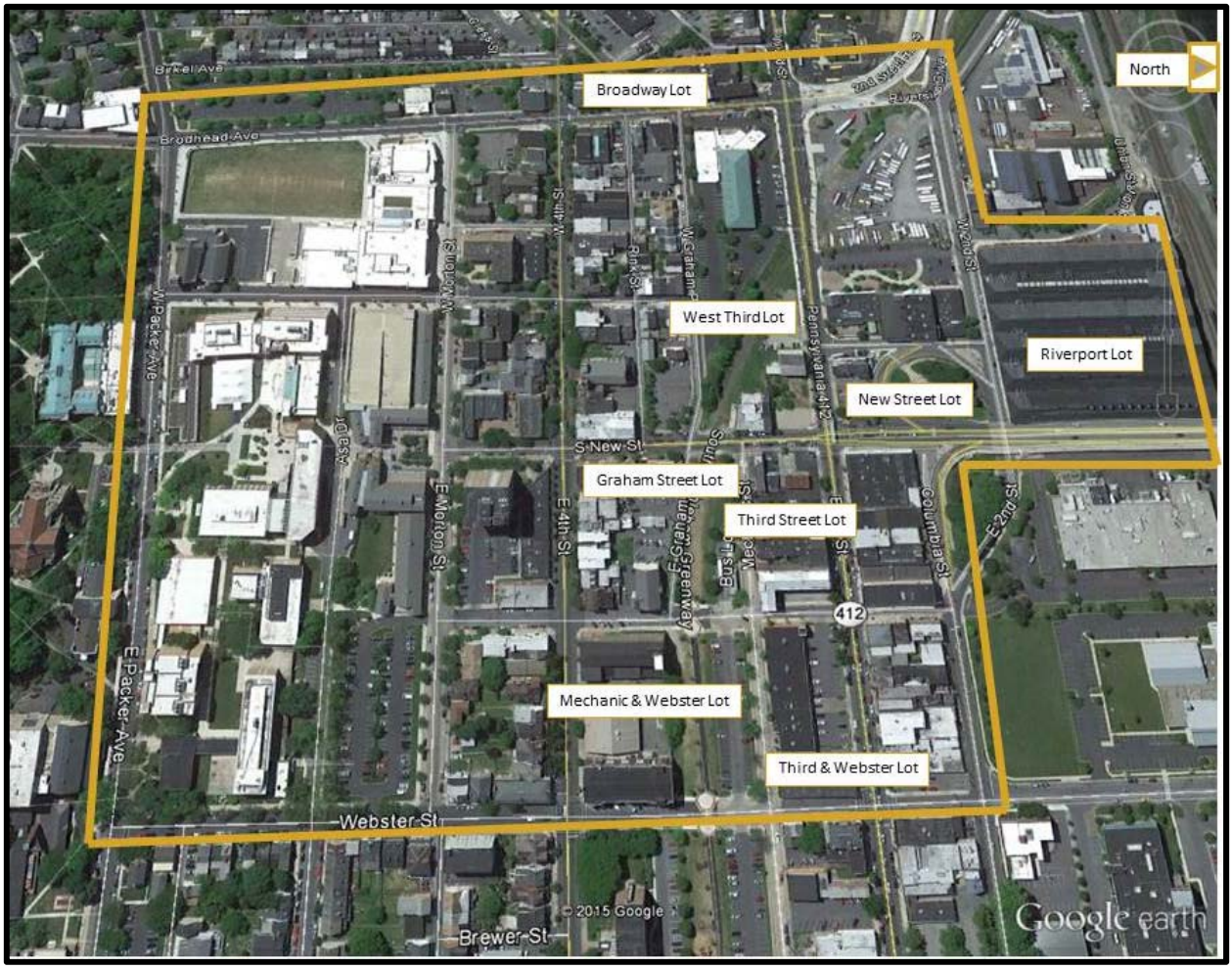
PARKING DEMAND & FEASIBILITY STUDY



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Section I – Executive Summary

DESMAN has been engaged by the Bethlehem Parking Authority (BPA) to prepare a Parking Demand and Feasibility Study to assist in evaluating the needs of existing and future parking generators in the Study Area and provide the infrastructure to meet demand. This assignment has a great potential to positively influence the quality of life of the City's residents, employers, workers and visitors by establishing a well-conceived plan to meet parking and transportation needs. It is critical that this assignment results in a plan that is implementable, cost-effective, safe, and will be well received by the community.

The Study Area for this assignment is generally bound by 2nd Street on the north, Packer Avenue on the south, Webster Street on the east and Brodhead Avenue on the west. This Study intends to provide the BPA with an evaluation of the parking conditions that are expected in the City's Southside Downtown with the planned development of several projects by private developers. This Report addresses the existing parking demands and the anticipated parking conditions after the completion of the foreseen development initiatives in the study area. Subsequent tasks included an analysis of the financial feasibility and performance of the BPA with added debt from the construction of a parking facility to meet future parking demand in the Southside, maintenance of its existing infrastructure and general operating requirements.

Based on approved and planned development scenarios in the Study Area, an additional peak parking demand of 680 spaces is expected during the week. This in conjunction with the existing public parking demand in the area of 104 vehicles, barring any other development which would increase parking demand in the area, results in a total future peak weekday parking demand of approximately 780 spaces. Based on this level of demand, the ideal future parking supply in the area would be about 850 spaces, which would ensure that approximately 10% of the public parking spaces remain vacant during the peak demand period, reducing excessive circulation of vehicles looking for an available space. It is common practice in the parking industry to design parking facilities and systems with this level of excess peak capacity. Assuming an ideal future parking supply of 850 spaces and an expected supply of 144 spaces (74 on-street + 70 off-street), approximately 700 additional spaces would need to be constructed in order to adequately address the parking needs of this area of Bethlehem, assuming the proposed developments are built as currently envisioned.

In order to meet the expected demand for parking in the study area the BPA is proposing to construct a parking structure at the corner of South New Street and Rink Street. The facility is planned to provide 6 levels of parking allowing for a capacity of 626 spaces. Budgets prepared to date for Design Costs, Permits, Inspections, General Conditions, Fees and Construction of the 626-space facility indicates the project will have a cost of approximately $17,750,000.

The objective of this financial analysis was to determine whether or not the Bethlehem Parking Authority can be expected to generate enough system-wide revenue to be self-supported, meaning the system-wide revenues are sufficient to cover the BPA's expected operating expenses, capital expenditures and debt service obligations. Based on these analyses it appears the Authority will operate with surplus revenues until 2029 if parking demands in the Study Area see no growth. Should the area continue to see redevelopment activity it is anticipated there would be a demand for additional public parking that would change the forecasts contained herein. Otherwise additional revenue sources will be

needed such as parking rate increases and/or City of Bethlehem guarantees to cover the Authority's operational expenses and debt obligations.

Section II – Parking Demand Analysis

This section of our Study presents the results of our Parking Demand Analysis performed in conjunction with our engagement. The Study Area is generally bounded by the Lehigh River to the north, Packer Avenue to the south, Webster Street to the east, and Montclair Avenue to the west. **Figure 1** shows the study area boundaries.

The study area includes a portion of Lehigh University, significant retail, restaurant and office space, and single- and multi-family residential buildings. To the north and east of the study area are Northampton Community College (NHCC), an ice rink (Steel Ice Center), commercial space, and the remnants of the old Bethlehem Steel plant and offices, a portion of which was redeveloped into SteelStacks arts and entertainment district. On the east and west, the study area is bordered mostly by residential streets, while on the south it is bordered by the Lehigh University campus. Additional development is planned in the area, which will be addressed later in the report.

Figure 1 – Study Area

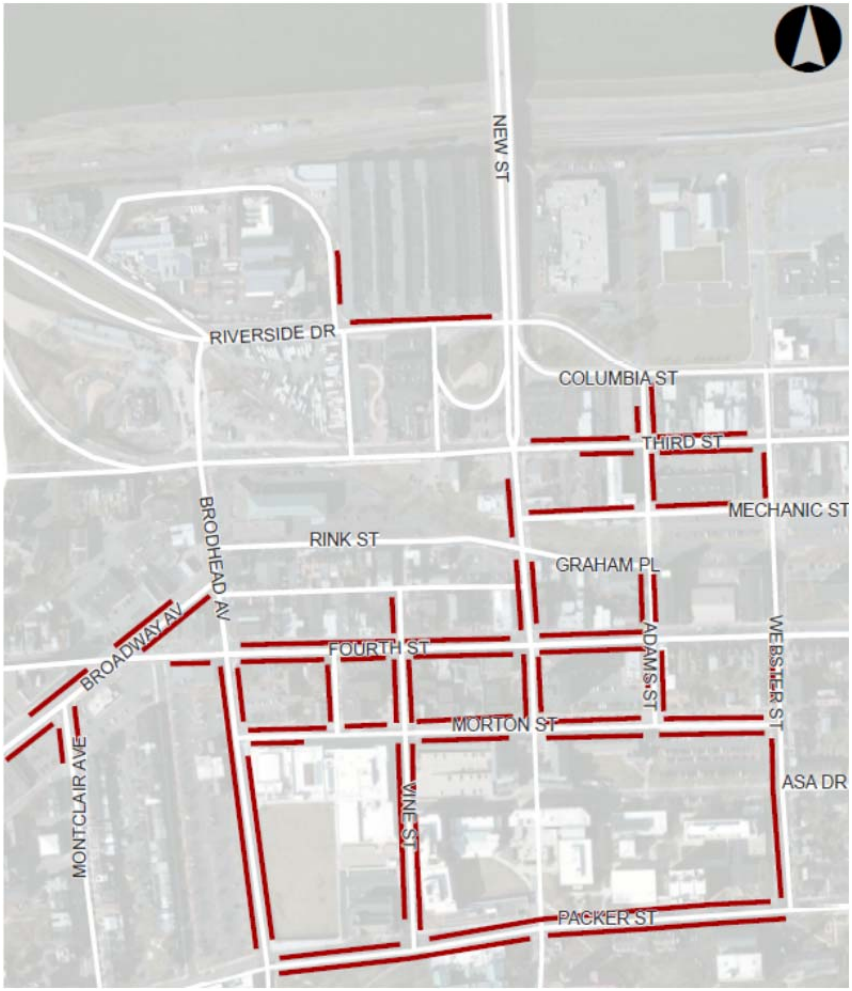
Source: DESMAN

Data Collection

Inventory and hourly occupancy counts of the on-street and off-street parking in the study area were performed on Wednesday, April 15, 2015 between 9AM and 8PM. The on-street parking spaces surveyed are monitored using single-space meters which accept both coin and credit/debit cards and are enforced from 8AM to 9PM, Monday through Saturday. The on-street rate is a $1 per hour with a 3 hour maximum time limit.

Figure 2 shows the street segments where metered parking is currently located within the study area.

Figure 2 – On-Street Parking in Study Area



Source: DESMAN

Hourly occupancy counts were also performed at all nine off-street parking facilities operated by the Bethlehem Parking Authority (BPA) within the study area. **Figure 3** shows the location of each parking facility analyzed in the study area. The letter ID system applied correlates with the off-street parking inventory and occupancy tables presented in the Appendix.

The off-street facilities surveyed allow parking by either transient customers, monthly customers or a combination of the two. The parking lot labelled 'G' in Figure 3 is the only facility which is dedicated solely to permit holders. Lots 'A', 'D', 'H', and 'I' provide only transient parking, controlled by either single-space parking meters or by multi-space pay stations. Lots 'B', 'C', 'E', and 'F' provide a combination of permit and transient parking spaces.

