PARKING SYSTEM REVIEW
&
EVALUATION

CITY OF SUMMIT, NJ

NOVEMBER 2016

LEVEL G ASSOCIATES, LLC

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continued….

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LIST OF APPENDICES

1. INTRODUCTION

The City of Summit has engaged Level G Associates, parking consultants, for the purpose of reviewing and evaluating parking in the City of Summit. This report summarizes our findings and conclusions and provides estimates of the financial performance of the municipal parking system over the next 20 years given certain operational parameters.

Background

Like many cities and towns with active and successful downtown business districts, the City of Summit struggles with balancing the diverse parking needs of its residents, commuters, workforce, downtown shoppers / visitors, and the business community. In response to this the City has undertaken a number of parking studies and implemented a number parking programs and policies designed to address these needs.

Purpose and Scope of Report

The purpose of this assignment is to review previously prepared reports, review regulations and programs of the municipal parking system, conduct evaluations, and render our findings and conclusions. This has been accomplished via completion of the following scope of work:

1. Review previously submitted reports and documents pertaining to parking, traffic, circulation, or economic development in downtown Summit;
2. Conduct occupancy counts of the City's off-street parking facilities and on-street meters at 8AM, 10AM, 12 Noon, 2PM, 4PM, 6PM, 8PM and 10PM on a typical weekday and typical Saturday;
3. Review and evaluate the City's parking policies, regulations and programs to determine their effectiveness in meeting the unique parking requirements of downtown Summit;
4. Evaluate regulatory ordinances, standards and laws concerning parking and determine how they can be consistent, and whether or not they are consistent, with best parking management practices;
5. Evaluate established rates, such as at the De Forest lots and their use for long term parking, and make recommendations based upon current or future parking demand. The forecasting of rates will be incorporated into broader financial projections;
6. Evaluate the potential impacts of evolving technologies such as self-driving cars on future parking supply and demand;

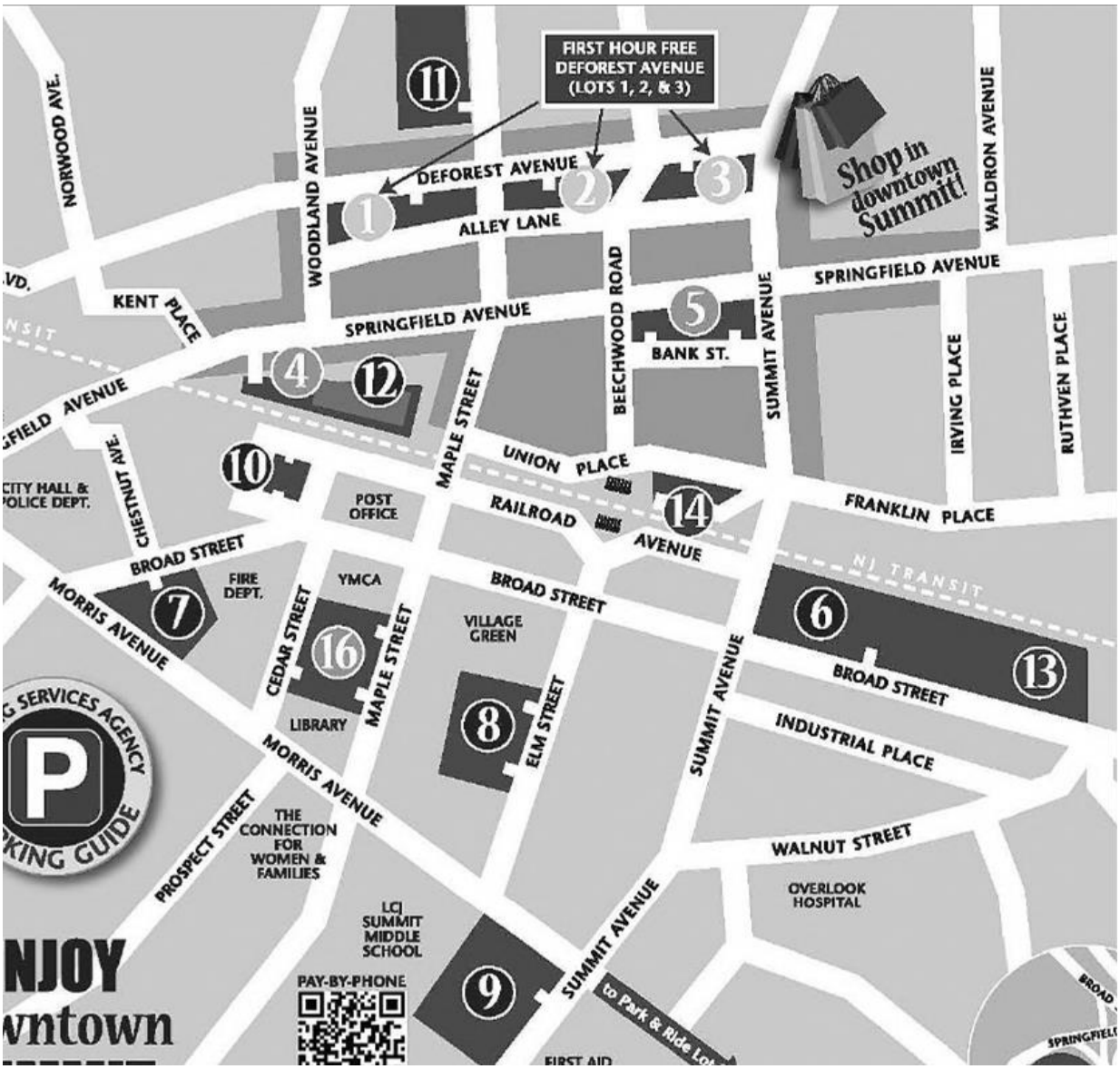
7. Evaluate the useful life of parking structures based on available information, including tiered garages, and recommend optimal uses for the parking structures;
8. Review current rates and determine a 20-year plan of rate structures to meet current and future expenditures and capital projects;
9. Describe recent parking system upgrades, programs, developments, or projects / proposals and provide an estimation of their economic impacts on the parking system;
10. Preparation of a 20 year pro forma detailing the projected performance of the municipal parking system using generally acceptable accounting principles and taking into account a series of assumptions consistent with recommendations and/or industry standards.

Please refer to Figure 1, next page, for a map depicting the Summit parking system.

Acknowledgements

We are indebted to Mr. Michael Rogers and Ms. Rita Mc Nany for providing insight and background information that were essential to the preparation of this report.

FIGURE 1 – SUMMIT MUNICIPAL PARKING SYSTEM



2. DOCUMENT REVIEW

We reviewed numerous documents supplied by the city including but not limited to; parking inventory, parking ordinances, parking resolutions, financial reports, parking garage condition surveys, and others. In addition, we reviewed four studies that were prepared within the past seven years. They are:

Title: Downtown Improvement Plan / Parking Analysis & Recommendations
By: Burgis Associates
Year: 2014

Title: Parking Expansion Studies
By: Desman Associates
Years: 2010 and 2015

Title: Downtown Parking Assessment Study
By: Desman Associates
Year: 2009

Table 1A and 1B, shown on the following two pages, summarize the findings and recommendations included in these reports. A synopsis of the key findings and takeaways of these reports is provided below.

Parking Space Deficit - After augmenting and adjusting key figures developed in previous reports the Desman (2009) report estimates a downtown parking deficit of about 450 parking spaces and the Burgis report estimates a downtown parking deficit of about 500 spaces. Based on our occupancy counts and observations of parking conditions in downtown Summit we believe these estimates are accurate if the City wishes to maintain a business environment that will attract new investment and development in the downtown district. If the city wanted to simply fix the current parking deficit without creating an environment that will support any growth or attract new investment we believe a parking program that adds 225 to 250 spaces would suffice.

Using parking inventory provided by the city plus estimates developed by Desman, Burgis and the Institute of Transportation Engineers the following parking supply / demand summary is estimated for downtown Summit:

TABLE 1A
SUMMARY OF PAST PARKING REPORTS
DESMAN ASSOCIATES / 2009 & 2010

<table>
<tr><th>REPORT</th><th colspan="2">PRIMARY CONCLUSIONS / RECOMMENDATIONS</th><th>COMMENTS / TAKEAWAYS</th></tr>
<tr><td rowspan="8">DESMAN - 2009</td><td>Estimated parking deficit =
Needed to achieve 15% vacancy
Impact of Development
Impact of FAR increase
Commuter shortage
TOTAL</td><td>
60
292
109
136
597</td><td>The estimated deficit is 446 when the loss of 157 spaces in K-Lot is removed</td></tr>
<tr><td>Recommended On-Street Meter Regs</td><td>2 hr limit
M-F / 8a-8p
Sat / 9a-8p</td><td>Not implemented per SPAC / City Council</td></tr>
<tr><td>Increase Parking Enforcement Staff</td><td>3FT to 5FT</td><td>Current total of 2FT and 2PT</td></tr>
<tr><td>After De Forest Lots gates are installed increase Springfield meters</td><td>50¢ to $1.00/HR</td><td>Not implemented</td></tr>
<tr><td>Increase OT parking fine</td><td>$21 to $25</td><td>Implemented</td></tr>
<tr><td>Replace permits / stickers with prox cards & multi-space meters (MSM)</td><td></td><td>MSM implemented; Prox cards not implemented per SPAC / City Council</td></tr>
<tr><td>Wayfinding sign system</td><td></td><td>Currently underway</td></tr>
<tr><td>Hire a FT Parking Administrator & FT Financial Analyst</td><td></td><td>Manager implemented; Bookkeeper implemented</td></tr>
<tr><td>DESMAN - 2010</td><td colspan="3">Analysis of 3 sites for parking deck development; includes functional plans

Summary of findings (Cost adjusted by Level G Associates)

<table>
<tr><th></th><th>Add Two (2) Levels To Tier Garage</th><th>Park & Rail Deck</th><th>PO Lot Garage (Scheme B)</th></tr>
<tr><td>Estimated Construction Cost (2010)</td><td>$4,900,000</td><td>$2,200,000</td><td>$9,600,000</td></tr>
<tr><td>Estimated Construction Cost (2017)</td><td>$5,782,000</td><td>$2,596,000</td><td>$11,328,000</td></tr>
<tr><td>Soft Costs at 20%</td><td>$1,156,400</td><td>$519,200</td><td>$2,265,600</td></tr>
<tr><td>Total Developmental Cost</td><td>$6,938,400</td><td>$3,115,200</td><td>$13,593,600</td></tr>
<tr><td>Net Parking Gain</td><td>160</td><td>27</td><td>296</td></tr>
<tr><td>Cost Per Net Space Gained</td><td>$43,365</td><td>$115,378</td><td>$45,924</td></tr>
</table>

Comments / Takeaways

The report does not consider lower cost but effective parking expansion strategies such as re-striping parking lots, adding angle parking on streets, or expanding existing parking lot footprints to lessen the burden of building expensive structured parking.</td></tr>
</table>

TABLE 1B
SUMMARY OF PAST PARKING REPORTS
BURGIS 2014 & DESMAN 2015

REPORT	PRIMARY CONCLUSIONS / RECOMMENDATIONS	COMMENTS / TAKEAWAYS
DESMAN - 2015	A summary of flat floor parking deck configurations on De Forest Lots 1, 2, and 3	Very limited scope. Does not explore sloping floor concepts or mixed use development potential of the various sites.
BURGIS - 2014	Part 1 - A reference book estimate of CBD parking demand utilizing factors published by Urban Land Institute and Institute of Transportation Engineers Calculated CBD parking demand summary: Employees 2089 Shoppers / Visitors 1171 TOTAL 3260 Parking Provided in Private Lots (824) Municipal supply needed (not including commuters) 2436	Estimated commuter demand: 0.21 cars per daily boarding = 0.21 x 3933 = 826 Burgis demand 2436 Commuter demand 826 Total Demand 3262 Municipal supply (2766) Re-Calculated Deficit 496
	Part 2 - General observations and recommendations Reduce Broad Street meter time limit 5HR to 3HR Reduce De Forest Street meter limit 5HR to 3HR Add 15 minutes "Express Park" meters on streets Increase De Forest Lots free parking threshold 30 min to 1HR Improve Lot identification, wayfinding signange, access routes, aethethics	 Not implemented Not implemented Implemented Implemented Planning Stages

	Parking Supply	Parking Demand	Surplus or (Deficit)
Employee / Commuter	1,719	2,346	(627)
Shopper / Visitor	1,047	877	170
Totals	2,766	3,223	(457)

Many of the conclusions and recommendations contained in this report regarding the current accommodation of local parking needs are based on this summary.

In addition to providing estimates of parking space deficits, the previous studies included a number of recommendations designed to improve parking conditions and / or the delivery of parking services. The following is a summary of these recommendations.

