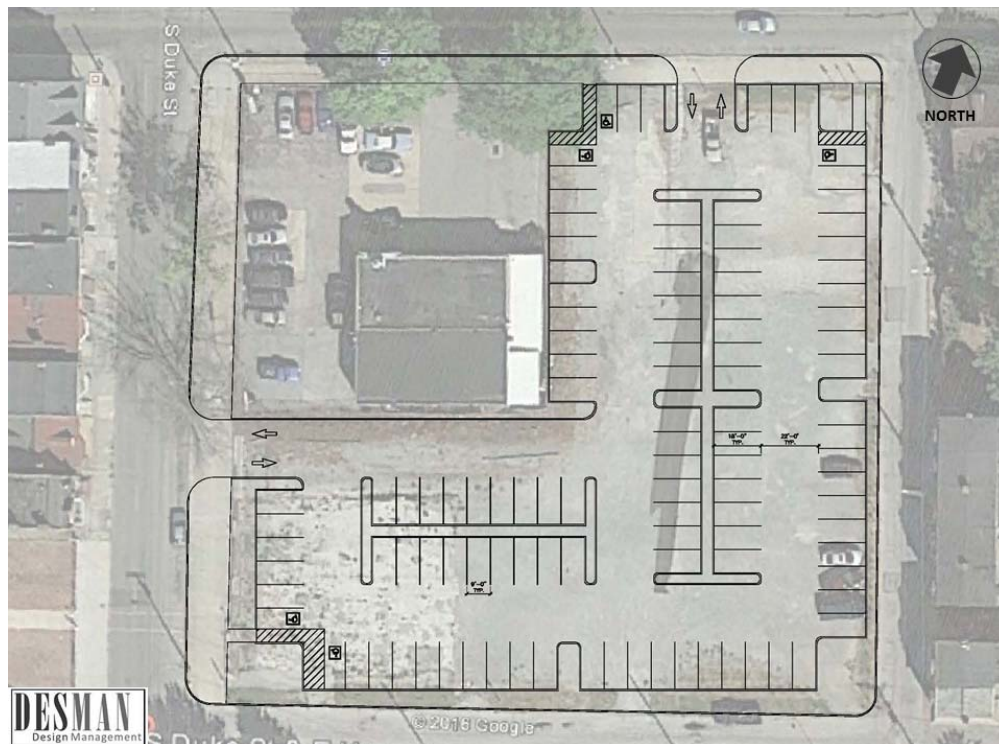
- 1) Costs are expressed in 2017 dollars. Inflation and escalation have not been included in the cost estimates.
- 2) The figures are exclusive of annual budgets for operational issues such as light bulb replacement, janitorial services, equipment maintenance contracts, etc.
- 3) The figures are exclusive of revenue control system and security equipment changes, and any abatement of hazardous materials.
- 4) Estimate an additional cost of 10% to 15% if a single work item is divided over multiple years (Not included in the above cost estimate table).

### *Parking Lot Condition Assessments*

The review of the surface parking lots was limited to an assessment of the condition of the paved surface and the striping and general layout of the parking spaces. The estimates of probable cost to repair and maintain the nine surface lots were based on the prevailing square footage unit costs for standard asphalt re-paving, limited asphalt crack filling and seal coating treatments to extend the life cycle of asphalt surface, as well as the per linear foot cost to repaint the space striping. Generally, the surface parking lots were found to be good condition, however the space striping at each lot is beginning to fade.

The GA's parking lot #11, located to the south and east of the intersection of Princess Street and Duke Street, is currently unimproved without a paved surface or striped space layout. DESMAN prepared the following conceptual improvement plan for the lot to illustrate how the property could be laid out as an improved parking facility. However, because so few parking permits have been sold at this lot and the amount of observed parking activity at the lot is nominal, DESMAN has not suggested a timeline for making the illustrated improvements. In fact, there is little or no demand for the site as a public parking place and thus it may be in the GA's and City's best interest to consider promoting some alternative redevelopment concept at the site.

**Exhibit 16 Proposed Conceptual Improvement Plan for GA Lot #11**



Should the GA choose to implement this conceptual improvement plan, the probable cost to complete the illustrated code improvements (i.e. curbs, drainage, asphalt paving, striping and landscaping, etc.) would be approximately \$550,000 or \$5,000 per space.

## Capital Improvement Needs for the GA Parking Lots

**Table 14** provides an estimate of the probable costs to repaint the space striping at the nine surface parking lots within the next 1 to 3 years and the cost to repave each lot within 4 to 10 years.

**Table 14 Opinion of Probable Capital Repair Costs for the GA Parking Lots (October 2016)**

Map ID	Block #	GA Off-Street Parking Lots	Address	Spaces	Square Feet	Estimates of Probable Repair Costs			Repair Priority		
						Asphalt Sealant	Space Re-Striping	Total Cost Estimate	Immediate 0-1 Yr	High 1-3 Yrs	Moderate 4-10 Yrs
CHW	34	CITY HALL WEST	137 S. George St.	75	51,140	\$153,420	\$720	= \$154,140	\$0	\$720	\$154,140
CHE	34	CITY HALL EAST	130 S. Duke St.	60	19,383	\$58,149	\$576	= \$58,725	\$0	\$576	\$58,725
1	6	LOT 1	E. Gas Ave.	44	17,759	\$53,277	\$422	= \$53,699	\$0	\$422	\$53,699
2	23	LOT 2	32 S. Newberry St.	81	32,574	\$97,722	\$778	= \$98,500	\$0	\$778	\$98,500
3	35	LOT 3	135 S. Duke St.	64	19,236	\$57,708	\$614	= \$58,322	\$0	\$614	\$58,322
4	35	LOT 4	132 E. Newton Ave.	32	7,098	\$21,294	\$307	= \$21,601	\$0	\$307	\$21,601
8	14	LOT 8	211 W. Market St.	75	40,156	\$120,468	\$720	= \$121,188	\$0	\$720	\$121,188
9	32	LOT 9	Princess & King	128	130,019	\$390,057	\$1,229	= \$391,286	\$0	\$1,229	\$391,286
11 *	41	LOT 11	211 S. Duke St.	110	41,852	Currently Unimproved = \$550,000					
17	24	LOT 17	240 W. Market	68	32,453	\$97,359	\$653	= \$98,012	\$0	\$653	\$98,012
York Parking Lot Maintenance Cost Total				737	391,670	\$1,605,473				\$6,019	\$1,055,473

\* **Note:** Lot #11 is unimproved and requires major construction to meet code. DESMAN estimates Probable Total Project Cost to approximately \$550,000.

## Parking System Technology Assessment

### *Parking Access and Revenue Control System Technology Assessment*

The three downtown parking garages are equipped with Parking Access and Revenue Control System (PARCS) hardware components (i.e. gates, ticket dispensers, access card readers, pay-in-lane exit stations, attendant booths, cashiering stations). The PARCS hardware components are manufactured by ZEAG and serviced by HUB Technologies based in Pittsburgh area. However, the system of HID proximity card readers also installed in all the garage access lanes are serviced by Electronic Installation Systems based in York

Each of the parking garages were physically designed for attendant cashiers to process the collection of parking charges when vehicles exit the facilities.

**Table 15** shows the count of existing access and the primary PARCS equipment components at each of the garages. Aside from having one entry lane and one primary exit lane serving both transient and permit parkers, each of the three garages also have a third point of access.



**Table 15 Existing Revenue Collection and Access Control Lanes and Equipment at the City's Garages**

Existing Parking Access & Revenue Control (PARCS) Equipment	Access Lanes			PARCS Components					
	In Lane	Out Lane	Rev. Lane	Barrier Gates	Ticket Dispensers	Card Readers	Pay-n-Lane Stations	Central Cashier Unit	Overhead Access Gate
King Street Garage	1	1	1	4	2	4	1	1	2
Market Street Garage	1	2	0	3	1	3	0	1	3
Philadelphia Street Garage	1	3	0	4	1	4	1	1	2

**King Street Garage** – The third point of access at this garage is an easement that extends from the garage to George Street through the ground floor of an abutting commercial property (i.e. 96 South George Street). This single-wide lane is setup to accommodate reversible traffic flow. The majority of time the lane is setup to accommodate in-bound transient and permit parkers from George Street, but after 4:00pm on daily basis only permit parkers can use the lane to exit the garage. The use of this access point as an entry to the garage could be improved by the installation of better signage.



**Market Street Garage** – The third point of access at this garage is a secondary exit to E. Clark Avenue from level B1 of the garage, which is configured to be used by only permit parkers. The current layout and internal circulation scheme of this garage requires all parkers that reach level B1 to use the Clark Avenue exit. However, there are no gates or signage in place to warn non-permit holders not to proceed below the first level and, if they do, the only way they can get out of the garage is to drive up a down ramp from level B1 to the level 1. A major impediment to converting this garage to a fully automated facility is the fact that the garage only has one exit lane to Market Street. Typically, a minimum of two primary exit lanes are essential for a fully automated operation.



**Philadelphia Street Garage** – It appears that the original ground level layout of the Philadelphia Street Garage was modified to create two additional exits lanes which merge into one exit lane at the edge of the structural façade of the garage. Two of these three exit lanes are setup to process both transient and monthly parkers, while the third exit lane is setup only for permit parkers. These parkers must exit on to W. Gas Street after passing through an adjacent privately-owned surface lot.



The review of existing PARCS equipment at the garages revealed a number of significant problems:

1. The existing pay-in-lane (PIL) station at the King Street Garage was not activated as all the cash and credit card transactions were being processed by the attendant cashier.
2. The PIL station at the Philadelphia garage is underutilized because most transient parkers are opting to have their payment processed by the attendant cashier, rather than use the automated equipment.
3. There is no PIL equipment at the Market Street Garage as all transient transactions are processed by the attendant cashier stationed at a drive-up window in the exist lane.

The performance of the existing cashiering terminals has been unreliable and, reportedly, attempts to process credit card transactions fail often. The in-lane vehicle detection counters are inaccurate and the barriers gates can be opened by the cashier without the action being recorded by the cashiering terminal.

The look and type of proximity cards supplied by the City's vendor and issued to monthly permit holders for each of the three garage are indistinguishable from one another. They also appear to be identical to proximity cards supplied to other private property owners in the downtown area. This has given rise to instances where parkers who receive transient tickets when they enter a garage claim that they need the cashier let them out. The parkers say that the proximity card they have, which is invalid for the subject garage, did not work when they tried to enter. Because there is no discernable difference among the proximity cards, the attendant cashiers have no option but believe the customer and allow them customer to exit without paying.

At the Philadelphia Street Garage, the attendant cashier reported that ticket swapping among restaurant shift workers frequently occurs and there is no auditable procedure that all the attendant cashiers must follow that effectively accounts for when discount punch cards are accepted and used to reduce the parking charge calculated by the cashier terminal.

Attendant cashiers are regularly relieved of duty on weekday after 6:30pm. At this time, the attendants raise the exits gates to allow all transient vehicles remaining in the garage to exit without having to pay a charge for parking. This has led to lost revenue from an unknown number of parkers.

Last, the current method of manually collecting special event parking fees at the entry to the Philadelphia Street Garage usually causes traffic backups on Philadelphia Street. The manual process for collecting the event parking fees is also vulnerable to revenue pilferage, as the count of vehicles that enter the garage cannot be separately reconciled with the amount of revenue collected.

Each of these equipment deficiencies and procedural anomalies make it impossible to properly audit the collection of transient parking revenue at the garages and pose clear opportunities for actual revenue collection amounts to be regularly under reported. If attendant cashiers continue to be used to collect transient parking charges at the City's garages, the City should take steps to acquire and properly install new cashiering terminals and revenue collection software that can be relied upon to address the aforementioned issues and be used to conduct regular system audits. Also, the current practices and procedures that apply the work of the attendant cashiers need to be thoroughly reviewed and revised as necessary. These recommendations will be discussed in more detail later in this report.

### *Parking Meter System Technology Assessment*

The review of the meter system was based in part on field observations of both mechanical and smart meter hardware units currently in service and on feedback received during an in-depth interview with the City's meter maintenance mechanic. The City's parking meter system is comprised of two basic meter types: digital electronic meters made by Duncan and the so called "smart meters" made by the IPS Group. The Duncan meters, which accept only coins, have been in use for more 20 years. In 2014, the City replaced one-fifth of its Duncan meters with the IPS smart meters, which accept both coin and credit cards. Today, the meter system is composed of 893 Duncan electronic meters and 215 IPS smart meters.



According to the City's maintenance mechanic, the Duncan electric meters, which are susceptible to jams and other malfunctions, require constant unit-by-unit inspection and repair to minimize down time. However, repairs to the Duncan meters are basic and can typically be completed entirely in-house by the City's meter maintenance mechanic.

The IPS smart meters are also subject jam, which are easily fixable by City personnel, but the other types of malfunctions also occur that must be repaired by the manufacturer at a cost of \$80.00 per unit. Additionally, the City's installation of the IPS smart meters included electromagnetic sensors to detect when and how long a vehicle remains parked at a metered space and, just as important, when a metered space is unoccupied. These sensors, which had to be imbedded in the street



pavement, were purchased to gather and analyze system usage data, support and facilitate enforcement and prevent "customers piggybacking" - a term used to describe when a new parker occupies a recently vacated meter space and avoids paying or ends up paying less than they should have paid because the

meter at the space where they parked still had paid time left on it. The sensors are supposed to prevent this happenstance by zeroing out any remain paid time on a meter within 5 to 10 seconds after the space is vacated by a vehicle. However, these sensors have experienced water damage that has repeatedly caused the sensors to malfunction and, to date, 180 of the original 215 sensors have had to be replaced since 2014. To deal with this persistent problem, the City has been spending \$295 per unit to buy replacement sensors, not including the cost to reinstall the sensors in the pavement.

Since the IPS meters have only been in service for three years and the useful life of these meters is reported to be 7 to 10 years, the City may want to seriously consider replacing any pavement-installed electromagnetic sensors that malfunction in the future with IPS Group's more accurate and reliable radar-formatted sensors which can be mounted on meter poles. While the cost of the radar sensors is no more or less expensive than the electromagnetic sensors, the proposed sensor change would prevent user piggybacking and produce more consistent system analytics.



#### *Parking Meter System Enforcement Technology Assessment*

The City's Parking Enforcement Unit uses Duncan's AutoCite devices and AutoIssue software for parking ticket issuance and violation tracking. The handheld units that are in-service were purchased in 2015, but have a history of malfunctioning while in use. According to firsthand reports from the enforcement supervisor and a parking enforcement officer, the handheld units regularly experience data communication disruptions that can only be resolved by rebooting the unit. In some case, this problem has resulted in the loss of citation data and violation photos. Additionally, the units do not have wireless connectivity, the built-in camera is said to produce poor quality images and the accompanying mobile ticket printer units regularly jam in rainy weather. While the supplier has made efforts to address these issues, the same problems have continued to persist and disrupt the performance and productivity of the Parking Enforcement Unit.

## **Parking System Management Review**

#### *Parking System Organizational and Administrative Oversight*

In 1995 the City of York's public parking system assets, namely the on-street parking meter system and three downtown garages and various off-street surface lots, were acquired by the York City General Authority. Then, in 1996, an Administrative Management Services Agreement was executed between the GA and the City of York which essentially assigned the operating and management responsibilities of the system to the City. The agreement specified that, on behalf and at the direction of the GA Board of Directors, the City shall provide management, operational, marketing, accounting, financial, procurement, and insurance services in exchange for an annual management fee.

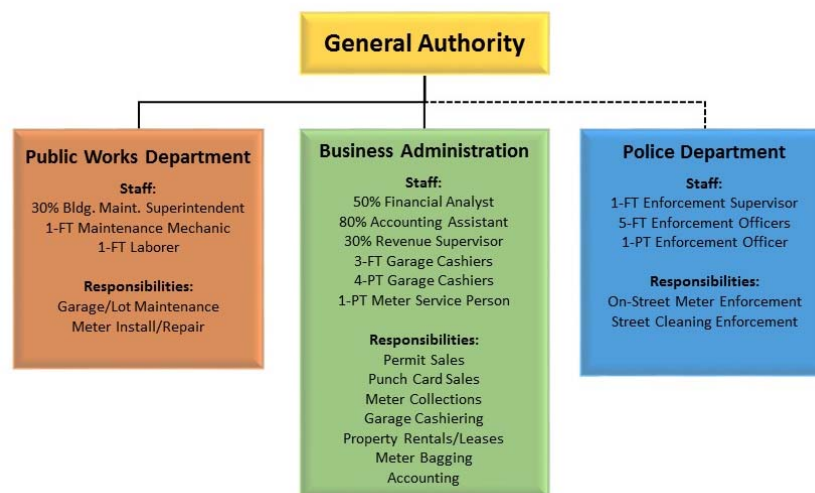
Between 1996 and 2015, the City assigned operating and management responsibilities for the Parking



System to the Parking Bureau. After April 2015, the City eliminated the Parking Bureau and the key responsibilities of the Bureau were distributed among various governmental units. The Department of Business Administration assigned personnel in the Finance Division the accounting, auditing, permit sales, revenue collections, and customer service responsibilities. Public Works Department personnel handle the property and equipment maintenance and repair responsibilities and the Police Department handles the on-street parking enforcement responsibilities.

