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# Comprehensive Parking Study

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Final Draft 2

January 2016



RICH & ASSOCIATES, INC.  
Parking Consultants - Planners  
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## EXECUTIVE SUMMARY

This Downtown Parking Study prepared for Elon is a comprehensive examination of parking needs. The goal of the report is to evaluate the use of existing parking supply and determine if the supply is adequate to meet current and future parking demand.

This report is an assessment of findings.

- Overview of the parking study process.
- Assessment of how the existing parking is operating and how much new parking may be required based on current and anticipated future developments.
- Overview of public input.
- A comprehensive set of recommendations intended to increase the efficiency of the existing parking system.
- When and where to build new parking when needed.

The study process consisted of a two part analysis. The first part includes a determination of the parking demand by block based on the provided building inventory and calculated parking generation factors per 1,000 square feet of gross floor space. The demand was compared to the available supply and the resulting surplus or deficit determined on a block-by-block basis.

The second part of the analysis involved comparing the parking surplus and deficit patterns to the observed conditions as determined by the turnover and occupancy data. This comparison offered a benchmark by which the surplus and deficit data was calibrated.

### **Parking Study Area**

The 8 block study area (blocks A-G), determined by the Town, consisting of the Downtown and surrounding blocks.

### **Parking Supply**

This table summarizes the existing parking supply in the study area. There are a total of 553 parking spaces in the study area. The public supply consists of 86 on-street spaces and the private supply consists of 467 off-street spaces.



Based on Rich & Associates experience and best practices, we have found that to successfully manage municipal parking it is desirable for the Town to have control of at least 50 percent of the supply. This allows the Town to

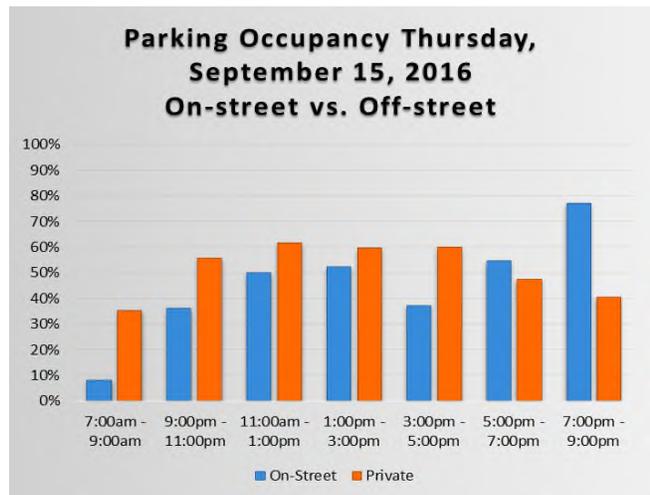
Public Parking Supply			
	On-Street Totals	86	16%
	Off-Street Totals	0	0%
	<b>Public Parking Total</b>	<b>86</b>	<b>16%</b>
Private Parking Supply			
	<b>Private Parking Total</b>	<b>467</b>	<b>84%</b>
	<b>TOTAL PARKING SUPPLY</b>	<b>553</b>	

effectively manage the parking in terms of allocation, changing demand, market pricing, and allows the parking to be enforced with greater efficiency. The Town manages and controls 16 percent of the parking in the downtown core area falling short of this benchmark.

### Turnover and Occupancy Study

Fieldwork included a turnover and occupancy study of on-street and off-street parking and vehicle movements encompassing both daytime and evening hours. A turnover and occupancy study of the public and private parking within the study area was completed on Thursday, September 15, 2016 from 7:00am-9:00pm. The weather during the turnover and occupancy study was sunny and warm.

The turnover and occupancy analysis was completed to gain an understanding of how parking was being utilized in the study area. The day chosen represented a typical weekday providing a base line for the analysis.



#### Key Points

- The overall peak observed occupancy was 60 percent and occurred during the 11:00am – 1:00pm circuit. This is typical for downtowns with multiple restaurants.
- It is common in downtowns with multiple restaurants to have a second peak in the evening, in the case of Elon the occupancy held steady until about 5:00pm after which it decreased.



- The on-street parking peaked during the 7:00pm – 9:00pm circuit when 77 percent of the spaces were occupied.
- The private off-street, which represents the majority of the parking, peaked during the 11:00am – 1:00pm circuit.
- There are areas within the study area that were at or near 100 percent occupied during the lunch peak. The Elon University parking on block D, F and G were at or over 100 percent occupancy. This occurs when people park vehicles in undesignated spaces such as aisles or other locations.
- Residential areas were observed for occupancy to determine if there was spill over from parking demand in the downtown. This did not appear to be occurring, though it is difficult to tell because there is not any on-street parking within blocks B, C, E, and F. It is possible that lot one on block G was not more occupied due to a fear of being towed. Several stakeholders and survey comments described towing in the few downtown lots.

### Turnover

The on-street spaces observed for turnover were designated as one hour and two hour. There were 216 vehicles observed parking in the 86 on-street parking spaces in the downtown during the hours of 7:00 A.M. - 9:00 PM. The majority of vehicles stayed two hours or less although there were 10 vehicles that remained in the same space for four hours. Five of the violations occurred in the two hour parking along the train tracks, with the others spread out throughout the other on-street spaces.

Typically it is difficult to get long term parkers to park in the appropriate locations without adequate parking enforcement. During the stakeholder interviews it was brought up that some people felt that employees were parking on street taking up the most valuable spaces. Of the vehicles noted on-street there was only a 3.8 percent violation rate, a rate of five percent or less is typically acceptable.

## **Parking Demand**

### **Current**

The current parking situation in the study area is an overall surplus. There are however pocket areas within the study area that have parking shortfalls. The overall parking surplus for the downtown is 165 spaces.



## Public Input

Public input was solicited in the form of surveys, public meetings and individual meetings with stakeholders of the downtown. Stakeholders included Town staff, business owners, property owners, employees of Elon businesses, developers, and both Elon University staff and students.

### Opportunity for Public Input:

- Main Street Meeting – September 12, 2016 5:00pm
- Stakeholder Meetings
  - September 12 – 16, 2016
  - November 14 – 15, 2016
- Preliminary Report Public Meeting – November 14, 2016 5:00pm
- On-Line Surveys – October 5, 2016 through October 31, 2016

Three surveys were developed and made available on the Town website to gain additional public input. The surveys were directed toward Business Owners/Managers, Employees and the General Public.

The surveys included a series of questions pertaining to how individuals traveled downtown, where they parked, how many businesses they visited, and how long they stayed.

### On-Line Parking Survey Results:

- Business Operator: 9 Responded
- Employee: 34 Responded
- Customer: 241 responded
  - 45% are Elon Residents
  - 23% are Elon University Students
  - 33% are not Elon Residents

The surveys included a series of questions pertaining to how individuals traveled downtown, where they parked, how many businesses they visited, and how long they stayed. Many questions provided an opportunity for participants to offer an opinion on various aspects of the parking system. Survey solicited respondent's views on topics ranging from the ease of parking to overall parking adequacy. Results of the opinion based questions are located in the **Appendix**.



## Recommendations

The recommendations presented in this report are intended to enhance the existing supply of parking through operational, management and allocation changes. While aimed primarily at increasing the efficiency of the system, the recommendations are comprehensive and provide a holistic approach to improving parking in the Town today and provide a plan for future growth.

A parking system is not just about parking vehicles, it also involves the walkability of a downtown, signage, enforcement, lighting as well as marketing parking to business owners, employees and customers/visitors. The utilization of parking lots can depend on any or all of these factors, as well as the overall condition of a lot. Fundamentally, these issues can impact a parking system and downtown economics in general.

All recommendations provided, whether used individually or as a package of system wide improvements, will aid Elon in creating a parking system. With a unified approach however, Elon will be best prepared to address parking related issues and handle new development now and in the future.

## New Parking

As development continues and as parking lots are used as sites for new developments the parking situation could quickly change making it important to plan ahead for new parking. **New Parking** details ways to plan for new parking and what type of parking will be needed.



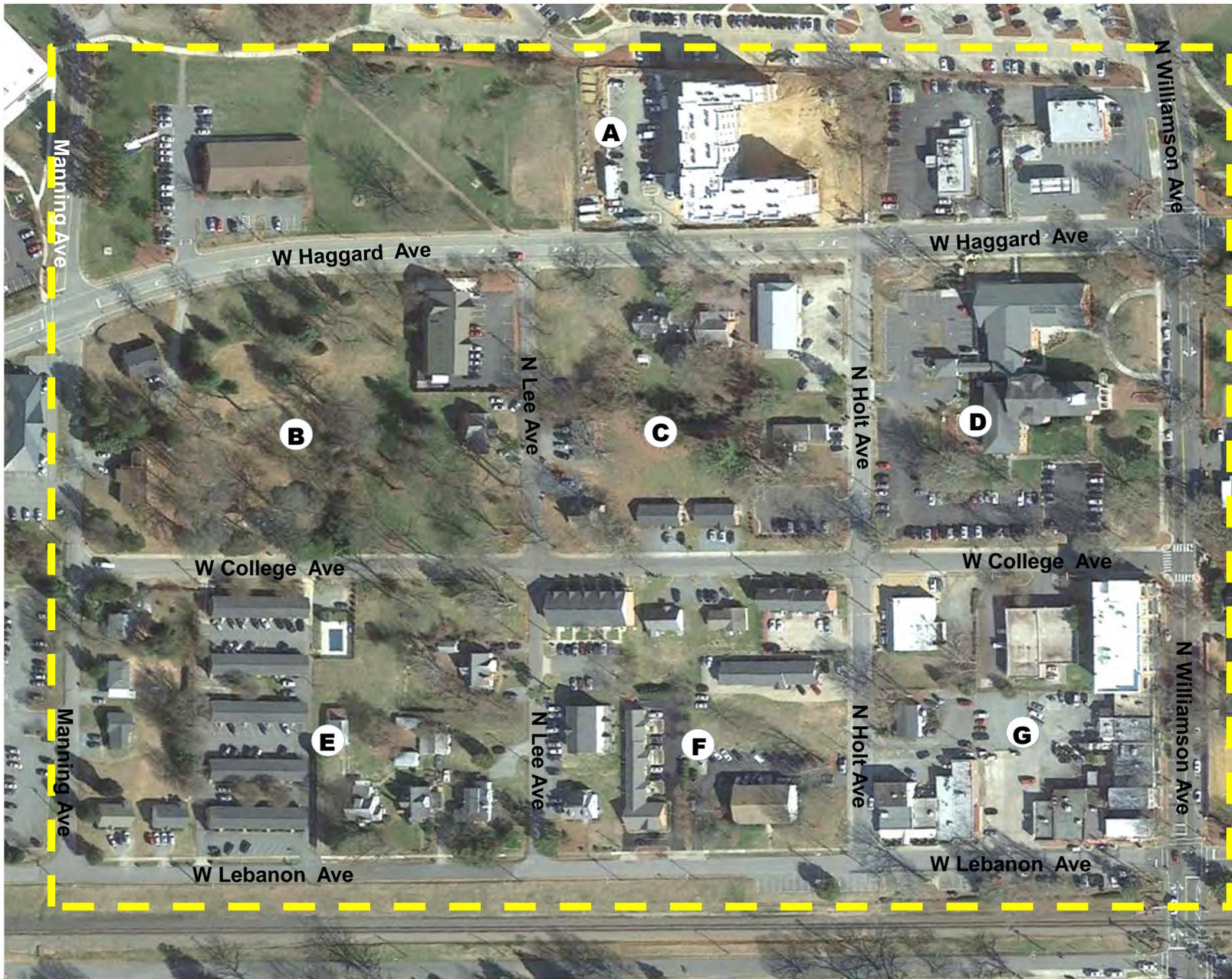
## Project Overview

This study, prepared for the Town of Elon serves to examine the existing parking system from both a qualitative and quantitative standpoint in the defined study area. Elon contracted with Rich and Associates to prepare a parking planning study for the Town. The study involved an inventory and review of the existing parking, how it is currently being used, impacts from Elon University and potential future changes to the downtown. A number of issues were examined including operations, current parking demand, development scenarios, and future parking needs.

For this study, Rich and Associates initiated the process with a field study and stakeholder interviews. Data collected as background material was considered using methods that involve analysis and survey feedback from user groups. The study drew on standards developed by the Institute of Transportation Engineers (ITE) and the Urban Land Institute (ULI), which were modified according to the survey results from Elon in order to suit the unique circumstances present in the downtown area.

## Study Area

The defined study area is illustrated in **Map 1**, “Study Area Map” located on **page 2** which consists of the historic business district. Rich and Associates evaluated the parking conditions, parking supply and parking activity in the roughly seven block study area. Areas outside of the study boundaries were examined for parking supply opportunities and potential impacts on parking.



TOWN OF ELON  
NORTH CAROLINA

PARKING ANALYSIS

Sheet Title:

STUDY AREA

LEGEND:

-  Block Identification
-  Study Area



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## Definitions

The following are definitions used for the analysis:

- **Parking Supply** – The number of parking spaces available for use by a specified group or groups of individuals (i.e. shoppers, employees, etc.).
- **Turnover** – Turnover is the number of vehicles that occupied a parking space in a particular period. For example, if a parking lot has 100 spaces and during the course of the day 250 different vehicles are recorded to have used the lot, then the turnover is two and a half times (2.5).
- **Occupancy** – The number of vehicles observed in a specific lot or block face represented as a percentage of spaces occupied.
- **Occupancy Rate** – The percentage of observed parking spaces with vehicles parked in them at a given time.
- **Circuit** – A circuit refers to the two-hour period between observances of any one particular parking space. For the turnover and occupancy study, a defined route was developed for each survey vehicle. Observations were conducted of each space once every two hours.
- **Block Face** – A letter was assigned to each block within the study area. Each block is then referenced by its block number and by a letter (A, B, C or D). The letter refers to the cardinal face of the block; with (A) being the north face, (B) the east face, (C) the south face and (D) the west face. Therefore, a block designated as AA would refer to the north face of block A.
- **Parking Demand** – The number of parking spaces generated by a single-purpose building, multi-purpose building, group of buildings or outdoor amenity.
- **Parking Need** – Represents the number of parkers who need to be accommodated in a given block after the use of alternative parking facilities is considered. Use is affected by price, location, accessibility and user restriction.
- **Parking Surplus** – The number of parking spaces within the study area boundaries for a block or the parking area total that surpass the parking demand.
- **Parking Deficit** – The number of insufficient parking spaces within the study area based on the parking demand.



## Parking Supply

Field work for this study entailed a review of the buildings and parking within the study area. **Table A** summarizes the existing parking supply in the study area. There are a total of 553 parking spaces in the primary study area. Of these spaces, 86 are public time limited on-street and 467 are off-street private spaces. The Town does not own any off-street parking within the study area.

**Table B** on **page 5** is a detailed parking inventory, listing type of parking by block and is followed by **Map 2** on **page 6**, which is a spatial view of the parking supply. In cases where parking spaces were not marked, the number of parking spaces was estimated. For the purpose of the study any parking marked reserved or privately owned was designated as private parking. Parking that is available for use by the general public was designated as public parking.

Elon manages and controls just 16 percent of the parking in the downtown business area. Based on Rich and Associates' experience and best practices, we have found that to successfully manage municipal parking in small downtowns it is especially desirable for the Town to have control of at least 50 percent of the parking supply. This allows the Town to effectively manage the parking in terms of allocation, reaction to changing demand, market pricing, and allows a parking system to be enforced with greater efficiency. Elon does not meet this benchmark.

Having a higher proportion of the parking publicly available means a customer may be able to shop at multiple destinations without having to move their vehicle. This is referred to as shared parking. With such large proportion of private parking in the downtown shared parking is discouraged and customers have to move their vehicle when visiting multiple destinations.