<u>Recommendations that have been IMPLEMENTED</u>

- Increase overtime parking fine from $21 to $25
- Replace Single-Space meters with Multi-Space meters in parking lots
- Hire a full time Parking Administrator
- Add 15 Minute limit "Express Park" meters on streets
- Increase De Forest Lots free parking threshold from 30 minutes to 60 minutes
- Hire a Financial Analyst / Bookkeeper
- Reduce Railroad Avenue time limits from 5-Hour to 3-Hour time limit

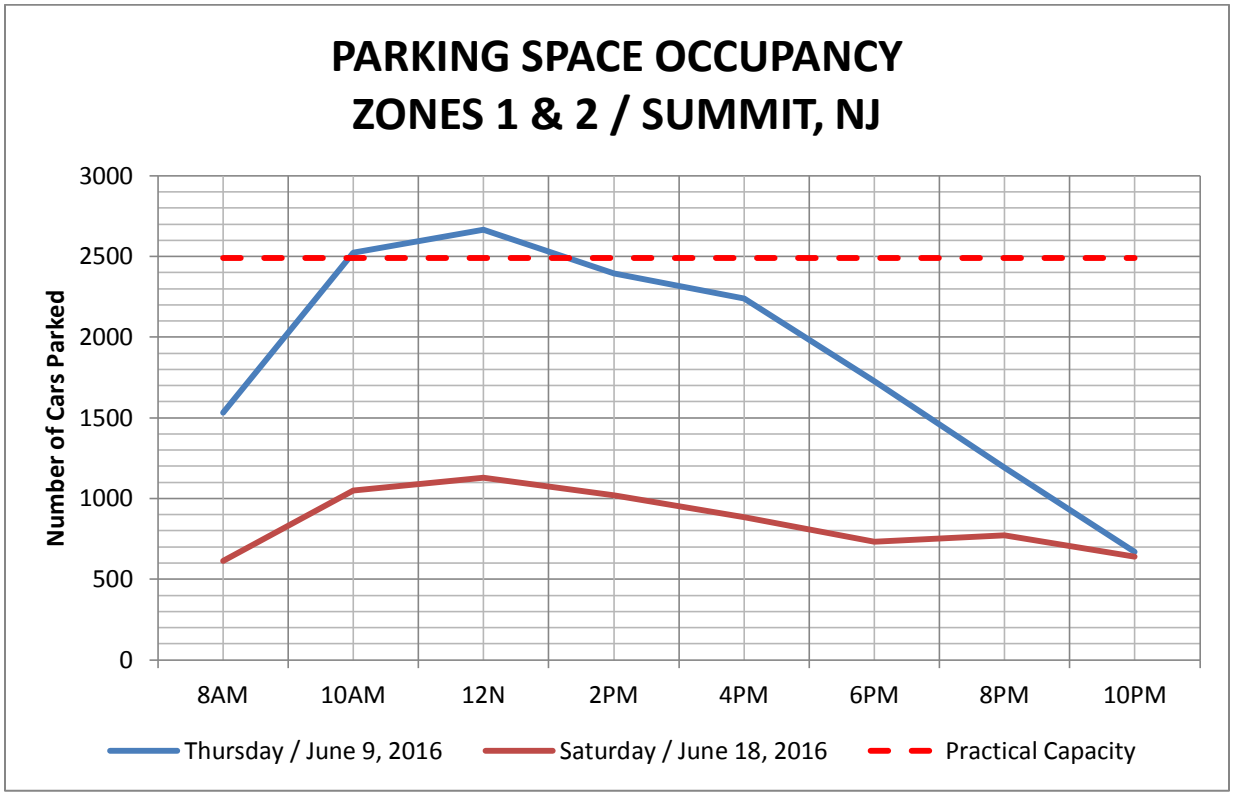
<u>Recommendations that have NOT been IMPLEMENTED</u>

- Implement a 2-Hour time limit for all on-street meters in the CBD
- Extend paid parking / enforcement operating hours from 6PM to 8PM
- Implement an AVI / Proximity Card system to control monthly parking
- Reduce Broad Street and De Forest Street time limits from 5-Hour to 3-Hour time limit

In 2012 the city formed the Summit Parking Advisory Committee (SPAC) to evaluate the Desman reports and develop their own recommendations. The SPAC effort resulted in the development of the current De Forest shopper lots, merchant validation program, and the parking "ambassador" program.

3. PARKING SPACE OCCUPANCY COUNTS

The parking consultant conducted occupancy counts of the city's off-street parking facilities and on-street meters in the central business district at 8AM, 10AM, 12 Noon, 2PM, 4PM, 6PM, 8PM and 10PM on Thursday June 9, 2016 (a typical weekday) and June 18, 2016 (a typical Saturday). The overall results of these counts are illustrated below.



The 90% parking space occupancy level is a significant threshold in parking program planning and design. Because of the constant in-flow and out-flow of vehicles, improperly parked vehicles and typical vacancies in handicap parking areas a parking supply can be reasonably expected to accommodate a "practical capacity" of about 90%.

As indicated, overall peak parking demand in downtown Summit occurs at 12 Noon on a typical weekday. At this time, 2,667 cars were parked in 2,766 parking spaces – an occupancy rate of 96.4%. This parking demand level (2,667) is 178 cars higher than the "practical capacity" of the parking supply (2,489).

For the purposes of analysis and useful comparison the parking study area was divided into two sections:

Zone 1: North of the railroad tracks – 1,267 total spaces
324 on-street spaces
943 off-street spaces

Zone 2: South of the railroad tracks – 1,499 total spaces
277 on-street spaces
1,222 off-street spaces

A complete set of tables that break down the occupancy counts on a ‘‘per zone’’, ‘‘per block side’’ and ‘‘per facility’’ basis is provided in Appendices A.1 through A.5. Some interesting parking patterns to be learned from the counts are listed below.

- On-street parking spaces in Zone 1 exhibited the highest occupancy levels in the CBD. At 12 noon on Thursday 6/9/16 there were 345 cars parked in 324 on-street spaces, an occupancy rate of 106.5%;

- Peak parking observations on Saturday also occurred at 12 noon but were significantly lower than the Thursday peak count (40.9% versus 96.4% overall occupancy);

- There is a significant occupancy decrease in 5-Hour limit meters in sections of Elm and Broad Streets in Zone 2 between 12 noon and 2pm. Over the same time period there is a 25.5% increase in parking occupancy in De Forest Lots 1 and 2;

- The evening (8PM) parking occupancy levels are 55.3% lower than the daytime (12N) peak on a weekday but only 31.7% lower than the daytime peak on a Saturday.

4. REVIEW OF PARKING REGULATIONS & POLICIES

The city maintains a wide variety of parking rules, regulations, restrictions, programs, and payment options. Many of these have been implemented to serve the needs of specific user groups such as:

- Downtown shoppers / visitors;
- Takeout / Other short duration parking activity;
- Downtown employees;
- Commuters;
- Summit residents; and
- Library / YMCA patrons.

Table 2A and 2B, next two pages, describe these regulations and policies for on-street parking (Table 2A) and off-street street parking facilities (Table 2B). These tables also include our observations as to whether or not each regulation or policy is meeting local needs and is consistent with industry best practices.

A number of these initiatives are not meeting local needs because parking demand exceeds the parking supply. Most of the initiatives are in alignment with industry best practice but a few are not. These are identified in the tables.

Table 3, page 13, is a matrix that summarizes parking programs, policies, and payment options at each municipal parking facility.

TABLE 2A
PARKING REGULATIONS & POLICIES

ON-STREET PARKING
CITY OF SUMMIT, NJ

Regulation	Capacity	Control	Rate	Rate (Hourly)	Description	Meeting Local Needs?	Consistent With Best Practice?
15 Minute Time Limit	26	SSM	25¢ = 15 min	$1.00	15 minute limit meters are placed in selected areas to accommodate "in and out" parking trips and promote parking space turnover.	Yes. These meters are very well utilized.	Yes
30 Minute Time Limit	7	SSM	25¢ = 30 min	50¢	30 minute limit meters are located along Railroad Avenue near the Post Office to accommodate typical customer transactions and promote parking space turnover.	Yes. These meters are very well utilized during typical Post Office peak periods.	Yes
90 Minute Time Limit	255	SSM	25¢ = 30 min	50¢	90 minute limit meters are located in the CBD core. Municipalities wisely employ a 90 minute time limit in areas where a 1 hour time limit is too short (not long enough for a sit down lunch) and a 2 hour limit is too long (invites meter feeding employees).	Yes. These meters are very well utilized.	Time Limit - Yes. Rate - No (should be = to or higher than convenient off-street spaces)
"Free" 15 minute limit button / 90 minute meters	Not Provided	SSM	N/A	N/A	Special pushbutton on 90 minute meters provide 15 minutes of free parking when pushed if meter time is at "0".	Yes.	Typically not seen where 15 minute "pay" meters are deployed in same area.
3 Hour Time Limit	57	SSM	25¢ = 30 min	50¢	3 hour limit meters are typically situated just outside of the CDB core to accommodate longer term parking trips such as business meetings or salon appointments.	Yes. These meters are very well utilized.	Time Limit - Yes. Rate - No (should be = to or higher than off-street)
5 Hour Time Limit	198	SSM	25¢ = 30 min	50¢	5 hour limit meters are seldom found on streets in a CBD setting as it is too short to accommodate an "all day" employee but too long to accommodate most shopper / visitor parking trips. They can easily accommodate local employees who move their car at lunch break.	No. Data suggests downtown employees are utilizing a number of these spaces in the morning then moving their cars to other areas after lunch.	No. Recommend converting selected spaces to longer term employee parking while changing a selection of 5HR meters to 3HR limit as suggested in the Burgis report. Coordinate with parkng deck and re-striping initiatives.
12 Hour Time Limit	30	SSM	25¢ = 30 min	50¢	12 hour limit meters are typically situated on the outskirts of the CBD or near rail stations to accommodate local CBD employee or commuter parking activity, respectively.	No. More long term meters are needed.	Yes
On-Street Permit Parking (Green Bags)	29	Bagged SSM / Bar Coded Stickers / Pre-Paid Parking	$4/day	Translates to about 45¢/HR for a 9 HR parking duration	Bagged spaces are for use only by vehicles with employee permit stickers that are available for $10. However, daily fees (currently $4 per day) apply.	No. Demand for these spaces will increase significantly if/when on-street meter rates are increased to $1.00/HR.	Yes.

TABLE 2B
PARKING REGULATIONS & POLICIES
OFF-STREET PARKING
CITY OF SUMMIT, NJ

Regulation / User Group(s)	Capacity	Control	Rate	Rate (Hourly)	Description	Meeting Local Needs?	Consistent With Best Practice?	Comments
Dedicated Employee Parking	665 in 4 separate facilities.	Bar Coded Stickers / Pay Stations	$4/day	Translates to about 45¢/HR for a 9 HR parking duration	Dedicated spaces are for use only by vehicles with employee permit stickers that are available for $10. However, daily fees (currently $4 per day) apply.	No. If Burgis estimates are correct there are 1,235 employees using the municipal parking supply.	Yes	Employee designation protects spaces that may otherwise be taken by early arriving commuters.
Shared Resident Commuter (Daily)/ Resident Commuter (Pre-Paid) / Employee (Daily) Parking	733 in 5 separate facilities.	Bar Coded Stickers / Pay Stations	$4/day	Translates to about 45¢/HR for employees (9HR parking duration) and 33¢/HR for commuters (12 HR parking duration)	Dedicated spaces are for use only by vehicles with employee permit stickers or resident commuter stickers that are available for $10. However, daily fees (currently $4 per day) apply. Summit Residents may also purchase "Pre-Paid" permits for $80/MO that allow them to park without using the Pay Station.	No. If Burgis and ITE estimates are correct there are 2,073 commuters & employees using the municipal parking supply.	Yes. The shared parking supply maximizes utilization and access.	
Public Parking / Shoppers / Visitors	389 in 5 separate facilities	Pay Stations	25¢ = 15 min	$1.00 Graduated rate structure in De Forest shopper lots.	Public parking available on a first come - first served basis. First hour is FREE in 282 of the 389 spaces in this category.	Yes. If Burgis and ITE estimates are correct there are only about 600 Shoppers / Visitors using the municipal parking supply during peak periods. The City features 1048 Shopper / Visitor oriented parking spaces*	Yes. Time limits and pricing structures discourage long term usage.	Maneuvering to ticket dispensors and readers in De Forest lots is difficult for some drivers & vehicles causing occasional back-ups. No reservoir capacity. Advantages: No ticketing or enforcment req'd.
Unrestricted Commuter Oriented	216 + Valet in 2 separate facilities	Pay Stations	$10/day	Translates to about 83¢/HR for commuters (12 HR parking duration)	Public parking available on a first come - first served basis.	No. Demand is significantly higher.	Pricing - Yes. Valet - Yes.	The expansion of this "high revenue" parking supply may help finance a new parking structure.
Library / YMCA Oriented	101 in 1 facility	Pay Stations	25¢ = 40 min	37.5¢	Short term public parking available on a first come - first served basis.	No. The facility exceeds 100% capacity at 10AM weekdays.	Time Limit - Yes. Pricing - No.	The cause and possible solutions to the 10AM parking problem should be examined / add parking in area?