The chart below identifies the City’s full- or part-time personnel currently assigned the various tasks that must be routinely performed to keep the Parking System operational.

**Exhibit 17 Diagram of the Current Organizational Structure of the City’s Parking Program**



A group of six staff members in the Finance Division of the Business Administration Department spend varying percentages of their time performing parking related tasks on a daily basis. A **“Revenue Supervisor”** reportedly spends approximately 30% of each work day logging daily system revenue collected from meters, transient garage parking, monthly permit and lease payments, and meter bagging agreements, as well as punch card and shop-park sales. The “Revenue Supervisor” is also in charge of scheduling, training and managing the attendant cashiers posted at the three garages. An **“Accounting Assistant”** reportedly spends approximately 80% of each work day auditing the cash receipts and transaction reports produced by the attendant cashiers stationed at the parking garages, as well as processing direct sales and fee payments (i.e. permits, meter bagging requests, citation payments, etc.) and customer inquiries at a walk service window in the Office of Finance. A **“Financial Analyst”** reportedly spends approximately 50% of each work day maintaining historical logs of daily, monthly and annual revenue sources and expenditures. One part-time **“Meter Service Person”** handles the collection of parking meter revenue on a daily basis. Lastly, a group of three full-time and four part-time **“Attendant Cashiers”** are deployed at the parking garages to facilitate the processing of daily, monthly and special event parking transactions.

Three employees in the Department of Public Works perform routine property and equipment housekeeping and maintenance duties. A “**Building Maintenance Supervisor**” reportedly spends approximately 30% of each work day coordinating and supervising one full-time “**Laborer**” who performs routine housekeeping duties at the garages and lots and one full-time “**Maintenance Mechanic**” who is charged with the task of keeping the system of on-street parking meters and the PARCS equipment in the garages working properly.

The Police Department currently has responsibility for parking enforcement which covers metered on-street parking, mostly in the downtown area, and non-metered on-street parking throughout the city. The enforcement of “*No Parking During Specified Street Sweeping Hours*” is also a major responsibility of the Department. The Department’s Parking Enforcement Unit is comprised of one full-time “**Parking Enforcement Supervisor**” and five full-time and one part-time seasonal “**Parking Enforcement Officers**”.

While the GA meets once a month to deal with substantive parking program and policy issues, the day-to-day oversight and coordination of all of the aforementioned operational elements of the Parking System needs to be improved. At present, the operation lacks an administrator who has the authority and accountability to make sure the Parking System is being operated effectively. This shortcoming has led to inconsistent, ineffective, wasteful, and unplanned organizational outcomes, as many of the people involved in the day-to-day operations are often left to resolve or neglect issues and problems that arise on a day-to-day basis without clearly documented procedures and the presence of a parking system manager to insure staff performance is effective and proper.

## Parking System Financial Performance Review

### *System Financial Performance*

**Table 16** shows a tabulated summary of the GA's annual financial statements between 2005 and 2015. During this 10-year period, the GA's annual average expenses grew only 1.07%, however, over same period, the average annual rate of change in revenue generation was a negative 1.51%. This, despite the fact that the rates charged for monthly and/or transient parking were increased in 2006, 2007, 2008, and 2009. These facts support the reality that demand for parking in the downtown area has steadily declined.

It is important to point out that neither the cost of enforcement of the on-street parking system nor the value of the tickets written are counted as part of the GA's annual revenues and expenses. The Parking Enforcement Unit wrote 34,682 parking citations in 2015, which account for approximately \$1.1 million in parking ticket value. The Police Department's 2016 expense budget request for the Parking Enforcement Unit was \$520,177, with approximately \$244,000 of the total used for salaries and wages for the five full-time and one part-time parking enforcement officers and one parking enforcement supervisor. The exhibit below provides a graphic display of the GA's revenue-generating trend by program source for the 10 year period between 2005 and 2015.

**Exhibit 18 GA Revenue Generation Trend by Program Source from 2005 -2015**

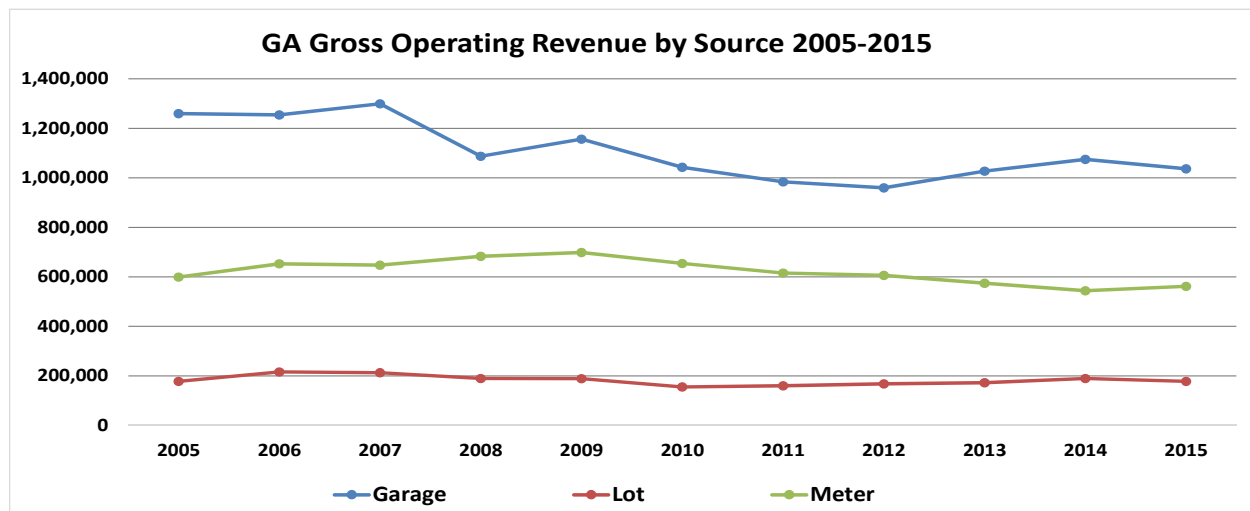


Table 16 General Authority Financial Performance between 2005 and 2015

General Authority Revenue Generation by Asset Category (2005 - 2015 Summary Accruals)											
	2005 Actual	2006 Actual	2007 Actual	2008 Actual	2009 Actual	2010 Actual	2011 Actual	2012 Actual	2013 Actual	2014 Actual	2015 Actual
<b>GARAGES</b>	<b>1,259,761</b>	<b>1,254,270</b>	<b>1,299,245</b>	<b>1,086,860</b>	<b>1,155,880</b>	<b>1,043,164</b>	<b>983,375</b>	<b>959,431</b>	<b>1,027,079</b>	<b>1,074,966</b>	<b>1,036,670</b>
Garage Monthly	836,871	817,243	851,333	745,244	750,647	669,254	592,550	550,211	599,304	606,438	553,114
Regular Monthlies	684,896	640,292	669,017	551,492	568,120	542,518	525,947	486,170	535,263	542,397	489,073
S. George Permit Agreement	40,995	58,280	55,565	56,799	55,281	74,928	66,603	64,041	64,041	64,041	64,041
Non-Paying Rentals	110,980	118,670	126,751	136,953	127,246	51,808	0	0	0	0	0
Garage Transient	298,342	309,612	320,360	260,636	312,246	276,098	297,506	321,149	350,863	392,554	419,054
Regular Transients	298,342	309,612	320,360	260,636	312,246	276,098	297,506	321,149	350,863	392,554	419,054
Hotel Charge Backs											
Garage Special Event	46,582	61,977	58,700	39,693	42,700	63,492	62,500	65,202	67,321	60,101	48,620
Other Special Events	19,209	15,407	7,700	6,616	7,700	8,894	5,040	2,274	2,888	6,101	4,207
Strand	27,373	46,570	51,000	33,077	35,000	54,598	57,460	62,928	64,433	54,000	44,413
Garage Nightly	43,388	28,130	30,600	20,399	21,320	11,227	1,863	531	0	201	0
Garage Other	34,578	37,308	38,252	20,888	28,967	23,094	28,955	22,338	9,591	15,673	15,882
<b>LOTS</b>	<b>178,407</b>	<b>216,180</b>	<b>213,349</b>	<b>189,835</b>	<b>189,063</b>	<b>155,853</b>	<b>160,617</b>	<b>167,766</b>	<b>173,089</b>	<b>190,055</b>	<b>178,305</b>
Lot Permits	178,407	216,180	213,349	189,835	189,063	155,853	160,617	167,766	173,089	190,055	178,305
<b>METERS</b>	<b>599,591</b>	<b>652,605</b>	<b>647,734</b>	<b>683,364</b>	<b>698,332</b>	<b>654,084</b>	<b>615,584</b>	<b>606,351</b>	<b>574,386</b>	<b>544,111</b>	<b>562,059</b>
Meters Deposits	522,102	582,106	571,050	614,760	626,500	595,101	554,396	554,492	521,080	488,295	505,736
Meters Permits & Bagging	77,489	70,499	76,684	68,604	71,832	58,983	61,188	51,859	53,306	55,816	56,323
<b>TOTAL OFF-STREET REVENUE</b>	<b>1,438,168</b>	<b>1,470,449</b>	<b>1,512,594</b>	<b>1,276,695</b>	<b>1,344,943</b>	<b>1,199,017</b>	<b>1,143,991</b>	<b>1,127,197</b>	<b>1,200,168</b>	<b>1,265,020</b>	<b>1,214,975</b>
Revenue Per Off-Street Space *	665	680	700	591	622	555	529	521	555	585	562
<b>TOTAL ON-STREET REVENUE</b>	<b>599,591</b>	<b>652,605</b>	<b>647,734</b>	<b>683,364</b>	<b>698,332</b>	<b>654,084</b>	<b>615,584</b>	<b>606,351</b>	<b>574,386</b>	<b>544,111</b>	<b>562,059</b>
Revenue Per On-Street Meter Space *	543	591	586	618	632	592	557	549	520	492	509
<b>TOTAL REVENUE</b>	<b>2,038,424</b>	<b>2,123,734</b>	<b>2,161,027</b>	<b>1,960,649</b>	<b>2,043,897</b>	<b>1,853,656</b>	<b>1,760,104</b>	<b>1,734,070</b>	<b>1,775,109</b>	<b>1,809,717</b>	<b>1,777,596</b>

Based on the reported annual revenue between 2005 and 2015 the average annual rate of change in revenue generation was -1.51%

Expenses by Program Category and Generalized Line Items (2005 - 2015 Summary Accruals)											
	2005 Actual	2006 Actual	2007 Actual	2008 Actual	2009 Actual	2010 Actual	2011 Actual	2012 Actual	2013 Actual	2014 Actual	2015 Actual
<b>GARAGE EXPENSES</b>	<b>675,988</b>	<b>678,835</b>	<b>834,800</b>	<b>815,576</b>	<b>813,741</b>	<b>842,234</b>	<b>775,377</b>	<b>737,878</b>	<b>538,235</b>	<b>557,965</b>	<b>646,583</b>
Labor	247,865	249,723	311,465	309,700	297,220	334,514	266,722	241,381	243,048	197,362	231,627
Utilities	65,211	54,675	67,625	68,797	67,925	67,230	94,391	106,612	5,646	60,637	67,840
Services	21,538	29,053	30,100	24,857	32,400	15,146	23,492	18,195	15,810	18,703	20,500
Supplies/Materials/Equipment	6,760	11,934	16,420	8,870	18,650	8,454	6,166	5,503	9,227	4,563	6,650
<b>LOT EXPENSES</b>	<b>26,009</b>	<b>4,122</b>	<b>23,300</b>	<b>10,220</b>	<b>23,300</b>	<b>6,195</b>	<b>8,162</b>	<b>41,257</b>	<b>42,562</b>	<b>135,603</b>	<b>69,411</b>
Labor	7,228	0	0	4,136	0	401	550	19,366	19,806	16,607	11,955
Services	4,500	1,030	10,000	0	10,000	1,983	3,410	0	397	47,630	21,915
Supplies/Materials/Equipment	2,000	2,062	3,300	1,948	3,300	1,398	196	1,071	619	5,567	659
<b>METER EXPENSES</b>	<b>129,051</b>	<b>155,664</b>	<b>300,636</b>	<b>253,031</b>	<b>292,622</b>	<b>242,866</b>	<b>220,860</b>	<b>183,116</b>	<b>106,707</b>	<b>129,585</b>	<b>108,258</b>
Labor	55,569	68,115	129,918	107,432	136,586	109,066	101,903	87,539	48,296	59,566	49,587
Services	5,771	6,439	17,100	15,379	5,600	5,139	5,430	2,700	3,404	3,388	3,231
Supplies/Materials/Equipment	6,370	6,555	6,600	7,408	8,250	14,456	6,196	2,638	3,307	3,678	2,622
<b>ADMINISTRATIVE EXPENSES</b>	<b>239,803</b>	<b>267,183</b>	<b>263,108</b>	<b>252,984</b>	<b>269,675</b>	<b>252,570</b>	<b>357,705</b>	<b>324,213</b>	<b>339,405</b>	<b>336,698</b>	<b>354,184</b>
<b>TOTAL OFF-STREET EXPENSES</b>	<b>701,997</b>	<b>682,957</b>	<b>858,100</b>	<b>825,797</b>	<b>837,041</b>	<b>848,429</b>	<b>783,539</b>	<b>779,136</b>	<b>580,797</b>	<b>693,568</b>	<b>715,994</b>
Expenses Per Off-Street Space *	325	316	397	382	387	392	362	360	269	321	331
<b>TOTAL ON-STREET EXPENSES</b>	<b>129,051</b>	<b>155,664</b>	<b>300,636</b>	<b>253,031</b>	<b>292,622</b>	<b>242,866</b>	<b>220,860</b>	<b>183,116</b>	<b>106,707</b>	<b>129,585</b>	<b>108,258</b>
Expenses Per On-Street Space *	117	141	272	229	265	220	200	166	97	117	98
<b>TOTAL EXPENSES</b>	<b>1,070,852</b>	<b>1,105,804</b>	<b>1,421,844</b>	<b>1,331,811</b>	<b>1,399,337</b>	<b>1,343,865</b>	<b>1,362,104</b>	<b>1,286,465</b>	<b>1,026,909</b>	<b>1,159,851</b>	<b>1,178,435</b>
<b>NOI EXCLUDING DEBT</b>	<b>967,573</b>	<b>1,017,930</b>	<b>739,184</b>	<b>628,838</b>	<b>644,560</b>	<b>509,791</b>	<b>398,000</b>	<b>447,605</b>	<b>748,200</b>	<b>649,866</b>	<b>599,161</b>

Based on the reported annual expenses between 2005 and 2015 the average annual rate of growth for the period was 1.07%

\* The noted per space revenue and expense figures are based the 2015 counts of 2,162 off-street spaces and 1,105 on-street meter spaces.

Source: General Authority Financial Statement Summary



## Parking System Policy & Program Review

### *Parking System Rate Analysis*

#### **Monthly Parking Rates at Off-Street Parking Facilities**

The City charges \$91.14 and \$113.91, respectively, for regular and reserved monthly parking permit at each of its garages, while a monthly permit at its surface lots ranges from \$24.63 to \$59.12, depending upon the lot's location and whether or not the applicant is a York resident. There are very few privately owned and operated parking facilities available to the general public in downtown that compete with the City of York's parking facilities. The majority of these privately-owned facilities only offer parking spaces to the public on a monthly basis. Though the monthly rates at these facilities are not openly advertised, by making direct contact with the several of the facility owners, it was discovered that the monthly parking rates at these facilities generally ranged between \$50.00 and \$70.00.