**Table A**  
**Parking Supply Summary**

<b>Public Parking Supply</b>			
	On-Street Totals	86	16%
	Off-Street Totals	0	0%
	<b>Public Parking Total</b>	<b>86</b>	<b>16%</b>
<b>Private Parking Supply</b>			
	<b>Private Parking Total</b>	<b>467</b>	<b>84%</b>
<b>TOTAL PARKING SUPPLY</b>		<b>553</b>	



**Table B**  
**Parking Supply**

Parking Supply							
Block >	A	B	C	D	F	G	TOTALS
<b>Public</b>							
<b>On-Street</b>							
1 HR				3	15	49	67
2 HR				10		8	18
Barrier Free						1	1
							<b>86</b>
<b>Off-Street</b>							
Unrestricted							0
Barrier Free							0
							<b>0</b>
<b>Private</b>							
Off-Street	153	14	41	109	37	91	445
Barrier Free	10	1	3	6		2	22
							<b>467</b>
<b>Summary</b>	<b>163</b>	<b>15</b>	<b>44</b>	<b>128</b>	<b>52</b>	<b>151</b>	<b>553</b>
Source: Rich and Associates Fall 2016							





## Turnover and Occupancy Study

A turnover and occupancy study of the public and private parking within the study area was completed on Thursday, September 15, 2016 from 7:00 AM. - 9:00 PM. The weather during the turnover and occupancy study was sunny and warm. The turnover and occupancy study was an observation of both public and private, on-street and off-street parking in the downtown.

The number of parking spaces occupied was observed during each two-hour circuit. The turnover portion of the analysis, where license plate numbers were recorded, applied to on-street parking spaces to determine how long specific vehicles remained parked in the same on-street space. The turnover information also yields occupancy results for the parking area and therefore for each circuit a composite occupancy rate can be derived. Turnover is an indicator of how often a parking stall is being used by different vehicles throughout the course of the day.

Occupancy is an important aspect of parking because it helps in understanding the dynamic of how parking demand fluctuates throughout the day. Likewise, the occupancy can be used to illustrate how parking demand is impacted by events in the downtown area. Overall, the occupancy data is used by Rich and Associates to calibrate the parking demand model. The results for the occupancy counts are separated by on-street vs. off-street and public vs. private parking.

### Occupancy

The occupancy summaries can be found in **Table C and Graph 1 and 2**. The composite occupancy results are found in **Table D**. The graphs demonstrate parking occupancies separated by on-street and off-street, with all of the on-street classified as public and all of the off-street is privately owned. The results show that there is a surplus of parking in the downtown.



**Table C**  
**Thursday September 15, 2016**  
**Occupancy Summary**

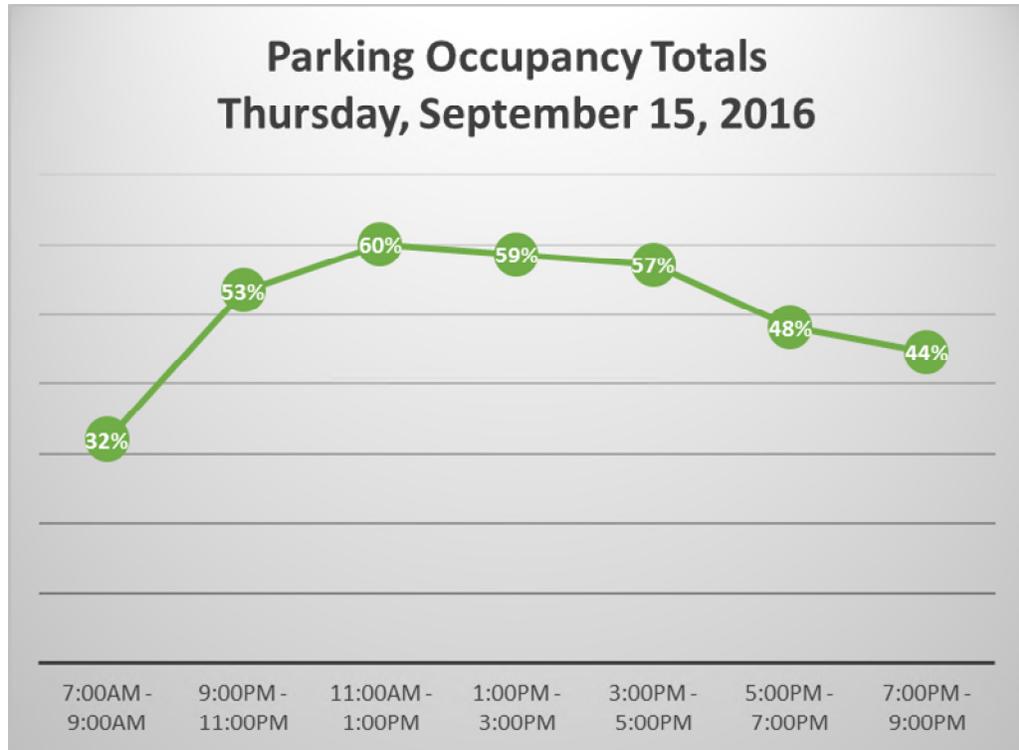
Description	# of spaces	7:00am - 9:00am	% Occ.	9:00pm - 11:00pm	% Occ.2	11:00am - 1:00pm	% Occ.3	1:00pm - 3:00pm	% Occ.4	3:00pm - 5:00pm	% Occ.5	5:00pm - 7:00pm	% Occ.6	7:00pm - 9:00pm	% Occ.7
Public On-street	86	7	8%	31	36%	43	50%	45	52%	32	37%	47	55%	66	77%
Private	658	231	35%	366	56%	404	61%	391	59%	393	60%	311	47%	265	40%
<b>Overall</b>	<b>744</b>	<b>238</b>	<b>32%</b>	<b>397</b>	<b>53%</b>	<b>447</b>	<b>60%</b>	<b>436</b>	<b>59%</b>	<b>425</b>	<b>57%</b>	<b>358</b>	<b>48%</b>	<b>331</b>	<b>44%</b>

The peak observed occupancy and key points:

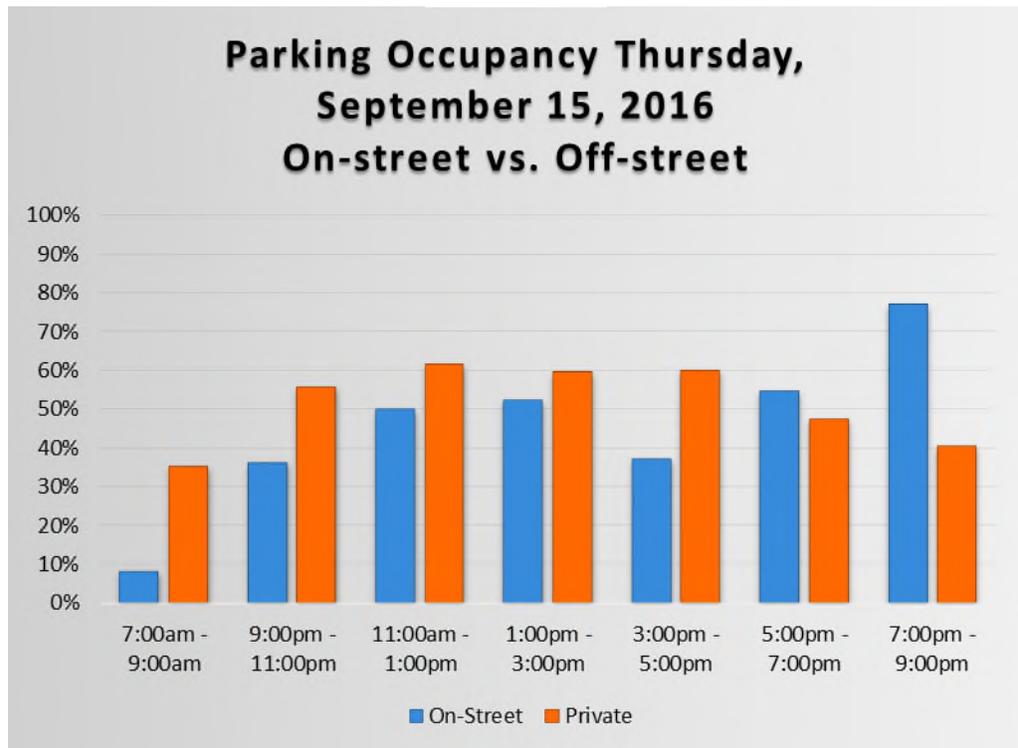
- The overall peak observed occupancy was 60 percent and occurred during the 11:00am – 1:00pm circuit. This is typical for downtowns with multiple restaurants.
- It is common in downtowns with multiple restaurants to have a second peak in the evening, in the case of Elon the occupancy held steady until about 5:00pm after which it decreased.
- The on-street parking peaked during the 7:00pm – 9:00pm circuit when 77 percent of the spaces were occupied.
- The private off-street, which represents the majority of the parking, peaked during the 11:00am – 1:00pm circuit.
- There are areas within the study area that were at or near 100 percent occupied during the lunch peak. The Elon University parking on block D, F and G were at or over 100 percent occupancy. This occurs when people park vehicles in undesignated spaces such as aisles or other locations.
- Residential areas were observed for occupancy to determine if there was spill over from parking demand in the downtown. This did not appear to be occurring, though it is difficult to tell because there is not any on-street parking within blocks B, C, E, and F.
- It is possible that lot one on block G was not more occupied due to a fear of being towed. Several stakeholders and survey comments described towing in the few downtown lots.



Graph 1



Graph 2





Parking Study  
Final Report

Table D

Block-Face	Description	spaces	7:00am - 9:00am	% Occ.	9:00pm - 11:00pm	% Occ.2	11:00am - 1:00pm	% Occ.3	1:00pm - 3:00pm	% Occ.4	3:00pm - 5:00pm	% Occ.5	5:00pm - 7:00pm	% Occ.6	7:00pm - 9:00pm	% Occ.7
A	Lot 1	24	4	17%	3	13%	6	25%	3	13%	8	33%	6	25%	2	8%
A	Lot 2 Skids	41	12	29%	15	37%	16	39%	15	37%	4	10%	10	24%	5	12%
A	Lot 3 Park	16	11	69%	12	75%	12	75%	10	63%	12	75%	11	69%	11	69%
A	Lot 4 Park	48	45	94%	44	92%	46	96%	43	90%	43	90%	39	81%	40	83%
A	Lot 5 Elon U	34	2	6%	27	79%	28	82%	19	56%	29	85%	10	29%	3	9%
B	Lot 1	6	4	67%	4	67%	5	83%	5	83%	5	83%	5	83%	4	67%
B	Lot 2	6	1	17%	2	33%	2	33%	2	33%	3	50%	2	33%	1	17%
B	Lot 3	4	4	100%	4	100%	3	75%	2	50%	2	50%	1	25%	0	0%
B	Lot 4	4	0	0%	0	0%	0	0%	0	0%	0	0%	0	0%	0	0%
B	Lot 5	6	3	50%	1	17%	3	50%	3	50%	3	50%	5	83%	2	33%
B	Lot 6 Acorn	15	6	40%	11	73%	6	40%	5	33%	3	20%	4	27%	3	20%
C	Lot 1	5	3	60%	5	100%	4	80%	5	100%	6	120%	3	60%	4	80%
C	Lot 2 Elon U	22	3	14%	11	50%	15	68%	13	59%	16	73%	12	55%	7	32%
C	Lot 3	5	1	20%	3	60%	3	60%	3	60%	3	60%	3	60%	3	60%
C	Lot 4	5	3	60%	2	40%	2	40%	2	40%	3	60%	3	60%	3	60%
C	Lot 5	4	2	50%	1	25%	2	50%	2	50%	2	50%	2	50%	2	50%
C	Lot 6	6	1	17%	1	17%	1	17%	3	50%	1	17%	1	17%	1	17%
C	Lot 7	6	2	33%	4	67%	4	67%	3	50%	5	83%	4	67%	2	33%
C	Lot 8	3	1	33%	1	33%	3	100%	1	33%	0	0%	1	33%	0	0%
C	Lot 9	5	3	60%	2	40%	3	60%	3	60%	3	60%	2	40%	2	40%
C	Lot 10 Wash Board/Salon	17	0	0%	2	12%	4	24%	3	18%	3	18%	3	18%	1	6%
D	Lot 1 Church	32	1	3%	8	25%	13	41%	9	28%	6	19%	16	50%	3	9%
D	Lot 2 Church - Elon U	65	5	8%	55	85%	65	100%	67	103%	67	103%	42	65%	31	48%
D	Lot 3 Church	18	closed	0%	closed	0%	closed	0%	closed	0%	18	100%	14	78%	11	61%
DB	on-street 2 hr	10	1	10%	9	90%	9	90%	9	90%	7	70%	6	60%	8	80%
E	Lot 1	4	2	50%	3	75%	3	75%	2	50%	2	50%	1	25%	0	0%
E	Lot 2	3	4	133%	3	100%	3	100%	2	67%	2	67%	2	67%	2	67%
E	Lot 3	4	3	75%	4	100%	4	100%	4	100%	3	75%	2	50%	3	75%
E	Lot 4	53	36	68%	34	64%	32	60%	32	60%	34	64%	29	55%	32	60%
E	Lot 5	3	3	100%	3	100%	3	100%	2	67%	2	67%	2	67%	1	33%
E	Lot 6	3	2	67%	1	33%	1	33%	1	33%	0	0%	1	33%	0	0%
E	Lot 7	4	3	75%	1	25%	1	25%	0	0%	1	25%	1	25%	0	0%
E	Lot 8	2	2	100%	2	100%	2	100%	2	100%	3	150%	2	100%	0	0%
E	Lot 9	2	1	50%	2	100%	2	100%	1	50%	1	50%	1	50%	1	50%
E	Lot 11	4	1	25%	1	25%	2	50%	2	50%	2	50%	1	25%	0	0%
F	Lot 1	12	5	42%	5	42%	3	25%	3	25%	3	25%	3	25%	4	33%
F	Lot 2	7	3	43%	3	43%	1	14%	4	57%	4	57%	3	43%	4	57%
F	Lot 3	9	7	78%	7	78%	4	44%	4	44%	4	44%	4	44%	7	78%
F	Lot 4	15	11	73%	12	80%	12	80%	11	73%	9	60%	8	53%	8	53%
F	Lot 5	6	3	50%	2	33%	2	33%	3	50%	3	50%	3	50%	1	17%
F	Lot 6	10	7	70%	6	60%	7	70%	6	60%	4	40%	4	40%	5	50%
F	Lot 7	9	7	78%	6	67%	6	67%	8	89%	8	89%	5	56%	6	67%
F	Lot 8	18	8	44%	21	117%	24	133%	23	128%	27	150%	6	33%	1	6%
G	Lot 1	23	1	4%	3	13%	6	26%	18	78%	6	26%	4	17%	16	70%
G	Lot 2	16	0	0%	8	50%	13	81%	14	88%	9	56%	11	69%	15	94%
G	Lot 3 Elon U	10	3	30%	10	100%	13	130%	12	120%	9	90%	6	60%	6	60%
G	Lot 4	6	0	0%	2	33%	5	83%	6	100%	3	50%	4	67%	4	67%
G	Lot 5 Dentist	11	1	9%	3	27%	0	0%	0	0%	0	0%	0	0%	0	0%
G	Lot 6	7	0	0%	3	43%	4	57%	4	57%	4	57%	5	71%	4	57%
G	Lot 7 College Taphouse	8	0	0%	0	0%	3	38%	4	50%	3	38%	2	25%	1	13%
G	Lot 8 AT&T	9	1	11%	3	33%	2	22%	2	22%	1	11%	1	11%	3	33%
G	Lot 9 AT&T	3	0	0%	0	0%	0	0%	0	0%	1	33%	1	33%	0	0%
GB	on-street 1 hr	9	0	0%	2	22%	5	56%	5	56%	6	67%	4	44%	7	78%
GBB	On-street 1 hr	12	5	4%	4	33%	5	42%	5	42%	5	42%	5	42%	5	42%
GC	on-street 1 hr	10	0	0%	0	0%	0	0%	1	10%	0	0%	2	20%	5	50%
GCC	on-street 2 hr along train tracks	8	1	13%	8	100%	8	100%	7	88%	8	100%	7	88%	8	100%
GCC	on-street 1 hr along train tracks	34	0	0%	8	24%	16	47%	17	50%	5	15%	23	68%	31	91%
GD	on-street 1 hr	3	0	0%	0	0%	0	0%	1	33%	1	33%	0	0%	2	67%
	<b>Totals</b>	<b>744</b>	<b>238</b>	<b>32%</b>	<b>397</b>	<b>53%</b>	<b>447</b>	<b>60%</b>	<b>436</b>	<b>59%</b>	<b>425</b>	<b>57%</b>	<b>358</b>	<b>48%</b>	<b>331</b>	<b>44%</b>





TOWN OF ELON  
NORTH CAROLINA

PARKING ANALYSIS

Sheet Title:

**PARKING PEAK OCCUPANCY**  
11:00 AM – 1:00 PM  
(60% overall Occupancy)  
Thursday, Sept 15, 2016

**LEGEND:**

- D Block Identification
- 1 Lot Designation
- Study Area

**PARKING OCCUPANCY**

- 85% through 100%
- 75% through 84%
- 50% through 74%
- 0 through 49%



Parking Consultants • Planners  
Architects • Engineers  
26877 NW Hwy Suite 208  
Southfield, MI 48033  
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File No.	1707	
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		11



## Turnover

The on-street spaces observed for turnover were designated as one hour and two hour. There were 216 vehicles observed parking in the 86 on-street parking spaces in the downtown during the hours of 7:00 A.M. - 9:00 PM. The majority of vehicles stayed two hours or less although there were 10 vehicles that remained in the same space for four hours. Five of the violations occurred in the two hour parking along the train tracks, with the others spread out throughout the other on-street spaces.