** This suggests that most of the 5 Hour limit spaces plus a number of other spaces intended for Shoppers & Visitors are being utilized by downtown employees.*

TABLE 3
PARKING PAYMENT OPTIONS
CITY OF SUMMIT, NJ

Lot	Description	Cash	Credit Card	Smart Card	Park Mobile	1-Day Scratch Pass	Chaser Ticket	Corp Code	Pre-Paid Permit	Access Permit Req'd	Summit Residents Only	Employee Only	Shared Employee Resident	Overnite Resident Permit	Purchase Permit Online	First Hour Free	First 15 Min Free	Saturday Free
1	Park & Shop No. 1	•	•		•		•									•		
2	Park & Shop No. 2	•	•		•		•									•		
3	Park & Shop No. 3	•	•		•		•							•	•	•		
4	Tier Garage - Grade Level	•	•		•									•	•			
5	Bank Street Lot	•	•		•									•				
6	Broad Street Garage	•	•		•	•		•	•	•			•	•				•
7	Chestnut Avenue Lot	•	•		•	•		•	•	•			•	•	•			•
8	Elm Street Lot	•	•		•	•		•	•	•			•		•			•
9	Sampson Lot	•	•		•	•		•	•	•			•	•	•			•
10	Railroad Ave / PO Lot	•	•		•	•		•	•	•		•						•
11	Maple Street "K" Lot	•	•		•	•		•	•	•		•		•	•			•
12	Tier Garage - Upper Levels	•	•		•	•		•	•	•		•						•
13a	Broad Street East Lot - 120 Spaces	•	•		•													•
13b	Broad Street East - 60 Spaces	•	•		•			•	•	•	•		•		•			•
14	Park & Rail Lot	•	•		•													•
15	Bus Park & Ride Lot	•	•		•				•						•			
16	YMCA / Library Lot	•	•		•													
	On-Street Meters	•		•	•													
	On-Street Meters - 90 min	•		•	•												•	
	On-Street Meters - Bagged								•			•						

5. EVOLVING TRENDS & TECHNOLOGIES

The City of Summit is one of the national leaders in efforts to reduce local parking demand by offering subsidized rides by a transportation networking service, in this case Uber. The city recently approved a six month program where users would be charged $2 per ride, from points within the City of Summit, to and from the Summit Train Station. The resulting $4 round trip charge is identical to resident daily fees for parking at the train station and the hope is that regular resident commuters will utilize the new service rather than driving themselves and dealing with train station parking every day. If the program is successful, the city will subsidize up to 100 commuter round trips per day.

One of the primary goals of this "virtual parking garage" program is to reduce existing commuter parking demand by up to 100 cars per day. Until the program has been operational for several months it will not be possible to determine the actual impact.

There are a number of other trends identifiable today and expected to continue into the upcoming planning horizon that are expected to reduce future train station parking demand.

Bicycle Use & Programs - Bicycle use continues to increase for commuter trips to and from train stations further reducing commuter parking demand. This can be attributed to the significant construction of bike lanes and bike parking facilities that has occurred over the past decade, much due to federal and state funding programs that continue to be supported and authorized. The inset photo was taken at the Scarsdale (NY) train station by Level G Associates as part of a 2015 parking study.

Connected / Autonomous Vehicles – Uber's business model already includes a significant shift to driverless vehicles happening in 15 to 20 years. Bloomberg Business estimates that this technology will be significant enough to make a difference in the transportation economy by 2030 and will have a transformative effect by 2040. These driverless coaches are projected to be quite affordable and could easily make many "station cars" obsolete.

Retiring Baby Boomers - The United States Bureau of Labor Statistics predicts flat to weak employment growth nationwide averaging out to about 0.7% per year between 2020 and 2050 as waves of Baby Boomers retire and leave the workforce.

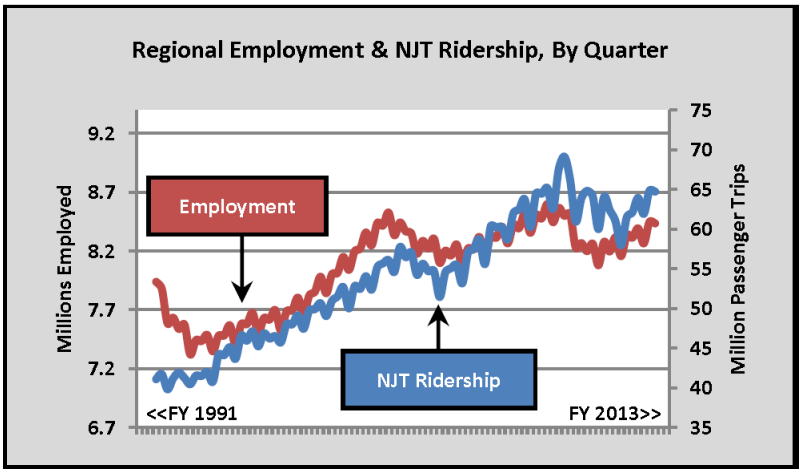
Millennial Generation – It is clear that Millennials are embracing the Sharing Economy and will continue to fuel the growth of companies like Lyft, Uber and Airbnb for years to come.

All the above trends are likely to impact parking facilities serving the Summit train station including the Broad Street Garage (491 spaces), Broad Street East Lot (180 spaces); Lot 7 (59 spaces); Lot 8 (123 spaces); Lot 9 (60 spaces); and Lot 14 (36 spaces).

Train Station Parking Demand

The Summit train station is the 10th busiest in New Jersey with average daily boardings (ADB) of 3,933 per day (source: NJ Transit). The Institute of Transportation Engineers' widely referenced publication "Parking Generation – 4th Edition" indicates an 85th percentile value for "Peak Parking Versus Daily Boardings" of 21% at light rail transit stations. A recent parking study by Level G Associates at the Morristown train station indicated a peak commuter parking factor of 19%. Therefore, it is estimated current commuter parking demand at the Summit train station is probably about 20% of average daily boardings or 787 spaces (3,933 ADB x 20% = 787).

The following graph is from a quarterly report of ridership trends published by NJ Transit in 2013. Based on this graph it is evident that there is a clear correlation between NJ Transit Ridership and regional employment.



The catchment area of the Summit train station is primarily located in Union County. Current employment projections prepared by the New Jersey Department of Labor indicate that

employment in Union County is projected to grow at an average rate of 0.8% per year between now and 2022.

Table 4, below, is a 30 year projection of Summit train station parking demand that attempts to quantify the impacts of regional employment growth, ‘‘virtual parking’’ / ridesharing, and autonomous vehicles.

TABLE 4 – PROJECTED COMMUTER PARKING DEMAND (CUMULATIVE) / SUMMIT, NJ

Year	Base (Exisiting) Demand	New Parking Demand From Regional Employment Growth (Constrained)	Net Parking Demand Reduction From "Virtual Parking"	Parking Demand Reduction From Autonomous Vehicles	Projected Train Station Parking Demand Total
2016	787	0	-10	0	777
2017	787	3	-25	0	765
2018	787	6	-45	0	748
2019	787	9	-47	0	749
2020	787	12	-50	0	749
2021	787	15	-52	0	750
2022	787	18	-55	0	750
2023	787	21	-57	0	751
2024	787	24	-60	0	751
2025	787	27	-63	0	751
2026	787	30	-66	0	751
2027	787	33	-70	0	750
2028	787	36	-73	0	750
2029	787	39	-77	0	749
2030	787	42	-81	-5	743
2031	787	45	-75	-15	742
2032	787	48	-65	-30	740
2033	787	51	-50	-45	743
2034	787	54	-40	-60	741
2035	787	57	-35	-70	739
2036	787	60	-30	-80	737
2037	787	63	-30	-90	730
2038	787	66	-30	-100	723
2039	787	69	-30	-110	716
2040	787	72	-30	-120	709
2041	787	75	-30	-130	702
2042	787	78	-25	-140	700
2043	787	81	-25	-150	693
2044	787	84	-25	-160	686
2045	787	87	-25	-170	679
2046	787	90	-25	-180	672

As indicated, it is estimated that regional employment and transportation trends could reduce current train station parking demand from about 787 cars to 672 cars over the next 30 years.

There are currently 889 parking spaces in downtown Summit that can be used for commuter parking and it is likely this number will be reduced as the described trends begin to emerge. This phenomenon would have the beneficial effect of creating additional parking opportunities for downtown shoppers, employees and/or non-resident parkers.

6. REVIEW OF PARKING RATES

Normally, a review of downtown parking rates would include a discussion of how parking fees can be adjusted to alter unhealthy parking patterns in a business district. For example, in many business districts centrally located convenient parking spaces are filled to capacity with employee and shopper cars while less convenient perimeter parking spaces go unused because employees and other parkers have not been priced or enforced out of the convenient shopper spaces. However, the ability to accomplish these shifts through pricing or enforcement is limited in Summit because there are few available spaces, even on the perimeter, to accommodate the shift.

Therefore, if pricing strategies are employed to open up parking spaces in downtown Summit, the displaced users would either be shifted to private or remote parking areas and/or alternate modes of transportation such as ridesharing, carpooling, or the city's new "virtual parking garage" program.

Table 5, next page, compares parking rates in downtown Summit with parking rates in Westfield and Morristown. These municipalities were selected to illustrate various parking space management strategies. They are:

Westfield – Parking fees are virtually "flat" across the board for hourly and daily parking (50¢ per hour) on the streets and in the parking lots. Permits are limited to residents and downtown employees and there are waiting lists for both varieties. The on-street parking time limit is 2 hours in the CBD but there are a few 9-hour limit meters and permit spaces located on the fringes of the CBD for downtown employees. The CBD parking lots use pay stations and offer 4-hour limit parking to accommodate longer shopper and visitor trips but there some 9-hour limit spaces in two CBD lots. Train station lots are "permit parking" only and are shared by commuters and downtown employees. These permit holders do not pay a daily parking fee. Permit issuance is limited so permit holders can always find a space.

Morristown – Parking fees are higher on the streets ($1.00 per hour) than in the parking lots (50¢ per hour) for short term hourly parking. Short term parking in the 3 parking garages is $1.50 per hour. Many lots and garages offer both hourly and permit parking. Permit fees are custom priced based on location. With the exception of the train station lot, there is no distinction or price differential between resident or non-resident permits. The on-street parking time limit in the CBD is either 90 minutes or 2 hours but there are a few 18-hour limit meters located on one street near the train station. Most parking lots have pay stations and

TABLE 5

PARKING RATE COMPARISON / NJ COMMUNITIES

RATES AS OF SEPTEMBER 2016

	Summit	Westfield	Morristown
On-Street Meters			
15 minutes	$1.00 / Hr		
30 minutes	$0.50 / Hr		$1.00 / Hr
1 hour			$1.00 / Hr
90 minutes	$0.50 / Hr		$1.00 / Hr
2 hours		$0.50 / Hr	$1.00 / Hr
3 hours	$0.50 / Hr		
5 hours	$0.50 / Hr		
9 hours		$0.50 / Hr	
12 hours	$0.50 / Hr		
18 hours			$0.75 / Hr
On-Street Permits		$70 / Mo	
Shopper / Visitor Lots / Short Term			
Hourly Rate	$1.00	$0.50 / Hr	$0.50 / Hr
Special Lot / Short Term			
Hourly Rate (Library / YMCA)	$0.375		
Shopper / Visitor Lots / Long Term			
1st Hour	Free	$0.50 / Hr	$1.50 / Hr
1 Hour to 3 Hours			$1.50 / Hr
3 Hours to 8 Hours			$2.00 / Hr
1 Hour to 5 Hours	$1.00 / Hr		
5 Hours to 6 Hours	$5.00 / Hr		
6 Hours to 7 Hours	$2.00 / Hr		
7 Hours to 8 Hours	$8.00 / Hr		
8 Hours or more	$5.00 / Hr		$2.50 / Hr
Commuter Parking			
Resident Daily	$4.00	$5.00	$5.00
Resident Monthly	$80.00		$50.00
Resident Quarterly	$228.00		
Resident Semi-Annual		$420.00	
Resident Annual	$864.00	$696.00	
Non-Resident Daily	$10.00		$5.00
Non-Resident Monthly	$200.00		$85.00
Non-Resident Quarterly	$600.00		
Non-Resident Annual	$2,400.00		
Employee Parking			
Employee Daily	$4.00	$0.50 / Hr ($4.50 for 9 Hrs)	$0.50 / 1.5 Hr ($3.00 for 9 Hrs)
Off-Street Visitor Daily Parking Pass	$6.00		
Employee Monthly	$80.00		$35.00 to $100.00 / Mo Depending on Location
Employee Quarterly	$228.00		
Employee Semi-Annual		$420.00	
Employee Annual	$864.00	$696.00	

offer short term (3 hour limit) and long term (12 hour limit) parking although there are some smaller lots that only offer short term parking. The parking garages are gate controlled and transient (short term and long term) parkers "pull a ticket" at the entrance gate while permit holders use proximity cards to activate the gates. The transient fee is based on duration and is calculated upon exit. The train station lot has a permit area and a pay station area ($5/ day) and permit holders do not need to pay the meter. Permit issuance is limited so permit holders can always find a space.

Summit - Parking fees are lower on the streets (50¢ per hour) than in the parking lots ($1.00 per hour) for short term hourly parking. Long term transient parking is only available in the three shopper lots but is discouraged by use of an aggressive graduated fee structure ($2, $5, or $8 per hour). All other parking facilities are tightly controlled for use by downtown employees or commuters who must purchase a pre-paid permit (and not pay the meter) or a general permit (and pay the meter $4 per day). The on-street parking time limit in the CBD core is mostly 90 minutes however, there are quite a few 3-hour and 5-hour limit on-street spaces conveniently located on the just outside the CBD core. Permit issuance is unlimited so permit spaces are not guaranteed. This structure favors the earliest arriving customers.

As indicated in Table 5, Summit's parking fees are generally comparable with those in Westfield and Morristown however, Summit's pricing of "first choice" on-street parking below that of off-street parking is counter to industry recommended / best practice.

The rationale behind this recommended practice is supported by the widely recognized economic principle of supply and demand:

- Low supply + high demand = higher pricing;
- High supply + low demand = lower pricing.

Parking fees that are comparatively low in high demand areas create congestion by encouraging motorists to circle for inexpensive convenient parking and inviting meter feeding by local merchants and employees.