#### **Hourly Parking Rates at Privately-Owned Off-Street Facilities**

Only two privately-owned parking facilities currently offer both daily/hourly and monthly parking – the surface parking lot located at 135 Beaver Street owned by St. John Church and the Central Market Parking Garage located at 101 W. Philadelphia Street. The St. John Church lot is staffed by a parking attendant who collects hourly parking fees during weekday business hours and the Central Market Garage is equipped with automated pay stations that are used to collect both hourly and monthly parking fees. The St. John Church lot has an hourly rate of \$1.00 with a maximum all-day charge of \$5.00 when entry occurs before 11:00am and \$3.00 when entry occurs after 11:00am. The Central Market Garage has an hourly rate of \$2.50, which is equal to the rate charged at the City's garages, but the maximum all-day charge of \$10.00 is well below the maximum all-day rate of \$22.50 charged by the City.

#### **On-Street Meter Rates & Parking Time Limits**

Generally speaking, on-street meter parking rates are typically set to correspond with the prevailing demand for short-term on-street parking – the higher the demand, the higher rate. Additionally, since on-street parking spaces are the most accessible and convenient, the objective is to set rates to encourage on-street space turnover in the highest demand areas, particularly where off-street long-term parking spaces are also available. Conversely, in areas where there might be a scarcity of long-term off-street spaces and the demand for short-term on-street parking is low, on-street parking rates are usually lower to allow for longer duration parking.

The City of York has a \$1.00 per hour rate set for all of its on-street meters and nowhere is anyone allowed to park at a meter for more than two consecutive hours without a special permit. In effect, this \$1.00 per hour meter rate, coupled with the standard 2-hour on-street parking time limit, ignores the fact that demand is not uniform throughout all of the on-street meter parking areas in the city. In some areas, the 2-hour time limit may be unwarranted or higher rates may be needed to regulate utilization.

In contrast, off-street parking facilities are not viewed as being as convenient as on-street spaces and are largely intended to accommodate user that need to park for an extended duration (i.e. more than 2 hours). Therefore, hourly parking rates in off-street parking facilities are customarily less than or equal to the hourly rates for more convenient, on-street meter spaces.

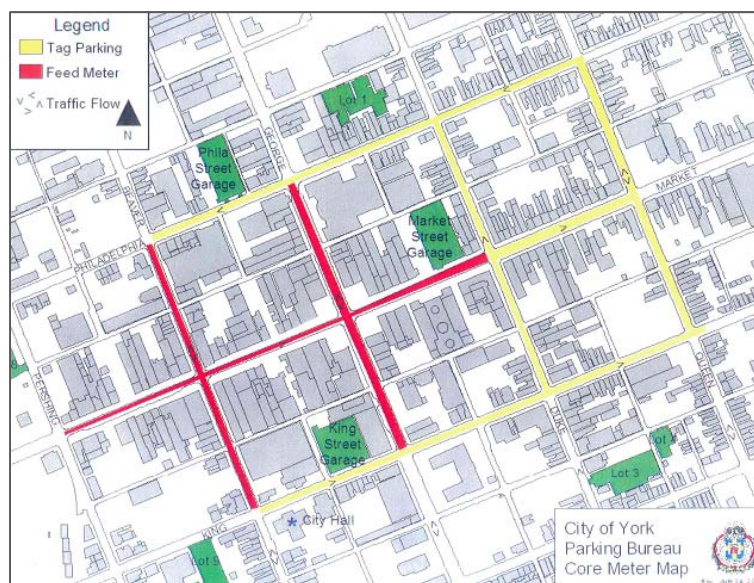
The opposite is the case in the City of York, as it costs \$2.50 per hour to park in the City’s garages and only a \$1.00 per hour to park at an on-street meter space. This rate differential between on-street meter and off-street garage parking is believed to be partly responsible for the fact that all the City parking garages are generally underutilized during normal business hours, while it is difficult to find unoccupied on-street meter spaces in the vicinity of the garages.

### On-Street Resident Parking Permit Rates

The City of York allows residents, residential landlords and business owners to obtain up to three on-street parking permits (i.e. one permit per vehicle) within declared Residential Parking Permit Areas. Such permit holders are entitled to park on-street at metered and non-metered spaces for more than 2 hours, without fear of receiving a violation. The permits are priced based on the areas where the permits can be lawfully used. Downtown “Core Area” permits are priced at \$32.28 per month and “Non-Core Area” permits are priced at \$12.44 for 6 months.

**Exhibit 18** illustrates where residential parking permits can and cannot be used in the Central Business District. The use of residential permits at CBD “Core Area” meters along the street segments highlighted in red is prohibited, but CBD “Core Area” permits can be used at meters located along the street segments highlighted in yellow. All the other “Non-Core Area” permits can be used at the meters along all the unmarked or “white” street segments in the CBD area and beyond.

**Exhibit 18 On-Street Meter Parking Permit Usage Areas in the Downtown Core Area**



According to City records, there are 161 program accounts that have purchased a total of 189 on-street residential parking permits (see **Table 17**). Twenty-five of the program participants have purchased an extra permit for their second, third or fourth vehicle. Over half the permits (102) were purchased by individuals that reside in either the core area or non-core area of downtown. Because the CBD has a total of 517 on-street meter spaces, the vehicles of these on-street parking permit holders could potentially occupy approximately 25% of all the meters in downtown for extended periods of time, if they were all parked in the area at one time.

**Table 17 Residential Area Parking Permits in Circulation for 2016**

Permit Category	Accounts	Single	Second	Third	Fourth	Permits	% of Total
Core Area Permit	17	14	3			20	11%
Non-Core Area Permit	71	60	11			82	43%
Outside of CBD Study Area	73	62	9	1	1	87	46%
<b>Permit Holder Accounts</b>	<b>161</b>	<b>136</b>	<b>23</b>	<b>1</b>	<b>1</b>	<b>189</b>	<b>100%</b>

Although no effort has been made to sample and document the number of hours these permit holders occupy on-street meters, the presence of these vehicles, particularly during peak parking demand periods, is likely to have accounted for a share of uncaptured meter system revenue. As an example, if half of the core and non-core permit parkers listed above (i.e. 51 permit holders) occupy a metered parking space in the downtown area for 4 hours during the peak demand period every day, the City would potentially be losing out on approximately \$51,400 in revenue per year (e.g. 51 X \$1.00 X 4hrs. X 252 days=\$51,405).

As shown in **Table 18**, the cost of these all-day on-street meter parking privileges in the core area and non-core areas of the CBD are \$1.44 and \$0.10 per day in the “Yellow Zone” and “White Zone”, respectively. Compared to the value of on-street metered parking to the City, the cost of these permits seem low, given the amount of foregone meter revenue the program is likely costing the City.

**Table 18 Parking Permit Rates and Sells by On-Street Parking Zone for 2016**

Resident On-Street Permit Rates	Permit Rate *	Permits Sold	Map Zone	Meters by Zones	Permits to Meters	Per Day Cost **
Central Business District (CBD) Core Meters	N/A	0	Red	91	0	N/A
Central Business District (CBD) Core Meters	\$30.28	20	Yellow	235	1 to 11	\$1.44
Central Business District (CBD) Non-Core Meters	\$12.44	82	White	444	1 to 5	\$0.10
Outside Central Business District (CBD) Non-Core Meters	\$12.44	87	White	412	1 to 4	\$0.10
<b>Total Permits and Metered Spaces</b>		<b>189</b>		<b>1182</b>		

\* No Permits allowed in "Red Zone", Per Month Rate for Permits in "Yellow Zone" and 6-Month Rate for Permits in "White Zone".

\*\* Per Day Cost for "Core Meter" parking permits based an average of 21 days per month, while "Non-Core Meter" parking permits based an average of 126 days over 6 months.

## *Parking Enforcement & Meter Collections*

### **Parking Enforcement – Street Cleaning**

The parking enforcement program, currently under the control City Police Department, was found to be weighted towards issuing of citations to violators of the City's street cleaning parking regulations, rather than parking meter violations. Between March and October, the Police Enforcement Unit deploys three of its five-member enforcement staff to conduct mobile patrols to work in conjunction with the Public Works Department street cleaning units. Although the program is responsible for generating the majority of citations and parking ticket revenue each year, there appeared to be no real correlation between the intensity of the enforcement efforts and the non-complaint parking behavior of habitual violators. As a result, the street cleaning program continues to be hampered by parkers that ignore the City's regulations. This problem suggests that the current parking fine and penalty structure associated with this program is ineffective in deterring non-complaint parking behavior. The amount of the citation fines and penalty fees need to be re-evaluated and both booting and vehicle towing initiatives may have to be re-activated, at least for the most habitual offenders of the regulations.

### **Parking Enforcement – Metered Parking and Non-Street Cleaning Violations**

The city-wide enforcement of metered and non-metered on-street parking regulations is also the responsibility of the Police Department. Two full-time parking enforcement officers (PEOs) are regularly deployed to patrol the east and west half of the CBD on foot and a third parking enforcement officers is assigned a vehicle to conduct mobile patrols in the downtown area and beyond. However, the third officer is sometimes needed to support the street cleaning unit, leaving parking meters outside the CBD unenforced.

Since daily parking activity and parker behaviors in downtown areas typically follow a pattern based on time of day, day of week and seasonal factors, the volume of parking violations issued also varies. While this causes day-to-day and seasonal variations in citation issuance, the number of citations issued by each parking enforcement officer assigned to the foot patrols in the downtown area should be comparable. Conversely, dramatic variances in the daily volumes of parking citations issued in the same area by different parking enforcement officers can be an indication of inconsistent performance and productivity among the staff.

In effort to review the performance of the Enforcement Unit, a sampling of actual parking citation issuance data was reviewed. **Table 19** reveals a fairly consistent ticket issuance volume among the PEO's by deployment assignment. Additionally, the table notes the number of times each PEO recorded time gaps of 40 or more minutes between the issuance of parking citations and the total amount of gap time minutes posted by each PEO. One or two time gaps totaling two hours or less can reasonably be attributed to lunch and break times. However, three or four time gaps totaling more than four hours is likely an indication that the subject PEOs may be neglecting their duty.



As shown in the table, several of the PEO's showed significant amounts of time taken away from the enforcement of metered and non-metered parking violations during their shifts.

**Table 19 Sample Analysis of the Parking Enforcement Staff Productivity in the Spring of 2016**

FOOT PATROL UNIT PEO CITATION DATA								
Officer	Beat	Date	Citations	Start	End	Hours	Tkts Per Hr.	Time Gaps
PEO #1	East	31-Mar	30	8:19AM	4:35PM	8	3.8	2/2:28
PEO #2	East	1-Apr	44	8:22AM	4:21PM	8	5.5	3/3:19
<b>Subtotals</b>			<b>74</b>			<b>16</b>	<b>4.6</b>	
Officer	Beat	Date	Citations	Start	End	Hours	Tkts Per Hr.	
PEO #3	West	31-Mar	33	8:02AM	4:17PM	8	4.1	3/4:09
PEO #4	West	1-Apr	45	8:20AM	4:17PM	8	5.6	1/1:23
<b>Subtotals</b>			<b>78</b>			<b>16</b>	<b>4.9</b>	
MOBILE UNIT PATROL PEO CITATION DATA								
Officer	Beat	Date	Citations	Start	End	Hours	Tkts Per Hr.	
PEO #4	E-W Mobile	31-Mar	22	8:39 AM	3:35 AM	7	3.1	3/3:28
PEO #5	E Mobile	1-Apr	22	8:38 AM	4:19 PM	8	2.8	4/4:45
PEO #1	W Mobile	1-Apr	22	8:40 AM	4:18 PM	8	2.8	3/4:38
<b>Subtotals</b>			<b>66</b>			<b>14</b>	<b>2.9</b>	
Officer	Beat	Date	Citations	Start	End	Hours	Tkts Per Hr.	
PEO #5	City-Wide	31-Mar	19	9:10 AM	4:06 PM	7	2.7	3/3:59
PEO #3	City-Wide	1-Apr	42	7:15 AM	11:55 AM	4	10.5	2/3:22
<b>Subtotals</b>			<b>61</b>			<b>11</b>	<b>5.5</b>	

### Parking Meter Collections

Parking meter collections are conducted daily by a part-time meter service person employed by the Finance Department. There are no set collection routes and the typical schedule of when meters are collected is governed by the need goal of keeping the meter coin vaults from becoming overfilled. If meter revenue collection amounts were logged by geographic area, by meter zone, by street or by numbered meter groupings on a regular basis, the City could better understand meter usage patterns and have a basis for justifying system changes. Unfortunately, this type of revenue tracking is not occurring today.

While the IPS meter software can provide detailed revenue data for the 215 smart meters installed in the downtown area, without effectively documenting revenue collection results from the ±800 Duncan meters that makeup the balance of the System, the City has no way of knowing if income is being pilfered during the collection process. Additionally, the practice of leaving the collected coins out in the open on a drying tray in the Department of Finance before being bagged and sent to the bank for deposit can also lead to graft. While no evidence of graft was found, these practices should be examined and altered so that future revenue loss is less likely to occur.

## *Parking Garage Operations*

### **Attended and Unattended Operating Hours**

All three parking garages are open 24/7, but only staffed by attendant cashiers on weekdays between 8:00am and 6:30pm. Before and after this timeframe and all day on weekends, the barrier access gates are left in the open position. The main reason the GA has adopted this staffing schedule is to avoid having to comply with onerous labor bargaining unit work rules and to avoid having to pay overtime wage rates. While the attendants collect fees from the transient parkers that exit the garage on weekdays between 8:00am and 6:30pm, those parkers that exit the facilities outside of this timeframe, or park in the garages on the weekends, are allowed to do so without paying for parking.

**Table 20 Parking Garage Operating Hours**

Garage Operating Hours	Attendant Cashier on Duty	Unattended
<b>King Street Garage</b>		
Monday - Friday	8:00am to 6:30pm	6:30pm to 8:00am
Saturday	-----	All Day
Sunday	-----	All Day
<b>Market Street Garage</b>		
Monday - Thursday	8:00am to 6:30pm	6:30pm to 8:00am
Saturday	-----	All Day
Sunday	-----	All Day
<b>Philadelphia Street Garage</b>		
Monday - Thursday	8:00am to 6:30pm	6:30pm to 8:00am
Saturday	-----	All Day
Sunday	-----	All Day

Although the City has attempted to leave the barrier gates down at all times and require parkers to pay their parking charge via credit card when attendants are not present, this policy has never been effectively implemented. In several instances, the in-lane credit card only pay stations have not been operational or customers have either forced open or driven through the barrier gates. In addition to not been able to collect revenue from transient parkers during these periods, the policy of lifting the gates has compromised the tracking and monitoring capabilities of the existing parking access and revenue control system is compromised and the facilities have been left exposed to potential crime and property vandalism.

While the City was unable to provide any statistics on parking activity documented at the garages during the unattended hours, from speaking to City personnel and observing the activity firsthand, it is clear that the Philadelphia Street Garage is heavily used on Saturdays when the Public Market. In addition, the Market Street Garage is regularly used by Yorktown Hotel guests when the Garage is unattended. The hotel does pay the hourly rate for every guest parker processed through attendant cashiers, but a large percentage of the parking activity by hotel guests is not account for because it happens when the garage is unattended.

### Training and Supervision of Attendant Cashiers

Interviews with each attendant cashier assigned to the parking garages revealed that there was no formal policies and procedures manual for the positions and that many of practices that they were using had been passed informally from employee to employee. Each workstation was cluttered with various hand written notes and other special instructions that had been introduced over time, but never formalized and memorialized in a manual.



During discussions with the cashiers, each one took issue with the unreliable performance of the fee terminals and the credit card processing devices. Additionally, attendants were seen using a proximity card that was kept at each work station to open barrier gates to allow parking customers to exit facilities without paying, for a variety of different reasons. While the need open the gate in every observed instance seemed to be justified, the action of opening the gates without payment was not being routinely documented and tracked by the PARC system software. This circumstance represents a significant opportunity for revenue to be collected without being reported and for free parking to be granted at any time to anyone without documentation.



These and other irregularities with the PARC system and the practices and procedures being followed by the attendant cashiers point to an overall lack of training, supervision and performance auditing, which are essential to any cash handling function of a parking program.