Figure 3 – Off-Street Parking in Study Area

Source: DESMAN

Existing Parking Supply and Demand Conditions

Tables 1 and **2** present the existing inventory of on-street metered parking spaces and off-street parking spaces within the study area. As shown in the tables, there are currently 502 on-street spaces and 392 off-street spaces within the study area, a total of 894 spaces available for public use. These tables also present the observed occupancy of the on- and off-street parking spaces during the 1PM peak demand period. *It should be noted that the Lehigh Riverport Parking Garage (labelled 'A' in Figure 3) contains Resident Permit parking in addition to the 149 transient parking spaces surveyed. Only the transient parking spaces were included in this analysis, as the remaining spaces in the Garage are off-limits to anyone but residents of the complex.*

Table 1 – On-Street Parking Inventory and Peak Occupancy

Street	Between	Side of Street	# of Spaces	1:00 PM	Occ. %
Union Station	Union Station Place & W. 2nd St.	East	7	0	0%
W. 2nd St.	Union Station Place & S. New St.	North	16	0	0%
E. 3rd St.	S. New St. & Adams St.	North	4	4	100%
E. 3rd St.	S. New St. & Adams St.	South	5	3	60%
E. 3rd St.	Adams St. & Webster St.	North	12	6	50%
E. 3rd St.	Adams St. & Webster St.	South	7	4	57%
Adams St.	Columbia St. & E. 3rd St.	East	4	4	100%
Adams St.	Columbia St. & E. 3rd St.	West	4	4	100%
Adams St.	E. 3rd St. & Mechanic	East	3	0	0%
Adams St.	The Greenway & E. 4th St.	East	4	4	100%
Adams St.	The Greenway & E. 4th St.	West	3	3	100%
Adams St.	E. 4th St. & E. Morton St.	East	7	6	86%
Adams St.	E. 4th St. & E. Morton St.	West	1	0	0%
Mechanic St.	S. New St. & Adams St.	North	11	3	27%
Mechanic St.	Adams St. & Webster St.	North	6	1	17%
Webster St.	W. Packer Ave. & E. Morton St.	West	14	8	57%
Webster St.	E. Morton St. & E. 4th St.	West	4	4	100%
Webster St.	E. 3rd St. & Mechanic St.	West	6	0	0%
Montclair Ave.	Cress St. & Broadway St.	East	3	0	0%
Montclair Ave.	Cress St. & Broadway St.	West	3	0	0%
Broadway St.	E. 4th St. to the Southwest	North	5	2	40%
Broadway St.	E. 4th St. to the Southwest	South	4	0	0%
Broadway St.	E. 4th St. & Brodhead Ave.	North	6	3	50%
Broadway St.	E. 4th St. & Brodhead Ave.	South	5	1	20%
Brodhead Ave.	E. 4th St. & W. Packer Ave.	West	32	3	9%
Brodhead Ave.	E. 4th St. & E. Morton St.	East	6	1	17%
Brodhead Ave.	E. Morton St. & W. Packer Ave.	East	16	2	13%
W. Packer Ave.	Brodhead Ave. & Vine St.	North	11	2	18%
W. Packer Ave.	Vine St. & Webster St.	North	34	29	85%
W. Packer Ave.	Brodhead Ave. & Webster St.	South	40	35	88%
E. Morton St.	Brodhead Ave. & Mariel St.	North	5	2	40%
E. Morton St.	Mariel St. & Vine St.	North	5	3	60%
E. Morton St.	Brodhead Ave. & Vine St.	South	5	0	0%
E. Morton St.	Vine St. & S. New St.	North	8	8	100%
E. Morton St.	Vine St. & S. New St.	South	6	4	67%
E. Morton St.	S. New St. & Adams St.	North	13	4	31%
E. Morton St.	S. New St. & Adams St.	South	11	5	45%
E. Morton St.	Adams St. & Webster St.	North	7	6	86%
E. Morton St.	Adams St. & Webster St.	South	14	1	7%
E. 4th St.	Birkel Ave. & Brodhead Ave.	South	2	2	100%
E. 4th St.	Brodhead Ave. & Vine St.	North	13	8	62%
E. 4th St.	Brodhead Ave. & Mariel St.	South	8	6	75%
E. 4th St.	Mariel St. & Vine St.	South	5	5	100%
E. 4th St.	Vine St. & S. New St.	North	8	7	88%
E. 4th St.	Vine St. & S. New St.	South	10	8	80%
E. 4th St.	S. New St. & Adams St.	North	8	4	50%
E. 4th St.	S. New St. & Adams St.	South	8	4	50%
S. New St.	E. 3rd St. & The Greenway	West	3	1	33%
S. New St.	W. Graham Pl. & E. 4th St.	East	7	5	71%
S. New St.	W. Graham Pl. & E. 4th St.	West	6	4	67%
S. New St.	E. 4th St. & E. Morton St.	East	4	4	100%
S. New St.	E. 4th St. & E. Morton St.	West	5	3	60%
Vine St.	Rink St. & E. 4th St.	West	3	3	100%
Vine St.	E. 4th St. & E. Morton St.	East	6	5	83%
Vine St.	E. 4th St. & E. Morton St.	West	12	10	83%
Vine St.	E. Morton St. & Asa Dr.	East	7	0	0%
Vine St.	Asa Dr. & W. Packer Ave.	East	14	10	71%
Vine St.	E. Morton St. & W. Packer Ave.	West	13	8	62%
Mariel St.	E. 4th St. & E. Morton St.	West	3	2	67%
Total On-Street Parking Inventory and Occupancy			**502**	**264**	**53%**

Source: DESMAN

Table 2 – Off-Street Parking Inventory and Peak Occupancy

Map ID	Facility Name or Description	Location	Capacity	1:00 PM	Occ. %
A	Lehigh Riverport Parking Garage	11 W. Second Street	**149**	49	33%
B	Broadway Street Lot	201 Broadway Street	**22**	4	18%
C	West Third Street Lot	Third Street b/w Brodhead & New	**30**	15	50%
D	New Street Bridge Lot	13 W. Third Street	**17**	5	29%
E	Third Street Lot	24 E. Third Street	**23**	8	35%
F	Graham Street Lot	327 S. New Street	**38**	27	71%
G	Mechanic & Webster Lot	Mechanic b/w Adams & Webster	**56**	12	21%
H	Third & Webster Lot	Corner of Webster & 3rd	**15**	8	53%
I	Beneath Fahy Bridge	East of Lehigh Riverport Parking Garage	**42**	0	0%
Total Off-Street Parking Inventory and Occupancy			**392**	**128**	**33%**

Source: DESMAN

As seen in Tables 1 and 2, the on-street metered parking spaces within the study area were 53% occupied (264 occupied out of 502 spaces) at peak, while the off-street spaces were 33% occupied (128 occupied out of 392 spaces). The overall occupancy of the study area during the 1PM peak demand period was 44%, as shown in **Table 3**.

Figure 4 shows the observed occupancy of each metered street segment and off-street facility during the 1PM peak demand hour and the complete set of hourly on- and off-street parking occupancy counts performed is included in the Appendix of this report.

Table 3 – Study Area Peak Parking Demand

Parking Type	Inventory	Observed Peak Occupancy	Occ. %
On-Street	502	264	53%
Off-Street	392	128	33%
TOTAL	**894**	**392**	**44%**

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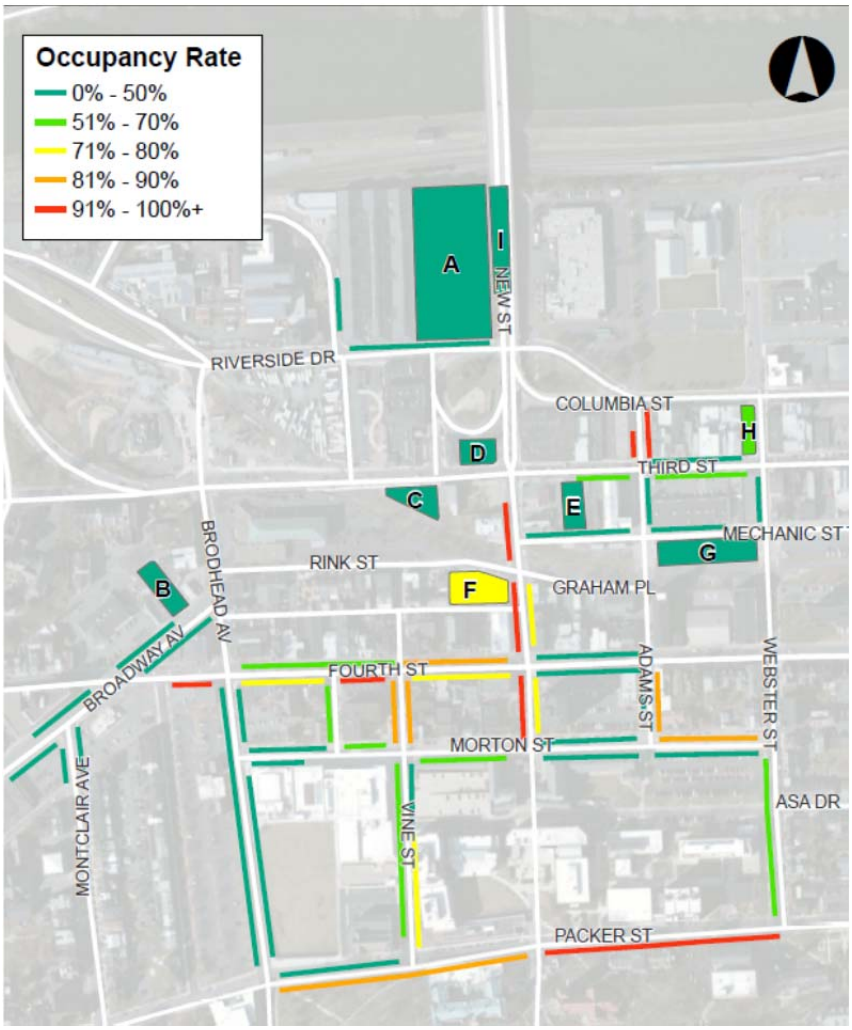
The final factor to consider in this analysis is the concept of practical capacity, which says that a parking system is perceived to be fully occupied by the common user at less than its actual capacity. Generally, this occurs when the system or facility reaches 85% occupancy. When occupancy exceeds this level, users typically have to search to find the last few available parking spaces, increasing traffic and driver frustration.

Assuming an 85% practical capacity factor, the practical parking capacity within the study area is 760 spaces (85% x 894 spaces). When compared to the observed peak demand of 392, there is currently a practical surplus of 368 spaces during the peak weekday period. Overall, this analysis of the existing parking conditions reveals that there is currently a surplus of parking in the study area.

Figure 4 – Observed Peak Period Occupancy by Street Segment and Off-Street Facility



Source: DESMAN

Future Developments

In order to determine the anticipated future parking demand conditions within the study area, it was necessary to identify any potential developments which could impact the supply of and demand for parking. As the major institution in the study area, we spoke with Lehigh University regarding their future development plans, as well as speaking with other stakeholders. While the University is not currently planning any developments in or near the study area which would affect public parking, there are other projects being planned by private developers which could significantly impact public parking in the study area.