7. RECENT PROGRAMS AND DEVELOPMENTS

The City of Summit and the Parking Services Agency have been one among the most progressive in the state when it comes to implementing new parking technology and programs. This includes past programs such as parking pay stations, smart cards and train station valet; recent programs such as pay by phone and on-line purchasing; and new programs such as transportation networking (Uber program), pay by plate and LPR.

The exploration and implementation of new technology and programs to assist in parking system management is a characteristic of high functioning parking systems that should be encouraged and sustained. The following summary restates the programs listed above and the benefits that have resulted:

Parking Pay Stations	Accept credit cards; reduced cash handling; secure collections; improved internal controls
Smart Cards	Pre-paid revenue; customer convenience; merchant participation
Train Station Valet	Increased system capacity
Pay By Phone	Reduced cash handling and collection load; customer convenience
On-line Purchasing	Reduced cash handling; customer convenience
Uber Program	Increased system capacity
LPR	Increased operating efficiency (PEOs cover more ground in less time); reduced parking ticket duties for higher pay scale police officers; high ticket issuance volume (if desired); increased meter compliance
Pay By Plate	Lower maintenance costs; and (if used to replace on-street meters) increased system capacity, enhanced enforcement via LPR, aesthetics, credit card for on-street transactions[1]

[1] Pay-by-plate has been deployed in Hoboken, Collingswood, Fort Lee, West Windsor, and Montclair State University. Pay-by plate has been active and thriving on the streets of Pittsburgh since 2012.

Table 6, next page, is a chart that describes the city's recent parking programs and includes an estimate of the financial impact of each program.

As indicated we have estimated that each new program will result in a net financial benefit to the city.

Operating Expense

Operating expenses of the Summit Parking Utility (SPU) are expected to be about $1,633,000 in 2016. This translates to about $590 per space per year. Parking system expenses in New Jersey generally range between $300 and $700 per space per year depending on the size and complexity of the system. Based on the complexity and range of products offered by the Summit Parking Utility the operating expense metric of $590 per space per year is quite reasonable.

TABLE 6
ESTIMATED FINANCIAL IMPACT OF RECENT PROGRAMS
SUMMIT MUNICIPAL PARKING SYSTEM

PROGRAM	DESCRIPTION	COMMENTS	FINANCIAL IMPACT
License Plate Recognition (LPR) For Enforcement and Digital Permitting	The city recently expended about $189,650 to deploy LPR for parking and transfer station enforcement. The system requires an additional $32,634 per year in back office and hosting costs. LPR cameras will scan the license plates of parked cars to determine if they are parked in violation of parking rules and regulations. The system can also be used to replace parking permits or stickers. The city intends to utilize LPR for enforcement, digital permitting, and residential parking enforcement. In the future, the system will be used to enforce "Pay by plate" metering.	LPR for parking enforcement and digital permitting is a growing national trend that is expanding as competition in the market has increased accessibility and lowered costs. The use of LPR will improve the efficiency of enforcement operations and the administration of parking permits.	It is clear that LPR will provide operating efficiency to the city because parking enforcement officers will be able to cover more ground and permit issuance will be less labor intensive. Financial impacts include: less police with parking enforcement duties; more tickets issued; increased compliance at meters due to increased enforcement. Cost Benefit Ratio (CBR) Estimate = 1.4*
Pay By Plate	Pay by plate is a parking revenue control method where parking transactions are linked to license plate numbers provided by customers via smartphone or at a parking pay station.	The industry is moving away from "Pay by space" (where customers enter space numbers) and toward "pay by plate". There are several benefits: 1) the city does not have to maintain painted numbers and signs, 2) parking stall lines can be removed on streets which allows greater capacity, 3) enforcement using LPR, 4) replacing on-street meters with pay stations / pay by plate improves aesthetics, internal controls, and collection efficiency.	Off-Street Estimated CBR = 1.1* On-Street Estimated CBR = 1.2*
Pay By Phone	Parkers use their personal smart phones to conduct parking transactions instead of using pay stations / meters.	Excellent program to offer. Convenience fee is absorbed by City which has fueled popularity / use of (Parkmobile) program. Cost to City is about $75,000 / year.	Reduces cash handling. Reduces collections & use of pay stations. Customer propensity to increase / maximize purchase when not using cash. Convenience benefit to customers promotes Goodwill.

* Cost Benefit Ratio (CBR) = Estimated Financial Benefit ÷ Estimated Cost. CBR in excess of 1.0 is considered net positive from a financial perspective.

8. PARKING STRUCTURES

Useful Life

Parking structures in the northeast generally have a useful life of 50 to 60 years. However, a parking structure's life span can be extended indefinitely with structural replacements and restoration.

The physical science of caring for a parking garage is similar to dentistry. Regular check-ups and a modest amount of routine care will prevent painful, costly and unexpected repairs in the future. A parking garage "preventative maintenance" program includes; sealing decks, replacing caulk, painting, crack repairs, cleaning decks, replacing joints, etc.

In the northeast, where harsh winters and the use of salt to combat ice are common, it is recommended that parking garage owners budget and plan for annual expenditures as part of a regular preventative maintenance program. A regular annual deposit of about $100 per structured parking space per year should be sufficient to fund this program. Distributions from the fund should be used exclusively for parking garage preventative maintenance, and may be utilized as follows:

Every Year:	Remove oil stains; power wash decks and stair towers; clean and test drainage system;
Every Two Years:	Crack repair program;
Every Third Year:	Rust removal; prime and paint doors, frames, connections, etc;
Every Fifth or Sixth Year:	Seal decks; re-caulk;
Every Eighth Year:	Replace expansion joints.

It is also recommended that the city's structural engineer conduct simple routine "check-ups" of the city's parking garages on an annual basis and more detailed inspections as necessary.

The ebb and flow of a parking garage preventative maintenance program for the city's two parking garages (930 total spaces total) could resemble the following table / schedule:

	Maintenance Fund Deposit	Maintenance Fund Expenditure	Fund Balance*
Year 1	$ 93,000	$ 12,300	$ 80,700
Year 2	$ 93,000	$ 15,200	$ 158,500
Year 3	$ 93,000	$ 15,500	$ 236,000
Year 4	$ 93,000	$ 16,400	$ 312,600
Year 5	$ 93,000	$ 175,500	$ 230,100
Year 6	$ 93,000	$ 26,600	$ 296,500
Year 7	$ 93,000	$ 17,500	$ 372,000
Year 8	$ 93,000	$ 243,600	$ 221,400
Year 9	$ 93,000	$ 19,700	$ 294,700
Year 10	$ 93,000	$ 225,300	$ 162,400
Year 11	$ 93,000	$ 19,500	$ 235,900
Year 12	$ 93,000	$ 33,200	$ 295,700
Year 13	$ 93,000	$ 22,500	$ 366,200
Year 14	$ 93,000	$ 435,000	$ 24,200
Year 15	$ 93,000	$ 28,300	$ 88,900
Totals	$ 1,395,000	$ 1,306,100	

** Does not include accrued interest*

The city has expended over $3 million over the past 7 years for structural repairs and rehabilitation of its two parking garages. It is likely that these costs could have been avoided or greatly reduced had the city employed a preventative maintenance program like the one described above.

Optimal Use

As indicated in Section 2 there is a shortage of employee / commuter parking in downtown Summit. Because the Broad Street Garage and Tier Garage are both operated to serve these user groups Level G Associates believes they are being optimally utilized. The use of the ground level of the Tier Garage for shopper / visitor parking provides important short term parking for local businesses and should be preserved.

9. RECOMMEDED PROGRAM PLAN

We have developed the following 8-point parking program plan based on a review of past studies and documents, data collection, and our experience in similar cities and communities.

TABLE 7 – RECOMMENDED PROGRAM PLAN

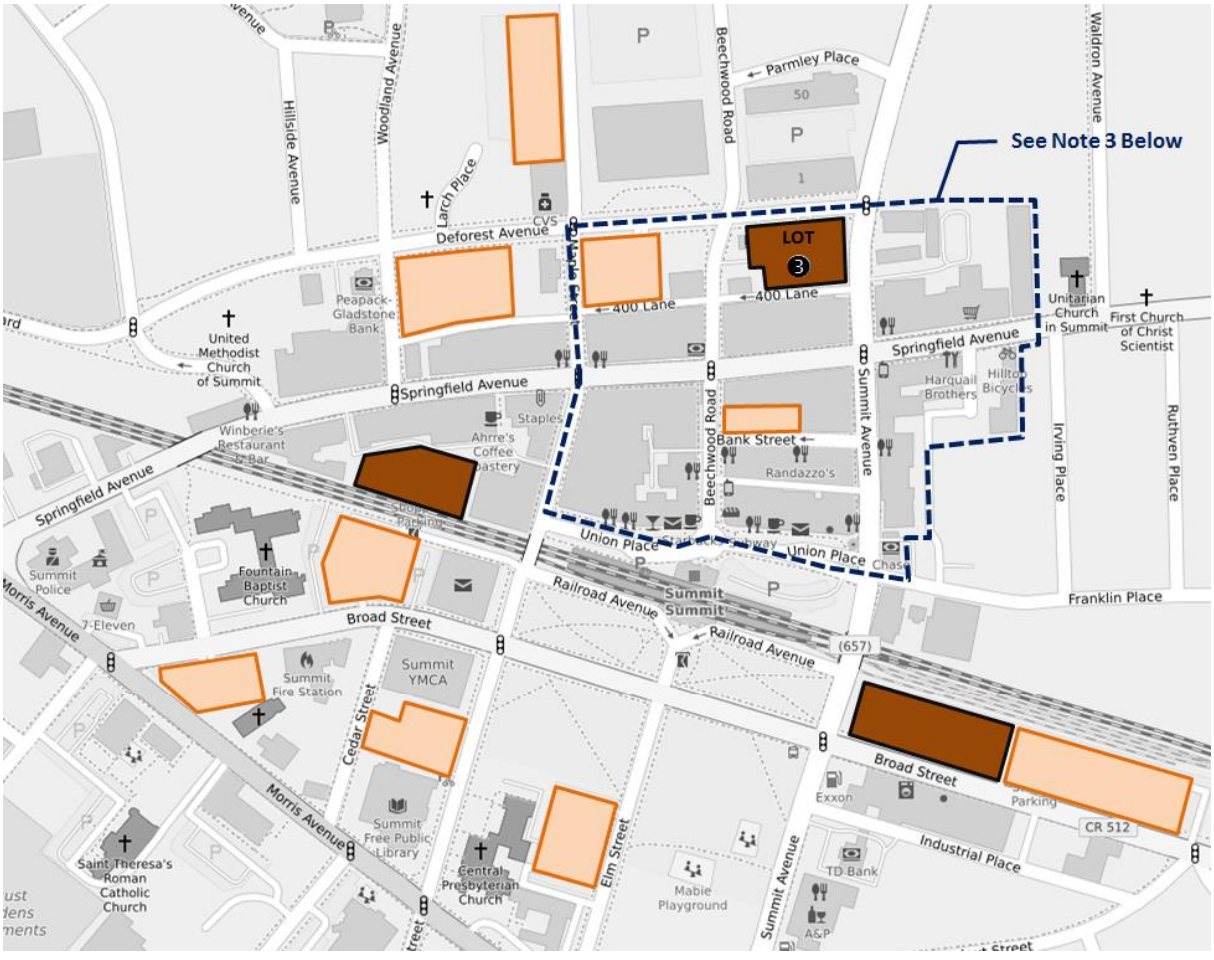
Item	Description	Rationale
1	Re-stripe Lots 9 and 16. Create head-in parking on Elm Street and Maple Street.	Adds 100 spaces[2]
2	Build structured parking that will provide a net gain of 350 spaces (minimum)	Adds 350 spaces
3	Incrementally correct the parking supply / demand imbalance depicted in Section 2. Phase 1: convert up to (40) 5-hour meters to 9 or 10-hour limit (resident or employee sticker required before 11AM). Phase 2: use additional parking described above to create additional employee parking opportunities.	Increases employee parking supply and moves employees out of spaces intended for downtown shoppers and visitors.
4	Increase on-street short term meter (15 minute to 2 hour limit) rates to $1.00 per hour.	Best practice. Discourages employee use of on-street spaces north of the railroad tracks.
5	Derive maximum benefit from recently deployed LPR system. Implement, encourage, and market digital permitting and Pay-by-plate on a system-wide basis.	Industry is clearly moving in this direction - becoming familiar to many. Multiple benefits described in Table 6.
6	Implement Pay-by-plate in De Forest "shopper lots" and remove gates. Pay-by-plate can support "1st hour free" parking. Re-purpose Shopper Lot gates and pay stations to new Parking Garage (Item 2 above).	Eliminate congestion / back-ups onto De Forest. Ambassadors can be re-assigned to more productive duties such as Junior Enforcement Officers.
7	Explore a 3-tiered permit system. Tier 1 - Reserved space / Guaranteed $250/$500 per month (resident/non-resident) - Digital permit only (not oversold); Tier 2 - Guaranteed space / Not reserved $90/$200 month (resident/non-resident) - Digital permit only (modestly oversold based on observed occupancy); Tier 3 - T/B/D based on sales of Tier 1 and Tier 2 permits.	Leverages use of LPR. Greatly reduces use of "daily" pay station use by commuters and employees.
8	Increase overtime parking fine from $25 to $45	The "All Day" parking fee in De Forest Lots is $30 per day. The overtime parking fine should exceed this amount.