### Special Event Parking

In past years, the annual special event programming at the Strand and Capital Theatres in downtown has generated between \$35,000 and \$60,000 annually. Each year, the two theatres combined schedule between 35 and 40 special event dates when advanced ticket sales for the ballet, concerts, variety shows, Broadway shows, etc. have justified the need for event-related parking to be provided at the Philadelphia Street Garage. On these occasions, the GA schedules cashiers to manually collect a discounted parking fee as vehicles enter the Garage. During these events, only cash is accepted and event parkers are given one part of a two-part, serialized paper ticket when they enter the Garage. After the events, all vehicles are allowed to freely exit the Garage, as the gates are left open. The method of processing special event parking makes it possible for theft to occur without detection

### **Yorktown Hotel Guest Parking Validation Program**

The GA has had a long-standing agreement with the Yorktown Hotel to accommodate the parking needs of hotel guests at the Market Street Garage. Under this program, the Hotel charges guests that require parking a flat, per night rate for day long in and out parking privileges at the Market Street Garage. The Hotel's front desk staff then gives guests machine-readable chaser tickets to be used when exiting the Garage. When a cashier is on-duty at the Garage, they collect the chaser ticket from the hotel guest and use it to calculate the appropriate parking charges. The guest is then permitted to exit the Garage and the value of each chaser ticket collected from hotel guests are tallied and billed back to the Yorktown Hotel at the end of every month. The Hotel reimburses the GA each month for the cost of the parked time and retains any surplus from the nightly parking rate charged to guests.

A review of the Yorktown Hotel guest parking statistics for 2015 revealed that approximately \$84,000 was paid to the GA for hotel guest parking. However, this revenue represents only a portion of the parking activity attributable to the Hotel, because parking activity is only tracked if a cashier is on duty. All hotel guests that exit the Garage after 6:30pm on weekdays and anytime on Saturdays and Sundays are not accounted for in the monthly total billed to the Hotel.

The following tables (**Tables 21** and **22**) provide a breakdown of all hotel guest parking transactions documented in 2015. The statistics reveal that an average of only 23 hotel guest parking transactions were recorded per day, each month and that 58% of the transactions were short-term. An additional 17% of the transactions appeared to be for overnight parking and 17% of the transactions appeared to be for multi-day parking. Based on this information and the fact that the Yorktown Hotel had approximately 90 rooms available for occupancy, it is not unreasonable to conclude that there are a significant number of hotel guest parking transactions that have not been unaccounted for because there was not attendant on duty to process all guest parking transactions.



**Table 21 Yorktown Hotel Guest Parking Transactions by Month in 2015**

Month	Days Per Mo.	Total Trans	Daily Avg Trans	% of Total Trans.	Monthly Revenue	Avg \$ Per Trans.	% of Total \$
Jan	21	506	24	8.5%	\$9,814	\$19.39	11.7%
Feb	21	487	23	8.2%	\$7,834	\$16.09	9.3%
Mar	22	474	22	8.0%	\$7,240	\$15.27	8.6%
Apr	21	535	25	9.0%	\$9,553	\$17.86	11.4%
May	22	587	27	9.9%	\$10,972	\$18.69	13.1%
June	22	568	26	9.6%	\$10,305	\$18.14	12.3%
July	22	558	25	9.4%	\$9,290	\$16.65	11.1%
Aug	22	494	22	8.3%	\$5,198	\$10.52	6.2%
Sept	22	516	23	8.7%	\$4,040	\$7.83	4.8%
Oct	22	498	23	8.4%	\$4,328	\$8.69	5.1%
Nov	19	332	17	5.6%	\$2,636	\$7.94	3.1%
Dec	21	372	18	6.3%	\$2,848	\$7.65	3.4%
<b>TOTAL</b>	<b>257</b>	<b>5927</b>	<b>23</b>	<b>100.0%</b>	<b>\$84,055</b>		<b>100.0%</b>

**Table 22 Yorktown Hotel Guest Parking Transactions by Duration of Stay in 2015**

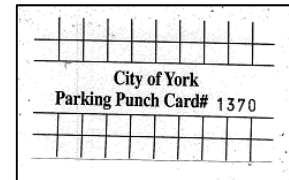
Total Trans	% of Total Trans.	Duration of Stay	2015 Revenue
763	12.9%	1 hour	\$2,213
1,691	28.5%	2 hours	\$9,230
1,018	17.2%	3 hours	\$8,071
321	5.4%	4 hours	\$3,248
183	3.1%	5 hours	\$2,246
148	2.5%	6 hours	\$2,144
138	2.3%	7 hours	\$2,275
309	5.2%	8 hours	\$5,852
309	5.2%	9-12 hours	\$6,257
1,047	17.7%	13-24+ hours	\$42,520
<b>5,927</b>	<b>100.0%</b>		<b>\$84,055</b>
3,472	58.6%	Short-Term Parkers	
618	10.4%	Overnight Parkers	
1,047	17.7%	Multi-Day Parkers	

The preceding tables provide a breakdown of all the hotel guest parking transactions for 2015. The statistics reveal that an average of only 23 hotel guest parking transactions were recorded per day each month and that 58% of the transactions were short-term, 17% of the transactions appeared to be for overnight parking and 17% of the transactions appeared to be for multi-day parking. Given this

breakdown, and the fact that the Yorktown hotel had approximately 90 rooms available for occupancy, it is not unreasonable to conclude that there has to be a significant number of hotel guest parking transactions that have not been unaccounted for because there was not attendant cashier on duty at the garage to process all the guest parking transactions.

### **Pre-Paid Punch Cards and Park-n-Shop Validations**

The GA maintains two advanced parking sales programs that are intended to make parking at the City garages easier and more appealing: pre-paid punch cards and Park-n-Shop validations. Pre-paid punch cards, which sell for \$87.55 (including tax), can be presented and hole-punched up to 40 times at any of the three parking garages, with each punch permitting the parking customer one hour of parking. With the current cost for one hour of parking at \$2.50, card holders receive a pre-tax discount of \$0.60 per hour. In the case that someone stays parked for nine hours, the GA would receive \$14.40 in pre-tax revenue instead of \$19.35 in pre-tax revenue.



The GA receives payment for these punch cards at the time of purchase and the attendant cashiers use a special key on their fee terminal to record when a punch card is presented as a form of full or partial payment. The punch cards are produced in-house and the sales of the cards are tracked by a unique ID number imprinted on the card. However, the ID number on the card is not entered into the fee computer at the time a card is presented as a form of payment, so it is impossible audit whether or not the value of punch cards in circulation has been exhausted. This program, which generated \$2,146 in 2015, is not popular among system users.

The Park-n-Shop program is designed to provide downtown businesses and institutions a way to reward their customers with one or more hours of free parking in the City's garages. Machine-readable parking tickets are used for the Park-n-Shop program, with packages of 50 tickets sold to merchants for \$87.70, including tax. This equates to a pre-tax discounted value of each park-n-shop ticket of \$1.52. This program, which generated \$13,736 in 2015, is more popular than the punch card program and, unlike the punch card program, the machine-readable tickets used for the Park-n-Shop program can be easily tracked and audited.

## Parking System Strategic Plan Recommendations

The Parking System Strategic Plan Recommendations which follow represent a collection of best industry practices and specific corrective measures designed to enhance the organization, management, operations, fiscal performance, and overall level of service provided by the City of York's Parking System. Best efforts have been made to explain the rationale, anticipated benefits and probable costs associated with the most significant recommendations, while industry trends and their proven results are sighted as the reasons why some of the less significant recommendations have been made. Additionally, it is important to note that there is some co-dependency among the recommendations. For example, proposed adjustments to on-street metered parking rates will not achieve the anticipated results unless adjustments to off-street parking rates are also made. Therefore, related recommendations have been grouped together under several broad topics.

### *Recommended Parking Meter System Policy, Program & Rates Changes*

#### **Meter Parking Rate Changes and Stratification of Time Limits**

Applying the current \$1.00 per hour rate and 2-hour maximum parking time limit rules across the entire on-street meter system ignores the reality that public parking options, needs, and demands are directly linked to the mix, density and intensity of land uses, which vary by city block, district and neighborhood. In every case, the objective should be to regulate and price the available supply of public parking so that it best serves the parking activity or demand generated by the land uses that comprise the immediate surrounding area. The greater the supply of on- and off-street parking in an area, the more options exist in terms of regulations and pricing to make the parking supply optimally serve the area. Where the supply of public off-street parking is scarce, on-street parking needs to be regulated and priced to best serve the predominant or most important parking users in an area.

With these principles in mind, DESMAN recommends the following:

- **Eliminate Parking Time Limit Restrictions in Low Demand Areas** – Allow non-time restricted parking at all meters, except those situated in the areas of highest parking demand. The existing 2-hour parking time limits should remain in effect in the high demand areas. Users of meters in these non-time restricted areas should be permitted to feed the meter for as long as they need to park.
- **Reduce the Inventory of Underutilized, Older Meters** – The existing Duncan digital parking meters installed on W. Market Street and west of Penn Street account for a very small share of the meter system revenue collected. The City's costs to maintain, repair and collect these meters is barely covered by the revenue they are generating. Until the level of activity in these areas rises enough to justify meters to control on-street parking, the ±200 Duncan meters in this area should be removed.
- **Establish a Three-Tiered Structure for Meter Parking Rates** – The current on-street parking rate structure should be amended to establish three tiers of rates. A \$0.50 per hour rate is proposed

for meters in the lowest demand areas, a \$1.00 per hour rate is proposed in the moderate demand areas and the highest rate of \$1.50 per hour is proposed for the highest parking demand areas.

### Introduce Multi-Space Pay Station Kiosks and Reduce Inventory of Duncan Digital Meters

It is recommended that the City initially acquire 47 multi-space pay station kiosks for installation in the areas of the CBD where on-street parking demand is highest and where the highest meter rate tier is proposed (i.e. parts of George Street, Market Street, Philadelphia Street, Beaver Street, Duke Street, and King Street). The kiosks should be configured with alpha-numeric keys and be programmed to facilitate meter payments keyed to the license plate of the customer's vehicle.

Each kiosk will take the place of 8 to 10 single space meters. The initial plan to introduce multi-space pay station kiosks, presented in the exhibits and tables that follow, recommends that the kiosks be installed in places where 198 IPS smart meters are currently installed. It is further recommended that the displaced smart meters be relocated to areas where the older Duncan meters are currently installed and to remove approximately 395 Duncan meters from the meter system inventory all together. These changes will reduce the number of single space meters that will have to be maintained and collected and move the City closer to having an on-street parking system that is fully credit card enabled, with an advanced array of managerial and analytical capabilities.



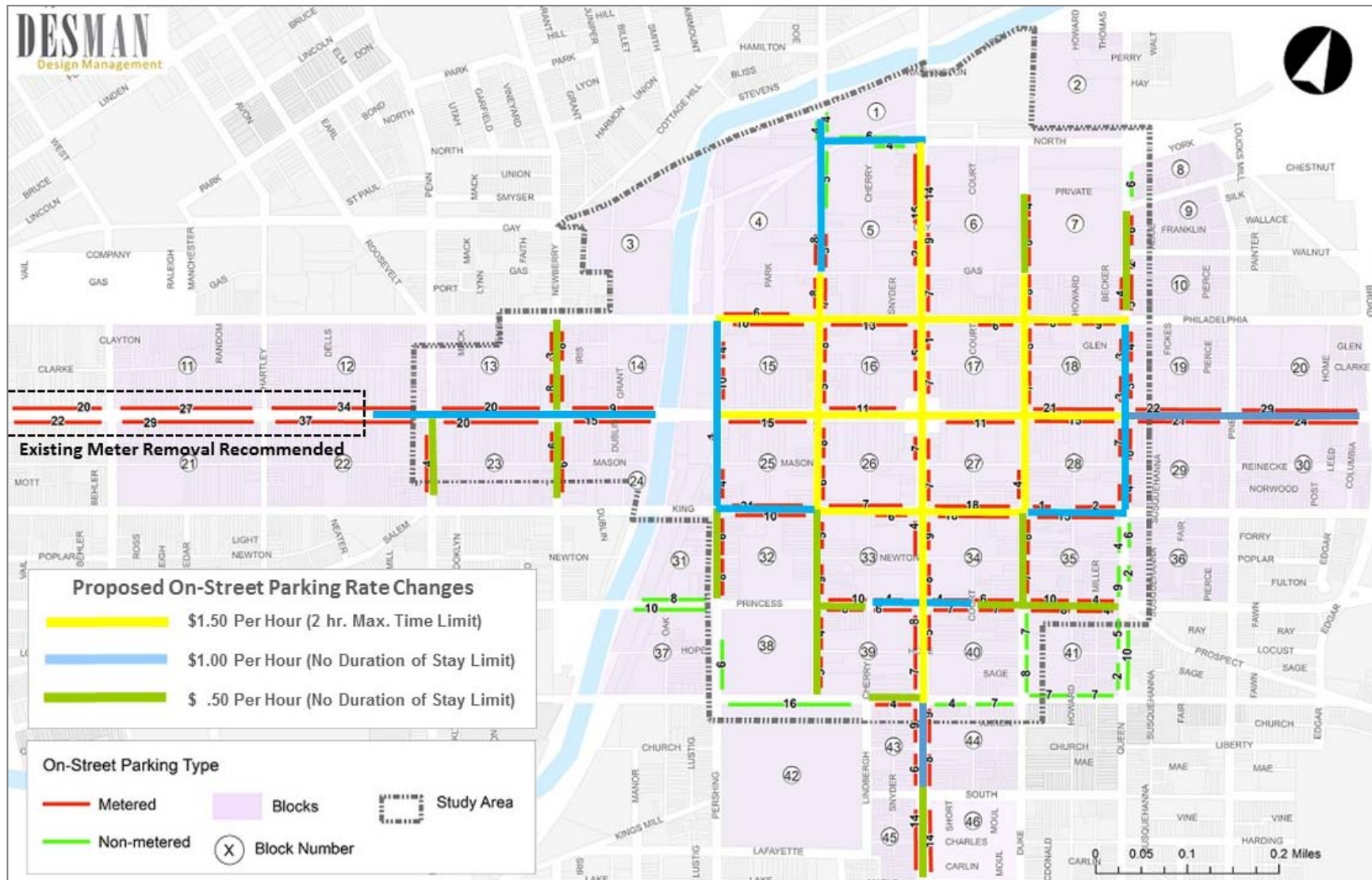
**Table 23 Proposed Parking Meter Rate Changes**

	Existing Rate for All Meters	Proposed New Meter Rate Schedule		
		1st Rate Tier	2nd Rate Tier	3rd Rate Tier
<b>Less Than 1 Hour Rates</b>	\$0.05/2 min.	-----	-----	-----
	\$0.10/6 min.	-----	-----	-----
	\$.25/15 min.	\$.25/10 min.	\$.25/15 min.	\$.25/30 min.
<b>Per Hour Rate</b>	\$1.00	\$1.50	\$1.00	\$0.50
<b>Maximum</b>	\$2.00	\$3.00	\$10.00	\$5.00
<b>Time Limit</b>	All 2 Hr. Max.	All 2 Hr. Max.	8AM-6PM	8AM-6PM
<b>Meter Type</b>	Smart/Duncan	Pay Station Kiosks	IPS Smart Meters	Duncan Meters

**Note:** The three colors on the chart are intended to correspond with the color coding on Exhibits 19 and 20.

**Exhibit 19** depicts the areas where it is recommended that the existing on-street parking time limits be changed and where the existing \$1.00 per hour meter parking rates should either be raised or lowered by \$0.50 per hour. **Exhibit 20** depicts the locations where the installation of new multi-space pay stations kiosks are proposed and where smart meters displaced by the pay stations should be relocated.