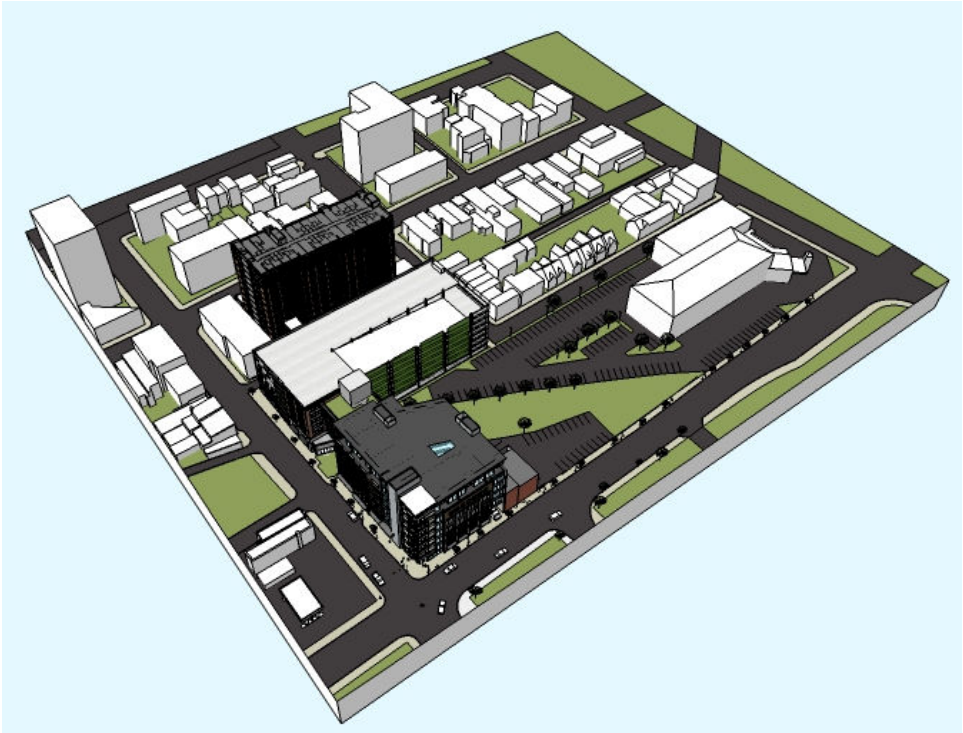
A private developer has obtained approval for a mixed-use development in the heart of the study area which will include 88,000 SF of office use with 18,000 SF of ground floor retail at the southwest corner of W. 3rd St. and S. New St. Another proposal calls for the construction of mixed-use building that will potentially contain 335 beds of student housing and 53,000 SF of ground floor retail located on the block bounded by Rink St. on the north, S. New St. on the east, W. 4th St. on the south and Vine St. on the

west. Based on conversations with the developer, it has been assumed that the combined 53,000 SF of ground floor retail space will be split 65% to 35% between restaurant and retail land uses, respectively.

In addition, a public parking facility is envisioned to be built encompassing the entire block bounded by W. Graham Pl. on the north, S. New St. on the east, Rink St. on the south, and Vine St. on the west. This analysis of the impact of the development on future parking supply and demand will help determine the appropriate size for the proposed parking garage.

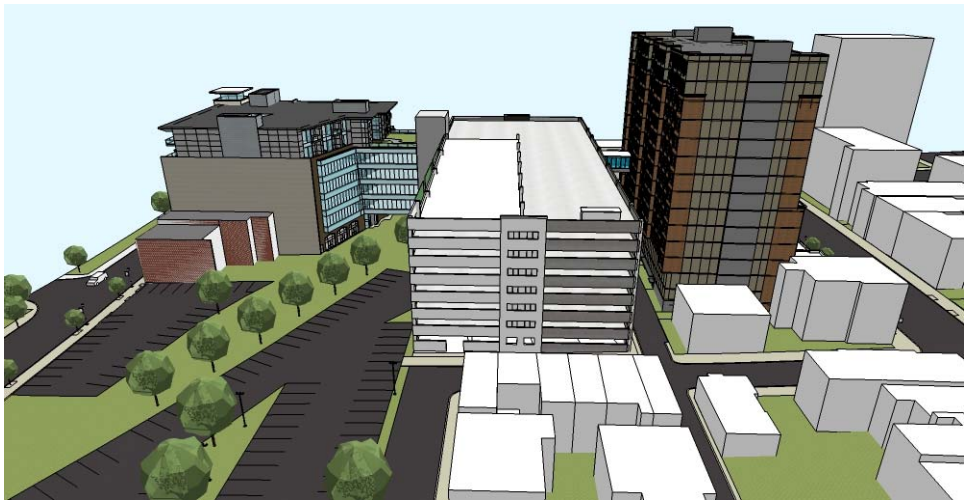
Figures 5 and **6** provide two renderings of the proposed project.

Figure 5 – Proposed Development Looking Southwest from Intersection of 3rd St. and S. New St.



Source: Howard Kulp Architects, P.C.

Figure 6 – View of Proposed Development from the West



Source: Howard Kulp Architects, P.C.

As currently envisioned, this development will result in the loss of the 38-space Graham Street Lot, identified in Figure 4 as "Lot F". By factoring this loss of parking into the analysis of additional demand expected to be generated by the development itself, it is possible to determine the net impact the development will have on parking dynamics within the study area.

Future Parking Demand Analysis

A future parking demand analysis was performed in the study area to determine the number of spaces needed in the proposed parking structure to support future development in the area. This analysis considered both the transient and monthly parking demand. The Urban Land Institutes (ULI) *Shared Parking, 2nd Edition* was applied to project the future parking demand of the proposed development. This is a well regarded resource in the professional parking services field that applies historic parking data from specific land uses to understand the peak parking demand factor, time of day factor, and monthly factor. This type of 'shared parking' analysis provides a more accurate representation of the true peak parking demand as it takes into account the change in parking demand over the course of a day for each land use.

Table 4 shows the shared parking demand for the proposed development during both the weekday and weekend peaks, based on the specific characteristics of the development detailed previously.

Table 4 – Future Parking Demand Analysis

Land Use	Size	Weekday Peak Demand (2PM)	Saturday Peak Demand (2PM)
APPROVED BUIDLING			
Office	88,000 sf	270 spaces	30 spaces
Retail	18,0000 sf	30 spaces	40 spaces
Projected Parking Demand		**300 spaces**	**70 spaces**
PROPOSED BUILDING			
Student Beds	335 beds	210 spaces	240 spaces
Restaurant	34,500 sf	140 spaces	250 spaces
Retail	18,500 sf	30 spaces	40 spaces
Projected Parking Demand		**380 spaces**	**530 spaces**
Total Future Study Area Parking Demand		**680 spaces**	**600 spaces**

Source: DESMAN

As shown in Table 4, the peak weekday demand at 2PM is projected to be 300 vehicles with the approved development that will increase to approximately 680 spaces with the additional planned mixed-use building. The weekend parking demands from these projects are expected to reach 70 spaces initially that could grow to 600 spaces with full build-out.

As stated previously, *Shared Parking, 2nd Edition* was applied for the future parking demand analysis. A mode split factor of 20% was applied to the employee parking demand, which is based on 2012 U.S. Census data for the means of transportation to work for the City of Bethlehem. Various capture factors were applied for retail and restaurant visitors on weekdays and weekends due to the fact that office workers and residents are expected to account for a large portion of the patronage of these establishments during the weekday daytime, while those not living or working in the development are expected to constitute the largest customer segment during the evenings and on weekends.

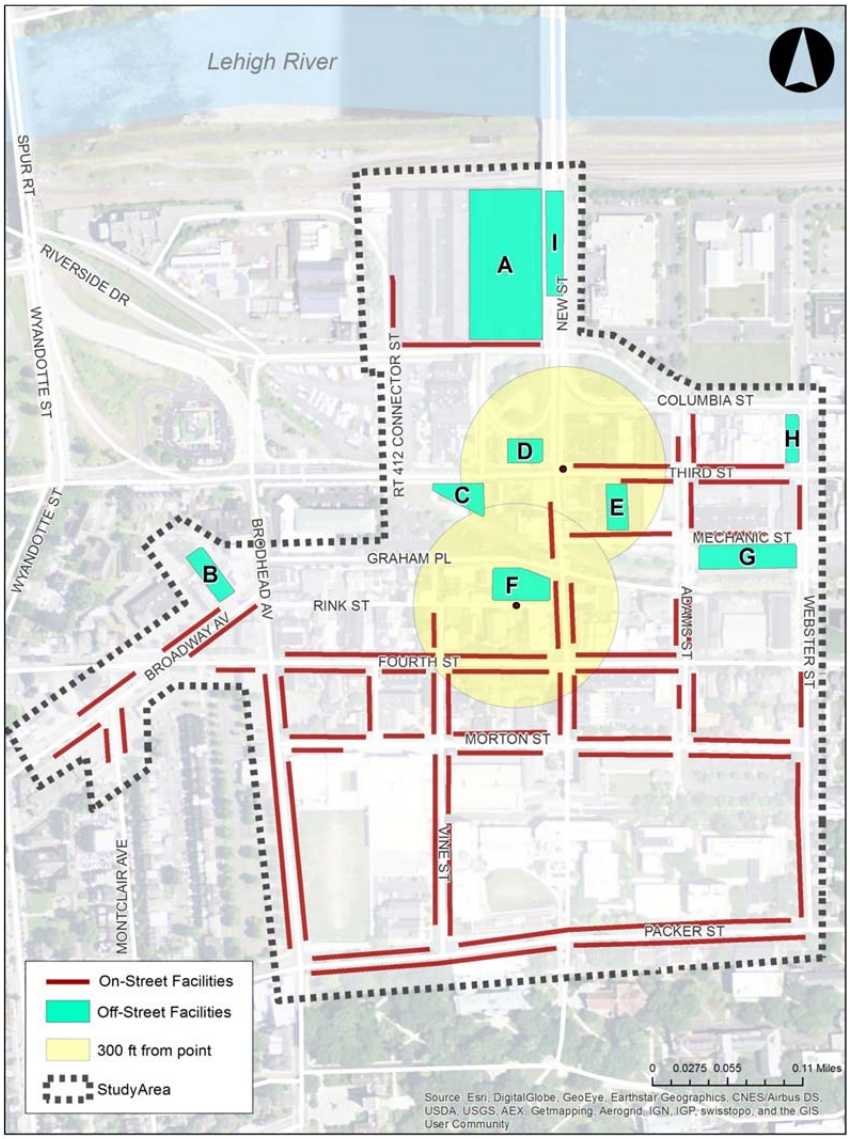
The next phase of the analysis is to determine the number of additional spaces needed in this area to support the development.

Adequacy of the Future Parking Supply

In order to determine the number of additional parking spaces that may need to be constructed to support this future development, it is necessary to consider the existing parking demand, the future parking demand and the amount of parking being displaced. Despite the fact that the study area encompasses a large geographical area, the location of the proposed development means that only a few of the existing public parking facilities and on-street parking spaces can be viewed as viable parking options to satisfy demand generated by the development. For this type of development and factoring in the car-centered culture in this area of the country, we assume that 300 feet is the maximum walking distance that the average person would consider reasonable in order to reach this destination.

Figure 7 depicts the portion of the study area within a 300-foot radius of the presumed main entrances to each of the buildings in the proposed development.

Figure 7 – Existing Parking Supply within Reasonable Walking Distance of Proposed Development



Source: DESMAN

The existing on- and off-street parking spaces within these radii are viewed as reasonably-close alternatives to serve the parking needs of the proposed development.

Tables 5 and **6** present a breakdown of the approximate number of on- and off-street parking spaces, respectively, within a reasonable walking distance of the proposed development, along with the existing demand for those spaces.