It is possible that the majority of the parking violations during the turnover and occupancy study were employees of downtown businesses or university students. It is a key to a successful parking system that employees and business owners understand the vital importance of the convenient on street spaces for the success of the downtown business. At this point there is not a specific public parking area that is designated for long term parking that would be used by employees or visitors of the downtown wanting to spend more than two hours.

Typically it is difficult to get long term parkers to park in the appropriate locations without adequate parking enforcement. During the stakeholder interviews it was brought up that some people felt that employees were parking on street taking up the most valuable spaces. Of the vehicles noted on-street there was only a 3.8 percent violation rate, a rate of five percent or less is typically acceptable.



## Parking Demand Analysis

Projections were made to determine the current and future parking demands and the need for parking in the study area. The data collected and compiled by Rich and Associates to calculate the parking demand included:

- An inventory of the on and off-street parking supply in the study area.
- Turnover and occupancy data for public and private on and off-street parking areas.
- Elon provided Rich and Associates a building inventory that included the land use and square footage for each building.

The parking demand analysis of land use contains two levels of parking analyses to determine the number of parking spaces needed. First is a mathematical or hypothetical model of parking demand based on the building gross floor area. The mathematical model multiplies a parking demand generation ratio by the floor area of specific land uses to derive the number of spaces needed. The second is a method of using field observations to calibrate the mathematical model and help to establish projected parking spaces needed.

Rich and Associates reviewed proposed and potential developments with Elon staff and Elon University staff. Developments were discussed though all developments are speculative at this point, since none of the projects have been confirmed as proceeding in the immediate future.

A point to consider regarding the parking supply and demand is that motorists, in general, perceive off-street spaces with occupancies greater than 85 percent to be at capacity. Larger parking areas may be able to achieve a higher occupancy before this perception occurs. The point is that many parking areas will be perceived as full at less than 100 percent occupied. When 85 percent occupancy occurs, motorists will begin to re-circulate to seek other parking, adding to downtown traffic congestion and the driver's perception that there is no parking available in the downtown. This is often the point that triggers the need for additional parking.

Calculating parking spaces required for the study area is based on an analysis of the number of parking spaces demanded and/or needed to serve the size and type of buildings present in the downtown and for future re-occupancy planned or proposed. Most parking requirements are based on the floor area of a particular development and the actual generation rate or parking ratio is linked to the land use type.



**Table E** demonstrates the parking ratios for each land use established for Elon versus national averages from the Institute of Transportation Engineers (ITE). ITE ratios are based on nationally conducted surveys although in some cases the survey sample size is very small. In general, the ITE parking generation ratios are assumed to be higher than necessary in a downtown setting where shared use and linked trips help to address the peak parking needed for various uses at different times of the day.

**Table E**

<b>Parking Generation Rate Comparison</b>				
<b>Parking Ratios</b>	Town of Elon Zoning Code	Town of Elon Zoning Code	Institute of Transportation	Established for Town of Elon
	per 500 gross square feet as written	per 1,000 gross square feet	per 1,000 gross square feet	per 1,000 gross square feet
Office	1.00	2.00	2.79	2.00
University Office	1.00	2.00	2.79	3.25
Hotel	1 per room or suite	1 per room or suite	0.90	1.25 / unit
Retail	1.00	2.00	3.97	2.00
Service	1.00	2.00	3.60	2.00
Mixed Use	1.00	2.00	N/A	2.95
Restaurant/Bar	1.00	2.00	10.01	5.00
Multi-Family Residential	1.25 one bed, 1.50 two bed, 2.00 3 bed	1.25 one bed, 1.50 two bed, 2.00 3 bed	1.2 / unit	1.5 / unit
Warehouse/Auto Repair & Sales		0.25	0.50	0.45
Community/Public Assembly	No Minimum	No Minimum	3.00	0.65
Vacant	N/A	N/A	N/A	2.95
(1) Source: Town of Elon Land Development Ordinance pg. 114				
(2) Source: Institute of Transportation Engineers Parking Generation Manual, 4th ed., 2010				
(3) Source: Rich and Associates Fieldwork & Surveys, Fall 2016				



**Rich and Associates is recommending that consideration be given to using the ratios Rich and Associates developed for the Elon study found in Table E as a guideline for determining parking need for various development proposals in the Town Center Planning District.** These ratios are designed around a peak daytime need.

The ratios developed in **Table E** were derived from our work on previous studies in similar downtowns and a review of the completed surveys. The parking demand that is calculated using these ratios is consistent with the observed parking occupancy from the study completed on September 15, 2016.

Once a parking generation model is developed that illustrates the surpluses and deficits of parking numerically and graphically, we then compare the model with actual field observations, specifically the turnover and occupancy counts. The comparison serves as a test of the demand model and allows Rich and Associates staff to make further revisions or adjustments where necessary to ensure accuracy, as well as to fully understand the overall parking dynamic in the downtown area.

The assumptions used for the parking demand calculations are:

**Assumption 1:** It was assumed that parking demand per block was dependent on the gross floor area contained in the block. Parking demand computed for one block was not affected by the amount of gross floor area on surrounding blocks. Therefore, a block with surplus parking supply is not used to offset shortfalls on adjacent blocks.

**Assumption 2:** The parking demand calculations were derived under the assumption that currently occupied properties would remain occupied at existing, or higher than existing levels into the future.

**Assumption 3:** Parking demand is not affected by parking availability, use, location and price.

The gross square footage of individual buildings was collected and then sorted by land use categories. The different land uses for each block are in general multiplied by a parking generation ratio (found in **Table E**,) of parking spaces required per 1,000 square feet. The resulting number of parking spaces demanded is deducted from the available parking supply on each block and a surplus or deficit for each block is then calculated. A summary of the parking demand is found in **Table F, page 17** and is represented spatially in the Surplus/Deficit **Map 4** on **page 18**.



The following are issues that are considered when developing the number of parking spaces needed:

- Building size, purpose and special use conditions,
- Socioeconomic characteristics of the downtown populations and visitors of the downtown.
- Alternative modes of transportation, which includes availability, use, attractiveness and policy impacts.
- Proportion of the downtown trips that are multiple-use or linked.
- Vehicle traffic.
- Cost of parking.

The parking generation ratios developed for each land use reflect the current peak daytime conditions. This results in a slightly higher projected current parking demand than the observed needs within the downtown. The office space for Elon University was separated from other office space because it is creating a higher demand of parking than other office space in the downtown. In the current situation there is an overall surplus of parking spaces within the study area of 165.

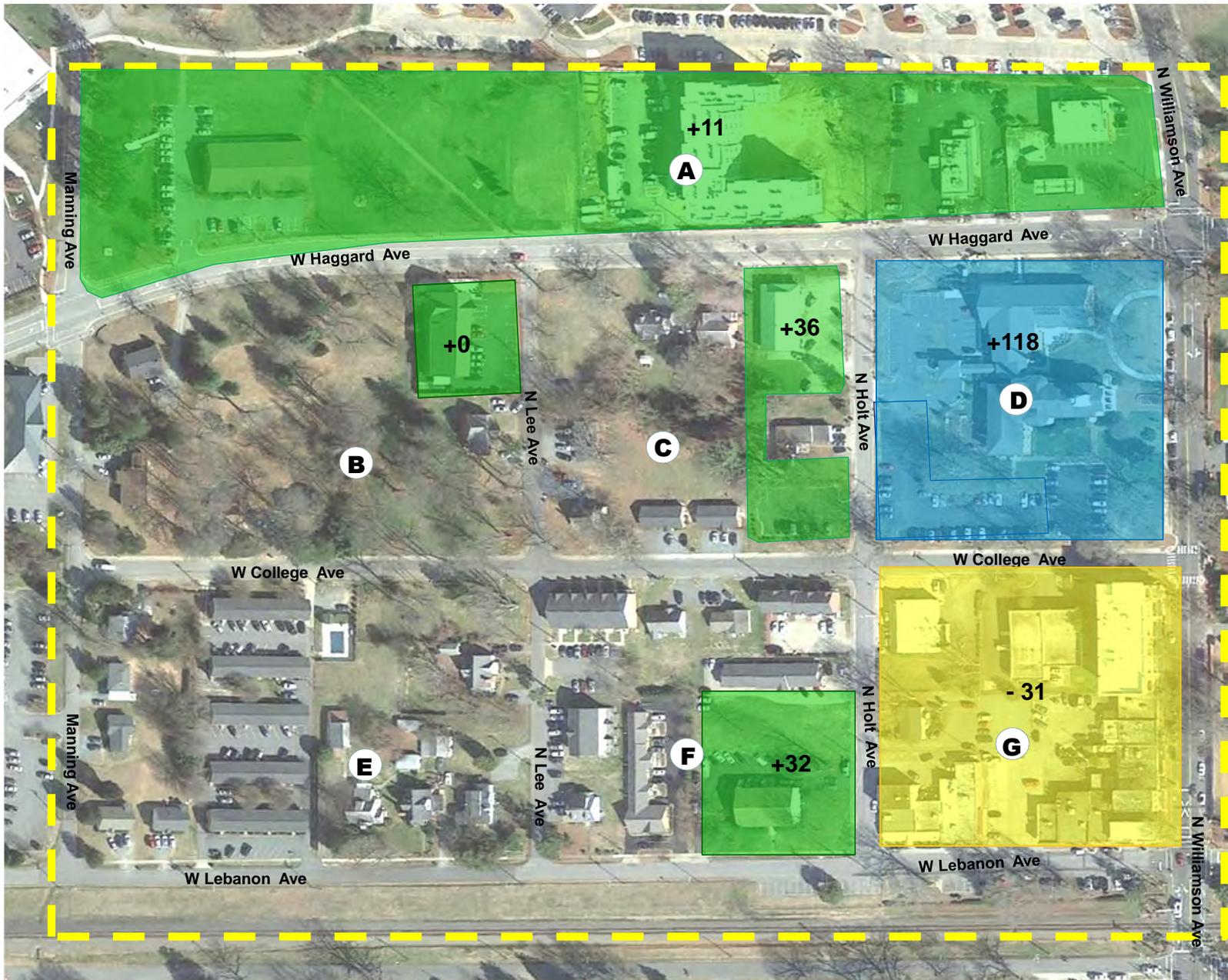
Though there is an overall surplus of parking in the study area, there are times when parking can be difficult to find. The primary reason behind this is that much of the parking in the Town core is privately controlled and does not get used as shared use parking. This parking is specifically for the business it is associated with, not allowing customers to park once and visit multiple businesses. If employees of the downtown who have a space in a lot owned by their employer instead park on street for convenience, this actually takes two spaces out of the parking inventory because the private space is not available for anyone else to use. The competition for the public space is occurring between customers, students and employees, with such a small proportion of the parking publicly available it is clear why many people feel that there is a parking shortage. Rich & Associates recommends municipalities control at least 50 percent of the parking to allow for use and allocation changes. Elon only controls 16 percent of the parking supply in the downtown at this time.

The Parking Surplus/Deficit Matrix used in this analysis will be provided to the Town to use as a tool in helping to determine the amount of parking needed for each new development. The table can be updated with any changes in use or square footage to keep up with current and future parking needs. Future developments were discussed during meetings though all developments were speculative at this point.



Table F

Daytime Parking Demand Matrix														
A	B	C	D	E	F	G	H	I	J	K	L	M	N	O
Block	Office	University Office	Hotel	Retail	Service	Mixed Use	Restaurant /Bar	Residential (per unit)	Warehouse/Auto Repair & Sales	Community	Vacant	Demand (current)	Parking Supply	Surplus/ Deficit (current)
Current	2.00	3.25	1.25	2.00	2.00	2.95	5.00	1.50	0.45	0.65	2.95			
A	-	7,320	-	3,100	-	13,395	3,028	45	-	-	-	152	163	11
B	-	-	12	-	-	-	-	-	-	-	-	15	15	0
C	-	-	-	-	3,825	-	-	-	-	-	-	8	44	36
D	-	-	-	-	-	-	-	-	-	16,012	-	10	128	118
F	-	6,248	-	-	-	-	-	-	-	-	-	20	52	32
G	1,128	9,357	-	5,800	-	23,517	13,022	-	7,283	-	-	182	151	-31
<b>Totals</b>	<b>1,128</b>	<b>22,925</b>	<b>12</b>	<b>8,900</b>	<b>3,825</b>	<b>36,912</b>	<b>16,050</b>	<b>45</b>	<b>7,283</b>	<b>16,012</b>	-	<b>388</b>	<b>553</b>	<b>165</b>
												(stalls)	(stalls)	(stalls)



TOWN OF ELON  
NORTH CAROLINA

PARKING ANALYSIS

Sheet Title:

CURRENT PARKING  
SURPLUS / DEFICIT

LEGEND:

**D** Block Identification

Study Area

-100 +

-99 - -1

0 - 99

+100

**Current Parking  
Surplus = 165 spaces**

**RICH**  
& ASSOCIATES  
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Architects • Engineers  
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## Public Input

Public input was solicited in the form of surveys, public meetings and individual meetings with stakeholders of the downtown. Public meetings provided an opportunity for an understanding of the study process, public input regarding parking and a presentation of current findings along with preliminary recommendations. Discussions with stakeholders included questions specific to developments, where they worked, lived or need to use parking in the downtown. Stakeholders included Town staff, business owners, property owners, employees of Elon businesses, developers, and both Elon University staff and students.

### Opportunity for Public Input:

- Main Street Meeting – September 12, 2016 5:00pm
- Stakeholder Meetings
  - September 12 – 16, 2016
  - November 14 – 15, 2016 (meeting minutes in **Appendix E**)
- Preliminary Report Public Meeting – November 14, 2016 5:00pm
- On-Line Surveys – October 5, 2016 through October 31, 2016

Many stakeholders stated that they felt there was a parking shortage in the downtown. It was also stated that it is sometimes difficult to find parking on street, although additional parking is available within a reasonable walking distance. Other discussions that came out of the stakeholder meetings included opinions of how students and Elon University events cause parking shortages.