**Exhibit 19 Proposed On-Street Meter Parking Rate and Parking Time Limit Changes**



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**Exhibit 20 Recommended On-Street Meter System Inventory Changes**

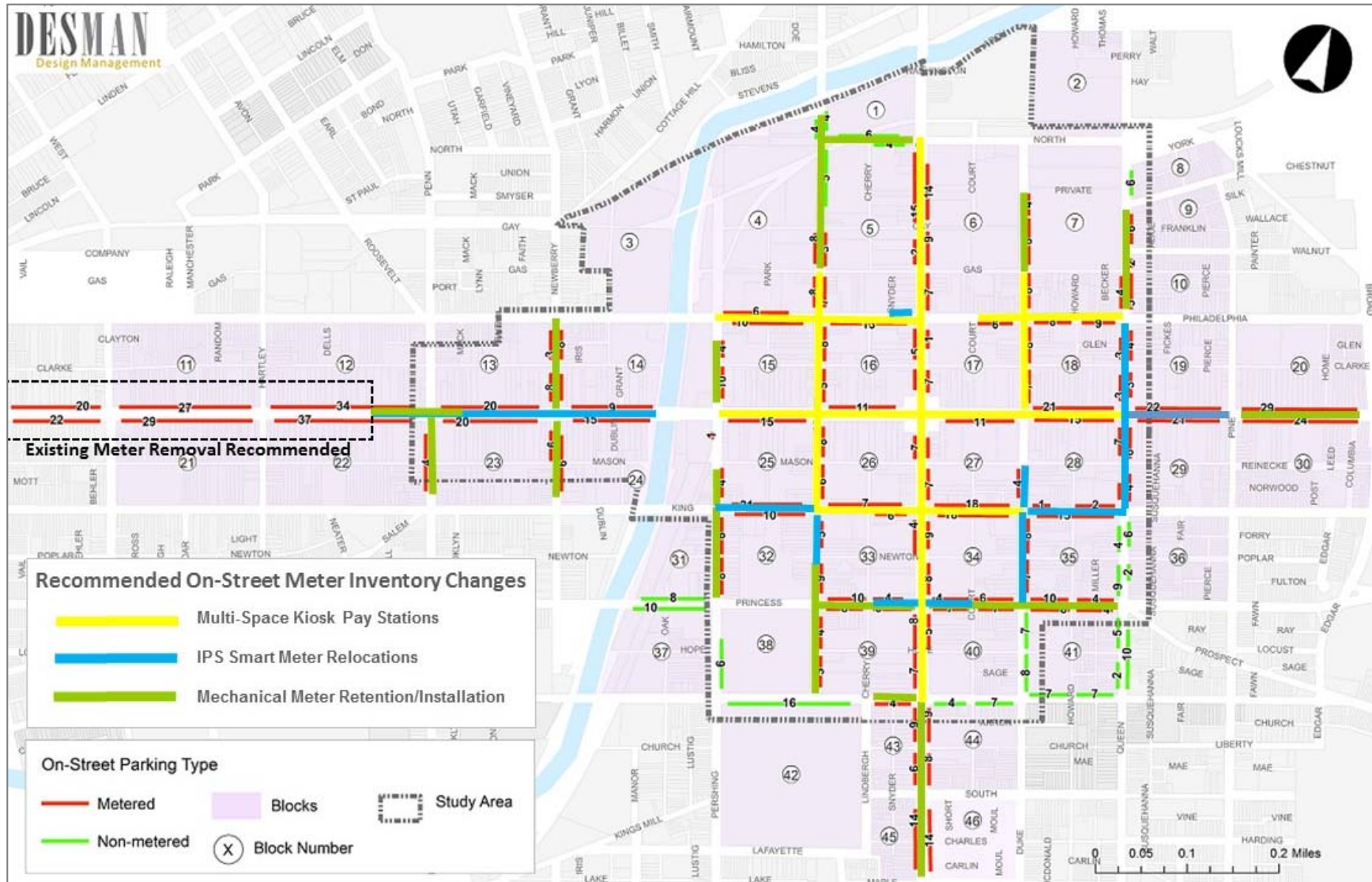


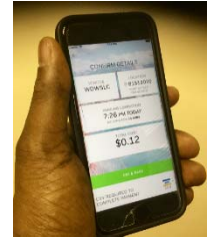
Table 24 Proposed Technology Upgrade to Existing Parking Meter System Inventory

Block Number	Existing Meter System		Proposed Meter System Changes			
	IPS Smart Meters In-Place	Duncan Digital Meters In-Place	Pay Station Kiosks Installed	IPS Smart Meters Added/Kept	Digital Meters Added/Kept	Digital Meters Eliminated
20	0	29	0	0	29	0
19	0	29	0	29	0	7
18	21	38	6	6	0	38
17	7	7	2	0	0	7
16	45	1	6	0	0	1
15	0	24	1	0	14	10
14	0	17	0	9	8	9
13	0	31	0	15	16	20
12	0	34	0	0	9	25
22	0	41	0	0	4	37
23	0	26	0	15	11	20
24	0	21	0	15	6	15
25	14	26	2	21	4	22
26	30	9	4	0	0	9
27	22	13	6	4	0	13
28	15	3	2	3	7	3
29	0	21	0	21	10	21
30	0	0	0	0	24	0
10	0	0	0	0	7	0
9	0	0	0	0	6	0
8	0	0	0	0	6	0
7	0	22	1	0	14	8
6	14	16	3	0	0	16
5	11	18	3	2	9	18
4	0	22	2	8	4	18
32	0	10	0	10	14	10
33	4	34	2	9	19	15
34	17	28	4	4	6	24
35	0	44	0	30	14	30
41	0	12	0	0	12	0
40	0	19	1	7	7	12
39	0	38	2	6	17	21
43	0	19	0	0	19	0
44	0	17	0	0	17	0
45	0	14	0	0	14	0
46	0	14	0	0	14	0
1	0	0	0	0	10	0
Meter Units	200	697	47	214	351	429
	897		612		429	

Note: Red text denotes meters located outside Central Business District (CBD)

**Introduce Pay-by-Phone Payment Service for On-Street Meter Parking**

This alternative payment service will be helpful to customers, reduces the time and expense of meter collections, offers full integration with pay station kiosk technology and enforcement solutions, and the program will cost the City very little in start-up cost. Customers can manage their accounts and have access to transaction receipts and proof-of payment using their smart phone. The service can also be used to pay for parking at the City's Duncan meters by establishing meter rate zones and payment records based on vehicle license plate numbers.

**Enact Pay-by-Plate Platform for Parking at On-Street Meters**

The use of Pay-by-Plate Technology is rapidly expanding in the parking industry for several reasons. The license plate is common to all parking patrons, plate-base payments can be processed at properly configured multi-space pay stations or at smart and non-smart single space meters using cellular phone app is easy and convenient for customers, the productivity enforcement can be effectively tracked, the workflow associated with processing parking citations can be consolidated as all records are initially keyed to plates and easily linked to vehicle registrations and fewer cash payments deposited into meters and pay stations reduces the meter system revenue collection work load. Additionally, license records can also be used to identify on-street meter parking permit holders. For these reasons, it is recommended that the City implement a license plate based payment system and acquire License Plate Recognition (LPR) technology to conduct enforcement.

**Replace On-Street Parking Permit Hangtags with E-Permits**

By enacting electronic ("E") permitting, the City can save administrative time and expense, eliminate the potential for permit counterfeiting, and allow for better enforcement control over the program. Each "E-Permit" will be linked to the license plate(s) registered on the parking assignee's parking account and enforcement of permit parking violations will be done through the recognition of the license plate number of permit holder's vehicle. Monthly, quarterly or annual permit purchases, renewals and cancellations can be processed on-line in real-time.

***Recommended Parking Enforcement Program Enhancement*****Transfer Parking Enforcement Program Oversight to GA**

Enforcement is critical to the operational effectiveness and performance of any on-street meter system. Technologies that provide for pay-by-phone parking payment processing also require real-time integration with the devices and software system relied upon to conduct enforcement. Since DESMAN is recommending that the City establish a pay-by-phone capability, it will also need to have a high level of coordination and oversight of the Parking Enforcement Unit now under the oversight of the Police Department. While hiring, basic training and swearing-in of civilian enforcement officers, plus any emergency backup response certainly requires the direct involvement and support of the Police

Department, the day-to-day deployment, productivity, and monitoring of PEO's does not require Police oversight and is often more effectively dealt with when an enforcement unit is managed as an integral component of the on-street parking program.

### **Acquire and Implement License Plate Recognition (LPR) Technology for Parking Enforcement**

The performance of the City's Parking Enforcement Unit has been inconsistent. Field surveys conducted by DESMAN and a review of actual citation issuance records revealed that on-street violations have been regularly missed. Also, the performance among the PEO's varied widely and extended time gaps between citation issuance times suggest that some enforcement personnel have been taking lengthy breaks from their duties. It is imperative that the public perceives parking enforcement as being consistent, diligent and fair in order to spur compliant parking habits among system users. It is likely that only one such equipped enforcement vehicle will be required to complete hourly patrols throughout the downtown area and beyond.



LPR Enforcement will facilitate frequent and all-encompassing system patrol runs using only one or two enforcement staff members during the customary enforcement time period. Additionally, the City could install the technology on its street sweeping vehicles to enforce street sweeping parking bans.



By instituting LPR mobile enforcement, the City will be able to substantially reduce its current compliment of enforcement personnel and streamline back-office processing and recordkeeping of citations.

## ***Recommended Operational Enhancements for the Parking Garages***

### **Hourly Parking Rate Adjustment**

Each of the City's parking garages are underutilized during peak parking demand periods with 50% to 60% of the space remaining unoccupied. As stated earlier, this underutilization is due in part to the fact that it costs \$2.50 to park for 1 hour or less inside the City parking garages, while it costs \$1.00 to park for 1 hour or less at any on-street parking meter in the downtown. This short-term parking rate imbalance must be corrected in order draw more users to the garages and spur more space turnover at metered on-street spaces.

Therefore, in addition to the previously stated proposal to raise the per hour cost to park at the most desirable on-street meters (i.e. those located in the proposed Tier 1 area) to \$1.50, the cost to park for a comparable short period inside the garages needs to be lowered. **Table 25** below displays the proposed changes to the current hourly parking rate schedule at the City's garages. The adjustments only impact the price for short-term parking (i.e. 3 hours or less) in the garage because 80% of the daily transient

customers at the Market Street and Philadelphia Street garages park for 2 hours or less and 66% of the daily transient customers park at the King Street Garage for 2 hours or less.

Clearly, the opportunity to capture more short-term parkers exists and a reduction in the short-term parking rates should cause more parkers to use the garages. A new minimum charge of \$0.75 for 30 minutes or less has been added and the \$1.50 and \$3.00 rates for the first 1 and 2 hours, respectively, will match the proposed Tier 1 on-street meter rates. The current rate to park for 3 hours is reduced by \$1.00, but no other changes are proposed for the hourly and monthly schedule of rates. While the charge per transaction collected from each garage parker during the first three hours will be reduced, the daily capture of greater numbers of transient parkers at each garage should make up for the proposed rate reductions.

**Table 25 Proposed Adjustments to the Parking Garage Rate Schedule**

Transient Rates	Existing	Proposed	% Change
30 min. to 1 hr	\$0.00	<b>\$0.75</b>	750%
1 hr or less	\$2.50	<b>\$1.50</b>	-40%
2 hrs or less	\$5.00	<b>\$3.00</b>	-40%
3 hrs or less	\$7.50	<b>\$6.50</b>	-13%
4 hrs or less	\$10.00	\$10.00	0%
5 hrs or less	\$12.50	\$12.50	0%
6 hrs or less	\$15.00	\$15.00	0%
7 hrs or less	\$17.50	\$17.50	0%
8 hrs or less	\$20.00	\$20.00	0%
9 hrs or less	\$22.50	\$22.50	0%
9 hrs - 24hr Max.	\$22.50	\$22.50	0%
<b>Monthly Rates</b>			
Non-Reserved	\$91.14	\$91.14	0%
Reserved	\$113.31	\$113.31	0%

### Expand the Operating Hours of the Parking Garages

The current operating hours for the garages need to be extended to better to support downtown activities. The current practice of leaving the garages unattended after 6:30pm and throughout the weekend sacrifices revenue that could be captured during these timeframe and the open garages are vulnerable to crime and property damage. The operating hours should be driven, in part, by the prevailing parking activity in the immediate vicinity of each garages. The Market Street Garage serves the Yorktown Hotel and the retail and restaurants along George Street and the Philadelphia Street Garage serves the market, the theatres and retail and restaurants along George Street, Market Street and to some extent along Beaver Street. The King Street Garage is perceptually the more removed from these same evening and weekend parking demand generators in the downtown area. At the present time, the operating



schedule for all three garages is the same 8:00am until 6:30pm Monday through Friday for a total of approximately 63 hours.

If attendant cashiers are to continue staffing all three garages, it would be beneficial to extend the operations of the Philadelphia Street Garage later in the evening on weekdays and to open the facility on weekends, since it will likely enjoy the most utilization during these periods. Since the Market Street Garage serves Yorktown Hotel guests, it should also remain open on weekends. However, the closure of the King Street Garage on the weekends should continue until actual demand justifies its opening. The table below presents the existing operating schedule for the garages alongside suggested operating schedules for the garages.

The primary difference between continuing to operate the garages with attendant cashiers versus automating the three facilities, is that the former will require attendants to staff each garage for the expanded coverage period and the latter will require that only one person staff a central operations center during the specified timeframes.

**Table 26 Suggested Changes to the Existing Operating Hours of the City Garages**

To Accommodate Transient Parkers	EXISTING OPERATION			SUGGESTED FUTURE OPERATION ALTERNATIVE					
	With Attendant Cashiers			With Attendant Cashiers			With Self-Park Automation		
	Open	Close	Hours	Open	Close	Hours	Open	Close	Hours
King Street Garage									
Monday - Thursday	8:00am	6:30pm	10.5	7:00am	7:00pm	12	6:00am	12:00am	18
Friday	8:00am	6:30pm	10.5	7:00am	7:00pm	12	6:00am	12:00am	18
Saturday	----	----	Closed	----	----	Closed *	6:00am	12:00am	18
Sunday	----	----	Closed	----	----	Closed *	----	----	Closed *
Subtotal Operating Hours	21			24			54		
Market Street Garage									
Monday - Thursday	8:00am	6:30pm	10.5	7:00am	7:00pm	12	6:00am	12:00am	14
Friday	8:00am	6:30pm	10.5	7:00am	2:00am	19	6:00am	2:00am	20
Saturday	----	----	Closed	8:00am	2:00am	18	6:00am	2:00am	20
Sunday	----	----	Closed	----	----	Closed **	----	----	Closed **
Subtotal Operating Hours	21			49			54		
Philadelphia Street Garage									
Monday - Thursday	8:00am	6:30pm	10.5	7:00am	7:00pm	12	6:00am	12:00am	14
Friday	8:00am	6:30pm	10.5	7:00am	2:00am	19	6:00am	2:00am	20
Saturday	----	----	Closed	8:00am	2:00am	18	6:00am	2:00am	20
Sunday	----	----	Closed	----	----	Closed *	----	----	Closed *
Subtotal Operating Hours	21			49			54		
TOTAL OPERATING HOURS	63			195			270		

Note: *Closed\** denotes that selected monthly permit holders would be granted special access after-hours and when the garage is closed to transient parkers and the facility is not staffed by attendant cashiers.  
*Closed\*\** denotes that selected monthly permit holders and hotel guests would be granted special access after-hours and when the garage closed to transient parkers and the facility is not monitored by the Central Operations Center.

During the overnight hours after each of the garages are closed to transient parkers and no staff is present at the facility, it is suggested that some monthly permit parkers, such as residents, and, in the case of the Market Street Garage, York Hotel guests, be provided special access credentials to allow them 24/7 access to the facilities. The special credentials, in the form of a machine-readable ticket or proximity card, should be used to open high speed overhead security doors to allow entry and exit to the garages.



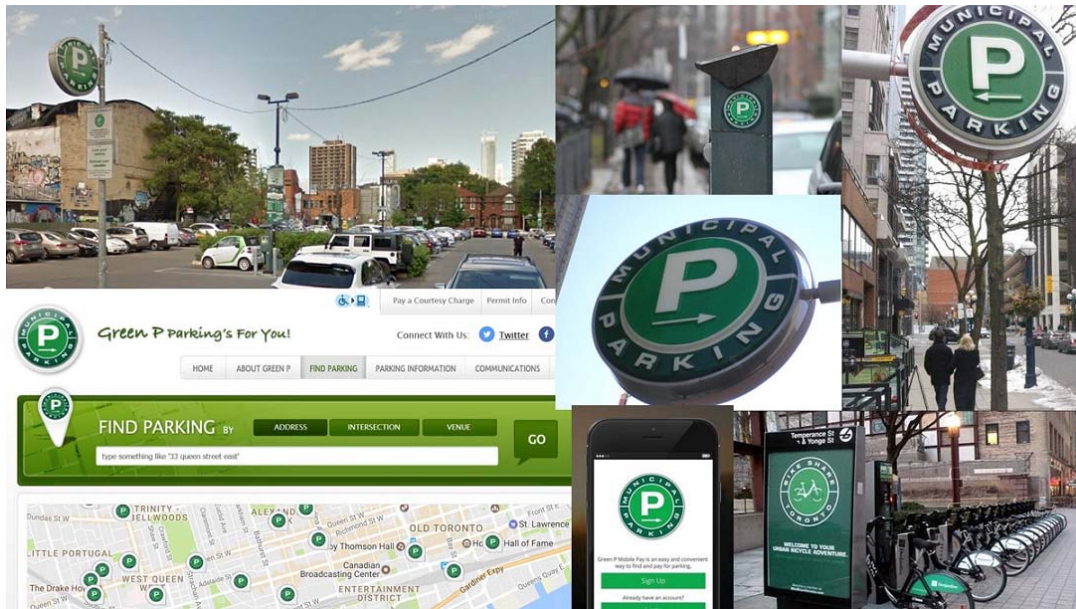
### **Terminate the Pre-Paid Punch Card Program**

The current punch card program is not popular among system users. Based on reports provided for the program, in 2015, approximately 25 punch cards were sold. Additionally, the current format and production method used for the punch cards makes them very easy to counterfeit. Also, there is not an effective procedure to audit the usage of the punch cards. Finally, the 25% price discount for the cards is excessive and, if the City adopts a graduated hourly rate scale as recommended, the current one free hour per punch would have to be abandoned.