Table 5 – Future On-Street Parking Supply Available to Serve Development

Street	Between	Side of Street	# of Spaces	Weekday Daytime Peak Occ.	Occ. %
E. 3rd St.	S. New St. & Adams St.	North	4	4	100%
E. 3rd St.	S. New St. & Adams St.	South	5	3	60%
Mechanic St.	S. New St. & Adams St.	North	11	3	27%
E. 4th St.	Vine St. & S. New St.	North	8	7	88%
E. 4th St.	Vine St. & S. New St.	South	10	8	80%
E. 4th St.	S. New St. & Adams St.	North	4	2	50%
E. 4th St.	S. New St. & Adams St.	South	4	2	50%
S. New St.	E. 3rd St. & The Greenway	West	3	1	33%
S. New St.	W. Graham Pl. & E. 4th St.	East	7	5	71%
S. New St.	W. Graham Pl. & E. 4th St.	West	6	4	67%
S. New St.	E. 4th St. & E. Morton St.	East	4	4	100%
S. New St.	E. 4th St. & E. Morton St.	West	5	3	60%
Vine St.	Rink St. & E. 4th St.	West	3	3	100%
Total On-Street Parking Inventory and Occupancy			**74**	**49**	**66%**

Source: DESMAN

Table 6 – Future Off-Street Parking Supply Available to Serve Development

Map ID	Facility Name or Description	Location	Capacity	Weekday Daytime Peak Occ.	Occ. %
C	West Third Street Lot	Third Street b/w Brodhead & New	**30**	15	50%
D	New Street Bridge Lot	13 W. Third Street	**17**	5	29%
E	Third Street Lot	24 E. Third Street	**23**	8	35%
F	Graham Street Lot*	327 S. New Street	**0**	27	-
Total Off-Street Parking Inventory and Occupancy			**70**	**55**	**79%**

*The future capacity of this lot is shown as "0" because the lot will be lost to the development. The 27 parkers displaced from this lot will need to be accommodated elsewhere, thus they are still counted in the peak occupancy number

Source: DESMAN

As noted in Table 6, because the Graham Street Lot will be displaced by the proposed development, the capacity of this lot was reduced to zero. However, the existing demand for the lot will have to be accommodated elsewhere, thus it is counted in the total peak off-street occupancy count.

According to this analysis of reasonable walking distance, in the future, during the peak demand period, it is anticipated that there will be 40 spaces of existing parking supply available to accommodate the demand generated by the proposed development ((74 – 49) + (70 – 55) = 40 spaces). Given that the proposed developments are anticipated to generate parking demands for 300 spaces initially and 680 potentially during the peak weekday demand period, the anticipated available parking supply of 40 spaces is clearly inadequate to accommodate this demand.

Adding the anticipated peak demand of 680 spaces generated by the proposed development to the documented peak demand in the area of 104 vehicles, barring any other development which would increase parking demand in the area, results in total future peak weekday parking demand of

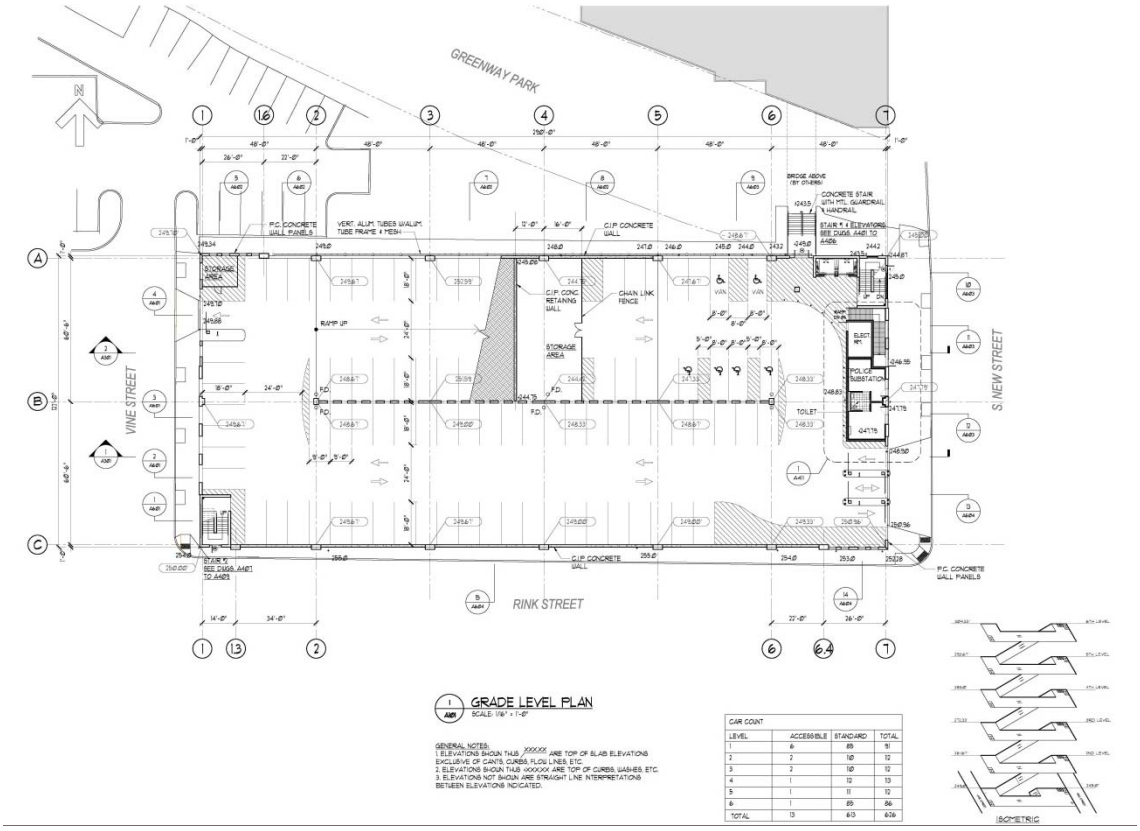
approximately 780 spaces. Based on this level of peak demand, the ideal future parking supply in the area would be about 850 spaces. This supply of parking would ensure that approximately 10% of the spaces remain vacant during the peak demand period, reducing excessive circulation of vehicles looking for an available space; it is common practice in the parking industry to design parking facilities and systems with this level of excess peak capacity.

Assuming an ideal future parking supply of 850 spaces and an expected supply of 144 spaces (74 on-street + 70 off-street), approximately 700 additional spaces would need to be constructed in order to adequately address the parking needs of this area of Bethlehem, if the proposed developments are built as currently envisioned.

Section III – Proposed Parking Improvements

In order to meet the expected demand for parking in the study area the BPA is proposing to construct a parking structure at the corner of South New Street and Rink Street. The facility is planned to provide 6 levels of parking allowing for a capacity of 626 spaces. The facility will not include any parking generating mixed-use space and will be operated by BPA as a public parking facility providing support to the adjoining Southside neighborhoods. It is expected that the facility will operate on a 24 hour – 7 day basis. **Figure 8** illustrates the arrangement of the proposed facility and its grade level relationship to the surrounding streets.

Figure 8 – Proposed New Street Garage Grade Level Plan



BPA has engaged Architects, Engineers and a Construction Manager to design and construct the New Street Parking Garage. Plans have been progressed and received approval from the City's Historic Conservation Commission and has been submitted to the City's Planning Commission for approval. Based on the progression of the Construction Documents, BPA's Construction Manager - Boyle Construction, Inc. from Allentown, PA has developed construction budgets for the project. Budgets prepared to date for Design Costs, Permits, Inspections, General Conditions, Fees and Construction of the 626-space facility indicates the project will have a cost of approximately $17,750,000. For the purpose of these analyses this was the assumed Construction Cost for the New Street Parking Garage.

Section IV – Financial Analysis

The next task for this study is to prepare a financial analysis that combines the annualized cost for the development of the New Street Garage, and the associated operating expenses and revenues, into the BPA's projected Operating Statement over the next 30-years, or the expected length of the debt service for this project. This financial analysis is premised on an expectation that the BPA will issue new 30-year parking revenue bonds to fund the development. The objective of this financial analysis is to determine whether or not the BPA can be expected to generate enough system-wide revenue to be self-supported, meaning the system-wide revenues are sufficient to cover the BPA's expected operating expenses, capital expenditures and debt service obligations.

DESMAN, worked in conjunction with BPA's Financial Advisor – Public Financial Management, Inc. from Harrisburg, PA to develop debt service schedules, operating expenses and revenue forecasts for both the proposed New Street Garage and BPA's entire system. These projections where then integrated into BPA's system-wide budget forecasts to determine the feasibility of the Authority to incur additional debt associated with this project, while still remaining in a positive cash flow position.

The following **Assumptions** have been included in the financial analyses and modeling:

1. New Street Parking Garage Construction Cost of $17,750,000.
2. $2,100,000 of net Pennsylvania Redevelopment Assistance Capital Program proceeds is available for the New Street Parking Garage.
3. Bonding will be structured and issued for a 30-year term with 50% tax-exempt and 50% taxable debt. A blended interest rate of 5.26% was used for these analyses.
4. The Authority will have expenditures of approximately $7,000,000 in 2019 for necessary deferred capital repairs, restoration and maintenance of its existing parking structures. It is anticipated these costs will be financed with a bond issue and debt service structured over 20 years.
5. An annual Capital Reserve Fund of $200,000 was included up to year 2017. After BPA accumulated a $1,000,000 Reserve Fund the annual expense was reduced to $100,000.
6. Authority will raise Parking Rates as follows:
   6.1. Monthly Rate in All Garages will increase from $57/month to $65/month
   6.2. Transient Rate in All Off-Street Facilities (garages and lots) will increase from $.75/hour to $1.00. NO OTHER INCREASES HAVE BEEN INCLUDED IN THESE ANALYSES AT THIS TIME.
   6.3. Maximum daily transient rate will increase from $6 per day to $10 per day
   6.4. Monthly Rate in Northside Surface Lots will increase from $47/month to $55/month.

6.5. Monthly Rate in Southside Surface Lots will increase from $31/month to $40/month.

7. All Monthly Rates will increase every 5th year by $5.00/month.
8. Special Event, Advertisement, Park & Shop, Resident Permits, Tow, Valet & Miscellaneous Revenue Growth Rate – 2% annually.
9. Parking Violation Revenue has assumed to be flat for the duration of the bond.
10. Salary and Benefit Growth Rates were as follows:
    - 10.1. Salaries – 3.04% annually.
    - 10.2. Benefits – 3.00% annually.
    - 10.3. Pension/Other – 2.00% annually.
11. Operating Expense Growth Rate – 2.00% annually.
12. Estimates for 2015 are based on numbers as of November 2015 from BPA. It is these analyses will be updated after final 2015 operating statements are available from BPA.

With the addition of the 626-space New Street Parking Garage BPA will incur additional Operating and Maintenance Costs. The combination of utility, contracted maintenance services and labor-related expenses (i.e. wages, vacation accrual, payroll taxes, workers' compensation and health & welfare) will account for more than 75% of the direct operating expenses for this new facility. The total annual operating cost estimate also includes a $50.00 per space sum that should be deposited annually into a Repair and Replacement Fund to cover the cost of any structural repairs. Working with officials from BPA DESMAN has forecasted the additional expected expenses associated with operating and maintaining this facility. Using BPA's existing operation and practices, **Table 7** illustrates the expected Year One Budget for the New Street Parking Garage.