Surveys were employed for collecting input from the community. The surveys were sent out by Elon staff to the business owners and managers in the downtown, links were sent out in newsletters, staff conducted direct visits to promote the surveys and links were posted on Facebook. There were three surveys developed for this task; the first was a business operator survey, the second was an employee survey and the third was for customers of the downtown. The detailed response rate is following.

### On-Line Parking Survey Results:

- Business Operator: 9 Responded
- Employee: 34 Responded
- Customer: 241 responded
  - 45% are Elon Residents
  - 23% are Elon University Students
  - 33% are not Elon Residents



The surveys included a series of questions to identify how individuals traveled to downtown, where they parked, how many businesses they visited, and how long they stayed. Many questions provided an opportunity for participants to offer an opinion on various aspects of the parking system. Survey solicited respondent's views on topics ranging from paid parking to overall parking adequacy. Summaries of the surveys are following with complete results of the opinion based questions provided in the **Appendix A-C**.

#### Overall Business Owners Responses

- Have a slower summer
- Drive and park (100%)
- Have a parking space at their business (89%)
- Provide parking for all employees (67%)
- Have a policy for staff regarding where to park (89%)
- Do not have parking for customers/visitors (50%)
- Feel there is not enough public parking (89%)
- Have customers complain about lack of parking (88%)
- Feel that employees park where they should (71%)
- Feel that it is difficult to find a parking space (100%)

#### Overall Employee Responses

- Part time employee (53%)
- Elon University Students (47%)
- Drive and Park my own car (72%)
- Employer provides parking (88%)
- Employers do not have a policy discouraging from parking on-street (52%)
- Feel that there is a need for additional public parking (66%)
- Feel people are parking in the correct locations (72%)
- Feel it is not easy to locate a parking space (59%)

#### Overall Customers and Visitors Responses

- Drive downtown (86%)
- Visit occasionally on Saturday-Sunday (65%, daytime or evening)
- Park on-street (71%)
- Visit 5 or more times per week (31%)
- Stay 2 hours (40%)
- Visit one business each trip (62%)
- Willing to walk one block from parking (46%)
- Feel there is not enough parking (82%)
- Find it difficult to find parking (63%)



## Parking Recommendations

### Introduction

The recommendations presented here are intended to enhance the existing supply of parking through operational and management changes. While aimed primarily at increasing the efficiency of the parking system, the recommendations are comprehensive and provide a holistic approach to improving parking in the downtown today as well as provide a plan for accommodating future growth of the downtown study area.

The recommendations in this section are a set of tools that Elon can use to manage the parking system. Elon will also be given the demand matrix chart (Table H) to use as a tool to manage parking data in the downtown. This chart can be updated with new development, vacancy or in-fill data, and any changes to the parking inventory. The chart allows the community to understand the impacts of potential development and assist in meeting the future parking needs of the downtown.

A parking system is not just about parking vehicles, it also involves the walkability of a downtown, signage, enforcement, lighting as well as marketing parking to business owners, employees and customers/visitors. The utilization of individual lots can depend on any or all of these factors, as well as the overall condition of the lot. Fundamentally, these issues can impact a parking system and therefore downtown economics in general.

All recommendations within this section, whether used individually or as a package of system wide improvements will aid Elon in creating a parking system. With a unified approach, Elon will be best prepared to address parking related issues and handle new development now and in the future.

Some of these recommendations can be implemented easily and quickly with little or no cost to the downtown while others may require significant budgeting and time to complete. The Recommendations section of the report focuses on policy and actions to the current parking system. There are recommendations for future changes with the downtown in the New Parking section addresses future parking options and timing.



## 1. Downtown Parking Advisory Committee

It is recommended that a Downtown Parking Advisory Committee is developed. This committee would meet to address the needs and concerns regarding the parking system, typically once a month. The committee should review and advise the Board of Aldermen on proposals for parking improvements and requests for changes to the system such as time durations, allocation of parking and the implementation of the parking report.

The committee should develop a set of goals and then work to set policies that help meet those goals. The committee would report to the Board of Alderman on parking issues and changes that need to be made to the system.

Responsibility: Town/DDA

Action Time: Immediate Action

Cost: N/A

## 2. Discourage the Development of Any New Private Parking Lots in the Downtown

A parking system works best when the parking can be shared and the Town is in control of 50 percent or more of the available parking in the downtown. This is important because it allows shared use parking. Maximizing the percentage of the parking supply that is shared use allows the parking needs of the Town to be met with fewer spaces, thereby requiring less investment allocated to parking and less consumption of land for parking purposes. Elon controls 16 percent of the parking and does not meet this benchmark. At higher percentages of publicly provide parking, even more flexibility is available.

When parking spaces are reserved for specific businesses or uses and are not available for multiple businesses in the downtown they often go unused for the majority of the day. While the current parking demand analysis showed that there is an overall sufficient parking supply, the availability of shared use parking is vital for downtown businesses to succeed. When there is a lack of available shared use parking because the parking is reserved for specific uses this makes it difficult for a customer/visitor of the downtown to visit more than one location. This also makes it difficult to provide a sufficient amount of employee parking off-street.

Density combined with a mixture of land use types encourages activity in an urban setting. Privately developed surface parking lots can be discouraged through zoning ordinances. Some communities outright ban parking development by private developers, while others implement parking maximums that limit the amount of on-site parking that can be built with a development.



When a community chooses to discourage private parking within a specific business district, the Town takes on the task of providing enough parking to support economic activity for all developments (other than residential) within the district. Most successful downtowns do not require parking in Central Business Districts. The reasoning behind this policy, is that a dense downtown can be created without an excess of parking or driveways. The parking that is built is shared use and encourages walking, thus encouraging customers to visit multiple locations. Additionally, this allows Elon to keep development where they want, parking in locations that benefit the whole district and keeps a more pedestrian friendly downtown.

Under this scenario, the majority of the parking need is provided by the Town. Elon can then consider charging a fee for new development or create an assessment district to fund new parking projects. This is discussed further in **New Parking** on **page 45**, in funding options or the parking system.

Communities that do not require parking for development in Downtown Business Districts encourage density, mixed land use and development in the district. In this scenario it is still required that developers provide parking for residential developments. Residential parking can sometimes work as shared use parking though it is difficult to rent or sell units when there is not a dedicated parking space provided, especially in an area that does not have multiple forms of public transportation.

**2.1** Public and private partnerships are another key factor in providing additional publicly available parking. Elon currently controls 16 percent of the available parking in the downtown. This number should be closer to 50 percent or higher to help facilitate the re-occupancy of vacant space along with the ability to pro-actively reallocate parking for new developments. Work with private parking owners to create shared use agreements.

**2.1.1** There are spaces available at the Elon Community Church that are often made available to the general public. These spaces are not included in the public parking supply because they are not always open to the public.

Where possible it will benefit the Town to seek out public/private partnerships with parking to increase the amount of publicly available parking. Stakeholders brought up the issue that people are often towed from the Elon Community Church lot. There are three separate areas for parking and some is designated specifically for Elon University. There seems to be an overall lack of understanding of what areas can be used and when. If there were signs that made it clear



who can use the parking and when, this lot would help serve the downtown needs in the evening.

**2.1.2** Try to work with AT&T to create an agreement to use the area in front of the building. This area is not used because there is not a reason for customers to come to this location. If the parking was reconfigured there could be either angled parking or 90 degree parking added along the street.

**2.1.3** If at all possible work with the private lot owners on block G to use this lot as one contiguous lot that is better maintained, striped, lighted and clearly signed. If the owners are willing, spaces that are not for employees could be signed two hour public and monitored by the parking enforcement officers. With the proper agreement between the Town and private lot owners there would be less of a need for towing due to proper enforcement of the lot.

**2.2** If it is not possible to work with private lot owners to open up the parking for public use it will be necessary for the Town to acquire land to build a parking lot. Even with a parking surplus the majority of parking is not available for public use and because of this there is a parking shortage on block G.

**2.3** Elon should look for areas where additional parking can be added along the train tracks. With this additional parking it will allow the Town to hold off on a lot until there is additional development in the downtown.

### Drawing 1



Drawing not to scale

Responsibility: Town/DDA

Action Time: Immediate

Cost: To be determined



### 3. Pedestrian Enhancements/Activity

Pedestrian movement is an important aspect of parking. It is extremely difficult to get people to park beyond the front door of their destination if there is any concern regarding safety or if the experience is not pleasant. Lighting and landscaping can greatly change a perception of safety in lots and along sidewalks. In addition to improved lighting adding murals, art, window decorations and flowers can create a pleasant walking experience during the day as well as at night.

All pedestrian walkways should be barrier free and easy to navigate. Minimize pedestrian and vehicular interaction by creating a clear distinction between the street and sidewalk. This can be done by using texture, colors, trees, or planters between the sidewalks and streets. It is also important to provide barrier free accessibility at all intersections. When all sidewalks are accessible, it is then possible for someone with less mobility to park at an available non-barrier free designated parking space when other barrier free spaces are full.

**3.1** All block faces should have sidewalks with accessible ramping and lighting. There are several block faces within the study area that do not have a sidewalk. When sidewalks are put in lighting will need to be added

**3.2** All of the older light fixtures in the downtown should be cleaned or replaced. In many cases the lenses have yellowed and they do not put out as much light as desired.

**3.3** Consider turning the first parallel parking space on W. Lebanon Ave into an extended sidewalk with a bike rack. The sidewalk at this area is narrow with a planter on the existing building making it difficult to walk two abreast.



If this is well received consider removing the parallel parking on this street to provide outdoor seating areas. This should not be done before additional parking is added along the rail road tracks.

Responsibility: Elon /DDA.

Action Time: When building new parking or new streets in the downtown.

Cost: **3.1** is to be determined, **3.2** has minimal cost associated, cleaner and time, and **3.3** is to be determined.



#### 4. Add Additional Bicycle Racks to the Downtown and Continue to Encourage Bicycle Ridership

**4.1** Elon should consider making the downtown more bicycle friendly and providing adequate and useable bicycle parking which in turn cuts down on the number of parking spaces needed.

##### Guidelines on Bicycle Racks:

- Racks should allow bike frame to make contact at two points.
- Should allow for more than one bike per rack.
- Needs to allow for popular "U" shape lock.
- Racks should be placed where they will not impede upon pedestrian traffic, though need to be readily identifiable.
- Should be clearly signed with a bicycle parking sign.



Two examples of recommended bike racks

**4.2** Add bike racks into the no parking zone on N. Williamson Ave near W. College Ave. Drawing 2 on the following page details rack placement and sign locations. The space is 35' long allowing enough space for 6 bike racks that will hold 12 bicycles. With Elon University students visiting many downtown businesses this location for bicycle parking is a close proximity to most businesses.

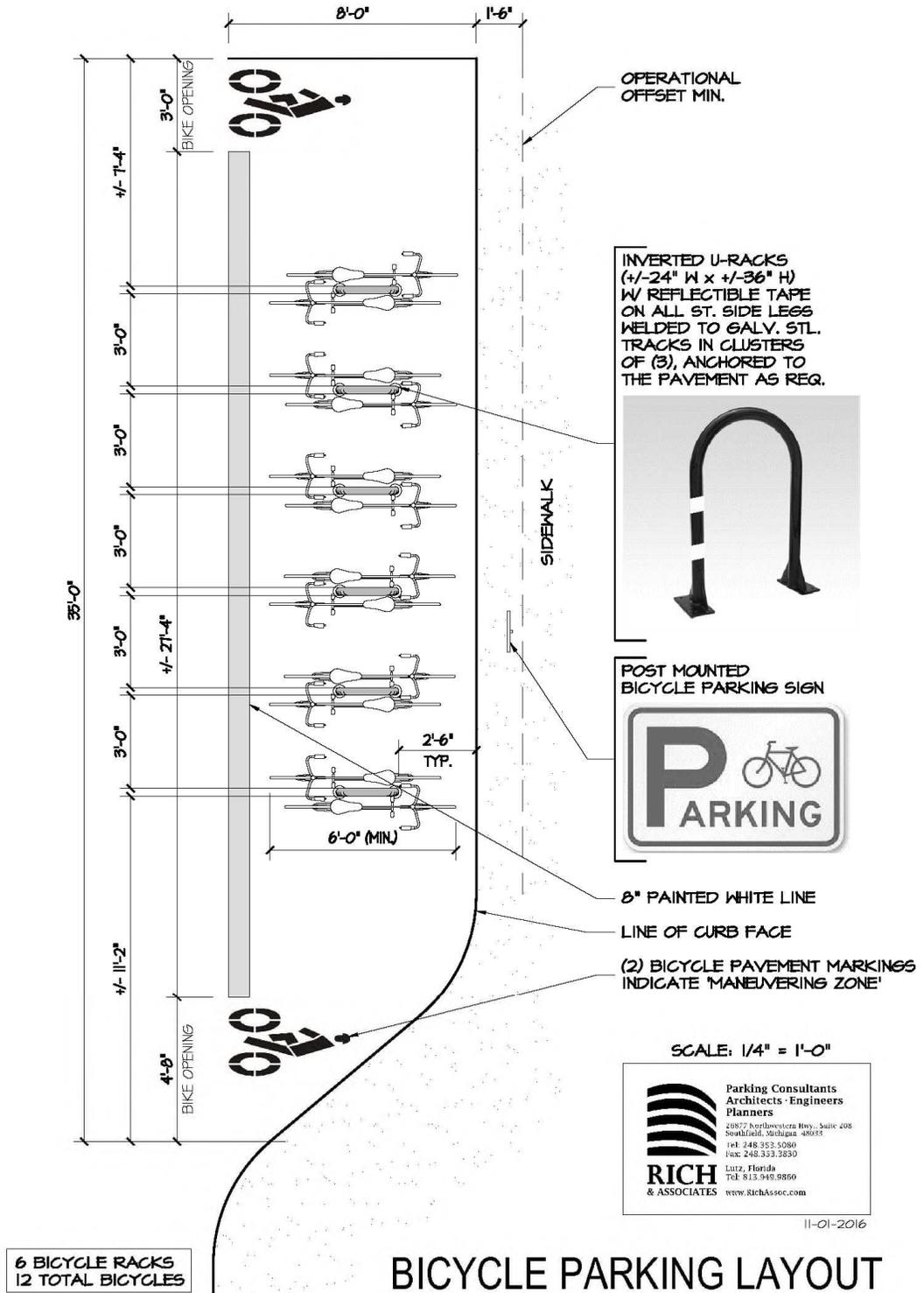
Responsibility: Elon/DDA

Action Time: 0-3 years

Cost: **4.1** depending on bicycle racks \$100-\$200, **4.2** will need 6 bike racks at \$100 along with signs at \$25-\$100 along with 2 stencils to be determined.



Drawing 2





## 5. Marketing

Marketing is a key aspect of a successful parking system. Marketing should be done every time there is a change to the parking system and should be directed towards downtown employees, business owners, residents and customers and visitors of the downtown. It is important to help encourage downtown employees to park in the long term parking areas, leaving the most valuable on-street parking for customers and visitors. Additionally, an individual's perception of Elon is greatly enhanced if they know ahead of time where they can park and what, if any, restrictions on parking duration apply.

Marketing materials can include direct mailings, brochures, maps, kiosks, on-line web pages and articles in magazines and newspapers. Information contained in the marketing materials should include location, up-coming changes, regulations, fine payment options and any other information relating to the parking system.

Flyers that list the downtown businesses included with a map showing parking areas and key attractions work well to market both the businesses and the parking system. The flyer is even more beneficial if it includes the durations of parking both on-street and off-street. Marketing will be vital to a successful transition of adding time limited durations and parking enforcement to the downtown.