### **Adopt a Uniform Identification Signage Scheme for all City Parking Facilities**

The existence and locations of the City's parking garages and lots need to be made more pronounced. Adopting a uniform signage design scheme for all City parking assets will not only help to identify public parking locations, but also improve the visual appearance of the properties and reinforce a sense of order and organization to the City's parking system. It is also important for the signage scheme to be centered on the use of the universally recognized "P" sign for parking, with illuminated signs mounted to the façades of the parking structures in order to quickly catch the eye of passing drivers.

As an example, the following images depict the Toronto Parking Authority's signage scheme and slogan, *"Park at the Green P"*, with the same signage scheme colors and style replicated on the Authority's website, printed material and on mobile phone apps.



### **Devise and Implement Plans to Convert the Garages to Fully Automated Facilities**

The City has chosen to adopt the practice of leaving the garage unattended after 6:30pm on weekdays and the gates open on weekends to avoid incurring excessive overtime labor costs. Although this approach to operations has helped to contain operating expenditures, it also has limited the level of service and revenue generating potential of the facilities. If evening and weekend activity in downtown continues to grow and thrive as the City hopes, it may benefit the City to change this current plan of operations for the garages.

Therefore, it is recommended that the City devise and implement a plan to convert the parking garages to fully automated facilities that can be remotely managed and monitored from a single central command center. The fully automated access and revenue control system envisioned for the City's three parking garages will serve both permit holders and transient parkers. Permit holders will use assigned access credentials or pass cards to enter and exit the facilities and transient parkers will be issued a time encoded machine-readable ticket at the primary entrance to each facility, which will be used to calculate the parker's duration of stay and parking charge on exit. Transient parking fees will be payable at ground level Pay-on-Foot (POF) stations or at Pay-in-Lane (PIL) exit terminals. All entry, exit and free standing POF machines will be equipped with audio/visual 2-way intercom displays to provide remote customer communications and assistance from the central operation center.

Oftentimes an operations conversion of this nature simply requires the acquisition and installation of advanced technologies to facilitate self-park access control and revenue collection. However, the designs of the City's parking garages do not make this conversion simple. In order for a facility to function properly when fully automated, the facility needs to have at least two primary vehicular exit lanes to accommodate

peak period traffic flow and to allow all exiting traffic to continue through one exit lane, if and whenever, the revenue collection equipment in the other exit becomes temporarily inoperable. Additionally, for user safety and the protection of property, it is important for all pedestrian and vehicular access points to each of the garages to be properly secured and capable of being remotely controlled.

Of the three City garages, only the Philadelphia Street Garage has two exit lanes and is able to be converted to an automated facility by simply installing new parking access and revenue control equipment. After assessing the existing entry/exit lane configurations at the Market Street and the King Street garages, DESMAN concluded that it would also be feasible from a structural and operational standpoint to add a second exit lane to both facilities and convert them to automated operations.

**Exhibits 21 and 22** that follow are conceptual depictions of the physical modifications that will need to be undertaken to create two primary exit lanes at the Market Street and King Street Garage.

- **Conversion of the Market Street Garage to a Self-Park Automated Facility** – A considerable amount of work will be required to convert the Market Street Garage to an automated facility. In order to establish two exits lanes, the existing tenant space and parking office areas would need to be partially demolished and reconfigured. In addition, two of the existing ramps would need to be demolished and one new ramps would need to be constructed as depicted by Exhibit 21.

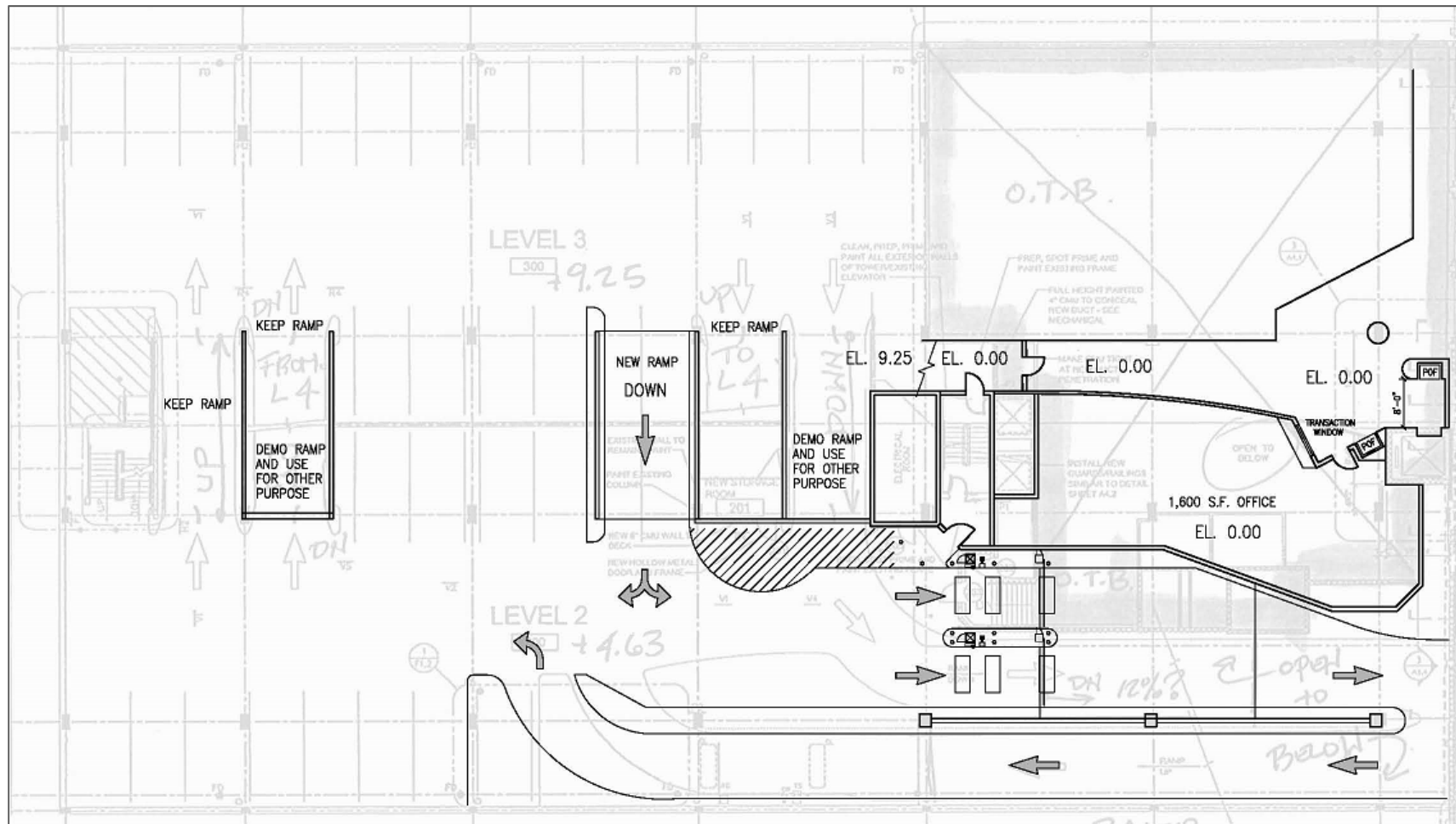
The demolition of the first down ramp between levels 2 and 3 closest to the office and tenant space is necessary to gain sufficient area to create two side-by-side interior exit lanes where gates and parking equipment would be installed. The demolition of the second down ramp at the rear of the garage between levels 1 and 2 is necessary to partition lower levels 1, B1, B2, and B3 from the upper levels 2 through 11. Where these ramps are removed, the open area would need to be filled with a flat concrete slab patch. The partitioning of the lower levels of the garage from the upper levels is recommended to eliminate a recurring problem that is caused by non-permit customers entering the lowers levels of the garage only to find that the only way out of the area is to drive up a down ramp in order get back to level 2 and exit onto Market Street from the garage. To complete this partitioning of the garage, the existing B1 level exit only lane to E. Clark Avenue at the rear of the garage would have to be reconfigured to allow all permit holders assigned to the lower levels of the garage to exit and enter the facility at that location. Lastly, in order to construct the two side-by-side exit lanes on Level 2, the existing placement of the non-load bearing walls that enclose of the ground level tenant and parking office space would need to be altered and part of the existing recessed office floor area would need to be filled in order to widen the existing drive lane and match its slope to Market Street.

The placement of the entry gate and equipment would not need to be altered, but all the demolition and reconstruction of ramps and tenant/office space, the construction of concrete lane separation islands, and the data and communications conduit and wiring for the Level 2 exit

lanes and the Level B1 entry/exit would all need to be completed before the equipment could be installed and activated. The Pay-on-Foot Pay stations would be installed near the elevator at the pedestrian entrance to the garage from Market Street.



**Exhibit 21 Proposed Retrofit Plan to Convert the Market Street Parking Garage to a Self-Park Automated Operation**

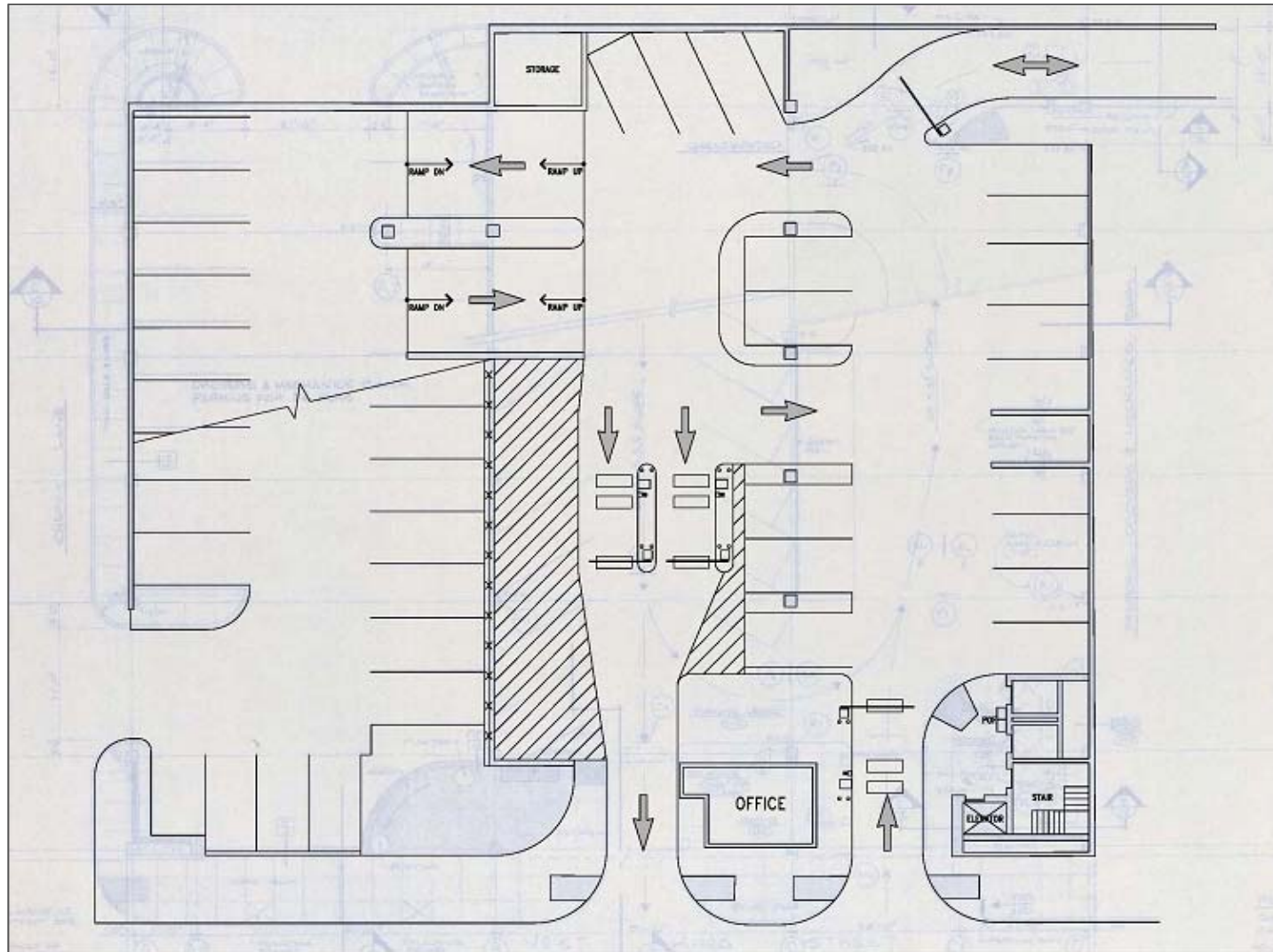


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- **Conversion of the King Street Garage to an Automated Facility** - At the King Street Garage, new and modified concrete islands and data and communications conduit and wiring would first need to be added to the interior inbound and outbound drive aisles at the ground level of the facility. This work is needed to shift the placement of the entry access gate and equipment farther into the interior of the garage and to create two side-by-side exit lanes to accommodate the repositioning of the barrier gates and other transaction processing equipment components. Vehicles that pass through these two exit gates would merge into one lane of traffic to pass through the single exit lane opening at the edge of the building façade line. Pay-on-Foot pay stations would need to be installed near the ground-level elevator lobby area so customers leaving the facility would be able to pay for their parking charge before returning to their vehicle.
- **Establish a Central Operations Center to Monitor and Control the Garages** – A centralized operations center would be needed to remotely monitor and provide customer support at all three automated garages. The operations center would need to be equipped with a 2-way audio and visual communication terminal and display monitors to oversee parking activity, interact with customers needing assistance and to remotely control the key parking equipment components. The center could be located in the unleased tenant space inside the Market Street Garage or in the ground-level office space at the Philadelphia Street Garage. However, establishing the central operations center at the Philadelphia Street Garage would be most advantageous because the garage office could be enlarged without encroaching into the parking area. In addition, the City's parking equipment maintenance shop is located in this facility and the garage tends to be most utilized facility during weekday evenings and on weekends.

One staff person would need to be deployed in the central operations center at all times to provide customer service assistance, monitor facility utilization and, if necessary, to remotely operate the parking equipment in all the garages. Because all parking equipment will occasionally breakdown and need to be regularly serviced, it would be important to have a properly trained service technician on staff. Also, staffing the operations center on a 24/7 basis can be avoided by installing ground level security fencing and equipment-controlled pedestrian doors and automated high speed overhead vehicular doors to lockdown and completely secure the garages during overnight hours.

**Exhibit 22 Proposed Retrofit Plan to Convert the King Street Parking Garage to a Self-Park Automated Operation**



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**Acquire and Install New Access and Revenue Control Equipment for the Garages**

Aside from the need to complete the previously discussed physical alterations to the Market Street and King Street garage, in order to automate the facilities, the City would need to acquire an entirely new Parking Access and Revenue Control (PARC) system. The rationale behind this recommendation is two-fold: first, the existing system has proven to be unreliable and limited in its capabilities to effectively meet the operating demands of the facilities and, second, the facilities were designed with the expectation that attendant cashiers would process all transient parking transactions which the City has found to be onerous and costly. Whether or not the City decides to embrace the recommendation to have all three garages converted to self-parking automated operations, the poor performance and limitations of the existing PARC system will still need to be addressed. The scope and nature of the plans to upgrade the existing PARC system will be largely driven by whether or not the City chooses to continue staffing the garages with attendant cashiers.