Table 7 – New Street Garage Year One Operation & Maintenance Budget

OPERATING BUDGET

ITEM	YEARLY EXPENSE
Bethlehem Parking Authority Added Salary	$35,000.00
Health Benefits @ 30%	$10,500.00
Pension @ 23%	$8,050.00
FICA/Unemployment @ 10%	$3,500.00
TOTAL Labor Cost	$57,050.00
INSURANCE (@ $30/space)	$18,780.00
ELECTRIC,SEWER & WATER (@ $45/space)	$28,170.00
EQUIPMENT & SUPPLIES (@ $10/space)	$6,260.00
MISCELLANEOUS (@ $5/space)	$3,130.00
TOTAL OPERATING BUDGET	**$113,390.00**

MAINTENANCE BUDGET

ITEM	YEARLY EXPENSE
GENERAL MAINTENANCE (@ $11/space)	$6,886.00
ELEVATOR SERVICE CONTRACT INCREASE	$5,000.00
PARC SERVICE CONTRACT INCREASE	$5,000.00
STRUCTURAL RESERVE FUND (@ $50/space)	$31,300.00
TOTAL MAINTENANCE BUDGET	**$48,186.00**
TOTAL OPERATING & MAINTENANCE BUDGET	**$161,576.00**
O & M PER SPACE	**$258**

Source: DESMAN

Table 8 provides a detailed breakdown of the anticipated annual revenue estimates the New Street Garage will generate in the first full year of operation. The parking rates in the table are reflective of the proposed increases recommended by BPA and tentative agreements with the developer of the adjacent building. The monthly parkers are assumed to be new permit holders to the system rather than transfers from other BPA facilities, with the exception of the Graham Street Lot which will displaced by this project. Similarly, the daily number of transient or hourly parkers projected to use the proposed garage represents new users who will be visitors to the planned development adjacent to the garage. ***For the purpose of these analyses we assumed that there would be no growth in parking demand as a result of any future development***. Clearly as additional redevelopment and/or new development comes on line in the immediate area the demand for public parking will increase, thus increasing the revenue potential for the New Street Garage.

Table 8 – New Street Garage - Year One Revenue Forecast

Parking Demand Generators			Weekday	Saturday
Existing Graham Street Lot Contract Parkers			38 spaces	
Greenway Building				
	Retail	18,000 SF	30 spaces	40 spaces
	Office	88,000 SF	270 spaces	0 spaces

Allocation of Demand		
St. Luke's University Health Network and Lehigh University	180	spaces
General Office	90	spaces
Retail Employees	6	spaces
TOTAL WEEKDAY MONTHLY CONTRACT SPACES	276	spaces
WEEKDAY DAYTIME HOURLY SPACES &/or NEW CONTRACT SPACES AVAILABLE	350	spaces

Forecast for Hourly Parking Space Demand		
General Weekday Visitors (Average demand of 0.25 spaces per 1,000 sf/hour)	175	Parking Hours (based on 60-minute average los)
Weekday Shoppers (Average demand of 20 spaces per hour - 8 hours per day)	200	Parking Hours (based on 50-minute average los)
Saturday Shoppers (Average demand of 35 spaces per hour - 8 hours per day)	225	Parking Hours (based on 75-minute average los)
TOTAL WEEKDAY HOURLY PARKING DEMAND	375	Parking Hours
TOTAL SATURDAY HOURLY PARKING DEMAND	225	Parking Hours

First Year Forecast of Parking Revenues with Monthly Rate of $65.00 & 1.00/hour Garage Transient

Category	Number	Fee	Period	Projected Annual Revenues	
Greenway Free Contract Parkers	57	$ -	Monthly	$ -	
Greenway Discounted Contract Parkers	123	$ 57.00	Monthly	$ 84,132.00	
Greenway Market Contract Parkers	96	$ 65.00	Monthly	$ 74,880.00	
Existing Graham St. Lot Contract Parkers	15	$ 65.00	Monthly	$ 11,700.00	
Weekday Hourly Parkers	375	$ 1.00	Hourly	$ 75,000.00	(based on 200 days)
Saturday Hourly Parkers	225	$ 1.00	Hourly	$ 9,000.00	(based on 40 days)
TOTAL				**$ 254,712.00**	

Source: DESMAN

Table 9 incorporates the previously detailed annual revenue and operating expense projections as well as project debt service obligations for the New Street Garage into a system-wide BPA multi-year cash flow proforma. Table 9 also incorporates the Assumptions previously referenced and included in this section of the Study.

Table 9 – Forecasted System-Wide Summary of Revenues & Expenses

Parking Demand & Feasibility Study
Bethlehem Parking Authority
Forecasted System-Wide Summary of Revenues & Expenses

	Estimated	Forecasted	Forecasted	Forecasted	Forecasted	Forecasted	Forecasted	Forecasted	Forecasted	Forecasted	Forecasted	Forecasted
Existing Revenue Sources	**2015**	**2016**	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**
Parking Garages	$ 1,663,723	$ 1,897,577	$ 1,908,399	$ 1,919,438	$ 1,920,558	$ 2,020,783	$ 2,032,498	$ 2,044,447	$ 2,056,636	$ 2,069,068	$ 2,170,920	$ 2,183,854
Parking Lots	$ 206,892	$ 259,980	$ 259,980	$ 241,740	$ 241,740	$ 269,640	$ 269,640	$ 269,640	$ 269,640	$ 269,640	$ 297,540	$ 297,540
Parking Violations	$ 1,269,381	$ 1,269,181	$ 1,269,381	$ 1,269,381	$ 1,269,381	$ 1,269,381	$ 1,269,381	$ 1,269,381	$ 1,269,381	$ 1,269,381	$ 1,269,381	$ 1,269,381
Special Events	$ 226,897	$ 231,435	$ 236,063	$ 240,785	$ 245,600	$ 250,512	$ 255,522	$ 260,633	$ 265,846	$ 271,163	$ 276,586	$ 282,117
Parking Meters	$ 1,483,331	$ 1,483,331	$ 1,483,331	$ 1,483,331	$ 1,483,331	$ 1,483,331	$ 1,483,331	$ 1,483,331	$ 1,483,331	$ 1,483,331	$ 1,483,331	$ 1,483,331
Daily Transient Rate Increase - to be determined	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Resident Permits	$ 59,468	$ 60,657	$ 61,871	$ 63,108	$ 64,370	$ 65,657	$ 66,971	$ 68,310	$ 69,676	$ 71,070	$ 72,491	$ 73,941
Park & Shop	$ 46,120	$ 47,042	$ 47,983	$ 48,942	$ 49,921	$ 50,920	$ 51,938	$ 52,977	$ 54,036	$ 55,117	$ 56,220	$ 57,344
Other Sources	$ 122,694	$ 125,147	$ 127,651	$ 130,204	$ 132,808	$ 135,464	$ 138,173	$ 140,937	$ 143,755	$ 146,630	$ 149,563	$ 152,554
TOTAL EXISTING REVENUE	**$ 5,078,505**	**$ 5,374,350**	**$ 5,394,658**	**$ 5,396,929**	**$ 5,407,710**	**$ 5,545,689**	**$ 5,567,455**	**$ 5,589,656**	**$ 5,612,301**	**$ 5,635,399**	**$ 5,776,032**	**$ 5,800,063**
New Revenue Sources												
New Street Parking Garage	$ -	$ -	$ -	$ 257,052	$ 258,732	$ 267,286	$ 269,033	$ 270,816	$ 272,635	$ 274,490	$ 283,222	$ 285,151
TOTAL SYSTEM-WIDE FORECASTED REVENUE	**$ 5,078,505**	**$ 5,374,350**	**$ 5,394,658**	**$ 5,653,981**	**$ 5,666,442**	**$ 5,812,974**	**$ 5,836,488**	**$ 5,860,472**	**$ 5,884,936**	**$ 5,909,889**	**$ 6,059,253**	**$ 6,085,214**
Existing Expenses												
Salaries	$ 1,096,732	$ 1,130,478	$ 1,164,783	$ 1,200,212	$ 1,236,839	$ 1,274,617	$ 1,313,424	$ 1,353,352	$ 1,394,443	$ 1,436,752	$ 1,480,228	$ 1,524,837
Health Benefits	$ 328,722	$ 338,619	$ 348,776	$ 359,238	$ 370,016	$ 381,116	$ 392,549	$ 404,325	$ 416,456	$ 428,951	$ 441,821	$ 455,075
Pension	$ 248,080	$ 253,042	$ 258,102	$ 263,264	$ 268,530	$ 273,900	$ 279,378	$ 284,966	$ 290,665	$ 296,479	$ 302,408	$ 308,456
FICA	$ 83,900	$ 86,482	$ 89,106	$ 91,816	$ 94,618	$ 97,508	$ 100,477	$ 103,531	$ 106,675	$ 109,912	$ 113,237	$ 116,650
Life/Valic/Unemployment	$ 32,027	$ 33,321	$ 33,321	$ 33,987	$ 34,667	$ 35,360	$ 36,068	$ 36,789	$ 37,525	$ 38,275	$ 39,041	$ 39,822
Total Salaries & Benefits	**$ 1,789,461**	**$ 1,841,942**	**$ 1,894,088**	**$ 1,948,518**	**$ 2,004,670**	**$ 2,062,502**	**$ 2,121,897**	**$ 2,182,963**	**$ 2,245,764**	**$ 2,310,369**	**$ 2,376,735**	**$ 2,444,840**
Operating Expenses	**$ 863,593**	**$ 880,859**	**$ 898,469**	**$ 916,432**	**$ 934,755**	**$ 953,443**	**$ 972,506**	**$ 991,950**	**$ 1,011,782**	**$ 1,032,012**	**$ 1,052,646**	**$ 1,073,692**
TOTAL EXISTING EXPENSES	**$ 2,653,054**	**$ 2,722,801**	**$ 2,792,558**	**$ 2,864,950**	**$ 2,939,424**	**$ 3,015,946**	**$ 3,094,403**	**$ 3,174,913**	**$ 3,257,546**	**$ 3,342,381**	**$ 3,429,381**	**$ 3,518,532**
New Expenses												
Capital Improvement Fund	$ -	$ -	$ 200,000	$ 200,000	$ 200,000	$ 200,000	$ 200,000	$ 100,000	$ 100,000	$ 100,000	$ 100,000	$ 100,000
New Street Parking Garage O&M	$ -	$ -	$ 80,000	$ 165,000	$ 168,300	$ 171,666	$ 175,099	$ 178,601	$ 182,173	$ 185,817	$ 189,533	$ 193,324
TOTAL NEW EXPENSES	**$ -**	**$ -**	**$ 280,000**	**$ 365,000**	**$ 368,300**	**$ 371,666**	**$ 375,099**	**$ 278,601**	**$ 282,173**	**$ 285,817**	**$ 289,533**	**$ 293,324**
TOTAL SYSTEM-WIDE FORECASTED EXPENSES	**$ 2,653,054**	**$ 2,722,801**	**$ 3,072,558**	**$ 3,229,950**	**$ 3,307,724**	**$ 3,387,612**	**$ 3,469,502**	**$ 3,453,514**	**$ 3,539,720**	**$ 3,628,197**	**$ 3,718,914**	**$ 3,811,856**
BPA Debt Service Obligations												
Existing Debt Service	$ 906,559	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Series A of 2015 Bonds (Taxable)	$ -	$ 102,400	$ 103,559	$ 107,093	$ 110,126	$ 107,743	$ 105,110	$ 61,991	$ -	$ -	$ -	$ -
Series B of 2015 Bonds	$ -	$ 286,325	$ 914,544	$ 915,844	$ 916,844	$ 883,969	$ 629,969	$ 675,194	$ 737,963	$ 738,213	$ 737,331	$ 740,281
New Street Parking Garage (NEW)	$ -	$ -	$ 436,875	$ 1,173,749	$ 1,162,109	$ 1,159,479	$ 1,160,715	$ 1,160,538	$ 1,159,252	$ 1,161,821	$ 1,157,959	$ 1,157,874
Deferred Capital Repairs (NEW)	$ -	$ -	$ -	$ -	$ -	$ 276,003	$ 571,094	$ 568,750	$ 570,693	$ 566,858	$ 567,259	$ 566,729
TOTAL DEBT SERVICE	**$ 906,559**	**$ 388,725**	**$ 1,454,977**	**$ 2,196,686**	**$ 2,189,079**	**$ 2,427,194**	**$ 2,466,888**	**$ 2,466,473**	**$ 2,467,907**	**$ 2,466,891**	**$ 2,462,548**	**$ 2,464,883**
SYSTEM-WIDE FORECASTED ANNUAL NOI	**$ 1,518,892**	**$ 2,262,824**	**$ 867,123**	**$ 227,345**	**$ 169,638**	**$ (1,831)**	**$ (99,902)**	**$ (59,515)**	**$ (122,690)**	**$ (185,199)**	**$ (122,209)**	**$ (191,525)**
BPA Cumulative Cash Reserves	$ 1,518,892	$ 3,256,717	$ 3,598,840	$ 3,301,185	$ 2,945,823	$ 2,418,992	$ 1,794,090	$ 1,709,575	$ 1,561,886	$ 1,351,686	$ 1,204,477	$ 987,952
City Mechanic Cost	$ 25,000	$ 25,000	$ 25,000	$ 25,000	$ 25,000	$ 25,000	$ 25,000	$ 25,000	$ 25,000	$ 25,000	$ 25,000	$ 25,000
Transfer to City of Bethlehem	$ 500,000	$ 500,000	$ 500,000	$ 500,000	$ 500,000	$ 500,000	$ -	$ -	$ -	$ -	$ -	$ -
BPA AVAILABLE OPERATING INCOME	**$ 993,892**	**$ 2,731,717**	**$ 3,073,840**	**$ 2,776,185**	**$ 2,420,823**	**$ 1,893,992**	**$ 1,769,090**	**$ 1,684,575**	**$ 1,536,886**	**$ 1,326,686**	**$ 1,179,477**	**$ 962,952**