**5.1** Develop a flyer that explains parking rules for public distribution that can be carried by the Parking Enforcement Officers. The flyer should be available on the Town website and in businesses. This flyer is intended to be marketed toward customers and visitors of the Town as well as employees. There should be clear distinctions of where employees should park such as the parking along the rail road tracks. Rich & Associates included an example of a parking flyer following these recommendations. This flyer is intended to be specific to parking in the downtown including locations of bicycle racks. Selling advertising space to businesses on the flyer will help cut the costs of printing.

**5.2** Develop a marketing program to promote bicycle use as an alternative to driving. Aim to achieve the designation as a "Bicycle Friendly Community" recognized by the League of American Bicyclists to assist in this program. Host a special event to promote bicycle ridership in a Town-wide effort to use alternative modes of transportation. This will in turn cut down on the number of parking spaces needed.

### Marketing Bicycle Ridership

- There are several communities throughout the U.S. that participate in National "Ride Your Bike to Work Day/Month" in May. Information can be found through the League of American Bicyclists [www.bikeleague.org](http://www.bikeleague.org).



- Source of possible grant funding through Bikes Belong Coalition, <http://bikesbelong.org>.
- Pedestrian and Bicycling Information center is a helpful link that offers advice on funding and marketing bicycling in downtowns. <http://www.bicyclinginfo.org>.

*“Communities that are bicycle-friendly are seen as places with a high quality of life. This often translates into increased property values, business growth and increased tourism. Bicycle-friendly communities are places where people feel safe and comfortable riding their bikes for fun, fitness, and transportation. With more people bicycling, communities experience reduced traffic demands, improved air quality and greater physical fitness”*  
[www.bicyclefriendlycommunity.org](http://www.bicyclefriendlycommunity.org).

Responsibility: Elon/DDA

Action Time: Flyers 0-1 year, Promote bicycle use 0-3 years, Aim to achieve designation as “Bicycle Friendly Community” 3-10 years.

Cost: **5.1** approximately \$175 for printing of the flyer, **5.2** staff time for research and marketing.



**PARKING IN DOWNTOWN OF ELON**  
Whether you are a first time visitor, a local resident, student, business owner or employee, we want to make your downtown experience even better. This card will help you locate where you can park.

The map indicates time restrictions for on-street parking.

**Legend**  
■ 1 Hour Parking     ■ 2 Hour Parking  
  Barrier Free

**RESTRICTIONS**  
You must follow street signs at all times:  
 • Time limits                      • Fire hydrant marked zones  
 • Handicap spaces                • Loading zones

**FINES**  
 Parking Ticket: \$25; after 15 days increases to \$35; after 45 days increases to \$75.  
 Handicap Parking Ticket: \$100; after 15 days increases to \$125; after 45 days \$225.

**For questions contact:**  
 Municipal Building  
 104 S. Williamson Ave  
 Elon, NC 27244  
 (336) 584-3601

**Parking Guide**  
 104 S. Williamson Avenue - Elon, NC 27244  
 (336) 584-3601 - www.elonnc.com

## 6. Special Event Parking

Rich and Associates recommend that a plan be developed for parking during special events. This plan should include a remote lot location (public school, church, town or county owned lot) and if necessary an agreement with the lot owner, as well as some form of shuttle service possibly arranged with the local transit service, or schools. The need for adequate and quality event parking will enhance visitors' overall downtown experience.

Purchase sandwich boards and flyers to be used during special events. The flyers can be handed out to businesses and used in marketing the event on the Town and DDA website. The sandwich boards are used as temporary wayfinding signs during special events leading parkers to the temporary lots.

Responsibility: Elon Town /DDA/ Elon University

Action Time: 0-3 years.

Cost: To be determined



## 7. Parking Signs

Parking areas can be difficult to find if they are located behind buildings, particularly if someone is not familiar with the downtown. There should be more directional/location signs in the downtown, especially to lead parkers to public parking. The off-street parking is private in the downtown though some of the lots are available for public use during certain hours. Due to a large amount of confusion over who can park where and the hours allowed for parking, it is recommended that the Town work with private lot owners to develop signs that are consistent throughout the downtown in parking lots. This will aid in addressing the large number of complaints about towing.

Parking lots need identification signs that let a visitor of the downtown know what parking is available. It is helpful to name the lots so that a customer can remember where they parked. Naming the lots can also help with giving directions to businesses in the downtown. The names should reflect the lot locations by using street names.

Pedestrian wayfinding is critical once a person parks and transitions to walking. Being able to find wayfinding maps or signs to aid pedestrians in locating key destinations and then locating their way back to where they parked are important elements in customer/visitor oriented downtowns. As the Town continues to grow and new development occurs Elon should consider adding a kiosks to the downtown with business listings, events and parking locations.

Rich and Associates has developed a parking signage best practices package that is detailed on the following page. The information is provided to show how the signs work together and provide a comprehensive wayfinding system. The colors are strictly an example to show how consistent color and text are necessary in a family of wayfinding signs.

### Best Practice Sign types include

As a best practice the following four types of parking signs that increases drivers' wayfinding experience are strongly recommended. Communities often miss the important role that signs play in making visitors comfortable with their surroundings and the effect that signs can have on vehicle travel and parking use efficiency.

**Directional/Location:** Directional-parking signage is distinct in color, size and logo and directs drivers to off-street parking areas. Parking location signage complements the directional parking signage. The signs can have arrows pointing to the off-street lots. The signs are mounted on poles at standard heights, on the streets.





**Identification:** Identification signage is placed at the entry of each parking lot. The name of the parking area is identified and the type of parking available as well as hours of enforcement and the hours of lot operation is listed on the signage. The identification signage is distinctive in color and size, and it is located on a pole at a lower height.



**Vehicular Wayfinding:** Vehicular wayfinding signs are placed at points in the downtown leading drivers to places of interest and parking locations. The sign also points out the various landmarks or attractions that can be found. These types of signs are placed at locations easily found by a driver and are intended to help a driver orient themselves to the downtown area.



**Pedestrian Wayfinding:** Pedestrian wayfinding signs or kiosks are placed at the points of pedestrian entry/exit to parking lots. Typically a map illustrating the downtown area that points out the various shops or attractions. These types of signs are placed at locations easily found by a pedestrian and are intended to help that person orient themselves to the downtown area, to locate their destination and then be able to return to where they parked.



**7.1** Elon had a wayfinding signage study completed in 2014, a part of the Downtown Master Plan. Rich & Associates recommends Elon adopt this signage package and include parking locations along with the sign types that were recommended.

**7.2** Work with private lot owners to allow signs that clearly designate who can park for what hours and name the lots.



**7.3** On-street parking signs should all be the same color and include both the duration and hours enforced. Consider changing all signs to green text. Red signs are typically used for “No Parking”.



Responsibility: Elon / DDA

Action Time: Work with private lot owners to develop signs 0-3 years, location and direction signs 0-3 years, update on-street parking signs to be consistent in color and text as soon as possible.

Cost: **7.1** cost will need to be updated for signage package from 2014, **7.2** to be determined the signs could be included in the signage package, **7.3** to be determined.

## 8. Parking Duration/Allocation

### On-Street

One and two hour parking should be the predominant durations for on-street parking as it suits the needs of the majority of customers and visitors. Individuals requiring more than two hours should be directed to off-street parking areas. The other duration that should be found on-street is 15 or 30 minute parking for use as pick-up and drop off and loading spaces. The 15 or 30 minute spaces (loading zones) should be located as either the first or last space on the block face where needed. These spaces do not belong to a specific use, rather the space is for anyone who has a short term errand or quick pick up.

**8.1** All parallel on-street parking should remain one hour except barrier free spaces and loading zones. The 90 degree parking along the railroad tracks should mostly be two hour parking except where otherwise recommended. There



needs to be consistency in duration and several customers complained in the surveys about needing more time when visiting the downtown.

**8.2** Long term (three hours or more) parking is acceptable in areas where turnover is not the desired effect. This parking can be used for additional employee or customer/visitor parking. The customer/visitor parking is often set at three hours to discourage employees from parking in these spaces. Three hour parking requires most employees to move their vehicle two times in a workday discouraging this action. Unrestricted or eight hour on-street parking where turnover is not required is typically used for employee parking.

The first 24 parking spaces along the railroad tracks should be converted to two hour with the next five spaces being converted to three hour and the next 10 spaces converted to permit parking for employees. The Town is currently working to set up a lease to add additional parking along the railroad tracks. When this parking is added the 15 spaces described can then become 3 hour with all of the new parking becoming long term and permit parking.

**8.3** Consider adding a timed loading zone (7:00am to 11:00am) along W. College Avenue after the entrance of the parking lot on the N. side. The trucks unloading on block G have to maneuver through the alley and randomly parked cars in the private lots behind the businesses. The lots all have different owners creating issues with damage done by the large trucks.

A second loading zone would work in the two spaces on N. Holt Avenue. These two spaces should be signed loading zone 7:00am to 11:00am, two hour parking 11:00am to 5:00pm.

**8.4** Require permission to close off on-street parking spaces. These spaces are intended for the use of all businesses in the downtown. Create a form that will be filled out in Town Offices that list the duration of requested closure, reasoning and the number of spaces needed. If the duration is longer than a few hours there should be a charge associated for closing each space. This money should be deposited into the Parking Fund. The Parking Enforcement Officer should be the only one closing off the spaces.

### Off-Street

**8.5** The majority of the off-street parking should be long term for customers and visitors who plan on spending longer periods of time in the Town. Public off-street parking is where most employees of Town businesses that do not have parking should park. Currently Elon does not have any off-street lots other than the lot at the Town Hall, which is not in the study area. This lot should be available for public



parking after 5:00pm. A sign clearly stating who can park here and when will need to be added to the entrance of this lot.

See Map 5 and 6 on the following pages for locations of both on-street and off-street recommendations

Responsibility: Elon/DDA/Parking Enforcement Officer.

Action Time: 0-3 years.

Cost: To be determined

TOWN OF ELON  
NORTH CAROLINA

PARKING ANALYSIS

Sheet Title:

ON-STREET PARKING  
RECOMMENDATIONS

LEGEND:

○ Block Identification

LZ = Loading Zone

General Note:

Change 1 hour on-street spaces to 2 hour



Loading Zone  
7am-11am

Bus Stops

Bike Racks

Convert last two spaces to Loading Zone - 7am - 11am  
2hr parking 11am - 5pm

Convert this 48 foot long HC space into 1 barrier free (standard is 20 feet) and add 1 - 1 hr parking space

Future Train - Permit Parking

Future parking

Employee permit until future spaces built

3 hour

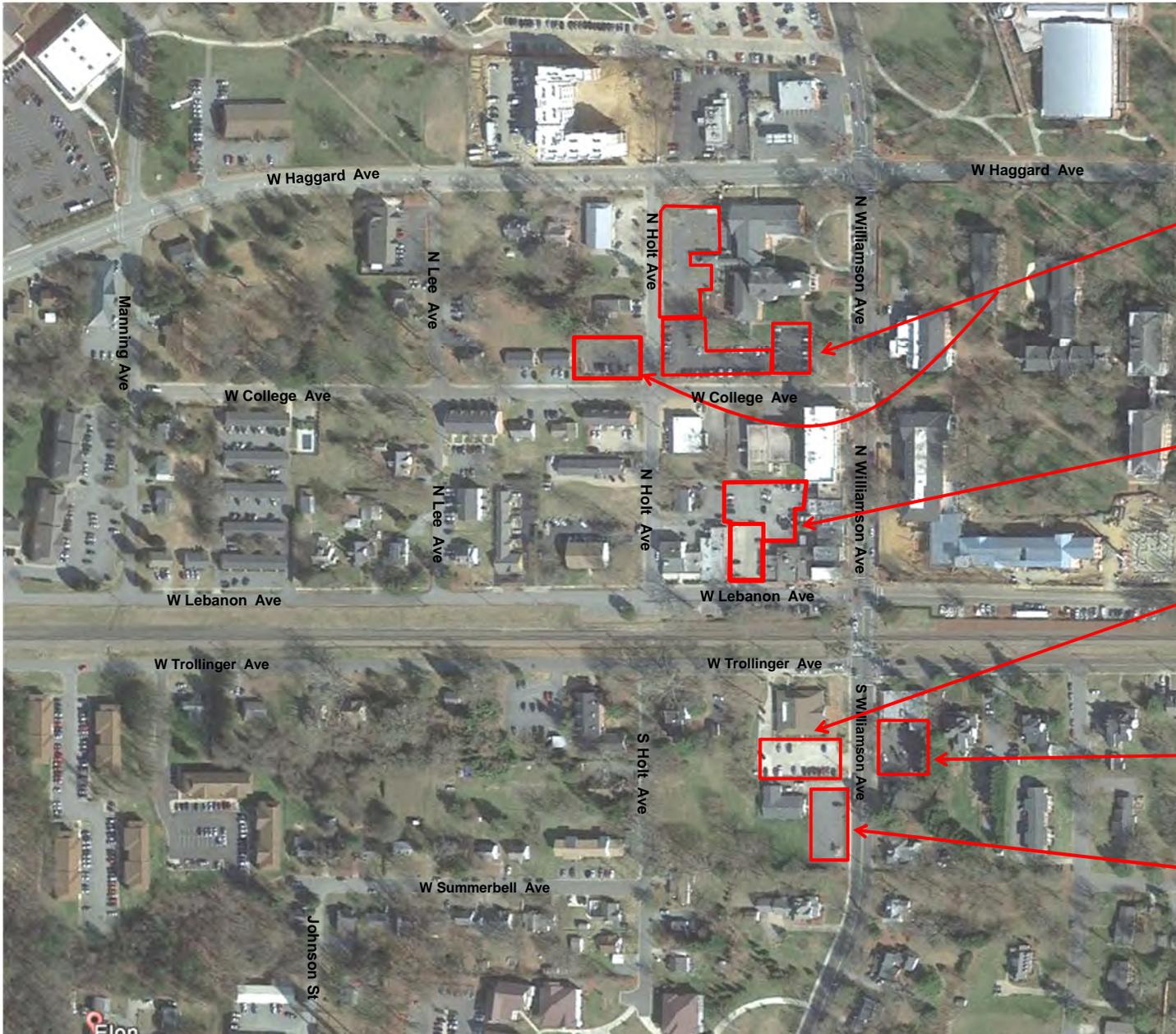
All 2 hour

Add 2 barrier free spaces with 5 ft. aisle in between allowing for van accessible spaces

Convert 1<sup>st</sup> space to wider walk w/bike rack

Parking Consultants • Planners  
Architects • Engineers  
26877 NW Hwy Suite 208  
Southfield, MI 48033  
Tel: 248-353-5080  
www.richassoc.com

File No.	1707	NORTH
Scale		
Date	10/3/16	
Checked by	AN	
MAP Number:	<b>5</b>	Page Number 36



Work with the University and Church to help develop signs that clearly state who can park in these lots. Post hours and durations.

Develop signs for Farmer's Market parking. People are getting towed when trying to purchase goods during Farmer's Market.

Work with private lot owners to develop signs that clearly state who can park and when.

Open up parking to general public after 5:00 PM and on weekends. When events are occurring where parking is needed, put out sandwich boards stating no parking.

Work with Post Office to make parking available for public use after 5:00 PM and weekends.

Work with business owner to allow public parking after 5:00 PM and weekends.