**Exhibit 27** is a matrix which identifies the key PARC components that will comprise an upgraded system for managing the garages. Most component upgrades will be required regardless of whether the operations will be an attendant cashiered operation or an automated operation, but those components that would be exclusive to only one or the other type of operation are highlighted as such. The same exhibit also highlights the physical modifications to each garage that only will be required if a self-park operation is to be implemented and it identifies where every key component will need to be installed.

- **PARC System Improvements for Attendant Cashier Operations:** A decision to continue relying on attendant cashiers to operate the garages would mean that a newer, more advanced PARC system which operates the same basic way as the existing system would be all that is required. New Fee Terminals and Ticket Dispensers would need to be installed in each garage and new Facility Management (FMS) Software to manage the entire system would be needed. The software should have latest technological advances including a more robust capability to manage and process validations, particularly related to the juror parking, hotel patronage and theatre related events. Additionally, special security components would also be required to enable garages to be closed off and secured whenever the facilities cannot be staffed by cashiers. These components include Pedestrian Access Doors programmed to be unlocked and opened with proximity cards and machine readable parking tickets and High Speed Overhead Vehicular Access Doors with radio frequency identification (RFID) transponders for automatic vehicle identification (AVI) control for permit parkers.
- **PARC System Improvements for Automated Operations:** A decision to convert the parking garages to self-park automated facilities would mean that all the previously discussed physical changes would have to be made at both the King Street and Market Street garages, along with the creation of a Central Operations Center on the ground level of either the Philadelphia Street Garage or the Market Street Garage.

Aside from these physical retrofit changes to the garages, a pair of Pay-on-Foot (POF) stations would be installed near the ground level elevator lobby area. All transient parkers would have to pay their parking charge at one of these machines before returning to their vehicle. Once there parking charge is processed, the customers would have a short, but reasonable, grace period to return to their car and exit the facilities. In-lane Exit Verifier/Credit Card Only Pay-in-Lane (PIL) Stations would need to be installed to either verify that payment has been received or to allow transient parkers to pay for their parking fees during the exiting process. All the lane equipment would need to be equipped with Proximity Card Readers and 2-Way Audio/Visual Intercoms that would have direct real-time links to an Audio/Visual Intercom Communication Terminal in the Central Operations Center.

**Table 27 Installation Matrix for Key PARC System Equipment for the City Parking Garages**

YORK PARKING GARAGES PRELIMINARY PARCS EQUIPMENT INSTALLATION MATRIX	Barrier Gate System	Directional Loops/ Counters	Ticket Dispenser	Proximity Access Card Reader	Cashiering Fee Terminal	Pay-on-Foot Machines (POF) Cash/Credit Card	Exit Verifier/ PIL Exit Station Credit Card	FMS System Software/ Computer Terminal	High Speed Overhead Vehicular Doors/ AVI Readers	Pedestrian Access Doors Reader/ Ticket Lock Control	Audio/ Visual VoIP Intercom Terminal
<b>PHILADELPHIA STREET GARAGE</b>											
1. Entry Lane #1 (from W. Philadelphia Street)	●	●	●	●					●		
2. Exit Lane #2 (to W. Philadelphia Street)	●	●		●	●		●		●		
3. Exit Lane #3 (to W. Philadelphia Street)	●	●		●			●				
4. Exit Lane #4 (to W. Gas Street)	●	●		●			●		●		
W. Philadelphia Street Ground Level Pedestrian Access Door										●	
Second Level Pedestrian Access Door to 110 N. George Bldg.										●	
Ground Level Elevator Lobby						● ●					
Central Operation Center NEW								●			●
<b>KING STREET GARAGE</b>											
5. Entry Lane #1 (from W. King Street)	●	●	●	●					●		
6. Exit Lane #2 (to W. King Street)	●	●		●	●		●		●		
7. Exit Lane #3 (to W. King Street) NEW	●	●		●			●				
8. Reversible Entry Lane #4 (at 96 S. George Street Access)	●	●	●	●					●		
9. Reversible Exit Lane #5 (from Garage to 96 S. George Street Access)	●	●		●			●				
W. King Street Ground Level Pedestrian Access Door										●	
Second Level Pedestrian Access Door to 96 S. George Bldg.										●	
Ground Level Elevator Lobby						● ●					
<b>MARKET STREET GARAGE</b>											
10. Entry Lane #1 (from E. Market Street)	●	●	●	●					●		
11. Exit Lane #2 (to E. Market Street)	●	●		●	●		●		●		
12. Exit Lane #3 (to E. Market Street) NEW	●	●		●			●				
13. Entry Lane #4 (from E. Clark Street) NEW	●	●		●					●		
14. Exit Lane #5 (to E. Clark Street)	●	●		●					●		
W. Market Street Ground Level Pedestrian Access Door										●	
E. Clark Street 1B Level Pedestrian Door										●	
Ground Level Elevator Lobby						● ●					

Garage Retrofit Modifications for Self-Park Operations

Cashier Operations Components

Self Park Operations Components

## Recommended Organizational Improvements for the General Authority

### Create Single Point of Accountability for the Parking System

The present organizational structure for the operations and oversight of the City Parking System is fragmented and unfocused. There is no one who has overall day-to-day accountability for parking, despite



the fact that the system of on- and off-street parking assets and programs, together with the parking enforcement program, generated in excess of \$3.1 million in revenue for the City in 2015. The scale and revenue of the Parking System and enforcement program warrants the establishment of a standalone management unit that can assume accountability for guiding all aspects of the System's daily operations, physical and fiscal planning, and program and policy guidance. The appointment or hiring of a business manager for the Parking System is needed.

Ideally, a seasoned professional possessing a minimum five (5) years of public or private sector parking operations experience should be chosen to for the position. Additionally, it would be highly desirable for the person chosen for the position to possess professional parking manager certification credentials from either the National Parking Association (NPA) or the International Parking Institute (IPI). If the candidate selected for the position does not possess such credentials, the City should require and provide funding for the person chosen for the position to obtain such credentials. A person with this experience and skill set will command a salary ranging from \$70,000 to \$85,000 at the high end.

The manager should also, at a minimum, be provided with full-time clerical and accounting support.

Based on DESMAN's exposure and understanding of the City of York's organizational structure, it is our recommendation that this Parking System Manager report directly to the Business Administration Director and function as a full-time administrative person for the General Authority on matters concerning parking. The parking enforcement program, which is currently lodged in the Police Department, should be placed under the purview of the Parking System Manager.

Through the appointment of a properly-trained, outcome-driven Parking Manager, the GA and the City would be establishing a single and centralized point of accountability for the operations and performance of its million-dollar Parking System.

*The following is a list of duties and responsibilities that would typically be assigned to a Parking Program Manager:*

- *Re-write of program operating procedures*
- *Train, deploy, supervise and evaluate parking staff*
- *Track, audit and forecast system revenues and expenditures*
- *Ensure that enforcement conducted is consistently and fairly*
- *Ensure facilities are keep clean, safe and well maintained*
- *Facilitate proactive and responsive marketing, sales and public information initiatives*
- *Coordinate parking services to support local special events and programs*
- *Troubleshoot day-to-day problems quickly and effectively*
- *Research and promote the implementation of "Best Industry Practices" for the program*
- *Serve as the "parking expert" as local City Planning and Economic Development strategies and*

*plans are being studied*

- *Monitor significant variances in the availability of supply and customer demand to ensure that assets are optimally serving the community*
- *Develop process and format for producing an annual report for the program*
- *Develop standards for good customer service and accommodations*
- *Create a City Parking website*

## Parking System Strategic Plan Budget Estimates

The section of the report contains preliminary estimates of the costs associated with the implementation of the significant changes that have been recommended for the Parking System.

### *Parking Meter System Project Budgets*

#### **Installation of Multi-Space On-Street Parking Pay Stations**

The recommendation to install 47 multi-space parking pay stations along the busiest downtown streets is estimated to cost approximately \$564,000. This sum is based on the assumption that each unit will cost approximately \$12,000 to acquire and install. Once the units are installed, it is estimated that on-going annual operating costs per unit for consumables, wireless communication, and warranty expenses will be approximately \$1,320 per year. The table below shows that, if the installation cost of pay stations are amortized over a seven-year period at an interest rate of 5%, the multi-space parking meter system project could cost the City approximately \$159,000 per year.

**Table 28 Estimate of Probable Project Costs to Install and Maintain Multi-Space Meter Pay Stations**

Multi-Space Parking Pay Stations	Initial Year	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Years 1 - 7	Year 8
Per Unit Cost including Installation	\$12,000.00	-----	-----	-----	-----	-----	-----	\$12,000	-----
<b>Total Project Cost for 47 Pay Stations</b>	<b>\$564,000</b>	-----	-----	-----	-----	-----	-----	<b>\$564,000</b>	-----
<b>Project Cost Amortization @ 5% for 7yrs.</b>	<b>\$97,000</b>	<b>\$97,000</b>	<b>\$97,000</b>	<b>\$97,000</b>	<b>\$97,000</b>	<b>\$97,000</b>	<b>\$97,000</b>	<b>\$679,000</b>	
Annual Consumables Per Unit	\$300	\$300	\$300	\$300	\$300	\$300	\$300	\$2,100	\$200
Annual Back Office/ Communication Per Unit	\$540	\$540	\$540	\$540	\$540	\$540	\$540	\$3,780	\$540
Warranty - Parts Only Per Unit	-----	\$480	\$480	\$480	\$480	\$480	\$480	\$2,880	\$480
Annual Operating Cost Per Unit	\$840	\$1,320	\$1,320	\$1,320	\$1,320	\$1,320	\$1,320	\$8,760	\$1,220
<b>Total Annual System Operating Cost</b>	<b>\$39,480</b>	<b>\$62,040</b>	<b>\$62,040</b>	<b>\$62,040</b>	<b>\$62,040</b>	<b>\$62,040</b>	<b>\$62,040</b>	<b>\$411,720</b>	<b>\$57,340</b>
<b>TOTAL SYSTEM UPGRADE COSTS</b>	<b>\$136,480</b>	<b>\$159,040</b>	<b>\$159,040</b>	<b>\$159,040</b>	<b>\$159,040</b>	<b>\$159,040</b>	<b>\$159,040</b>	<b>\$1,090,720</b>	<b>\$57,340</b>

#### **Retrofit and Relocate the IPS Smart Parking Meters**

The recommendation to retrofit the City's 215 IPS smart meters with pole-mounted radar sensors and relocate them to the proposed Tier 2 rate zone areas of downtown is estimated to initially cost the City approximately \$76,325. However, once the meters are relocated, the City's on-going operating costs will continue to cost approximately \$112,000 per year.

**Table 29 Estimate of Probable Project Costs to Retrofit and Relocate the IPS Meter Inventory**

Retrofit and Relocate IPS Smart Meters	Unit Cost	2017	2018	2019	2020	2021	2022	4th - 10th Yr.
<b>Total Meter Unit Count</b>		<b>215</b>	<b>215</b>	<b>215</b>	<b>215</b>	<b>215</b>	<b>215</b>	<b>215</b>
<b>Mfg. Repairs of 5% of Meter Inventory Annually</b>		<b>11</b>	<b>11</b>	<b>11</b>	<b>11</b>	<b>11</b>	<b>11</b>	<b>65</b>
IPS Meter Unit Relocation Project Costs	\$50.00	\$10,750						\$10,750
IPS Pole Mount Radar Sensor Cost	\$295.00	\$63,425						\$63,425
IPS Radar Sensor Installation Cost	\$10.00	\$2,150						\$2,150
<b>Total Project Cost for 215 IPS Meters</b>	<b>\$355.00</b>	<b>\$76,325</b>						<b>\$76,325</b>
Manufacturer's Fixed Fee Repair (Per Unit)	\$80.00	\$860	\$860	\$860	\$860	\$860	\$860	\$5,160
Meter Battery Replacement (every 2 years)	\$30.00		\$6,450		\$6,450		\$6,450	\$19,350
Mgmt System Fee (\$2.00 Per Meter)	\$430.00	\$92,450	\$92,450	\$92,450	\$92,450	\$92,450	\$92,450	\$554,700
Secure Gateway Fee (\$3.75 Per Meter Per Mo.)	\$45.00	\$9,675	\$9,675	\$9,675	\$9,675	\$9,675	\$9,675	\$58,050
Pole Mounted Sensor Fee (\$3.50 Per Sensor Per Mo.)	\$42.00	\$9,030	\$9,030	\$9,030	\$9,030	\$9,030	\$9,030	\$54,180
<b>Total Annual System Operating Cost</b>		<b>\$112,015.00</b>	<b>\$118,465.00</b>	<b>\$112,015.00</b>	<b>\$118,465.00</b>	<b>\$112,015.00</b>	<b>\$118,465.00</b>	<b>\$691,440</b>
<b>IPS System Cost</b>		<b>\$264,665.00</b>	<b>\$118,465.00</b>	<b>\$112,015.00</b>	<b>\$118,465.00</b>	<b>\$112,015.00</b>	<b>\$118,465.00</b>	<b>\$844,090</b>

### *Mobile ALPR Enforcement Program Budget*

In order to enact Mobile Automated License Plate Recognition (ALPR) for parking enforcement, the City could either out-source its meter system enforcement to an entity that would acquire and operate the necessary equipment or the City could acquire the necessary vehicles, equipment and software and train its own enforcement personnel for this task. While out-sourcing the operations would likely speed the enactment of the program and relieve the City of much of the upfront cost, the City would pay higher ongoing service fees and miss the opportunity to successfully establish the enforcement capability in-house.

To start an in-house ALPR enforcement program, the City would have to buy or lease one or more patrol vehicles and acquire the ALPR cameras and accompanying servers, computer terminals and software. The per unit startup cost, excluding the cost of a patrol vehicle, will range between \$40,000 and \$50,000. Once the system setup is complete, there will be on-going licensing, cloud storage, and data services fees that will be based, in part, on the program's scope and the City's annual volume of ticket issuance.

Given the rapid, nation-wide expansion in the use of ALPR for enforcement, the City would be wise to first invite one or two industry leaders in this area to make an informational presentation to the General Authority. The presentation should cover program out-sourcing as well as in-house setup and system procurement options. The eventual decision regarding the use of ALPR for enforcement should take into account the heightened productivity, streamlined administration, labor savings, and the general public's improved compliance with parking regulations that have been realized from the implementation of these systems in other municipalities.

### *Parking Garage Project Budget*

#### **Replace and Upgrade the PARC System at the Parking Garages**

**Tables 30 and 31** provide two different budget estimates to upgrade the PARC system in the three downtown parking garages. Each budget lists the unit count, installation location, unit price and overall

project costs estimate for the fundamental PARC system components that would be required to enhance the operational capabilities of the garages. The first PARCS project budget estimate (Table 30) is premised on the concepts of converting the three parking garages to fully automated facilities where monthly, transient and even special event customers would be able to enter and exit the garages and pay their parking charges without interacting with attendant cashiers.

The second PARCS project budget estimate (Table 31) is premised on the concepts that attendant cashiers will continue to be deployed at the three parking garages to process parking customer transactions. These project budget estimates can be further refined after the City decides which approach to operating the garages is preferable.

### **Other Construction and Retrofit Costs to Fully Automate the Parking Garages**

Before two of the parking garages can be successfully converted to fully automated self-park/self-pay operations, a number of significant physical changes will have to be made at each garage. Exhibits 21 and 22, presented earlier in this report, illustrate these proposed changes to the ground levels of the King Street and Market Street garages. While only a minor amount of concrete work would be required at the King Street Garage, the amount of concrete demolition and reconstruction at the Market Street Garage would be significant. Additionally, the King Street Garage would require security screening or fencing to restrict pedestrian access, particularly during late night hours, as well as auto-lock doors equipped with special credential readers. While both the Philadelphia Street Garage and the Market Street Garage already have appropriate security screening, both garage would require the same auto-lock doors. Finally, the same type of pedestrian doors would need to be installed on the second level of both the King Street Garage and the Philadelphia Street Garage to control ingress and egress from the adjoining office buildings.

The overhead roll-down vehicular entry/exit doors that exist at the Philadelphia Street Garage and the Market Street Garage ideally should be replaced with high-speed doors that also would need to be controlled by special credential readers. The same high-speed doors would need to be added to the King Street Garage. These doors are needed to allow monthly customers and hotel guests with overnight parking privileges to rapidly enter and exit the garages during the late night and early morning hours when the facilities are closed to the general public.