[2] Sketches indicating these potential parking reconfigurations were forwarded to the city under separate cover.

With respect to Item 2, we believe the possibility of developing a parking deck on Lot 3 should be explored. A deck in this location offers the following benefits:

- Offers excellent balance in terms of distribution of high concentration parking supply and coverage of central business district (see Figure 2 below);
- Location is proximate to high parking space deficiency areas identified in Burgis report[3];
- "North of the tracks" location is proximate to central business district yet allows De Forest Lots 1 and 2 to remain open during construction;
- Less likely to be impacted by potential decreases in future parking demand around the train station resulting from evolving transportation trends;
- Can become part of a redevelopment package to include adjacent and/or nearby properties.

FIGURE 2 – HIGH CONCENTRATION PARKING SUPPLY DIAGRAM (PROPOSED)



[3] Highest concentration of parking deficiency in Burgis report – area within dashed line on Figure 2 has a parking deficit that is 2x greater than areas west of Maple Street and north of the rail corridor.

The dimensions of Lot 3 offer excellent opportunities for screening and/or mixed use development along De Forest. Also, integration of all or part of the adjacent drive-thru bank property can improve parking capacity and/or the mixed-use potential of the site. Adjacent properties may be integrated via rehabilitation partnerships, land swaps, air rights agreements or other arrangements. These parking deck functional and property assemblage concepts are all worthy of further exploration.

Please refer to Figure 3, next page, for sketches depicting a potential parking deck on De Forest Lot 3. This sketch features a parking deck footprint of about 126' x 183'. If developed to a height of 5-supported levels this sloping floor deck would contain about 427 spaces yielding a net parking gain of about 350 spaces.

Effect of Other City Redevelopment Initiatives

Level G met with and presented our preliminary findings to city planning officials and professionals in advance of the preparation of this report. We learned that the western portion of Zone 2 is an area that is being considered for redevelopment. In some cases, a redevelopment project can be packaged with new public parking development in an efficient shared parking relationship. Unfortunately, the measured parking space deficiencies in the eastern portions of Zone 1 are so intense that our initial recommendation to develop additional parking supply at De Forest Lot 3 is unchanged.

However, it is recommended that the city remain flexible in terms of addressing its parking shortages. For example, if there is good opportunity to develop 100 additional public parking spaces as part of a redevelopment project on Lot 16 (western portion of Zone 2) then perhaps the target net parking gain on Lot 3 can be reduced by 100 spaces from 350 to 250. However, we feel strongly that the net parking gain on Lot 3 should be at least 250 spaces.

FIGURE 3 – DE FOREST LOT 3 PARKING DECK SKETCHES[4]

SUMMARY

LEVEL	NO. SPACES
GRADE	65
1ST	74
2ND	74
3RD	74
4TH	74
ROOF	66
TOTAL	427
EXIST ON SITE	(77)
NET GAIN	350

6-LEVEL PARKING DECK (GRADE + 5 SUPPORTED LEVELS) BEHIND 3-LEVEL LIVE-WORK UNITS

BLOCK DIAGRAM (LOOKING EAST)

LIVE-WORK UNITS EXAMPLE

[4] Conceptual plan / proof of concept.

Estimated Cost of Recommended Program

The following table indicates our cost and funding assumptions for the recommended program plan. These estimates and assumptions will be integrated with current parking system financial data and projections in Section 10 of this report.

TABLE 8 – PROGRAM COST AND FUNDING ASSUMPTIONS

Item	Description	Assumed Funding	Developmental Cost Estimate
1	100-car at-grade parking expansion; Re-Striping; Misc improvements	Short Term	$1,000,000
2	430-car parking garage	Short Term	$11,000,000
3, 4	Meter re-programming	Short Term	$40,000
5a	Signage; Pay station re-programming	Short Term	$50,000
6	Seven (7) new pay stations; signage; removal of existing equipment	Short Term	$160,000
7, 8	Permit System; Fine Increase	Short Term	$0
Sub-total / Short Term Funding Program			$12,250,000
5b	On-Street pay-by-space / North of RR 21 pay stations & associated costs	Mid Term	$465,000
5c	On-Street pay-by-space / South of RR 19 pay stations & associated costs	Mid Term	$445,000

10. FINANCIAL SUMMARY – PRO FORMA

In 2016 it is estimated that the Summit Parking Utility will earn over $3 million in operating revenue offset by operating expenses in excess of $1.6 million and debt service payments of about $623,000. This projected financial summary for 2016 is indicated below and yields a very respectable debt service coverage ratio of 249%.

a) Estimated Revenue	$ 3,186,800
b) Estimated Expense	(1,633,200)
c) Net Income (Available for Debt Service)	$ 1,553,600
d) Debt Service	(623,300)
e) Debt Service Coverage Ratio (c÷d)	249%

Table 9A, next page, is a 20-year pro forma indicating the derivation of the above estimates as well as three years of historical financial data and projected financial estimates through the year 2032. This pro forma is a "Base" condition or "Do Nothing" analysis that assumes no significant capital programs or changes in operating capacity or staffing but has averaged in modest gains in revenue via rate and/or volumetric increases. As indicated, the municipal parking system in its current configuration can be expected to produce surplus revenues in excess of $1 million per year for the next 15 years[5].

Table 9B, page 34, integrates the recommended parking program plan described in Section 9 into the Base Condition pro forma. This table includes impacts from recommendations included in this report such as rate increase, fine increase and the establishment of a preventative maintenance fund as well as the addition of new staff. As indicated, we are projecting debt service coverage ratios ranging between 146% and 276% for the first 15 years following the bond sale[6]. Because the bond market will require minimum projected debt service coverage ratios of 110 to 115% it is preliminarily determined that the recommended program is financially feasible.

Important: These are preliminary conclusions based on a "conceptual" parking program. A more detailed feasibility study will be required if and when a final program is determined and approved by the city. For example, the final project may very well include real estate

[5] Except 2026 when existing note requires refunding.
[6] Except 2026 when existing note requires refunding.

agreements or transactions that increase the Lot 3 parking deck footprint or perhaps there may be other sources of income such as developer contributions or Payments in Lieu of Parking (PILOP)[7] that may need to be considered.

The achievement of any projected performance is dependent upon future events that cannot be assured. Therefore, actual results are likely to vary from the forecasts presented herein. Such variations could be material.

7 A number of municipalities require developers who seek or are granted relief from code dictated parking requirements to pay into a municipal fund that is then used to develop public parking. If the city does not have such a policy it should be considered to help off-set the high cost of building structured parking.

TABLE 9A
20-YEAR PROJECTED PERFORMANCE OF THE SYSTEM ($ 000's)
BASE CONDITION
SUMMIT PARKING UTILITY

Run Date: October 13, 2016

REVENUE:

Off-Street / Hourly & Daily	Capacity	2013 (1)	2014 (1)	2015 (1)	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032
Broad Street Garage	491	$251.1	$297.3	$329.5	$334.4	$339.5	$344.6	$349.7	$355.0	$360.3	$365.7	$371.2	$376.7	$382.4	$388.1	$394.0	$399.9	$405.9	$412.0	$418.1	$424.4
Broad Street East	180	$348.1	$352.9	$312.0	$316.7	$321.4	$326.3	$331.1	$336.1	$341.2	$346.3	$351.5	$356.7	$362.1	$367.5	$373.0	$378.6	$384.3	$390.1	$395.9	$401.9
Tier Garage - Upper Levels	353	$108.7	$157.8	$152.3	$154.6	$156.9	$159.3	$161.6	$164.1	$166.5	$169.0	$171.6	$174.1	$176.8	$179.4	$182.1	$184.8	$187.6	$190.4	$193.3	$196.2
Tier Garage - Ground Level	78	$87.1	$68.2	$73.9	$75.0	$76.1	$77.3	$78.4	$79.6	$80.8	$82.0	$83.2	$84.5	$85.8	$87.1	$88.4	$89.7	$91.0	$92.4	$93.8	$95.2
Bank Street Lot	29	$51.7	$53.4	$56.5	$57.3	$58.2	$59.1	$60.0	$60.9	$61.8	$62.7	$63.6	$64.6	$65.6	$66.6	$67.6	$68.6	$69.6	$70.6	$71.7	$72.8
Library / YMCA Lot	104	$67.4	$66.1	$68.0	$69.0	$70.1	$71.1	$72.2	$73.3	$74.4	$75.5	$76.6	$77.8	$78.9	$80.1	$81.3	$82.5	$83.8	$85.0	$86.3	$87.6
De Forest Lots	294	$397.0	$386.9	$434.4	$440.9	$447.5	$454.2	$461.1	$468.0	$475.0	$482.1	$489.3	$496.7	$504.1	$511.7	$519.4	$527.2	$535.1	$543.1	$551.2	$559.5
Park & Rail	36	$102.8	$104.4	$103.5	$105.1	$106.6	$108.2	$109.9	$111.5	$113.2	$114.9	$116.6	$118.3	$120.1	$121.9	$123.7	$125.6	$127.5	$129.4	$131.3	$133.3
Park & Ride Lot	75	$55.7	$62.0	$66.0	$67.0	$68.0	$69.0	$70.0	$71.1	$72.2	$73.2	$74.3	$75.5	$76.6	$77.7	$78.9	$80.1	$81.3	$82.5	$83.8	$85.0
All Other Lots	600	$200.6	$249.3	$260.2	$264.1	$268.1	$272.1	$276.2	$280.3	$284.5	$288.8	$293.1	$297.5	$302.0	$306.5	$311.1	$315.8	$320.5	$325.3	$330.2	$335.1
Sub-Total	2240	$1,670.2	$1,798.3	$1,856.3	$1,884.1	$1,912.4	$1,941.1	$1,970.2	$1,999.8	$2,029.8	$2,060.2	$2,091.1	$2,122.5	$2,154.3	$2,186.6	$2,219.4	$2,252.7	$2,286.5	$2,320.8	$2,355.6	$2,391.0
Off-Street / Permits																					
Resident Bar Code		$14.9	$14.8	$15.3	$15.5	$15.8	$16.0	$16.2	$16.5	$16.7	$17.0	$17.2	$17.5	$17.8	$18.0	$18.3	$18.6	$18.8	$19.1	$19.4	$19.7
Employee Bar Code		$7.0	$6.7	$6.9	$7.0	$7.1	$7.2	$7.3	$7.4	$7.5	$7.7	$7.8	$7.9	$8.0	$8.1	$8.2	$8.4	$8.5	$8.6	$8.8	$8.9
Resident Pre-Paid		$274.0	$290.8	$266.4	$270.4	$274.5	$278.6	$282.7	$287.0	$291.3	$295.7	$300.1	$304.6	$309.2	$313.8	$318.5	$323.3	$328.1	$333.1	$338.1	$343.1
Employee Pre-Paid		$305.7	$291.2	$304.9	$309.5	$314.1	$318.8	$323.6	$328.5	$333.4	$338.4	$343.5	$348.6	$353.8	$359.2	$364.5	$370.0	$375.6	$381.2	$386.9	$392.7
Overnight		$42.7	$46.7	$44.4	$45.1	$45.7	$46.4	$47.1	$47.8	$48.5	$49.3	$50.0	$50.8	$51.5	$52.3	$53.1	$53.9	$54.7	$55.5	$56.3	$57.2
Sub-Total		$644.3	$650.2	$637.9	$647.5	$657.2	$667.0	$677.0	$687.2	$697.5	$708.0	$718.6	$729.4	$740.3	$751.4	$762.7	$774.1	$785.7	$797.5	$809.5	$821.6
On-Street Meters	601	$460.9	$469.6	$493.6	$501.0	$508.5	$516.1	$523.9	$531.7	$539.7	$547.8	$556.0	$564.4	$572.8	$581.4	$590.2	$599.0	$608.0	$617.1	$626.4	$635.8
Other Income																					
Leased Spaces		$51.8	$51.1	$51.4	$52.2	$53.0	$53.7	$54.6	$55.4	$56.2	$57.0	$57.9	$58.8	$59.7	$60.5	$61.5	$62.4	$63.3	$64.3	$65.2	$66.2
Meter Bags		$11.8	$17.7	$33.6	$34.1	$34.6	$35.1	$35.7	$36.2	$36.7	$37.3	$37.9	$38.4	$39.0	$39.6	$40.2	$40.8	$41.4	$42.0	$42.6	$43.3
Smart Cards		$220.9	$98.1	$12.8	$13.0	$13.2	$13.4	$13.6	$13.8	$14.0	$14.2	$14.4	$14.6	$14.9	$15.1	$15.3	$15.5	$15.8	$16.0	$16.2	$16.5
Visitor Passes		$45.2	$33.9	$37.4	$38.0	$38.5	$39.1	$39.7	$40.3	$40.9	$41.5	$42.1	$42.8	$43.4	$44.1	$44.7	$45.4	$46.1	$46.8	$47.5	$48.2
Miscellaneous		$11.9	$10.2	$16.7	$17.0	$17.2	$17.5	$17.7	$18.0	$18.3	$18.5	$18.8	$19.1	$19.4	$19.7	$20.0	$20.3	$20.6	$20.9	$21.2	$21.5
Sub-Total		$341.6	$211.0	$151.9	$154.2	$156.5	$158.8	$161.2	$163.6	$166.1	$168.6	$171.1	$173.7	$176.3	$178.9	$181.6	$184.3	$187.1	$189.9	$192.8	$195.7
Adjustment To Reconcile With Audit		($215.5)	($154.8)																		
Grand Total Revenue		**$2,901.5**	**$2,974.3**	**$3,139.7**	**$3,186.8**	**$3,234.6**	**$3,283.1**	**$3,332.4**	**$3,382.3**	**$3,433.1**	**$3,484.6**	**$3,536.8**	**$3,589.9**	**$3,643.8**	**$3,698.4**	**$3,753.9**	**$3,810.2**	**$3,867.3**	**$3,925.4**	**$3,984.2**	**$4,044.0**
Grand Total Operating Expense		**$1,436.8**	**$1,554.5**	**$1,593.4**	**$1,633.2**	**$1,674.0**	**$1,715.9**	**$1,758.8**	**$1,802.7**	**$1,847.8**	**$1,894.0**	**$1,941.4**	**$1,989.9**	**$2,039.6**	**$2,090.6**	**$2,142.9**	**$2,196.5**	**$2,251.4**	**$2,307.7**	**$2,365.4**	**$2,424.5**
NET INCOME - AVAILABLE FOR DEBT SERVICE		$1,464.7	$1,419.8	$1,546.3	$1,553.6	$1,560.6	$1,567.2	$1,573.6	$1,579.6	$1,585.3	$1,590.6	$1,595.5	$1,600.0	$1,604.1	$1,607.8	$1,611.0	$1,613.7	$1,616.0	$1,617.7	$1,618.9	$1,619.5
Existing Debt Service (Source: Annual Report)		$912.4	$939.4	$939.4																	
Existing Debt Service (2)					$623.3	$745.2	$739.3	$426.9	$420.2	$413.5	$406.7	$399.8	$397.7	$390.7	$1,621.2	$285.1	$287.7	$98.0	$101.0	$100.0	$100.0
Not Used																					
Total Debt Service		$912.4	$939.4	$939.4	$623.3	$745.2	$739.3	$426.9	$420.2	$413.5	$406.7	$399.8	$397.7	$390.7	$1,621.2	$285.1	$287.7	$98.0	$101.0	$100.0	$100.0
DEBT SERVICE COVERAGE RATIO		1.61	1.51	1.65	2.49	2.09	2.12	3.69	3.76	3.83	3.91	3.99	4.02	4.11	0.99	5.65	5.61	16.49	16.02	16.19	16.20
Surplus or (Deficit)		$552.3	$480.4	$606.9	$930.3	$815.4	$827.9	$1,146.7	$1,159.4	$1,171.8	$1,183.9	$1,195.7	$1,202.3	$1,213.4	($13.4)	$1,325.9	$1,326.0	$1,518.0	$1,516.7	$1,518.9	$1,519.5