TOWN OF ELON  
NORTH CAROLINA

PARKING ANALYSIS

Sheet Title:  
Off-Street  
Parking  
Recommendations

LEGEND:

 Parking Consultants • Planners  
Architects • Engineers  
26877 NW Hwy Suite 208  
Southfield, MI 48033  
Tel; 248-353-5080  
www.richassoc.com

File No.	1707	
Scale		
Date	12/13/16	
Checked by	AN	
MAP Number:	<b>6</b>	Page Number 37



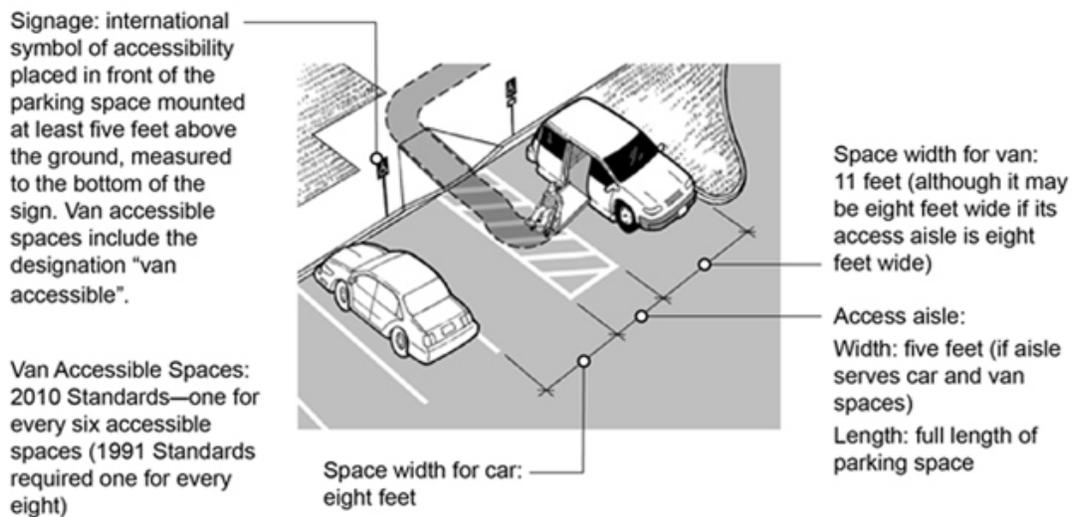
### 9. Barrier Free Parking

As part of the parking analysis, Rich and Associates reviewed the number of barrier free (handicap) parking stalls in public parking areas. Because the Town does not own any lots they are not short any barrier free parking spaces in the downtown. Table G on page 40 is the Americans with Disabilities (ADA) Parking Guidelines to determine the number of needed off-street barrier free spaces for each lot.

Rich and Associates encourages the development of on-street barrier free stalls to ensure the downtown is accessible to everyone. Generally, the number and location of these spaces on-street should be based on convenience and overall accessibility to the downtown. Locating these spaces as either the first or last space or in the middle of the block face tends to work best.

**9.1** The barrier free space on the corner of N. Williamson Ave. and W. Lebanon Ave is much longer than necessary at 48' between the planters. This causes confusion and multiple cars will park in the space. This space can accommodate both a barrier free space (20') and a 2 hour parking space (20') with eight additional feet that can be divided between the two spaces.

**9.2** To ensure better accessibility to the downtown convert the three parking spaces that are directly west of the two hour spaces along the railroad tracks on W. Lebanon Avenue into two barrier free spaces with an access aisle in between. The spaces would both be 11' in width with a 5' access aisle. This would provide a public barrier free space that would fit a van or a car.



\*ADA National Network (adata.org)



**Table G**  
**ADA Parking Guidelines**

Total Parking in Lot	Required Minimum Number of Accessible Spaces
1 to 25	1
26 to 50	2
51 to 75	3
76 to 100	4
101 to 150	5
151 to 200	6
201 to 300	7
301 to 400	8
401 to 500	9
501 to 1000	2 percent of total
1001 and over	20, plus 1 for each 100 over 1000

*One in every eight assessable spaces, but not less than one, shall be served by an access aisle 96 in (2440 mm) wide minimum and shall be designated "van accessible".*

Along with the parking guidelines it is important to make sure that once a person is parked they will be able to access the sidewalk from where they are parked. All intersections should have sidewalks that are barrier free and all lots should have a clear path of access.

Responsibility: Elon

Action Time: 0-3 years

Cost: **9.1** minimal cost with moving sign and re-stripping, **9.2** will need to re-stripe and add signs.

### 10. Permits

Parking permits are an important component to provide long-term parking to employees in a downtown area. The convenience of being able to park in a designated area, without having to hunt for parking is important from a convenience and time saving perspective.

It is recommended that Elon offer permit parking at a minimal fee (to cover expenses of monitoring the system along with the administration fees). Permits should be non-transferable and are invalid when the employee is no-longer working in the downtown. A form should be developed that requires the parkers name, home and business address, phone number, vehicle type, license plate



number and sign off from manager. A hang tag will be issued for the parkers to display on their rear view mirrors to aid in enforcement of the spaces.

The Town can start with the 10 recommended spaces along the rail road tracks as a pilot program. When additional spaces are developed the program can be expanded.

Responsibility: Elon/DDA/PEO's

Action Time: 0-3 years

Cost: Minimal cost to administer the program and enforce the parking spaces.

## 11. Parking Enforcement

Parking enforcement is an important component of a parking system. By differentiating the time limits of parking between off and on-street parking, we are helping to ensure that customers and visitors always have adequate and convenient parking. However, it is necessary to enforce the parking time limits in order for the allocation to work.

Enforcement of time restrictions and other regulations should follow the posted enforcement time in the entire downtown. Within reason, the enforcement staff cannot choose who gets a ticket. Everyone in violation is treated equally. Parking regulations are necessary and implemented to increase the efficiency of the parking system by allocating certain parking areas to specific users. When the regulations are not followed the system efficiency is degraded.

Parking Enforcement Officers (PEOs') staffing levels will need to be adequate to ensure that parking is routinely monitored per the applicable regulations. Specifically, one PEO can monitor a route consisting of between 600 and 800 parking spaces. This ratio assumes the use of handheld ticket writers and includes the PEO covering a mixture of long and short term parking. If an individual is in a vehicle, a specified route of 600 to 800 parking stalls can be monitored up to four times during a standard shift.

Currently there are two parking enforcement officers working part time. The officers mark the tires and write down license plate numbers in short term parking spaces. If parking enforcement is done consistently there is no need to have full time PEO's or to cover every space for every hour of the enforcement time. It is important to maintain a level of staffing to cover the entire parking supply though this can be done randomly. As budgeting allows follow the recommendations below for parking enforcement.

**11.1** Staffing for parking enforcement is adequate in Elon. This allows routing of the officers so that a complete circuit is followed every two hours (as permitted with scheduling) in the downtown area. There should be multiple routes with



varied times so that patterns are not developed allowing patrons to know when and where to park to avoid a citation.

**11.2** PEO's should use chalk to mark tires until handheld parking ticket writers that track license plate numbers and print tickets can be purchased. Handheld units increase efficiency by storing the license plate numbers of vehicles, thus negating the need to physically chalk tires. This allows enforcement to occur during inclement weather, whereas marking tires with chalk cannot be done in rain or snow because the chalk does not mark well on a wet tire. When using the handheld device every parking space, whether occupied or not, when following a route is then entered into the handheld giving a time stamp of when the PEO checked the space. This helps ensure that a vehicle is not given a ticket before the posted duration.

Handheld units can also store data concerning warrants, previous offenders, shuffling of vehicles and unpaid tickets. If a vehicle needs to be booted or towed due to multiple unpaid tickets, the information will come up on the handheld unit. Software needs to be purchased to run a handheld system and process and file tickets. A cloud based back up or a "home base" where the handhelds can be downloaded and updated daily will also be required. There are several options of specific ticket writing units. Much of the software written for enforcement can be used with tablets or smart phones. The units can also take pictures of the vehicle in violation.

**11.3** Track the number of tickets issued to help determine what the issues are and where they occur most often. With the purchase of handheld ticket writers software is available to better keep track of unpaid tickets, when tickets are written as well as the number and location of tickets issued.

**11.4** Street signs should indicate that parking is enforced from 8:00am to 5:00pm Monday – Friday in any and all areas where there is a limited duration or restrictions for parking.

Responsibility: Elon/DDA

Action Time: 0-3 years

Cost: **10.1**N/A, **10.2** cost for two handheld units varies depending on device and software to run programs (\$5,000-\$10,000 per unit), **10.3** cost is included in **10.2**.

## 12. Parking Fines

Rich & Associates have compiled information benchmarking parking fines to other communities.



Davidson, NC - \$30.00, without a courtesy ticket  
Carrboro, NC - \$35.00, without a courtesy ticket  
Belmont, NC – N/A  
Asheville, NC - \$10.00  
Chapel Hill, NC - \$15  
Greensboro, NC - \$15

**12.1** Rich & Associates recommends keeping the parking violation at \$25.00 until handheld ticket writers are purchased. When handheld ticket writers are purchased it is recommended that the Town move to a graduated fine system and the first ticket would be a courtesy ticket and the second ticket would be \$25.00 with each ticket after increasing in price. By offering a courtesy ticket first, the parker has clearly been warned of the parking time durations and with free long term parking available there are the appropriate parking options.

The recommend graduated parking fine schedule for overtime parking tickets:

1<sup>st</sup>– Courtesy ticket

2<sup>nd</sup> – \$25.00

3<sup>rd</sup> –\$30.00

4<sup>th</sup>–\$35.00

5<sup>th</sup>– \$40.00

\*Three or more unpaid tickets, vehicle is booted or towed

**12.2** Once handheld ticket writers are purchased, offer courtesy tickets during the first few weeks of enforcement when a regular enforcement schedule begins. After the first few weeks adopt the recommended fine schedule and only offer a courtesy ticket when a parker has not received a ticket in six months (or whatever time frame is chosen). From a public relations standpoint, it would be preferable to issue a Courtesy ticket alerting the parker of their violation and then explaining the rules for parking in the downtown including a map of labeled parking areas.

**12.3** Develop an ordinance that allows the use of booting or towing after three or more unpaid parking tickets. Currently, there is an issue with the ability to collect on unpaid parking tickets with repeat offenders. The option of booting or towing will allow for a collection of unpaid tickets.

**12.4** All fines should go to a parking fund and should be used to cover parking operating expenses and any net revenue go back into the downtown area (parking fund) for things such as parking enforcement, sidewalk cleaning, signs,



lighting, banners etc. Parking revenue is then helping to pay for the upkeep of the downtown.

Responsibility: Elon / DDA / Police

Action Time: 0-3 years

Cost: **12.1** N/A, **12.2** will cost the loss of revenue from the first ticket, **12.3** cost will be minimal.

### 13. Maintenance of Parking Spaces On-street and Off-street

Develop a maintenance schedule for the lots to keep up with maintenance needs and help budget yearly costs. This should include trash removal, sweeping, striping, lighting (lens cleaning, bulb replacement), signs, landscaping and tree trimming. A rotating schedule should be developed with daily, weekly, monthly and annual tasks to assure proper maintenance is completed.

Responsibility: Elon / DDA

Action Time: Immediate Action.

Cost: To be determined.

### 14. Create a Sinking Fund for Maintenance and Upgrades to the Parking System

**14.1** Create a sinking fund for maintenance and upgrades to the parking system. We recommend putting aside \$25.00 per parking space per year. This money would go into a parking fund and should be allocated for long term maintenance and upgrades.

**14.2** Further, it is suggested that the revenue from parking tickets and permits should be used to cover parking operating expenses and any net revenue go back into the area (parking fund) for things such as parking enforcement, sidewalk cleaning, signs, lighting, banners etc. Parking revenue is then helping to pay for the upkeep of the Town area.

Responsibility: Elon / DDA

Action Time: Immediate Action.

Cost: 83 spaces @ \$25 = \$2,075/year.

### 15. Location for Train Platform

The most logical location for a train platform is along W. Lebanon Ave near the intersection of N. Williamson Avenue. This location provides access to both the downtown and Elon University with convenient parking. There should be enough room to provide a platform area along with a covered waiting area and still keep the majority of the existing parking.



Responsibility: Elon/DDA/Elon University

Action Time: As soon as feasible.

Cost: To be determined.

#### 16. Location for Elon University Bus Stop in the Downtown

Work with Elon University to set up a bus stop in Downtown Elon. Currently there is not a stop for students who want to visit restaurants or businesses along N. Williamson Ave and W. Lebanon Ave. There is a loading zone on the west corner of N. Williamson and W. College Ave and on the opposite side of N. Williamson there is a yellow striped area that could be converted to a bus stop without the loss of parking.

Responsibility: Elon/ DDA / Elon University

Action Time: Immediate Action.

Cost: To be determined.



Downtown Parking Study Implementation Plan		Recommendation Type			Time Frame		
		Policy Action	Action Strategy	Project Initiatives	Immediate Action	0-3 Years	3-6 Years
Recommendations							
<b>1. Downtown Parking Advisory Committee</b>							
	It is recommended that a Downtown Parking Advisory Committee is developed. This committee would meet to address the needs and concerns regarding the parking system, typically once a month.	√	√		√		
<b>2. Discourage the Development of Any New Private Parking Lots in the Downtown</b>							
2.1	Public and private partnerships are another key factor in providing additional publicly available parking. Elon currently controls 16 percent of the available parking in the downtown. This number should be closer to 50 percent or higher to help facilitate the re-occupancy of vacant space along with the ability to pro-actively reallocate parking for new developments. Work with private parking owners to create shared use agreements.	√	√		√		
2.2	If it is not possible to work with private lot owners to open up the parking for public use it will be necessary for the Town to acquire land to build a parking lot. Even with a parking surplus the majority of parking is not available for public use and because of this there is a parking shortage on block G.	√	√		√		
2.3	Elon should look for areas where additional parking can be added along the train tracks. With this additional parking it will allow the Town to hold off on a lot until there is additional development in the downtown.	√	√		√		
<b>3. Pedestrian Enhancements</b>							
3.1	All block faces should have sidewalks with accessible ramping and lighting.						
3.2	All of the older light fixtures in the downtown should be cleaned or replaced. In many cases the lenses have yellowed and they do not put out as much light as desired.						
3.3	Consider turning the first parallel parking space on W. Lebanon Ave into an extended sidewalk with a bike rack. The sidewalk at this area is narrow with a planter on the existing building making it difficult to walk two abreast.		√	√		√	
<b>4. Bicycle Parking</b>							
4.1	Elon should consider making the downtown more bicycle friendly and providing adequate and useable bicycle parking which in turn cuts down on the number of parking spaces needed.			√		√	
4.2	Add bike racks into the no parking zone on N. Williamson Ave near W. College Ave.			√		√	
<b>5. Marketing</b>							
5.1	Develop a flyer that can be distributed to businesses and can be carried by the Parking Enforcement Officers.		√	√	√		
5.4	Market and promote bicycle use as an alternative to driving. Along with this, consider aiming to achieve the designation as a "Bicycle Friendly Community".						
<b>6. Special Event Parking</b>							
5.1	Rich and Associates recommend that a plan be developed for parking during special events.		√		√		
<b>7. Signage</b>							
7.1	Elon had a wayfinding signage study completed in 2014, a part of the Downtown Master Plan. Rich & Associates recommends Elon adopt this signage package and include parking locations along with the sign types that were recommended.			√		√	
7.2	Work with private lot owners to allow signs that clearly designate who can park for what hours and name the lots.			√		√	
7.3	On-street parking signs should all be the same color and include both the duration and hours enforced. Consider changing all signs to green text. Red signs are typically used for "No Parking".			√		√	
<b>8. Parking Duration/Allocation</b>							
8.1	All parallel on-street parking should remain one hour except barrier free spaces and loading zones. The 90 degree parking along the railroad tracks should mostly be two hour parking except where otherwise recommended.			√		√	
8.2	The first 24 parking spaces along the railroad tracks should be converted to two hour with the next five spaces being converted to three hour and the next 10 spaces converted to permit parking for employees.		√	√		√	
8.3	Consider adding a timed loading zone (7:00am to 11:00am) along W. College Avenue after the entrance of the parking lot on the N. side. A second loading zone would work in the two spaces on N. Holt Avenue. These two spaces should be signed loading zone 7:00am to 11:00am, two hour parking 11:00am to 5:00pm.						
8.4	Require permission to close off on-street parking spaces.		√	√		√	