The acquisition and installation costs for these pedestrian and vehicular access doors (with accompanying credential readers) are included with the PARCS equipment cost estimates listed in Tables 30 and 31. However, the cost of the concrete demolition and reconstruction work required at the King Street Garage and the Market Street Garage would be in addition to the PARCS equipment acquisition and installation costs. The total construction costs (including 8% for architectural and engineering design, 10% for general conditions and a 20% contingency) for the King Street Garage and Market Street Garage are estimated to be approximately \$18,258 and \$248,769, respectively.

**Table 30 Cost Estimate for PARCS Equipment to Fully Automate Operations at the Parking Garages**

# of Units		Estimated Unit Price	Entry Lane 1 (From Phila)	Exit Lane 2 (to Phila)	Exit Lane 3 (to Phila)	Exit Lane 4 (to Gas)	Central Operations Center	Elevator Lobby	Pedestrian Access Door	Line Item Cost
<b>PHILADELPHIA STREET GARAGE</b>										
3	Reuse Existing Barrier Gates with Vehicle Detector	\$0	•	•	•	•				\$0
3	Reuse Existing Access Card Readers	\$0	•	•	•	•				\$0
2	Combination Access Card/Ticket Reader Controller w/ Intercom	\$2,000							•	\$4,000
2	Ticket Dispensers with Push to Talk Audio/Visual Intercom	\$15,000	•							\$30,000
3	Pay-in-Lane Stations with with Push to Talk Audio/Visual Intercom (Credit Cards Only)	\$18,000		•	•	•				\$54,000
1	Pay-on-Foot Stations with Intercom (Credit Card/Bills/Coins)	\$45,000						•		\$45,000
1	Pay-on-Foot Stations with Intercom (Credit Card Only)	\$20,000						•		\$20,000
3	High Speed Overhead Vehicular Access Door	\$5,000	•	•		•				\$15,000
3	RFID Transponder Controller for High Speed Vehicular Door	\$1,500	•	•		•				\$4,500
1	Variable Message Entry Lane Signs (Closed/Passholders Only)	\$1,500	•							\$1,500
<b>PHILADELPHIA STREET GARAGE Central Operations Center</b>										
1	Base Card Access Software Package	\$5,280					•			\$5,280
1	Base Revenue Management Software Package	\$9,600					•			\$9,600
1	Credit Card Processing Software	\$6,000					•			\$6,000
1	Base Accounts Receivable Software Package	\$7,800					•			\$7,800
4	I/O Board for every 2 lanes	\$3,500					•			\$14,000
1	Base Counting & Monitoring Software Package	\$4,680					•			\$4,680
1	CCTV System Monitor	\$3,000					•			\$3,000
2	Computer with Monitor	\$800					•			\$1,600
1	Computer Printer	\$1,000					•			\$1,000
1	Audio/Visual Intercom System Terminal	\$5,000					•			\$5,000
# of Units		Estimated Unit Price	Entry Lane 1 (from King)	Exit Lane 2 (to King)	Exit Lane 3 (to King)	Entry Lane 4 (from George)	Exit Lane 5 (to George)	Elevator Lobby	Pedestrian Access Door	Line Item Cost
<b>KING STREET GARAGE</b>										
3	Reuse Existing Barrier Gates with Vehicle Detector	\$0	•	•		•	•			\$0
1	New Barrier Gates with Vehicle Detector	\$4,000			•					\$4,000
4	Reuse Existing Access Card Readers	\$0	•	•		•	•			\$0
1	New Access Card Readers	\$2,500			•					\$2,500
2	Combination Access Card/Ticket Reader Controller w/ Intercom	\$2,000							•	\$4,000
2	Ticket Dispensers with Push to Talk Audio/Visual Intercom	\$15,000	•			•				\$30,000
2	Pay-in-Lane Stations with with Push to Talk Audio/Visual Intercom (Credit Cards Only)	\$18,000		•	•					\$36,000
1	Pay-on-Foot Stations with Intercom (Credit Card/Bills/Coins)	\$45,000						•		\$45,000
1	Pay-on-Foot Stations with Intercom (Credit Card Only)	\$20,000						•		\$20,000
3	High Speed Overhead Vehicular Access Door	\$5,000	•	•		•				\$15,000
4	RFID Transponder Controller for High Speed Vehicular Door	\$1,500	•	•		•	•			\$6,000
2	Variable Message Entry Lane Signs (Closed/Passholders Only)	\$1,500	•			•				\$3,000
# of Units		Estimated Unit Price	Entry Lane 1 (from Market)	Exit Lane 3 (to Market)	Exit Lane 2 (to Market)	Entry Lane 4 (from Clark)	Exit Lane 5 (to Clark)	Elevator Lobby	Pedestrian Access Door	Line Item Cost
<b>MARKET STREET GARAGE</b>										
3	Reuse Existing Barrier Gates with Vehicle Detector	\$0	•	•			•			\$0
2	New Barrier Gates with Vehicle Detector	\$4,000			•	•				\$8,000
3	Reuse Existing Access Card Readers	\$0	•	•			•			\$0
2	New Access Card Readers	\$2,500			•	•				\$5,000
1	Combination Access Card/Ticket Reader Controller w/ Intercom	\$2,000							•	\$2,000
1	Ticket Dispensers with Push to Talk Audio/Visual Intercom	\$15,000	•							\$15,000
2	Pay-in-Lane Stations with with Push to Talk Audio/Visual Intercom (Credit Cards Only)	\$18,000		•	•					\$36,000
1	Pay-on-Foot Stations with Intercom (Credit Card/Bills/Coins)	\$45,000						•		\$45,000
1	Pay-on-Foot Stations with Intercom (Credit Card Only)	\$20,000						•		\$20,000
4	High Speed Overhead Vehicular Access Door	\$5,000	•	•		•	•			\$20,000
4	RFID Transponder Controller for High Speed Vehicular Door	\$1,500	•	•		•	•			\$6,000
1	Variable Message Entry Lane Signs (Closed/Passholders/Hotel Guests Only)	\$1,500	•							\$1,500
<b>ACQUISITION SUBTOTAL</b>										<b>\$555,960</b>
Freight and Taxes @ 8%										\$44,477
Electrical Work @ 8%										\$44,477
Installation @ 10%										\$55,596
Construction (To be Determined)										TBD
<b>ESTIMATED PARCS SYSTEM PROJECT COST TOTAL</b>										<b>\$700,510</b>



**Table 31 Cost Estimate for PARCS Equipment to Upgrade Attendant Cashier Operations at the Parking Garages**

# of Units		Estimated Unit Price	Entry Lane 1 (From Phila)	Exit Lane 2 (to Phila)	Exit Lane 3 (to Phila)	Exit Lane 4 (to Gas)	Pedestrian Access Door	Line Item Cost
<b>PHILADELPHIA STREET GARAGE</b>								
4	Reuse Existing Barrier Gates with Vehicle Detector	\$0	•	•	•	•		\$0
4	Reuse Existing Access Card Readers	\$0	•	•	•	•		\$0
2	Access Card w/ Intercom	\$2,000					•	\$4,000
2	Ticket Dispensers with Push to Talk Audio/Visual Intercom	\$15,000	•					\$30,000
2	Pay-in-Lane Stations with with Push to Talk Audio/Visual Intercom (Credit Cards Only)	\$18,000			•	•		\$36,000
1	Cashiering Terminal	\$45,000		•				\$45,000
3	High Speed Overhead Vehicular Access Door	\$8,000	•	•		•		\$24,000
3	RFID Transponder Controller for High Speed Vehicular Door	\$1,500	•	•		•		\$4,500
1	Variable Message Entry Lane Signs (Closed/Passholders Only)	\$1,500	•					\$1,500
# of Units		Estimated Unit Price	Entry Lane 1 (from King)	Exit Lane 2 (to King)	Entry Lane 3 (from George)	Exit Lane 4 (to George)	Pedestrian Access Door	Line Item Cost
<b>KING STREET GARAGE</b>								
4	Reuse Existing Barrier Gates with Vehicle Detector	\$0	•	•	•	•		\$0
4	Reuse Existing Access Card Readers	\$0	•	•	•	•		\$0
2	Access Card w/ Intercom	\$2,000					•	\$4,000
2	Ticket Dispensers with Push to Talk Audio/Visual Intercom	\$15,000	•		•			\$30,000
1	Cashiering Terminal	\$45,000		•				\$45,000
3	High Speed Overhead Vehicular Access Door	\$8,000	•	•	•			\$24,000
4	RFID Transponder Controller for High Speed Vehicular Door	\$1,500	•	•	•	•		\$6,000
2	Variable Message Entry Lane Signs (Closed/Passholders Only)	\$1,500	•		•			\$3,000
# of Units		Estimated Unit Price	Entry Lane 1 (from Market)	Exit Lane 2 (to Market)	Entry Lane 4 (from Clark)	Exit Lane 5 (to Clark)	Pedestrian Access Door	Line Item Cost
<b>MARKET STREET GARAGE</b>								
3	Reuse Existing Barrier Gates with Vehicle Detector	\$0	•	•		•		\$0
2	New Barrier Gates with Vehicle Detector	\$4,000			•			\$8,000
3	Reuse Existing Access Card Readers	\$0	•	•		•		\$0
2	Access Card w/ Intercom	\$2,500			•		•	\$5,000
1	Combination Access Card/Ticket Reader Controller w/ Intercom	\$2,000		•				\$2,000
1	Cashiering Terminal	\$45,000		•				\$45,000
1	Ticket Dispensers with Push to Talk Audio/Visual Intercom	\$15,000	•					\$15,000
4	High Speed Overhead Vehicular Access Door	\$8,000	•	•	•	•		\$32,000
4	RFID Transponder Controller for High Speed Vehicular Door	\$1,500	•	•	•	•		\$6,000
1	Variable Message Entry Lane Signs (Closed/Passholders/Hotel Guests Only)	\$1,500	•					\$1,500
<b>ACQUISITION SUBTOTAL</b>								<b>\$371,500</b>
Freight and Taxes @ 8%								\$29,720
Electrical Work @ 8%								\$29,720
Installation @ 10%								\$37,150
Construction (To be Determined)								TBD
<b>ESTIMATED PARCS SYSTEM PROJECT COST TOTAL</b>								<b>\$468,090</b>

## Parking System Strategic Plan Implementation Phasing

Although numerous recommendations have been presented in this report, the City first needs to determine if it is in full agreement with the recommendations and to carefully examine its financial and managerial capacity to implement the recommendations. Many of the recommendations require more in depth review, analysis and planning before implementation steps can be appropriately undertaken. Additionally, many of the recommendations need to be implemented simultaneously, while others will require revisions to current policies and practices. Nearly all of the recommendations will also require an organized product investigation and procurement process, program reorganization, design and engineering, and advanced budget funding based on implementation sequencing. Finally, as the recommendations are implemented, it will be important to allow time for the impacts of these changes

to be felt. Once the extent of the impact of each recommendation is known, it may be necessary to make subsequent course corrections.

With these challenges in mind, it is DESMAN's belief that the City and General Authority should approach the implementation of the strategic plan recommendations contained in this report over the course of a three-year period. What follows is a preliminary timetable for implementing the strategic plan recommendations contained in this report, based on that schedule. The first-year initiatives involve several parking system organizational and operational changes and project initiatives aimed at improving and modernizing the on-street parking system. The second-year focuses on initiatives aimed at improving the quality, operation and management of selected off-street parking lots and the Philadelphia and King Street garages. The third-year initiatives are focused on conversion of the Market Street Garage to an automated facility.

### *Phase I (Year 1 Action Plan)*

#### **Organizational Initiatives**

1. **Create a Parking System Administrator position** and appoint or hire a qualified person to fill the position. The person in this position should have ample authority to garner the necessary cooperation and support from City Department heads (i.e. Police, Economic Development, City Planning, Finance, etc.). Additionally, the Administrator needs to become an active member of both the International Parking Institute (IPI) and the Pennsylvania Parking Association (PPA), in order to gain knowledge and technical know-how from industry leaders and municipal parking peer entities. This Administrator will need to assume full accountability for the daily operations of the system and for the advancement of new policies and programs.
2. **Establish a Parking Task Force to serve and support the Parking System Administrator's efforts** to implement the strategic plan agenda.
3. **Transfer Downtown Parking Enforcement to the General Authority** in order to gain better control of staff deployment and productivity.

#### **Operational Initiatives**

1. **Rewrite Garage Attendant Cashiering policies and procedures and retrain personnel.**
2. **Begin documenting meter system revenue collections by proposed rate zone** in order to have actual data against which future system performance can be measured.
3. **Rewrite policies governing the issuance of on-street meter parking permits.**
4. **Begin removal of underutilized parking meters** on West and East Market Street.
5. **Change Meter Parking Rates and Parking Time Limit Zones** in order to better balance short- and long-term on-street parking demand.

6. **Lower the rates for parking for 3 hours or less hours in the City Garages** in order to expand the usage of the City's garages.

#### **On-Street Parking Project Initiatives**

1. **Invite Parking Equipment Vendors to educate the Parking Taskforce on leading technologies** for pay-by-plate parking and mobile enforcement, access and revenue control systems, multi-space meter kiosks, LED lighting systems, etc.
2. **Refine implementation budgets and Plans for Phase I On-Street Parking Project Initiatives** (*i.e. Mobile Enforcement, Pay-by-Phone, Multi-Space Meters, Parking Rate Zone Signage, IPS Sensors, etc.*).
3. **Initiate On-Street Parking System Procurement Process** for the award of contracts for:
  - a) Pay-by-phone service provider;
  - b) Multi-space pay stations;
  - c) Mobile enforcement units, devices, data services, and software, and;
  - d) Replacement IPS parking meter sensors.

#### ***Phase II (Year 2 Action Plan)***

##### **Off-Street Parking Project Initiatives**

1. **Refine Implementation Budgets and Plans for Phase II Off-Street Parking Project Initiatives** (*i.e. Automated Access and Revenue Control Equipment and Software, Garage Re-Construction Work, LED Lighting Systems, Lot Signage and Paving, etc.*).
2. **Initiate Off-Street Parking System Procurement Process** for the award of contracts for:
  - a) Conversion of the Philadelphia Street Garage to an automated parking facility;
  - b) Conversion of the King Street Garage to an automated parking facility;
  - c) PARCS technology upgrades;
  - d) LED lighting upgrades for the parking garages, and;
  - e) Signage, paving, striping, and lighting upgrades for selected off-street parking lots.

#### ***Phase III (Year 3 Action Plan)***

##### **Off-Street Parking Project Initiatives**

1. **Initiate Off-Street Parking System Procurement Process** for the award of contracts for:
  - a) Conversion of the Market Street Garage to an automated parking facility.

## APPENDIX

### List of Community Stakeholders Interviewed By DESMAN

#### CITY OF YORK STAKEHOLDERS

Kim Bracey	Mayor
Cherie Alwine	Finance
Kittrell Barnes	Finance
Shanelle Barnes	Finance
Shilvosky Buffaloe	Economic & Community Development
Nicole Davis	Economic & Community Development
Nicole Gallup	Bureau of Permits, Planning & Zoning
Robert Goshen	Police Enforcement
Mary Shoff	Parking Enforcement
Yvonne Nesbeth	Parking Garage Cashier
Anthony Neuyan	Meter Repairman
Richard Kennard	Parking Enforcement Officer

#### CITY OF YORK GENERAL AUTHORITY

Pamela Zerba	General Authority
Eric Kirkland	General Authority
Michael Ray Helfrich	City Council, Vice President
Carol Hill-Evans	President

#### YORK COUNTY STAKEHOLDERS

Blanda Nace	York County Economic Alliance
Scott Castle	York County Human Services Department
Kyle Benser	York County Court Administration

#### COMMUNITY STAKEHOLDERS

Cindy Stelle	Central Market
Eric Menzer	York Revolution
David & Leslie Yohn	Yohn Property Management
Tim Miller & Meagan Feeser	Downtown Inc./WECO
Rick Cunningham	The Yorktowne Hotel
Michael Gordon Miller	York Board of Education
Dylan Bauer	Royal Square
Ron Kinsley	LSC Design
Heather Gryp	United Fiber & Data
Dennis Baughman	York Academy
Robert Muldrow	York City High School
Ben Moylan & Michael Miller	Alliance of Neighborhoods
Dale Elkiss	Strand/Capital Theatres
Jeremiah & Tom White	White Rose Restuarant
Kevin Hodge & Heather Kreiger	Rock Commercial Real Estate, LLC