(1) Source: Audited & Unadudited of the City of Summit and Summit Parking Utility (2) Source: City of Summit (Unaudited)

20-YEAR PROJECTED PERFORMANCE OF THE SYSTEM ($ 000's)

REVENUE:

Off-Street / Hourly & Daily	2013 (1)	2014 (1)	2015 (1)	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032
Broad Street Garage	$251.1	$297.3	$329.5	$334.4	$339.5	$344.6	$349.7	$355.0	$360.3	$365.7	$371.2	$376.7	$382.4	$388.1	$394.0	$399.9	$405.9	$412.0	$418.1	$424.4
Broad Street East	$348.1	$352.9	$312.0	$316.7	$321.4	$326.3	$331.1	$336.1	$341.2	$346.3	$351.5	$356.7	$362.1	$367.5	$373.0	$378.6	$384.3	$390.1	$395.9	$401.9
Tier Garage - Upper Levels	$108.7	$157.8	$152.3	$154.6	$156.9	$159.3	$161.6	$164.1	$166.5	$169.0	$171.6	$174.1	$176.8	$179.4	$182.1	$184.8	$187.6	$190.4	$193.3	$196.2
Tier Garage - Ground Level	$87.1	$68.2	$73.9	$75.0	$76.1	$77.3	$78.4	$79.6	$80.8	$82.0	$83.2	$84.5	$85.8	$87.1	$88.4	$89.7	$91.0	$92.4	$93.8	$95.2
Bank Street Lot	$51.7	$53.4	$56.5	$57.3	$58.2	$59.1	$60.0	$60.9	$61.8	$62.7	$63.6	$64.6	$65.6	$66.6	$67.6	$68.6	$69.6	$70.6	$71.7	$72.8
Library / YMCA Lot	$67.4	$66.1	$68.0	$69.0	$70.1	$71.1	$72.2	$73.3	$74.4	$75.5	$76.6	$77.8	$78.9	$80.1	$81.3	$82.5	$83.8	$85.0	$86.3	$87.6
De Forest Lots (Revenue dip in 2018 represents switch to PBP)	$397.0	$386.9	$434.4	$440.9	$447.5	$425.0	$431.4	$437.8	$444.4	$451.1	$457.8	$464.7	$471.7	$478.8	$485.9	$493.2	$500.6	$508.1	$515.8	$523.5
Loss of DeForest Lot 3					($44.7)	($45.4)	($86.3)	($87.6)	($88.9)	($90.2)	($91.6)	($92.9)	($94.3)	($95.8)	($97.2)	($98.6)	($100.1)	($101.6)	($103.2)	($104.7)
Park & Rail	$102.8	$104.4	$103.5	$105.1	$106.6	$108.2	$109.9	$111.5	$113.2	$114.9	$116.6	$118.3	$120.1	$121.9	$123.7	$125.6	$127.5	$129.4	$131.3	$133.3
Park & Ride Lot	$55.7	$62.0	$66.0	$67.0	$68.0	$69.0	$70.0	$71.1	$72.2	$73.2	$74.3	$75.5	$76.6	$77.7	$78.9	$80.1	$81.3	$82.5	$83.8	$85.0
All Other Lots	$200.6	$249.3	$260.2	$264.1	$268.1	$272.1	$276.2	$280.3	$284.5	$288.8	$293.1	$297.5	$302.0	$306.5	$311.1	$315.8	$320.5	$325.3	$330.2	$335.1
Sub-Total	$1,670.2	$1,798.3	$1,856.3	$1,884.1	$1,867.7	$1,866.5	$1,854.3	$1,882.1	$1,910.3	$1,939.0	$1,968.0	$1,997.6	$2,027.5	$2,057.9	$2,088.8	$2,120.1	$2,151.9	$2,184.2	$2,217.0	$2,250.2
Off-Street / Permits																				
Resident Bar Code	$14.9	$14.8	$15.3	$15.5	$15.8	$16.0	$16.2	$16.5	$16.7	$17.0	$17.2	$17.5	$17.8	$18.0	$18.3	$18.6	$18.8	$19.1	$19.4	$19.7
Employee Bar Code	$7.0	$6.7	$6.9	$7.0	$7.1	$7.2	$7.3	$7.4	$7.5	$7.7	$7.8	$7.9	$8.0	$8.1	$8.2	$8.4	$8.5	$8.6	$8.8	$8.9
Resident Pre-Paid	$274.0	$290.8	$266.4	$270.4	$274.5	$278.6	$282.7	$287.0	$291.3	$295.7	$300.1	$304.6	$309.2	$313.8	$318.5	$323.3	$328.1	$333.1	$338.1	$343.1
Employee Pre-Paid	$305.7	$291.2	$304.9	$309.5	$314.1	$318.8	$323.6	$328.5	$333.4	$338.4	$343.5	$348.6	$353.8	$359.2	$364.5	$370.0	$375.6	$381.2	$386.9	$392.7
Overnight	$42.7	$46.7	$44.4	$45.1	$45.7	$46.4	$47.1	$47.8	$48.5	$49.3	$50.0	$50.8	$51.5	$52.3	$53.1	$53.9	$54.7	$55.5	$56.3	$57.2
Sub-Total	$644.3	$650.2	$637.9	$647.5	$657.2	$667.0	$677.0	$687.2	$697.5	$708.0	$718.6	$729.4	$740.3	$751.4	$762.7	$774.1	$785.7	$797.5	$809.5	$821.6
On-Street Meters																				
Base Revenue	$460.9	$469.6	$493.6	$501.0	$508.5	$516.1	$523.9	$531.7	$539.7	$547.8	$556.0	$564.4	$572.8	$581.4	$590.2	$599.0	$608.0	$617.1	$626.4	$635.8
Impact of Rate Increase (Note 2)					$300.0	$447.5	$454.2	$461.0	$467.9	$475.0	$482.1	$489.3	$496.7	$504.1	$511.7	$519.3	$527.1	$535.0	$543.1	$551.2
Sub-Total	$460.9	$469.6	$493.6	$501.0	$808.5	$963.6	$978.1	$992.8	$1,007.7	$1,022.8	$1,038.1	$1,053.7	$1,069.5	$1,085.5	$1,101.8	$1,118.3	$1,135.1	$1,152.1	$1,169.4	$1,187.0
Other Income	$341.6	$211.0	$151.9	$154.2	$156.5	$158.8	$161.2	$163.6	$166.1	$168.6	$171.1	$173.7	$176.3	$178.9	$181.6	$184.3	$187.1	$189.9	$192.8	$195.7
New Revenue																				
De Forest Garage (Note 3)						$188.9	$458.7	$485.7	$485.7	$485.7	$485.7	$582.8	$582.8	$582.8	$582.8	$582.8	$582.8	$680.0	$680.0	$680.0
100 Spaces South of Broad Street (Note 4)						$118.8	$118.8	$118.8	$118.8	$118.8	$118.8	$132.0	$132.0	$132.0	$132.0	$132.0	$132.0	$145.2	$145.2	$145.2
Increase Fines From $25 to $45 (Note 5)							$300.0		$300.0											
Sub-Total						$307.7	$877.5	$604.5	$904.5	$604.5	$604.5	$714.8	$714.8	$714.8	$714.8	$714.8	$714.8	$825.2	$825.2	$825.2
Adjustment To Reconcile With Audit OR Capitalized Interest	($215.5)	($154.8)			$215.0	$215.0														
Grand Total Revenue	**$2,901.5**	**$2,974.3**	**$3,139.7**	**$3,186.8**	**$3,704.9**	**$4,178.7**	**$4,548.1**	**$4,330.2**	**$4,686.1**	**$4,442.8**	**$4,500.4**	**$4,669.1**	**$4,728.4**	**$4,788.6**	**$4,849.7**	**$4,911.7**	**$4,974.7**	**$5,149.0**	**$5,213.9**	**$5,279.7**
Expenses																				
Existing System	$1,436.8	$1,554.5	$1,593.4	$1,633.2	$1,674.0	$1,715.9	$1,758.8	$1,802.7	$1,847.8	$1,894.0	$1,941.4	$1,989.9	$2,039.6	$2,090.6	$2,142.9	$2,196.5	$2,251.4	$2,307.7	$2,365.4	$2,424.5
Deposit To Preventative Maintenance Fund					$93.0	$136.0	$136.0	$136.0	$136.0	$136.0	$136.0	$136.0	$136.0	$136.0	$136.0	$136.0	$136.0	$136.0	$136.0	$136.0
New staffing needs					$40.0	$41.0	$42.0	$43.1	$44.2	$45.3	$46.4	$47.5	$48.7	$50.0	$51.2	$52.5	$53.8	$55.1	$56.5	$57.9
430 Space Garage at $600 / Sp / Year						$129.0	$258.0	$264.5	$271.1	$277.8	$284.8	$291.9	$299.2	$306.7	$314.3	$322.2	$330.3	$338.5	$347.0	$355.7
Grand Total Expense	**$1,436.8**	**$1,554.5**	**$1,593.4**	**$1,633.2**	**$1,807.0**	**$2,021.9**	**$2,194.8**	**$2,246.3**	**$2,299.0**	**$2,353.1**	**$2,408.5**	**$2,465.3**	**$2,523.6**	**$2,583.3**	**$2,644.4**	**$2,707.2**	**$2,771.4**	**$2,837.3**	**$2,904.9**	**$2,974.1**
NET INCOME - AVAILABLE FOR DEBT SERVICE	**$1,464.7**	**$1,419.8**	**$1,546.3**	**$1,553.6**	**$1,897.9**	**$2,156.8**	**$2,353.3**	**$2,083.9**	**$2,387.0**	**$2,089.7**	**$2,091.8**	**$2,203.8**	**$2,204.8**	**$2,205.3**	**$2,205.3**	**$2,204.6**	**$2,203.3**	**$2,311.7**	**$2,309.0**	**$2,305.6**
Existing Debt Service (Source: Annual Report)	$912.4	$939.4	$939.4																	
Existing Debt Service (2)				$623.3	$745.2	$739.3	$426.9	$420.2	$413.5	$406.7	$399.8	$397.7	$390.7	$1,621.2	$285.1	$287.7	$98.0	$101.0	$100.0	$100.0
Debt Service (Series 2017) - See Table 10					$430.0	$736.7	$736.7	$736.7	$736.7	$736.7	$736.7	$736.7	$736.7	$736.7	$736.7	$736.7	$736.7	$736.7	$736.7	$736.7
Total Debt Service	**$912.4**	**$939.4**	**$939.4**	**$623.3**	**$1,175.2**	**$1,476.0**	**$1,163.6**	**$1,156.9**	**$1,150.2**	**$1,143.4**	**$1,136.5**	**$1,134.4**	**$1,127.4**	**$2,357.9**	**$1,021.8**	**$1,024.4**	**$834.7**	**$837.7**	**$836.7**	**$836.7**
DEBT SERVICE COVERAGE RATIO	**1.61**	**1.51**	**1.65**	**2.49**	**1.61**	**1.46**	**2.02**	**1.80**	**2.08**	**1.83**	**1.84**	**1.94**	**1.96**	**0.94**	**2.16**	**2.15**	**2.64**	**2.76**	**2.76**	**2.76**
Surplus or (Deficit)	$552.3	$480.4	$606.9	$930.3	$722.7	$680.8	$1,189.7	$927.0	$1,236.8	$946.3	$955.3	$1,069.4	$1,077.4	($152.6)	$1,183.5	$1,180.2	$1,368.6	$1,474.0	$1,472.3	$1,468.9
Capital Outlay For Phases 5b and 5c							($465.0)		($445.0)											