Table 9 – Forecasted System-Wide Summary of Revenues & Expenses

Parking Demand & Feasibility Study
Bethlehem Parking Authority
Forecasted System-Wide Summary of Revenues & E›

	Forecasted 2027	Forecasted 2028	Forecasted 2029	Forecasted 2030	Forecasted 2031	Forecasted 2032	Forecasted 2033	Forecasted 2034	Forecasted 2035	Forecasted 2036	Forecasted 2037	Forecasted 2038
Existing Revenue Sources												
Parking Garages	$ 2,197,047	$ 2,210,504	$ 2,224,230	$ 2,238,230	$ 2,252,510	$ 2,267,076	$ 2,281,934	$ 2,297,088	$ 2,490,026	$ 2,505,792	$ 2,521,874	$ 2,538,278
Parking Lots	$ 297,540	$ 297,540	$ 297,540	$ 297,540	$ 297,540	$ 297,540	$ 297,540	$ 297,540	$ 297,540	$ 297,540	$ 297,540	$ 297,540
Parking Violations	$ 1,269,381	$ 1,269,381	$ 1,269,381	$ 1,269,381	$ 1,269,381	$ 1,269,381	$ 1,269,381	$ 1,269,381	$ 1,269,381	$ 1,269,381	$ 1,269,381	$ 1,269,381
Special Events	$ 287,760	$ 293,515	$ 299,385	$ 305,373	$ 311,480	$ 317,710	$ 324,064	$ 330,546	$ 337,156	$ 343,900	$ 350,778	$ 357,793
Parking Meters	$ 1,483,331	$ 1,483,331	$ 1,483,331	$ 1,483,331	$ 1,483,331	$ 1,483,331	$ 1,483,331	$ 1,483,331	$ 1,483,331	$ 1,483,331	$ 1,483,331	$ 1,483,331
Daily Transient Rate Increase - to be determined	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Resident Permits	$ 75,420	$ 76,928	$ 78,467	$ 80,036	$ 81,637	$ 83,270	$ 84,935	$ 86,634	$ 88,366	$ 90,134	$ 91,936	$ 93,775
Park & Shop	$ 58,491	$ 59,661	$ 60,854	$ 62,071	$ 63,312	$ 64,579	$ 65,870	$ 67,188	$ 68,531	$ 69,902	$ 71,300	$ 72,726
Other Sources	$ 155,605	$ 158,718	$ 161,892	$ 165,130	$ 168,432	$ 171,801	$ 175,237	$ 178,742	$ 182,317	$ 185,963	$ 189,682	$ 193,476
TOTAL EXISTING REVENUE	**$ 5,824,575**	**$ 5,849,577**	**$ 5,875,079**	**$ 5,901,092**	**$ 5,927,624**	**$ 5,954,687**	**$ 5,982,292**	**$ 6,010,449**	**$ 6,216,648**	**$ 6,245,942**	**$ 6,275,822**	**$ 6,306,300**
New Revenue Sources												
New Street Parking Garage	$ 287,120	$ 324,876	$ 326,923	$ 329,012	$ 331,143	$ 333,316	$ 335,533	$ 337,794	$ 340,100	$ 342,453	$ 344,852	$ 347,300
TOTAL SYSTEM-WIDE FORECASTED REVENUE	**$ 6,111,695**	**$ 6,174,453**	**$ 6,202,003**	**$ 6,230,104**	**$ 6,258,767**	**$ 6,288,004**	**$ 6,317,825**	**$ 6,348,243**	**$ 6,556,748**	**$ 6,588,395**	**$ 6,620,674**	**$ 6,653,599**
Existing Expenses												
Salaries	$ 1,570,742	$ 1,617,842	$ 1,666,368	$ 1,716,218	$ 1,767,302	$ 1,819,865	$ 1,873,919	$ 1,929,652	$ 1,986,903	$ 2,045,732	$ 2,106,306	$ 2,168,605
Health Benefits	$ 468,726	$ 482,787	$ 497,271	$ 512,188	$ 527,553	$ 543,382	$ 559,681	$ 576,472	$ 593,765	$ 611,579	$ 629,927	$ 648,825
Pension	$ 314,625	$ 320,918	$ 327,336	$ 333,883	$ 340,561	$ 347,372	$ 354,319	$ 361,406	$ 368,634	$ 376,007	$ 383,527	$ 391,197
FICA	$ 120,162	$ 123,765	$ 127,477	$ 131,291	$ 135,199	$ 139,220	$ 143,355	$ 147,618	$ 151,998	$ 156,498	$ 161,132	$ 165,898
Life/Valic/Unemployment	$ 40,618	$ 41,430	$ 42,259	$ 43,104	$ 43,966	$ 44,846	$ 45,742	$ 46,657	$ 47,590	$ 48,542	$ 49,513	$ 50,503
Total Salaries & Benefits	**$ 2,514,874**	**$ 2,586,742**	**$ 2,660,712**	**$ 2,736,684**	**$ 2,814,581**	**$ 2,894,684**	**$ 2,977,017**	**$ 3,061,805**	**$ 3,148,891**	**$ 3,238,358**	**$ 3,330,405**	**$ 3,425,028**
Operating Expenses	**$ 1,095,160**	**$ 1,117,057**	**$ 1,139,391**	**$ 1,162,173**	**$ 1,185,410**	**$ 1,209,112**	**$ 1,233,288**	**$ 1,257,947**	**$ 1,283,100**	**$ 1,308,755**	**$ 1,334,924**	**$ 1,361,616**
TOTAL EXISTING EXPENSES	**$ 3,610,033**	**$ 3,703,798**	**$ 3,800,103**	**$ 3,898,857**	**$ 3,999,991**	**$ 4,103,796**	**$ 4,210,304**	**$ 4,319,753**	**$ 4,431,990**	**$ 4,547,114**	**$ 4,665,329**	**$ 4,786,645**
New Expenses												
Capital Improvement Fund	$ 100,000	$ 100,000	$ 100,000	$ 100,000	$ 100,000	$ 100,000	$ 100,000	$ 100,000	$ 100,000	$ 100,000	$ 100,000	$ 100,000
New Street Parking Garage O&M	$ 197,190	$ 201,134	$ 205,157	$ 209,260	$ 213,445	$ 217,714	$ 222,068	$ 226,510	$ 231,040	$ 235,661	$ 240,374	$ 245,181
TOTAL NEW EXPENSES	**$ 297,190**	**$ 301,134**	**$ 305,157**	**$ 309,260**	**$ 313,445**	**$ 317,714**	**$ 322,068**	**$ 326,510**	**$ 331,040**	**$ 335,661**	**$ 340,374**	**$ 345,181**
TOTAL SYSTEM-WIDE FORECASTED EXPENSES	**$ 3,907,224**	**$ 4,004,933**	**$ 4,105,260**	**$ 4,208,117**	**$ 4,313,436**	**$ 4,421,510**	**$ 4,532,373**	**$ 4,646,262**	**$ 4,763,030**	**$ 4,882,774**	**$ 5,005,703**	**$ 5,131,826**
BPA Debt Service Obligations												
Existing Debt Service	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Series A of 2015 Bonds (Taxable)	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Series B of 2015 Bonds	$ 741,081	$ 741,281	$ 745,881	$ 598,850	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
New Street Parking Garage (NEW)	$ 1,156,267	$ 1,158,279	$ 1,158,609	$ 1,157,218	$ 1,159,070	$ 1,158,842	$ 1,161,694	$ 1,157,314	$ 1,155,963	$ 1,157,326	$ 1,156,084	$ 1,159,728
Deferred Capital Repairs (NEW)	$ 570,352	$ 567,807	$ 569,407	$ 570,022	$ 569,582	$ 568,128	$ 570,709	$ 567,075	$ 567,424	$ 566,589	$ 569,593	$ 571,180
TOTAL DEBT SERVICE	**$ 2,467,699**	**$ 2,467,366**	**$ 2,473,896**	**$ 2,326,090**	**$ 1,728,652**	**$ 1,726,970**	**$ 1,732,402**	**$ 1,724,389**	**$ 1,723,387**	**$ 1,723,915**	**$ 1,725,677**	**$ 1,730,907**
SYSTEM-WIDE FORECASTED ANNUAL NOI	**$ (263,228)**	**$ (297,846)**	**$ (377,153)**	**$ (304,103)**	**$ 216,680**	**$ 139,524**	**$ 53,050**	**$ (22,408)**	**$ 70,332**	**$ (18,294)**	**$ (110,705)**	**$ (209,134)**
BPA Cumulative Cash Reserves	$ 699,724	$ 376,878	$ (25,276)	$ (354,378)	$ (162,699)	$ (48,175)	$ (20,125)	$ (67,533)	$ (22,201)	$ (65,495)	$ (201,200)	$ (435,334)
City Mechanic Cost	$ 25,000	$ 25,000	$ 25,000	$ 25,000	$ 25,000	$ 25,000	$ 25,000	$ 25,000	$ 25,000	$ 25,000	$ 25,000	$ 25,000
Transfer to City of Bethlehem	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
BPA AVAILABLE OPERATING INCOME	**$ 674,724**	**$ 351,878**	**$ (50,276)**	**$ (379,378)**	**$ (187,699)**	**$ (73,175)**	**$ (45,125)**	**$ (92,533)**	**$ (47,201)**	**$ (90,495)**	**$ (226,200)**	**$ (460,334)**