8.5	Public off-street parking is where most employees of Town businesses that do not have parking should park. Currently Elon does not have any off-street lots other than the lot at the Town Hall, which is not in the study area. This lot should be available for public parking after 5:00pm. A sign clearly stating who can park here and when will need to be added to the entrance of this lot.		√		√			
<b>9. Barrier Free Parking</b>								
9.1	The barrier free space on the corner of N. Williamson Ave. and W. Lebanon Ave is much longer than necessary at 48' between the planters. This causes confusion and multiple cars will park in the space. This space can accommodate both a barrier			√		√		
9.2	To ensure better accessibility to the downtown convert the three parking spaces that are directly west of the two hour spaces along the railroad tracks on W. Lebanon Avenue into two barrier free spaces with an access aisle in between. The spaces would both be 11' in width with a 5' access aisle. This would provide a public barrier free space that would fit a van or a car.			√		√		
<b>10. Permits</b>								
	It is recommended that Elon offer permit parking at a minimal fee (to cover expenses of monitoring the system along with the administration fees).	√	√	√		√		
<b>11. Parking Enforcement</b>								
11.1	Staffing for parking enforcement is adequate in Elon.		√			√		
11.2	PEO's should use chalk to mark tires until handheld parking ticket writers that track license plate numbers and print tickets can be purchased. Handheld units increase efficiency by storing the license plate numbers of vehicles, thus negating the need to physically chalk tires.			√		√		
11.3	Track the number of tickets issued to help determine what the issues are and where they occur most often. With the purchase of handheld ticket writers software is available to better keep track of unpaid tickets, when tickets are written as well as the number and location of tickets issued.	√	√			√		
11.4	Street signs should indicate that parking is enforced from 8:00am to 5:00pm Monday – Friday in any and all areas where there is a limited duration or restrictions for parking.			√		√		
<b>12. Parking Fines</b>								
12.1	Rich & Associates recommends keeping the parking violation at \$25.00 until handheld ticket writers are purchased. When handheld ticket writers are purchased it is recommended that the Town move to a graduated fine system and the first ticket would be a courtesy ticket and the second ticket would be \$25.00 with each ticket after increasing in price. By offering a courtesy ticket first, the parker has clearly been warned of the parking time durations and with free long term parking available there are the appropriate parking options.	√	√	√		√		
12.2	Once handheld ticket writers are purchased, offer courtesy tickets during the first few weeks of enforcement when a regular enforcement schedule begins.					√		
12.3	Consider developing an ordinance that allows the use of booting or towing after three or more unpaid parking tickets and offering courtesy tickets when making any changes to the parking system, including the first few weeks of enforcement when a regular enforcement schedule begins again.	√	√	√		√		
12.4	All fines should go to a parking fund and should be used to cover parking operating expenses and any net revenue go back into the downtown area (parking fund) for things such as parking enforcement, sidewalk cleaning, signs, lighting, banners etc. Parking revenue is then helping to pay for the upkeep of the downtown.	√				√		
<b>13. Maintenance of Parking Spaces On-street and Off-street</b>								
	Develop a maintenance schedule for the lots to keep up with maintenance needs and help budget yearly costs. This should include trash removal, sweeping, striping, lighting (lens cleaning, bulb replacement), signs, landscaping and tree trimming. A rotating schedule should be developed with daily, weekly, monthly and annual tasks to assure proper maintenance is completed.	√				√		
<b>14. Create a Sinking Fund for Maintenance and Upgrades to the Parking System</b>								
14.1	Create a sinking fund for maintenance and upgrades to the parking system. We recommend putting aside \$25.00 per parking space per year. This money would go into a parking fund and should be allocated for long term maintenance and upgrades.	√				√		
14.2	Further, it is suggested that the revenue from parking tickets and permits should be used to cover parking operating expenses and any net revenue go back into the area (parking fund) for things such as parking enforcement, sidewalk cleaning, signs, lighting, banners etc. Parking revenue is then helping to pay for the upkeep of the Town area.	√				√		



<b>15. Location for Train Platform</b>								
The most logical location for a train platform is along W. Lebanon Ave near the intersection of N. Williamson Avenue. This location provides access to both the downtown and Elon University with convenient parking. There should be enough room to provide a platform area along with a covered waiting area and still keep the majority of the existing parking.		√	√	√				√
<b>16. Location for Elon University Bus Stop in the Downtown</b>								
Work with Elon University to set up a bus stop in Downtown Elon. Currently there is not a stop for students who want to visit restaurants or businesses along N. Williamson Ave and W. Lebanon Ave. There is a loading zone on the west corner of N. Williamson and W. College Ave and on the opposite side of N. Williamson there is a yellow striped area that could be converted to a bus stop without the loss of parking.		√	√	√	√			



## New Parking

### Timing for Additional Parking Development

Parking Development in the Town will need to be coordinated with increases in parking demand to ensure that as new development occurs Elon will have the ability to decide when to consider new parking. Deciding when to initiate new parking and whether to build surface or structured parking will depend first and foremost on financial constraints. Deciding when the new demands warrant a parking structure is a relatively straightforward calculation.

The following is a calculation worksheet Elon can use as part of a decision making process to determine when additional parking is needed. The model works using building gross floor area (existing and proposed) as the variable in a decision making flow chart that will assist with determining when new parking demand justifies new parking.

The model demonstrates how, for example, the need of additional parking is triggered. When a proposed new development's parking demand, along with the existing parking demand, exceed the available parking (on-street and off-street) and the target capacity for new parking is approximately 85 percent of that total. Due to the size of the Town, it may be possible to use the entire square footage of the block where a new development is planned.

The numbers provided in the New Parking Threshold Calculation Worksheet are an **example** of how the model works. If the Minimum New Parking Needed is equal to or greater than the optimal capacity for a parking structure (typically 300 spaces) than consider providing structure parking. If the Minimum New Parking Needed is less than the optimal capacity for a parking structure, consider providing surface parking and land banking for a future parking structure when needed.

It is in Elon's best interest to have a well thought out plan to address parking so it does not hinder development in the downtown. Having a plan that the Town can show property owners, stakeholder and potential developers is important to promote growth and maintain stability within the Town. There is currently not a need for additional parking, this tool is provided to help plan for future development.



**Table H**  
**New Parking Threshold Calculation Worksheet**

**Part A: Determining Floor Area**

Total Built Gross Floor Area for Entire Downtown: 1,200,000 sf

(+) Proposed New Gross Floor Area: 45,000 sf

(--) Gross Floor Area to be removed as part of redevelopment:  
0 sf

(=) Total Existing and Proposed New Gross Floor Area: 1,245,000

**Part B: Determining Parking Need**

Total Existing and Proposed New Gross Floor Area: 1,245,000 sf

(X) 3.03 Parking Stalls Per 1,000 Square Feet: 3,773 spaces

(=) Total Parking Stalls Demanded: 3,773 spaces

(-) Existing On-Off-Street Parking: 3,650 spaces

(=) New Parking Demanded:  $3,650 - 3,773 =$  -123 spaces

**Part C: Decision Guide**

New Parking Demanded: 123 spaces

(X) 85%: 105 spaces

(=) Minimum New Parking Needed: 105 spaces

**Funding Options for the Parking System, Operational Improvements and Additional Parking:**

There are no magic answers for the financing of a parking structure or of any parking improvements for that matter. Where there is a charge for on and off-street parking, revenues can be used to pay for improvements. In general this requires the pooling of revenues from all parking areas and fines if possible. At this time we are not recommending to charge for on-street parking. As the Town continues to grow and the parking demand continues to increase a paid parking system may need to be considered. A best practice for parking systems is that



they are self-sufficient, where the money coming into a parking system is used to maintain, enforce and make improvements to the system.

A parking fund should be created and the revenue from parking fines and the sinking fund should go directly to a parking fund. In the case of Elon, there is **currently** little or no opportunity to collect parking revenue. This generally leaves funding the improvements or the creation of additional parking up to the Town's general fund; local, State or Federal grants; private developer, public/private partnership or special assessment districts.

Municipalities have also used a combination of general fund, fee-in-lieu payments, TIF and special assessment districts to pay for improvements to the parking system. In some communities the parking system operating expenses are paid for by an assessment district and the general fund.

### **In-Lieu-of**

The in-lieu-of-fees are usually based on a percentage of the cost of providing one parking stall in a new parking structure. The fee among communities that provide an in-lieu-option for parking generally ranges from \$3,500 - \$16,000 per stall. With this scenario, the Town then charges a fee for parking based of the development and uses the money to fund new parking projects.

### **Special Assessment District or Business Improvement District (BID)**

Many communities use special assessment districts to help pay for parking improvements. This works by charging each business or building owner a fee based on the gross square foot and land use type.

### **Tax Increment Finance District (TIF)**

In regards to parking is usually used to leverage money for large projects within the district.



# Appendices

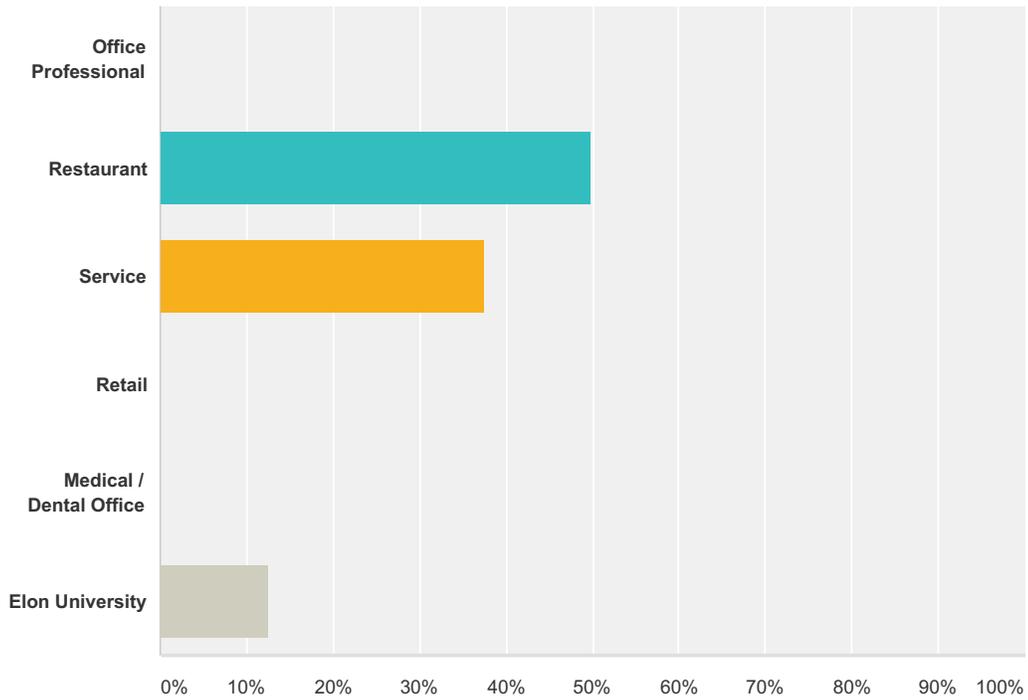
**Q1 Business Name & Address**

Answered: 8 Skipped: 1

#	Responses	Date
1	West End Terrace & 138 West Lebanon Avenue	10/6/2016 4:56 PM
2	Smitty's Homemade Ice Cream	10/5/2016 8:41 PM
3	Tangent Eat Bar 116 west lebanon ave Elon nc 27244	10/5/2016 3:25 PM
4	Elon University	10/5/2016 1:50 PM
5	Elon Community Church UCC	10/5/2016 12:13 PM
6	The Wash Board	10/5/2016 12:00 PM
7	Pandora's Pies	10/5/2016 11:55 AM
8	Enlighten Salon	10/5/2016 11:39 AM

### Q2 Type of Business

Answered: 8 Skipped: 1



Answer Choices	Responses
Office Professional	0.00% 0
Restaurant	50.00% 4
Service	37.50% 3
Retail	0.00% 0
Medical / Dental Office	0.00% 0
Elon University	12.50% 1
<b>Total</b>	<b>8</b>

#	Other (please specify)	Date
1	Ice Cream Store	10/5/2016 8:41 PM
2	Church	10/5/2016 12:13 PM

### Q3 Business Hours of Operation, days/hours

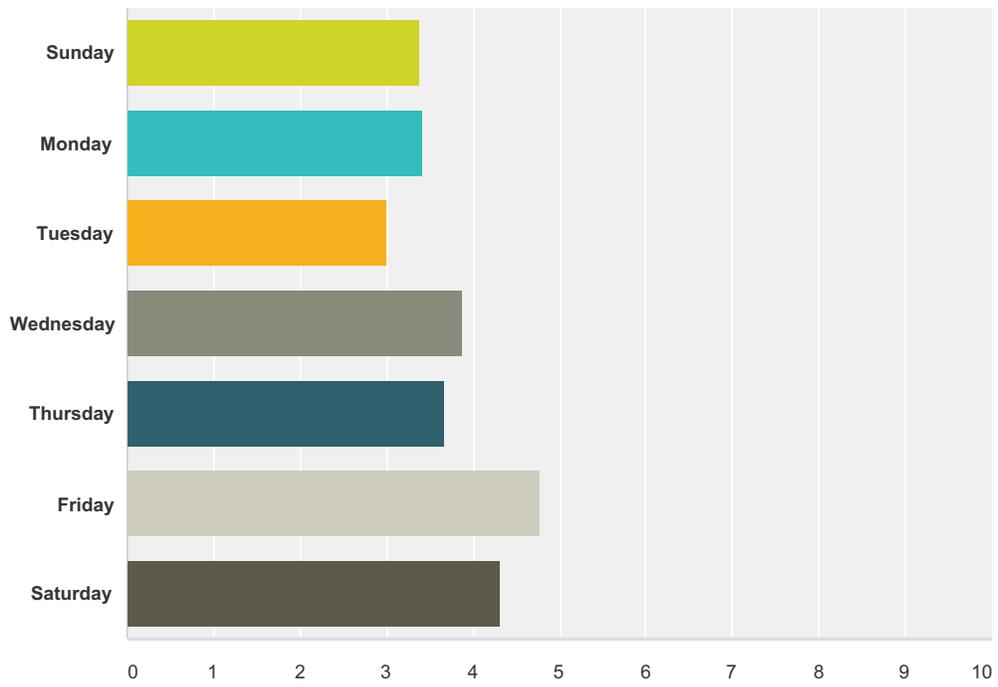
Answered: 9 Skipped: 0

#	Responses	Date
1	Thursday - Saturday 10am to midnight or 2 Sunday 10am to 9pm	10/6/2016 4:56 PM
2	11:30 am - 11:00 pm, Daily	10/5/2016 8:41 PM
3	Mon-Thurs 11-9 Fri-Sat 11-10	10/5/2016 3:25 PM
4	Monday - Sunday 24 hours a day	10/5/2016 1:50 PM
5	7 days a week at various hours	10/5/2016 12:13 PM
6	Monday thru Friday 8:30 a.m. thru 10 p.m. Saturday 7 a.m. thru 10 p.m. Sunday 1:30 p.m. thru 10 p.m.	10/5/2016 12:00 PM
7	7 days per week Employees 8am-12pm Customers 11am-10pm	10/5/2016 11:55 AM
8	Tuesday-Saturday Appointment based hours	10/5/2016 11:39 AM
9	lunch and dinner	10/5/2016 11:36 AM