(1) Source: Audited & Unadudited Financial Statements of the City of Summit and Summit Parking Utility
(2) From 50¢ to $1.00 per hour on 4/1/2017
(3) 430 space facility to open July 1, 2018 / Average $5 per space per day; Rate increase $1 every 6 years
(4) As of 1/1/2018 - Average $90 per space per month (1.1 oversell) / Increase $10 every 6 years
(5) Additional revenue flows to Parking Utility in 2019 and 2021 to fund on-street pay-by-plate program (Program Items 5b and 5c)
(6) Requires verification from City

TABLE 10
FINANCING WORKSHEET
REVENUE BOND FINANCING - TAX EXEMPT
2017 PARKING / FUNDING PROGRAM
SUMMIT, NJ

Run Date: 10/13/16

	OPTION A
Garage Construction - Hard & Soft Costs	
430 spaces @ $25,580 per space	$10,999,400
Re-Striping / Add 100 Spaces Zone 2 / Misc Improvements	$1,000,000
Meter Re-programming & Pay Stations	$250,000
Contingency (5%)	$612,470
Land	$0
TOTAL DEVELOPMENTAL COST	**$12,861,870**
Financing:	
Deposit to (net funded) Construction Fund	$12,765,406
Deposit to Debt Service Reserve Fund	$736,719
Deposit to (net funded) Cap Interest Fund (12 months)	$429,951
Issuing Costs	$505,400
Correction Amount	$2,524
	$14,440,000
Estimated Par Amount of Bonds	**$14,440,000**
Annual Debt Service Payment	
30 year issue @ 3.00%, level payment schedule	$736,719

LEVEL G ASSOCIATES, LLC

APPENDIX A.1
OCCUPANCY COUNTS - ZONE 1
SUMMIT, NJ

COUNT DATE: June 9, 2016
(Thursday)

ON-STREET PARKING

REF	Street	Limits		Side	Cap	Number Of Cars Parked At							
						8AM	10AM	12N	2PM	4PM	6PM	8PM	10PM
1	Springfield	RR Tracks	Tier EE	S	3	0	2	2	2	2	1	2	0
4	Springfield	Tier EE	Maple	S	11	4	12	13	10	7	7	12	8
5	Springfield	Maple	Beechwood	S	5	3	5	7	5	6	5	5	4
6	Springfield	Beechwood	Summit	S	8	7	8	11	8	7	7	8	2
7	Springfield	Summit	Glenwood	S	5	4	5	6	3	4	5	5	2
8	Springfield	Summit	Waldron	N	13	7	13	12	8	8	11	9	3
9	Springfield	Glenwood	Irving	S	3	20	7	4	3	3	2	3	2
10	Springfield	Irving	Ruthven	S	4	1	0	6	1	0	1	3	0
11	Springfield	Waldron	Debary	N	5	2	1	2	1	0	0	1	0
12	Springfield	Ruthven	Debary	S	3	1	0	3	0	1	0	0	0
13	Springfield	Debary	Hobart	N	2	1	2	2	2	0	0	0	0
14	Springfield	Debary	Hobart	S	2	1	2	3	2	2	1	1	1
15	Franklin	Summit	Last Meter	S	10	11	10	12	7	13	11	8	3
16	Summit	Franklin	Bank	E	5	6	6	8	6	7	7	6	3
17	Summit	Springfield	DeForest	E	6	4	6	6	4	4	6	3	2
18	Summit	DeForest	Parmley	W	8	2	2	7	5	2	3	2	2
19	Summit	DeForest	Parmley	E	5	4	6	5	3	2	5	2	2
20	Summit	Parmley	Euclid	E	5	0	1	7	7	5	2	2	2
21	Summit	Euclid	Whittredge	E	3	0	1	2	4	3	1	0	0
22	Summit	Euclid	Whittredge	W	5	0	0	1	0	0	0	0	0
23	Summit	Euclid	Parmley	W	8	2	6	7	3	5	2	0	0
24	Parmley	Summit	Beechwood	S	8	8	8	8	8	4	3	0	0
25	Beechwood	Euclid	Parmley	E	7	5	7	7	0	6	1	0	0
26	Maple	Euclid	Office Bldg DW	E	8	0	8	8	8	5	1	0	0
28	DeForest	Maple	Beeckwood	N	6	4	6	6	4	2	3	2	0
29	DeForest	Maple	Beeckwood	S	5	3	3	5	3	2	2	2	2
31	Beechwood	DeForest	Parmley	E	2	1	2	4	2	2	1	0	0
32	DeForest	Beechwood	Summit	S	0	0	0	0	0	0	0	0	0
33	DeForest	Beechwood	Summit	N	3	1	3	4	3	2	1	1	0
35	Springfield	Beechwood	Summit	N	3	5	5	6	5	3	3	2	1
36	Springfield	Maple	Beechwood	N	8	3	7	9	7	9	8	6	3
37	Springfield	Woodland	Maple	N	11	2	10	11	12	11	14	7	6
38	Woodland	DeForest	Springfield	W	5	1	2	5	1	3	4	1	2
39	Springfield	Woodland	Kent Place	N	7	2	4	7	2	8	8	7	4
40	Kent Place	Springfield	DeForest	W	9	2	8	9	9	8	9	7	7
41	Kent Place	Springfield	DeForest	E	7	2	7	7	6	8	6	4	5
42	DeForest	Kent Place	Hillside	S	5	1	1	4	2	3	5	1	0
43	DeForest	Hillside	Woodland	N	1	0	2	1	1	1	0	0	0
44	DeForest	Woodland	Maple	S	8	3	8	8	6	8	6	3	2
46	DeForest	Woodland	Maple	N	3	0	4	3	4	2	3	1	0
47	Maple	Union	Springfield	W	7	4	7	7	7	7	7	7	6
48	Union	Maple	Beechwood	S	8	9	9	9	8	8	7	5	6
49	Union	Beechwood	Summit	S	9	10	8	10	10	8	9	5	1
51	Union	Maple	Beechwood	N	16	17	19	16	19	14	16	15	14
52	Beechwood	Union	Bank	E	4	5	5	6	7	4	3	5	4
53	Summit	Springfield	Bank	W	4	4	4	4	4	5	4	5	4
54	Bank	Beechwood	Summit	S	12	11	12	13	12	12	14	9	3
56	Summit	Bank	Union	W	6	5	7	6	6	7	8	6	2
57	Union	Beechwood	Summit	N	20	20	19	20	21	18	20	19	13
58	Beechwood	Union	Springfield	W	9	10	9	11	10	11	10	7	6
59	Beechwood	Springfield	DeForest	E	4	4	5	5	5	4	5	3	4
TOTALS					324	222	294	345	276	266	258	202	131

OFF-STREET PARKING

REF	No.	Description	Cap	Number Of Cars Parked At							
				8AM	10AM	12N	2PM	4PM	6PM	8PM	10PM
45	Lot 1	DeForest & Woodland	144	20	76	138	87	95	100	74	41
30	Lot 2	DeForest & Maple	74	24	67	72	60	64	62	56	29
34	Lot 3	DeForest & Summit	76	26	69	75	48	62	49	45	26
55	Lot 5	Bank Street Lot	29	22	21	30	27	29	19	18	9
27	Lot 11	Maple Street "K" Lot	153	53	150	149	148	118	26	19	14
50	Lot 14	RR - 24 Hour Lot	36	36	33	36	36	36	26	18	14
2	Tier	Upper Levels	353	133	312	338	335	280	97	45	24
3	Tier	Ground Level	78	14	55	71	60	54	63	51	27
TOTALS			**943**	**328**	**783**	**909**	**801**	**738**	**442**	**326**	**184**

APPENDIX A.2
OCCUPANCY COUNTS - ZONE 2
SUMMIT, NJ

COUNT DATE: June 9, 2016
(Thursday)

ON-STREET PARKING

REF	Street	Limits		Side	Cap	Number Of Cars Parked At							
						8AM	10AM	12N	2PM	4PM	6PM	8PM	10PM
3	Beauvoir	Morris	Beauvoir	W	8	8	8	8	8	9	9	7	4
4	Beauvoir	Walnut	Beauvoir	W	3	3	3	3	3	3	3	2	2
5	Walnut	Beauvoir	Industrial	N	12	11	12	12	11	11	11	4	3
6	Broad	Walnut	Garage EE	N	12	0	6	11	6	1	6	1	0
9	Broad	Walnut	Summit	S	12	6	13	15	11	11	6	1	1
10	Broad	Garage EE	Summit	N	11	0	8	11	8	7	9	6	3
11	Summit	Broad	Walnut	W	10	2	8	9	8	3	3	1	0
12	Summit	Broad	Walnut	E	10	2	6	9	8	8	3	0	0
13	Summit	Morris	Walnut	W	4	4	0	2	1	1	1	1	1
14	Summit	Morris	Walnut	E	4	2	4	4	4	4	2	2	1
16	Elm	Broad	Morris	W	23	1	23	23	7	6	5	4	3
18	Elm	Broad	Morris	E	27	2	24	26	8	11	10	10	7
20	Broad	Elm	Summit	S	9	2	9	8	7	7	7	6	2
21	Railroad	RR Station	Summit	N	11	0	10	11	9	12	9	10	4
22	Railroad	RR Station	Summit	S	10	1	11	10	6	9	2	8	3
23	Broad	Maple	Elm	N	9	4	9	9	9	7	8	4	3
24	Railroad	RR Station	Maple	S	6	3	6	6	7	7	6	10	4
25	Railroad	RR Station	Maple	N	12	3	12	13	11	13	13	12	8
26	Broad	Elm	Summit	N	11	3	11	11	10	9	9	6	3
27	Broad	Maple	Elm	S	10	3	10	10	8	11	8	7	7
28	Maple	Broad	Lot 16	W	0	0	0	1	1	1	0	2	0
29	Maple	Broad	Morris	E	12	4	15	7	6	4	10	7	4
31	Maple	Lot 16	Morris	W	8	1	8	7	2	3	6	0	0
32	Morris	Maple	Elm	N	10	1	9	4	5	4	1	1	0
34	Cedar	Broad	Morris	E	13	9	12	13	5	10	11	9	4
36	Broad	Lot 10	Maple	N	8	8	8	8	8	8	6	3	0
37	Railroad	Maple	Lot 10	S	7	3	7	6	6	3	8	6	6
39	Broad	Lot 10	Chestnut	N	2	0	2	2	2	2	2	0	0
40	Chestnut	Broad	City Hall	W	3	3	5	2	3	3	3	5	4
TOTALS					**277**	**89**	**259**	**261**	**188**	**188**	**177**	**135**	**77**

OFF-STREET PARKING

REF	No.	Description	Cap	Number Of Cars Parked At							
				8AM	10AM	12N	2PM	4PM	6PM	8PM	10PM
41	Lot 7	Chestnut Avenue Lot	59	60	55	54	52	47	36	32	24
17	Lot 8	Elm Street Lot	123	123	121	120	123	118	96	31	20
1	Lot 9	City Section - Numbered	60	45	48	40	36	49	41	24	15
2	Lot 9	BOE Section	106	87	104	91	100	24	18	53	44
38	Lot 10	Railroad Avenue Lot	99	73	98	95	92	70	44	30	20
30	Lot 16	YMCA / Library Lot	104	37	105	65	46	82	97	79	57
7	Deck 6	Broad Street Garage	491	325	453	475	476	458	367	203	67
8	Lot 13	Broad Street East Lot	180	144	203	212	206	198	150	76	31
TOTALS			**1222**	**894**	**1187**	**1152**	**1131**	**1046**	**849**	**528**	**278**

APPENDIX A.3
OCCUPANCY COUNTS - ZONE 1
SUMMIT, NJ

COUNT DATE: June 18, 2016
(Saturday)