Table 9 – Forecasted System-Wide Summary of Revenues & Expenses

Parking Demand & Feasibility Study
Bethlehem Parking Authority
Forecasted System-Wide Summary of Revenues & E›

	Forecasted 2039	Forecasted 2040	Forecasted 2041	Forecasted 2042	Forecasted 2043	Forecasted 2044	Forecasted 2045
Existing Revenue Sources							
Parking Garages	$ 2,555,010	$ 2,572,076	$ 2,589,484	$ 2,607,239	$ 2,625,350	$ 2,643,824	$ 2,928,886
Parking Lots	$ 297,540	$ 297,540	$ 297,540	$ 297,540	$ 297,540	$ 297,540	$ 297,540
Parking Violations	$ 1,269,381	$ 1,269,381	$ 1,269,381	$ 1,269,381	$ 1,269,381	$ 1,269,381	$ 1,269,381
Special Events	$ 364,949	$ 372,248	$ 379,693	$ 387,287	$ 395,033	$ 402,933	$ 410,992
Parking Meters	$ 1,483,331	$ 1,483,331	$ 1,483,331	$ 1,483,331	$ 1,483,331	$ 1,483,331	$ 1,483,331
Daily Transient Rate Increase - to be determined	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Resident Permits	$ 95,651	$ 97,564	$ 99,515	$ 101,505	$ 103,535	$ 105,606	$ 107,718
Park & Shop	$ 74,180	$ 75,664	$ 77,177	$ 78,721	$ 80,295	$ 81,901	$ 83,539
Other Sources	$ 197,345	$ 201,292	$ 205,318	$ 209,424	$ 213,613	$ 217,885	$ 222,243
TOTAL EXISTING REVENUE	**$ 6,337,387**	**$ 6,369,096**	**$ 6,401,439**	**$ 6,434,429**	**$ 6,468,078**	**$ 6,502,401**	**$ 6,803,630**
New Revenue Sources							
New Street Parking Garage	$ 349,796	$ 352,342	$ 354,940	$ 357,589	$ 360,291	$ 363,047	$ 365,858
TOTAL SYSTEM-WIDE FORECASTED REVENUE	**$ 6,687,183**	**$ 6,721,438**	**$ 6,756,378**	**$ 6,792,017**	**$ 6,828,369**	**$ 6,865,448**	**$ 7,169,489**
Existing Expenses							
Salaries	$ 2,232,825	$ 2,298,728	$ 2,366,471	$ 2,436,213	$ 2,507,910	$ 2,581,832	$ 2,657,980
Health Benefits	$ 668,290	$ 688,340	$ 708,989	$ 730,259	$ 752,168	$ 774,734	$ 797,974
Pension	$ 399,021	$ 407,002	$ 415,142	$ 423,444	$ 431,913	$ 440,552	$ 449,363
FICA	$ 170,811	$ 175,853	$ 181,035	$ 186,370	$ 191,855	$ 197,510	$ 203,335
Life/Valic/Unemployment	$ 51,513	$ 52,544	$ 53,595	$ 54,666	$ 55,760	$ 56,875	$ 58,012
Total Salaries & Benefits	**$ 3,522,461**	**$ 3,622,466**	**$ 3,725,231**	**$ 3,830,953**	**$ 3,939,606**	**$ 4,051,502**	**$ 4,166,664**
Operating Expenses	**$ 1,388,842**	**$ 1,416,613**	**$ 1,444,939**	**$ 1,473,831**	**$ 1,503,301**	**$ 1,533,361**	**$ 1,564,022**
TOTAL EXISTING EXPENSES	**$ 4,911,303**	**$ 5,039,079**	**$ 5,170,170**	**$ 5,304,784**	**$ 5,442,907**	**$ 5,584,863**	**$ 5,730,686**
New Expenses							
Capital Improvement Fund	$ 100,000	$ 100,000	$ 100,000	$ 100,000	$ 100,000	$ 100,000	$ 100,000
New Street Parking Garage O&M	$ 250,085	$ 255,087	$ 260,188	$ 265,392	$ 270,700	$ 276,114	$ 281,636
TOTAL NEW EXPENSES	**$ 350,085**	**$ 355,087**	**$ 360,188**	**$ 365,392**	**$ 370,700**	**$ 376,114**	**$ 381,636**
TOTAL SYSTEM-WIDE FORECASTED EXPENSES	**$ 5,261,388**	**$ 5,394,166**	**$ 5,530,358**	**$ 5,670,177**	**$ 5,813,607**	**$ 5,960,977**	**$ 6,112,323**
BPA Debt Service Obligations							
Existing Debt Service	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Series A of 2015 Bonds (Taxable)	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Series B of 2015 Bonds	$ -	$ -	$ -	$ -	$ -	$ -	$ -
New Street Parking Garage (NEW)	$ 1,156,027	$ 1,160,355	$ 1,157,278	$ 1,157,028	$ 1,159,338	$ 1,158,938	$ 1,160,913
Deferred Capital Repairs (NEW)	$ 571,324	$ -	$ -	$ -	$ -	$ -	$ -
TOTAL DEBT SERVICE	**$ 1,727,351**	**$ 1,160,355**	**$ 1,157,278**	**$ 1,157,028**	**$ 1,159,338**	**$ 1,158,938**	**$ 1,160,913**
SYSTEM-WIDE FORECASTED ANNUAL NOI	**$ (301,556)**	**$ 166,917**	**$ 68,742**	**$ (35,187)**	**$ (144,576)**	**$ (254,467)**	**$ (103,747)**
BPA Cumulative Cash Reserves	$ (761,890)	$ (619,972)	$ (576,230)	$ (636,417)	$ (805,993)	$ (1,085,460)	$ (1,214,207)
City Mechanic Cost	$ 25,000	$ 25,000	$ 25,000	$ 25,000	$ 25,000	$ 25,000	$ 25,000
Transfer to City of Bethlehem	$ -	$ -	$ -	$ -	$ -	$ -	$ -
BPA AVAILABLE OPERATING INCOME	**$ (786,890)**	**$ (644,972)**	**$ (601,230)**	**$ (661,417)**	**$ (830,993)**	**$ (1,110,460)**	**$ (1,239,207)**

Section V – Findings

This Report addressed the existing parking demands and the anticipated parking conditions after the completion of the foreseen development initiatives in the identified Southside study area within the City of Bethlehem. Subsequent tasks included an analysis of the financial feasibility and performance of the Bethlehem Parking Authority with added debt from the construction of the 626-space New Street Parking Garage. DESMAN, in conjunction with the Authority's Financial Advisor – Public Financial Management, Inc., prepared a financial analysis that combined the debt service, operating expenses and revenues associated with the development of the New Street Garage into the BPA's projected Operating Statement over the next 30-years, or the expected length of the revenue bond that will be issued for this garage.

The objective of this financial analysis was to determine whether or not the Bethlehem Parking Authority can be expected to generate enough system-wide revenue to be self-supported, meaning the system-wide revenues are sufficient to cover the BPA's expected operating expenses, capital expenditures and debt service obligations. . Based on these analyses it appears the Authority will operate with surplus revenues until 2029 if parking demands in the Study Area see no growth. Should the area continue to see redevelopment activity it is anticipated there would be a demand for additional public parking that would change the forecasts contained herein. Otherwise additional revenue sources will be needed such as parking rate increases and/or City of Bethlehem guarantees to cover the Authority's operational expenses and debt obligations.

APPENDIX

Off-Street Parking Inventory and Hourly Occupancy Counts

Map ID	Facility Name or Description	Location	Owner	Capacity	9:00 AM	Occ. %	10:00 AM	Occ. %	11:00 AM	Occ. %	12:00 PM	Occ. %	1:00 PM	Occ. %	2:00 PM	Occ. %	3:00 PM	Occ. %	4:00 PM	Occ. %	5:00 PM	Occ. %	6:00 PM	Occ. %	7:00 PM	Occ. %
A	Lehigh Riverport Parking Garage	11 W. Second Street	Bethlehem Parking Authority	**149**	43	29%	52	35%	48	32%	55	37%	49	33%	34	23%	37	25%	60	40%	65	44%	80	54%	72	48%
B	Broadway Street Lot	201 Broadway Street	Bethlehem Parking Authority	**22**	5	23%	6	27%	4	18%	4	18%	4	18%	4	18%	4	18%	3	14%	7	32%	4	18%	4	18%
C	West Third Street Lot	Third Street b/w Brodhead & New	Bethlehem Parking Authority	**30**	15	50%	13	43%	11	37%	12	40%	15	50%	13	43%	12	40%	12	40%	12	40%	15	50%	12	40%
D	New Street Bridge Lot	13 W. Third Street	Bethlehem Parking Authority	**17**	2	12%	3	18%	4	24%	11	65%	5	29%	6	35%	5	29%	8	47%	7	41%	9	53%	9	53%
E	Third Street Lot	24 E. Third Street	Bethlehem Parking Authority	**23**	6	26%	9	39%	14	61%	10	43%	8	35%	8	35%	11	48%	12	52%	12	52%	11	48%	12	52%
F	Graham Street Lot	327 S. New Street	Bethlehem Parking Authority	**38**	26	68%	27	71%	29	76%	27	71%	27	71%	28	74%	24	63%	25	66%	23	61%	15	39%	12	32%
G	Mechanic & Webster Lot	Mechanic b/w Adams & Webster	Bethlehem Parking Authority	**56**	9	16%	8	14%	11	20%	10	18%	12	21%	13	23%	17	30%	13	23%	13	23%	9	16%	10	18%
H	Third & Webster Lot	Corner of Webster & 3rd	Bethlehem Parking Authority	**15**	6	40%	6	40%	5	33%	8	53%	8	53%	9	60%	12	80%	10	67%	10	67%	12	80%	15	100%
I	Beneath Fahy Bridge	East of Lehigh Riverport Parking Garage	Bethlehem Parking Authority	**42**	0	0%	2	5%	2	5%	2	5%	0	0%	2	5%	0	0%	0	0%	0	0%	8	19%	7	17%
Total Off-Street Parking Inventory and Occupancy				**392**	**112**	**29%**	**126**	**32%**	**128**	**33%**	**139**	**35%**	**128**	**33%**	**117**	**30%**	**122**	**31%**	**143**	**36%**	**149**	**38%**	**163**	**42%**	**153**	**39%**