ON-STREET PARKING

REF	Street	Limits		Side	Cap	Number Of Cars Parked At							
						8AM	10AM	12N	2PM	4PM	6PM	8PM	10PM
1	Springfield	RR Tracks	Tier EE	S	3	3	1	3	4	2	0	1	0
4	Springfield	Tier EE	Maple	S	11	4	12	10	8	12	12	12	10
5	Springfield	Maple	Beechwood	S	5	5	5	6	5	5	5	5	4
6	Springfield	Beechwood	Summit	S	8	9	8	9	8	7	6	7	7
7	Springfield	Summit	Glenwood	S	5	1	6	6	6	5	6	7	5
8	Springfield	Summit	Waldron	N	13	0	14	13	13	7	11	11	13
9	Springfield	Glenwood	Irving	S	3	1	4	3	6	3	4	3	3
10	Springfield	Irving	Ruthven	S	4	0	4	4	6	0	0	2	2
11	Springfield	Waldron	Debary	N	5	0	1	2	2	1	0	3	0
12	Springfield	Ruthven	Debary	S	3	0	0	1	3	0	0	0	0
13	Springfield	Debary	Hobart	N	2	0	2	2	2	1	1	0	0
14	Springfield	Debary	Hobart	S	2	0	2	2	1	1	1	0	0
15	Franklin	Summit	Last Meter	S	10	1	10	8	5	2	10	8	5
16	Summit	Franklin	Bank	E	5	5	6	6	5	5	5	5	4
17	Summit	Springfield	DeForest	E	6	2	6	4	4	4	5	5	3
18	Summit	DeForest	Parmley	W	8	0	1	1	3	5	1	3	0
19	Summit	DeForest	Parmley	E	5	0	3	2	5	5	3	3	3
20	Summit	Parmley	Euclid	E	5	1	1	1	3	0	0	0	1
21	Summit	Euclid	Whittredge	E	3	1	0	0	0	0	0	0	0
22	Summit	Euclid	Whittredge	W	5	0	0	0	0	0	0	0	0
23	Summit	Euclid	Parmley	W	8	0	1	2	3	2	2	1	0
24	Parmley	Summit	Beechwood	S	8	0	1	2	4	1	0	2	1
25	Beechwood	Euclid	Parmley	E	7	2	6	7	3	3	1	0	1
26	Maple	Euclid	Office Bldg DW	E	8	1	3	3	1	1	0	0	0
28	DeForest	Maple	Beeckwood	N	6	1	3	4	5	4	2	3	4
29	DeForest	Maple	Beeckwood	S	5	0	2	3	1	2	1	5	4
31	Beechwood	DeForest	Parmley	E	2	0	0	3	0	0	0	1	0
32	DeForest	Beechwood	Summit	S	0	0	0	0	0	0	0	0	0
33	DeForest	Beechwood	Summit	N	3	0	0	0	0	0	0	0	1
35	Springfield	Beechwood	Summit	N	3	1	3	3	6	6	5	5	4
36	Springfield	Maple	Beechwood	N	8	0	7	8	8	6	8	8	7
37	Springfield	Woodland	Maple	N	11	2	11	11	10	11	11	11	11
38	Woodland	DeForest	Springfield	W	5	1	3	6	6	5	5	6	6
39	Springfield	Woodland	Kent Place	N	7	6	6	7	7	5	6	7	5
40	Kent Place	Springfield	DeForest	W	9	1	3	8	8	3	10	9	4
41	Kent Place	Springfield	DeForest	E	7	2	3	8	7	4	7	9	6
42	DeForest	Kent Place	Hillside	S	5	0	4	3	3	1	1	5	1
43	DeForest	Hillside	Woodland	N	1	0	0	0	1	0	0	0	0
44	DeForest	Woodland	Maple	S	8	2	7	7	3	5	3	6	3
46	DeForest	Woodland	Maple	N	3	1	3	4	1	2	1	0	0
47	Maple	Union	Springfield	W	7	5	7	7	5	7	8	7	6
48	Union	Maple	Beechwood	S	8	2	6	7	6	7	5	7	8
49	Union	Beechwood	Summit	S	9	9	10	10	9	9	9	9	7
51	Union	Maple	Beechwood	N	16	12	16	17	11	12	18	17	16
52	Beechwood	Union	Bank	E	4	4	5	5	6	4	4	5	2
53	Summit	Springfield	Bank	W	4	4	4	4	2	5	3	6	3
54	Bank	Beechwood	Summit	S	12	11	13	13	10	11	12	13	11
56	Summit	Bank	Union	W	6	7	7	8	7	6	6	6	5
57	Union	Beechwood	Summit	N	20	20	21	21	20	18	21	19	18
58	Beechwood	Union	Springfield	W	9	8	10	10	10	10	10	11	9
59	Beechwood	Springfield	DeForest	E	4	3	4	4	5	5	4	5	5
TOTALS					**324**	**138**	**255**	**278**	**257**	**220**	**233**	**258**	**208**

OFF-STREET PARKING

REF	No.	Description	Cap	Number Of Cars Parked At							
				8AM	10AM	12N	2PM	4PM	6PM	8PM	10PM
45	Lot 1	DeForest & Woodland	144	12	30	54	79	45	38	48	46
30	Lot 2	DeForest & Maple	74	3	40	48	49	50	41	67	54
34	Lot 3	DeForest & Summit	76	13	41	47	39	30	23	30	19
55	Lot 5	Bank Street Lot	29	25	26	28	22	22	21	29	20
27	Lot 11	Maple Street "K" Lot	153	26	59	68	56	46	27	15	17
50	Lot 14	RR - 24 Hour Lot	36	35	36	36	27	26	31	29	20
2	Tier	Upper Levels	353	28	41	50	58	60	29	19	18
3	Tier	Ground Level	78	4	35	47	15	18	28	53	47
TOTALS			**943**	**146**	**308**	**378**	**345**	**297**	**238**	**290**	**241**

APPENDIX A.4
OCCUPANCY COUNTS - ZONE 2
SUMMIT, NJ

COUNT DATE: June 18, 2016
(Saturday)

ON-STREET PARKING

REF	Street	Limits		Side	Cap	Number Of Cars Parked At							
						8AM	10AM	12N	2PM	4PM	6PM	8PM	10PM
3	Beauvoir	Morris	Beauvoir	W	8	Closed For Re-Surfacing							
4	Beauvoir	Walnut	Beauvoir	W	3	Closed For Re-Surfacing							
5	Walnut	Beauvoir	Industrial	N	12	5	1	2	4	6	6	5	5
6	Broad	Walnut	Garage EE	N	12	0	0	0	0	1	0	0	0
9	Broad	Walnut	Summit	S	12	0	7	3	3	2	2	0	0
10	Broad	Garage EE	Summit	N	11	0	0	2	2	3	1	1	0
11	Summit	Broad	Walnut	W	10	0	9	7	4	4	3	2	1
12	Summit	Broad	Walnut	E	10	1	3	7	7	2	4	3	1
13	Summit	Morris	Walnut	W	4	0	0	0	0	0	0	0	0
14	Summit	Morris	Walnut	E	4	1	0	0	0	0	0	0	0
16	Elm	Broad	Morris	W	23	2	3	1	2	2	3	5	1
18	Elm	Broad	Morris	E	27	0	4	9	7	4	3	3	4
20	Broad	Elm	Summit	S	9	0	0	0	0	0	0	0	1
21	Railroad	RR Station	Summit	N	11	2	3	1	5	6	5	8	7
22	Railroad	RR Station	Summit	S	10	4	9	3	7	5	9	8	8
23	Broad	Maple	Elm	N	9	9	8	7	5	6	6	8	5
24	Railroad	RR Station	Maple	S	6	3	5	5	5	4	6	6	6
25	Railroad	RR Station	Maple	N	12	4	8	8	9	6	12	12	11
26	Broad	Elm	Summit	N	11	0	3	4	5	7	7	5	3
27	Broad	Maple	Elm	S	10	4	6	3	5	7	7	7	7
28	Maple	Broad	Lot 16	W	0	0	0	0	0	0	0	0	0
29	Maple	Broad	Morris	E	12	10	10	10	7	5	2	2	1
31	Maple	Lot 16	Morris	W	8	4	5	4	3	0	0	0	0
32	Morris	Maple	Elm	N	10	0	0	0	1	1	1	0	0
34	Cedar	Broad	Morris	E	13	9	8	6	4	5	3	0	0
36	Broad	Lot 10	Maple	N	8	4	4	3	2	2	0	0	0
37	Railroad	Maple	Lot 10	S	7	2	5	4	1	0	1	6	5
39	Broad	Lot 10	Chestnut	N	2	1	1	0	0	0	0	0	0
40	Chestnut	Broad	City Hall	W	3	0	1	1	0	0	0	0	0
TOTALS					**277**	**65**	**103**	**90**	**88**	**78**	**81**	**81**	**66**

OFF-STREET PARKING

REF	No.	Description	Cap	Number Of Cars Parked At							
				8AM	10AM	12N	2PM	4PM	6PM	8PM	10PM
41	Lot 7	Chestnut Avenue Lot	59	9	11	8	7	8	10	18	12
17	Lot 8	Elm Street Lot	123	18	31	26	26	25	16	12	11
1	Lot 9	City Section - Numbered	60	13	8	9	12	10	11	11	12
2	Lot 9	BOE Section	106	0	2	19	6	0	0	0	0
38	Lot 10	Railroad Avenue Lot	99	96	95	90	75	57	29	29	27
30	Lot 16	YMCA / Library Lot	104	91	92	89	53	44	21	2	0
7	Deck 6	Broad Street Garage	491	34	112	111	111	107	64	52	45
8	Lot 13	Broad Street East Lot	180	4	31	32	39	39	29	19	19
TOTALS			**1222**	**265**	**382**	**384**	**329**	**290**	**180**	**143**	**126**

APPENDIX A.5
OCCUPANCY COUNT SUMMARIES
SUMMIT, NJ

		Number Of Cars Parked At							
Thursday - June 9, 2016	Capac	8AM	10AM	12N	2PM	4PM	6PM	8PM	10PM
Zone 1 / On-Street	324	222	294	345	276	266	258	202	131
Zone 1 / Off-Street	943	328	783	909	801	738	442	326	184
Zone 1 / Total	1267	550	1077	1254	1077	1004	700	528	315
Zone 2 / On-Street	277	89	259	261	188	188	177	135	77
Zone 2 / Off-Street	1222	894	1187	1152	1131	1046	849	528	278
Zone 2 / Total	1499	983	1446	1413	1319	1234	1026	663	355
Zones 1 & 2 / On-Street	601	311	553	606	464	454	435	337	208
Zones 1 & 2 / Off-Street	2165	1222	1970	2061	1932	1784	1291	854	462
Zones 1 & 2 / Total	2766	1533	2523	2667	2396	2238	1726	1191	670

		Number Of Cars Parked At							
Saturday - June 18, 2016	Capac	8AM	10AM	12N	2PM	4PM	6PM	8PM	10PM
Zone 1 / On-Street	324	138	255	278	257	220	233	258	208
Zone 1 / Off-Street	943	146	308	378	345	297	238	290	241
Zone 1 / Total	1267	284	563	656	602	517	471	548	449
Zone 2 / On-Street	277	65	103	90	88	78	81	81	66
Zone 2 / Off-Street	1222	265	382	384	329	290	180	143	126
Zone 2 / Total	1499	330	485	474	417	368	261	224	192
Zones 1 & 2 / On-Street	601	203	358	368	345	298	314	339	274
Zones 1 & 2 / Off-Street	2165	411	690	762	674	587	418	433	367
Zones 1 & 2 / Total	2766	614	1048	1130	1019	885	732	772	641

BY PERCENTAGE:

		Parking Spaces Occupied At							
Thursday - June 9, 2016	Capac	8AM	10AM	12N	2PM	4PM	6PM	8PM	10PM
Zone 1 / On-Street	324	68.5%	90.7%	106.5%	85.2%	82.1%	79.6%	62.3%	40.4%
Zone 1 / Off-Street	943	34.8%	83.0%	96.4%	84.9%	78.3%	46.9%	34.6%	19.5%
Zone 1 / Total	1267	43.4%	85.0%	99.0%	85.0%	79.2%	55.2%	41.7%	24.9%
Zone 2 / On-Street	277	32.1%	93.5%	94.2%	67.9%	67.9%	63.9%	48.7%	27.8%
Zone 2 / Off-Street	1222	73.2%	97.1%	94.3%	92.6%	85.6%	69.5%	43.2%	22.7%
Zone 2 / Total	1499	65.6%	96.5%	94.3%	88.0%	82.3%	68.4%	44.2%	23.7%
Zones 1 & 2 / On-Street	601	51.7%	92.0%	100.8%	77.2%	75.5%	72.4%	56.1%	34.6%
Zones 1 & 2 / Off-Street	2165	56.4%	91.0%	95.2%	89.2%	82.4%	59.6%	39.4%	21.3%
Zones 1 & 2 / Total	2766	55.4%	91.2%	96.4%	86.6%	80.9%	62.4%	43.1%	24.2%

		Parking Spaces Occupied At							
Saturday - June 18, 2016	Capac	8AM	10AM	12N	2PM	4PM	6PM	8PM	10PM
Zone 1 / On-Street	324	42.6%	78.7%	85.8%	79.3%	67.9%	71.9%	79.6%	64.2%
Zone 1 / Off-Street	943	15.5%	32.7%	40.1%	36.6%	31.5%	25.2%	30.8%	25.6%
Zone 1 / Total	1267	22.4%	44.4%	51.8%	47.5%	40.8%	37.2%	43.3%	35.4%
Zone 2 / On-Street	277	23.5%	37.2%	32.5%	31.8%	28.2%	29.2%	29.2%	23.8%
Zone 2 / Off-Street	1222	21.7%	31.3%	31.4%	26.9%	23.7%	14.7%	11.7%	10.3%
Zone 2 / Total	1499	22.0%	32.4%	31.6%	27.8%	24.5%	17.4%	14.9%	12.8%
Zones 1 & 2 / On-Street	601	33.8%	59.6%	61.2%	57.4%	49.6%	52.2%	56.4%	45.6%
Zones 1 & 2 / Off-Street	2165	19.0%	31.9%	35.2%	31.1%	27.1%	19.3%	20.0%	17.0%
Zones 1 & 2 / Total	2766	22.2%	37.9%	40.9%	36.8%	32.0%	26.5%	27.9%	23.2%