Source: DESMAN

On-Street Parking Inventory and Hourly Occupancy Counts

Street	Between	Side of Street	# of Spaces	9:00 AM	Occ. %	10:00 AM	Occ. %	11:00 AM	Occ. %	12:00 PM	Occ. %	1:00 PM	Occ. %	2:00 PM	Occ. %	3:00 PM	Occ. %	4:00 PM	Occ. %	5:00 PM	Occ. %	6:00 PM	Occ. %	7:00 PM	Occ. %
Union Station	Union Station Place & W. 2nd St.	East	7	1	14%	0	0%	0	0%	1	14%	0	0%	0	0%	0	0%	0	0%	0	0%	0	0%	0	0%
W. 2nd St.	Union Station Place & S. New St.	North	16	0	0%	0	0%	0	0%	0	0%	0	0%	1	6%	0	0%	3	19%	0	0%	4	25%	5	31%
E. 3rd St.	S. New St. & Adams St.	North	4	0	0%	4	100%	3	75%	4	100%	4	100%	4	100%	4	100%	3	75%	1	25%	4	100%	4	100%
E. 3rd St.	S. New St. & Adams St.	South	5	0	0%	3	60%	2	40%	4	80%	3	60%	5	100%	4	80%	4	80%	3	60%	4	80%	1	20%
E. 3rd St.	Adams St. & Webster St.	North	12	1	8%	4	33%	4	33%	6	50%	6	50%	6	50%	4	33%	4	33%	5	42%	5	42%	4	33%
E. 3rd St.	Adams St. & Webster St.	South	7	0	0%	3	43%	2	29%	1	14%	4	57%	2	29%	4	57%	4	57%	6	86%	5	71%	4	57%
Adams St.	Columbia St. & E. 3rd St.	East	4	1	25%	4	100%	2	50%	2	50%	4	100%	3	75%	3	75%	4	100%	3	75%	3	75%	2	50%
Adams St.	Columbia St. & E. 3rd St.	West	4	2	50%	1	25%	2	50%	1	25%	4	100%	1	25%	3	75%	2	50%	3	75%	0	0%	0	0%
Adams St.	E. 3rd St. & Mechanic	East	3	0	0%	0	0%	0	0%	0	0%	0	0%	0	0%	0	0%	0	0%	0	0%	0	0%	1	33%
Adams St.	The Greenway & E. 4th St.	East	4	3	75%	0	0%	6	150%	4	100%	4	100%	4	100%	4	100%	4	100%	4	100%	4	100%	4	100%
Adams St.	The Greenway & E. 4th St.	West	3	3	100%	3	100%	3	100%	3	100%	3	100%	3	100%	3	100%	3	100%	3	100%	3	100%	3	100%
Adams St.	E. 4th St. & E. Morton St.	East	7	7	100%	7	100%	7	100%	6	86%	6	86%	6	86%	7	100%	7	100%	5	71%	5	71%	7	100%
Adams St.	E. 4th St. & E. Morton St.	West	1	1	100%	1	100%	1	100%	0	0%	0	0%	1	100%	1	100%	1	100%	1	100%	1	100%	1	100%
Mechanic St.	S. New St. & Adams St.	North	11	1	9%	2	18%	2	18%	4	36%	3	27%	1	9%	0	0%	0	0%	0	0%	0	0%	3	27%
Mechanic St.	Adams St. & Webster St.	North	6	1	17%	3	50%	1	17%	1	17%	1	17%	1	17%	0	0%	5	83%	6	100%	4	67%	1	17%
Webster St.	W. Packer Ave. & E. Morton St.	West	14	3	21%	9	64%	13	93%	5	36%	8	57%	9	64%	9	64%	1	7%	0	0%	1	7%	2	14%
Webster St.	E. Morton St. & E. 4th St.	West	4	1	25%	4	100%	4	100%	4	100%	4	100%	3	75%	1	25%	0	0%	2	50%	0	0%	0	0%
Webster St.	E. 3rd St. & Mechanic St.	West	6	0	0%	2	33%	0	0%	0	0%	0	0%	1	17%	0	0%	1	17%	1	17%	1	17%	1	17%
Montclair Ave.	Cress St. & Broadway St.	East	3	0	0%	0	0%	0	0%	1	33%	0	0%	0	0%	0	0%	0	0%	0	0%	0	0%	0	0%
Montclair Ave.	Cress St. & Broadway St.	West	3	0	0%	0	0%	0	0%	0	0%	0	0%	0	0%	0	0%	0	0%	0	0%	0	0%	0	0%
Broadway St.	E. 4th St. to the Southwest	North	5	2	40%	0	0%	4	80%	3	60%	2	40%	3	60%	1	20%	2	40%	2	40%	2	40%	2	40%
Broadway St.	E. 4th St. to the Southwest	South	4	0	0%	2	50%	0	0%	1	25%	0	0%	1	25%	0	0%	0	0%	0	0%	1	25%	1	25%
Broadway St.	E. 4th St. & Brodhead Ave.	North	6	2	33%	5	83%	1	17%	4	67%	3	50%	2	33%	0	0%	2	33%	2	33%	2	33%	1	17%
Broadway St.	E. 4th St. & Brodhead Ave.	South	5	4	80%	3	60%	3	60%	1	20%	1	20%	3	60%	5	100%	5	100%	5	100%	5	100%	2	40%
Brodhead Ave.	E. 4th St. & W. Packer Ave.	West	32	0	0%	0	0%	3	9%	1	3%	3	9%	1	3%	3	9%	1	3%	1	3%	0	0%	0	0%
Brodhead Ave.	E. 4th St. & E. Morton St.	East	6	0	0%	0	0%	0	0%	0	0%	1	17%	1	17%	0	0%	0	0%	2	33%	0	0%	2	33%
Brodhead Ave.	E. Morton St. & W. Packer Ave.	East	16	0	0%	0	0%	0	0%	0	0%	2	13%	1	6%	1	6%	2	13%	3	19%	0	0%	1	6%
W. Packer Ave.	Brodhead Ave. & Vine St.	North	11	0	0%	2	18%	2	18%	1	9%	2	18%	2	18%	2	18%	2	18%	1	9%	1	9%	1	9%
W. Packer Ave.	Vine St. & Webster St.	North	34	19	56%	29	85%	29	85%	28	82%	29	85%	28	82%	30	88%	15	44%	11	32%	5	15%	5	15%
W. Packer Ave.	Brodhead Ave. & Webster St.	South	40	11	28%	30	75%	28	70%	19	48%	35	88%	35	88%	30	75%	26	65%	26	65%	7	18%	8	20%
E. Morton St.	Brodhead Ave. & Mariel St.	North	5	1	20%	1	20%	1	20%	1	20%	2	40%	3	60%	0	0%	1	20%	0	0%	5	100%	5	100%
E. Morton St.	Mariel St. & Vine St.	North	5	2	40%	1	20%	2	40%	2	40%	3	60%	3	60%	0	0%	2	40%	0	0%	3	60%	4	80%
E. Morton St.	Brodhead Ave. & Vine St.	South	5	0	0%	0	0%	0	0%	0	0%	0	0%	2	40%	0	0%	2	40%	0	0%	4	80%	4	80%
E. Morton St.	Vine St. & S. New St.	North	8	6	75%	8	100%	8	100%	8	100%	8	100%	8	100%	8	100%	6	75%	6	75%	8	100%	8	100%
E. Morton St.	Vine St. & S. New St.	South	6	3	50%	2	33%	3	50%	4	67%	4	67%	1	17%	5	83%	3	50%	6	100%	3	50%	3	50%
E. Morton St.	S. New St. & Adams St.	North	13	2	15%	7	54%	8	62%	5	38%	4	31%	4	31%	11	85%	5	38%	5	38%	6	46%	9	69%
E. Morton St.	S. New St. & Adams St.	South	11	1	9%	3	27%	3	27%	5	45%	5	45%	2	18%	6	55%	5	45%	2	18%	3	27%	4	36%
E. Morton St.	Adams St. & Webster St.	North	7	6	86%	5	71%	6	86%	6	86%	6	86%	6	86%	7	100%	6	86%	6	86%	6	86%	6	86%
E. Morton St.	Adams St. & Webster St.	South	14	1	7%	1	7%	5	36%	3	21%	1	7%	2	14%	9	64%	1	7%	1	7%	1	7%	4	29%
E. 4th St.	Birkel Ave. & Brodhead Ave.	South	2	1	50%	0	0%	0	0%	0	0%	2	100%	1	50%	0	0%	1	50%	1	50%	0	0%	0	0%
E. 4th St.	Brodhead Ave. & Vine St.	North	13	3	23%	6	46%	6	46%	10	77%	8	62%	4	31%	4	31%	6	46%	6	46%	7	54%	11	85%
E. 4th St.	Brodhead Ave. & Mariel St.	South	8	2	25%	5	63%	5	63%	5	63%	6	75%	3	38%	5	63%	4	50%	4	50%	7	88%	3	38%
E. 4th St.	Mariel St. & Vine St.	South	5	1	20%	1	20%	3	60%	3	60%	5	100%	2	40%	0	0%	0	0%	0	0%	3	60%	2	40%
E. 4th St.	Vine St. & S. New St.	North	8	5	63%	5	63%	8	100%	6	75%	7	88%	5	63%	2	25%	2	25%	6	75%	5	63%	4	50%
E. 4th St.	Vine St. & S. New St.	South	10	1	10%	8	80%	3	30%	7	70%	8	80%	8	80%	4	40%	5	50%	7	70%	6	60%	7	70%
E. 4th St.	S. New St. & Adams St.	North	8	4	50%	3	38%	3	38%	4	50%	4	50%	2	25%	4	50%	3	38%	3	38%	5	63%	7	88%
E. 4th St.	S. New St. & Adams St.	South	8	4	50%	2	25%	2	25%	4	50%	4	50%	4	50%	3	38%	7	88%	8	100%	7	88%	6	75%
S. New St.	E. 3rd St. & The Greenway	West	3	1	33%	1	33%	1	33%	2	67%	1	33%	1	33%	1	33%	0	0%	1	33%	0	0%	2	67%
S. New St.	W. Graham Pl. & E. 4th St.	East	7	0	0%	0	0%	5	71%	5	71%	5	71%	4	57%	5	71%	3	43%	5	71%	3	43%	4	57%
S. New St.	W. Graham Pl. & E. 4th St.	West	6	1	17%	1	17%	4	67%	4	67%	4	67%	1	17%	2	33%	4	67%	6	100%	2	33%	4	67%
S. New St.	E. 4th St. & E. Morton St.	East	4	3	75%	3	75%	5	125%	4	100%	4	100%	4	100%	3	75%	4	100%	3	75%	4	100%	4	100%
S. New St.	E. 4th St. & E. Morton St.	West	5	0	0%	3	60%	5	100%	5	100%	3	60%	3	60%	4	80%	4	80%	3	60%	3	60%	4	80%
Vine St.	Rink St. & E. 4th St.	West	3	0	0%	3	100%	3	100%	3	100%	3	100%	3	100%	3	100%	3	100%	3	100%	3	100%	3	100%
Vine St.	E. 4th St. & E. Morton St.	East	6	6	100%	5	83%	5	83%	5	83%	5	83%	5	83%	4	67%	5	83%	6	100%	6	100%	6	100%
Vine St.	E. 4th St. & E. Morton St.	West	12	11	92%	10	83%	11	92%	12	100%	10	83%	8	67%	10	83%	9	75%	9	75%	11	92%	11	92%
Vine St.	E. Morton St. & Asa Dr.	East	7	0	0%	1	14%	1	14%	2	29%	0	0%	2	29%	3	43%	2	29%	2	29%	1	14%	1	14%
Vine St.	Asa Dr. & W. Packer Ave.	East	14	10	71%	7	50%	12	86%	10	71%	10	71%	12	86%	11	79%	6	43%	7	50%	5	36%	7	50%
Vine St.	E. Morton St. & W. Packer Ave.	West	13	2	15%	3	23%	10	77%	9	69%	8	62%	8	62%	4	31%	6	46%	5	38%	4	31%	6	46%
Mariel St.	E. 4th St. & E. Morton St.	West	3	3	100%	3	100%	2	67%	1	33%	2	67%	1	33%	0	0%	2	67%	3	100%	2	67%	1	33%
Total On-Street Parking Inventory and Occupancy			**502**	**143**	**28%**	**219**	**44%**	**252**	**50%**	**240**	**48%**	**264**	**53%**	**240**	**48%**	**237**	**47%**	**208**	**41%**	**210**	**42%**	**190**	**38%**	**206**	**41%**

Source: DESMAN