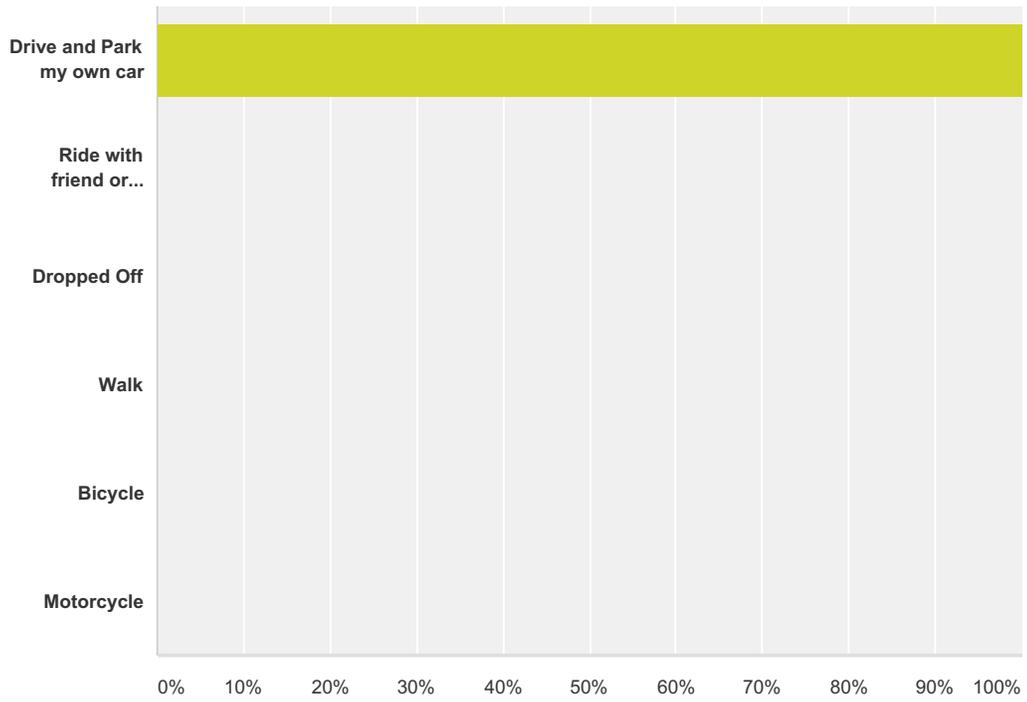
**Q4 If your business hours of operation change seasonally please explain changes, hours/days by season**

Answered: 5 Skipped: 4

#	Responses	Date
1	closed the week of July 4th closed the week in between Christmast/New Years	10/6/2016 4:56 PM
2	we close at 9 on the weekends during the summer	10/5/2016 3:25 PM
3	Far fewer activities in the summer	10/5/2016 1:50 PM
4	Activities of the church, university and community create our schedule. Office hours, m-f 9-5.	10/5/2016 12:13 PM
5	Close one hour earlier in the summer	10/5/2016 11:55 AM



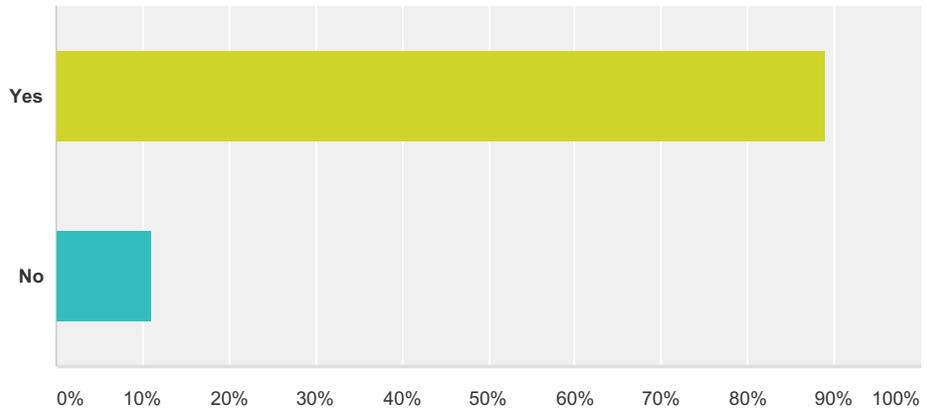
	1	2	3	4	5	6	7	Total	Score
Sunday									
Monday									
Tuesday									
Wednesday									
Thursday									
Friday									
Saturday									



**Answer Choices**

**Responses**

- Drive and Park my own car
- Ride with friend or spouse
- Dropped Off
- Walk
- Bicycle
- Motorcycle

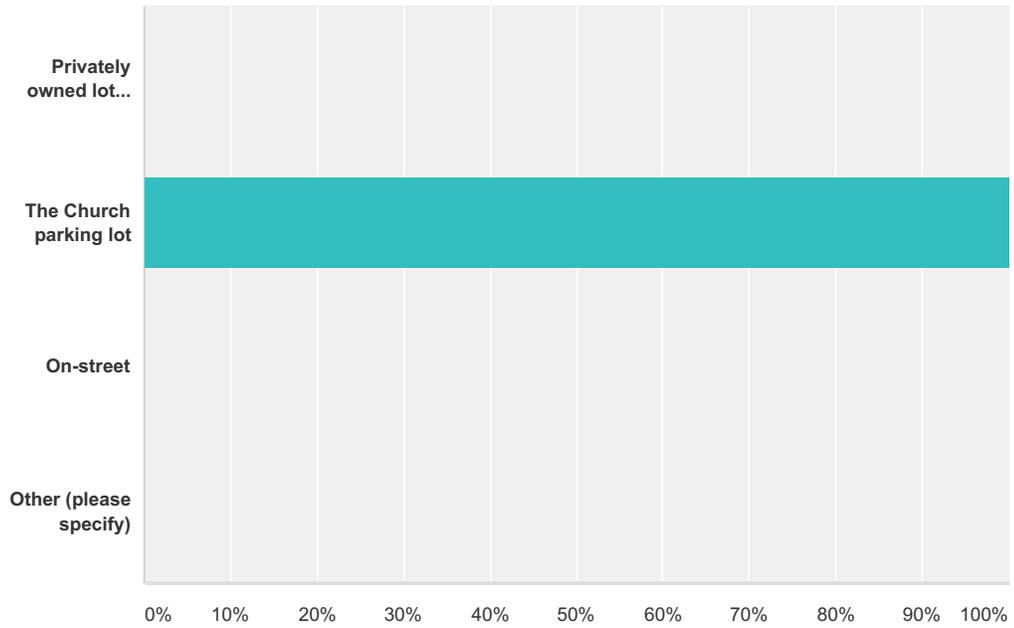


**Answer Choices**

**Responses**

Yes

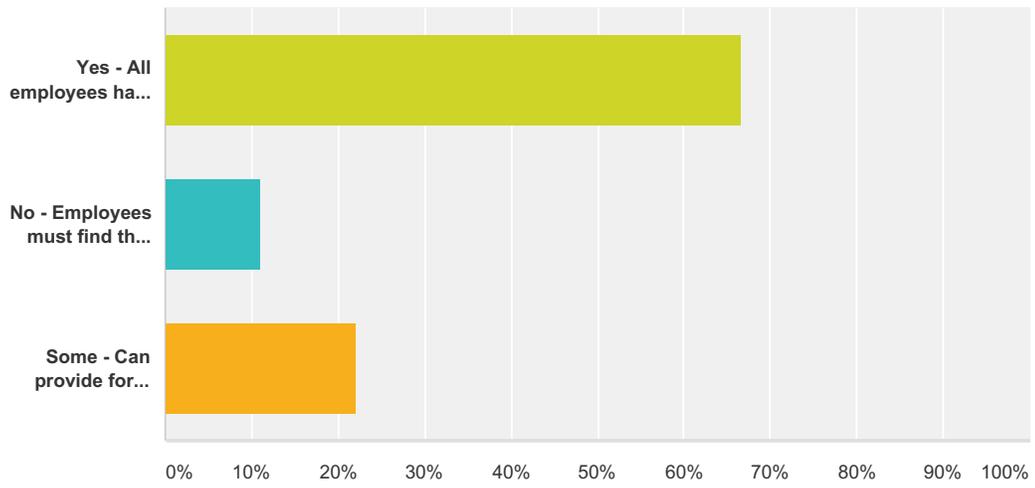
No



**Answer Choices**

**Responses**

- Privately owned lot (agreement or leased spaces)
- The Church parking lot
- On-street
- Other (please specify)



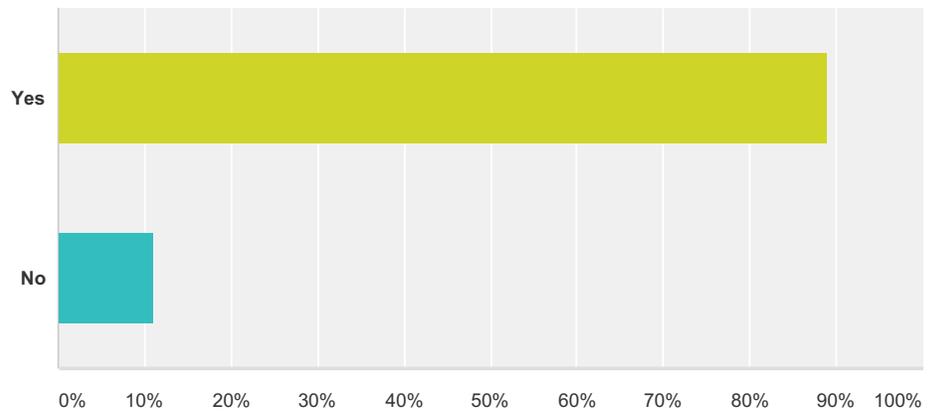
**Answer Choices**

**Responses**

Yes - All employees have parking provided and available

No - Employees must find their own parking

Some - Can provide for some employees but not all

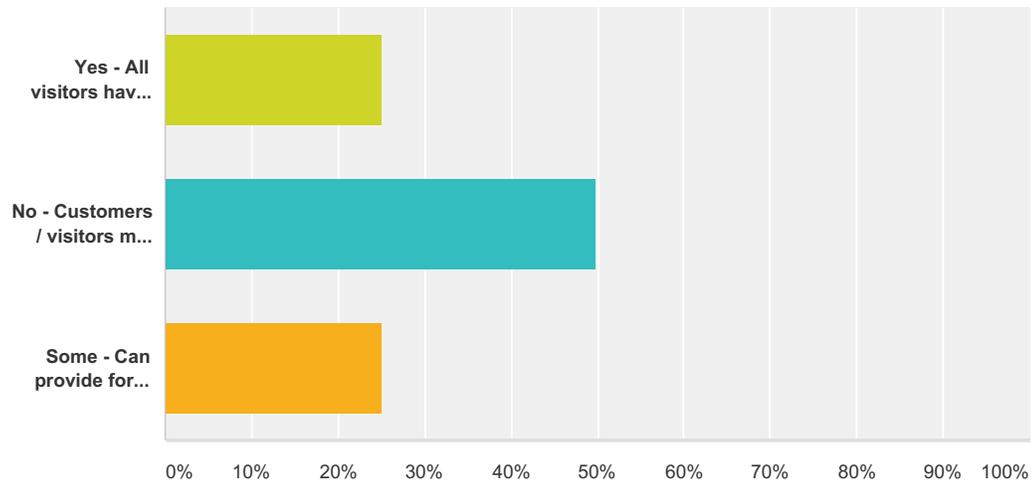


**Answer Choices**

Yes

No

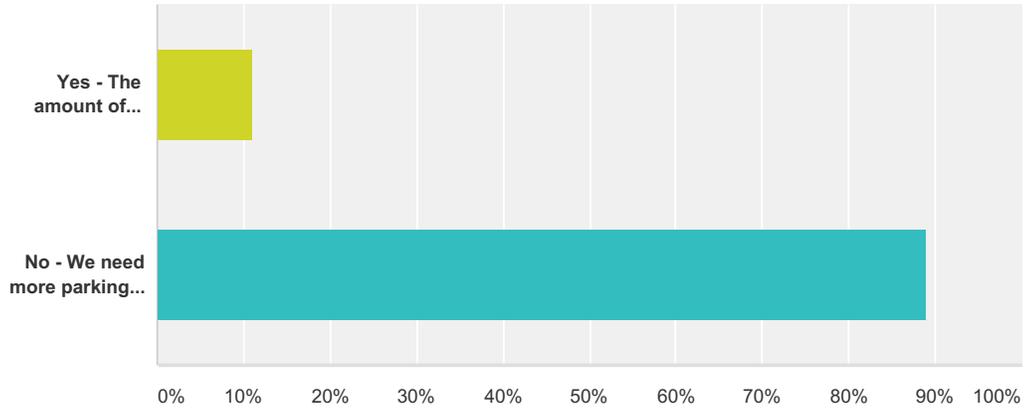
**Responses**



**Answer Choices**

**Responses**

- Yes - All visitors have parking provided and available
- No - Customers / visitors must park using public parking
- Some - Can provide for some customers but not all

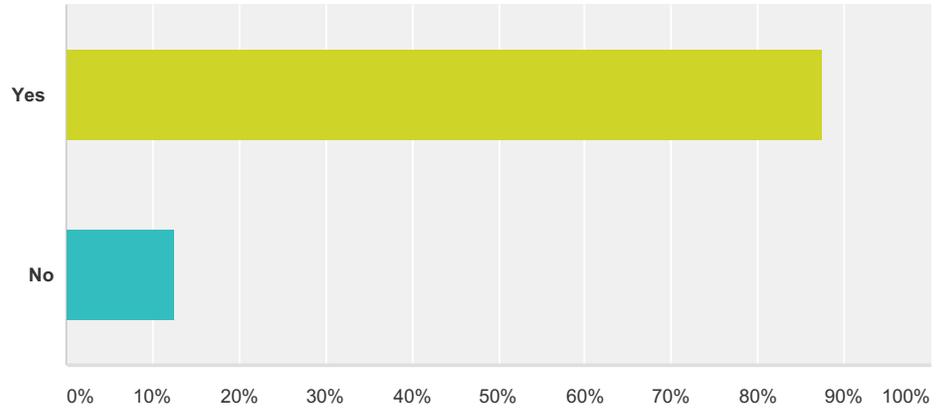


**Answer Choices**

**Responses**

Yes - The amount of customer/visitor parking is fine

No - We need more parking for customers and visitors

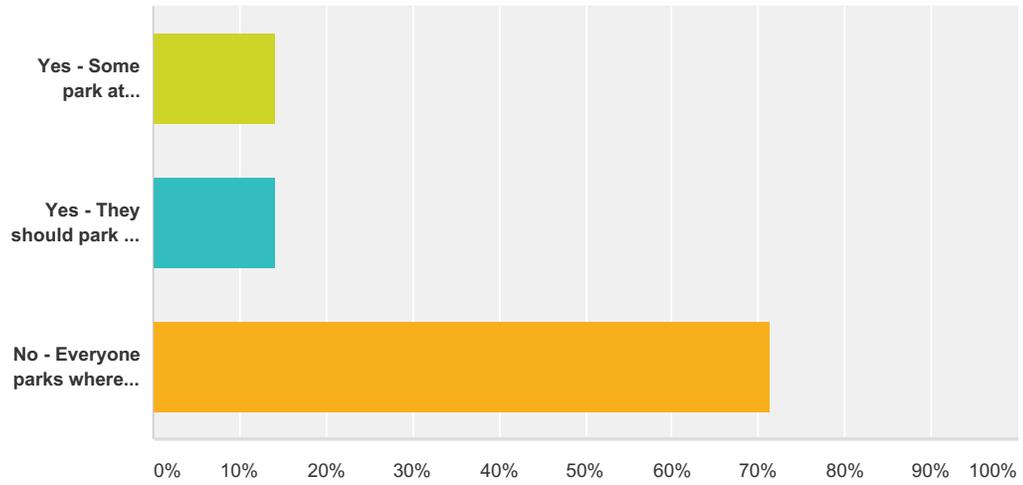


**Answer Choices**

Yes

No

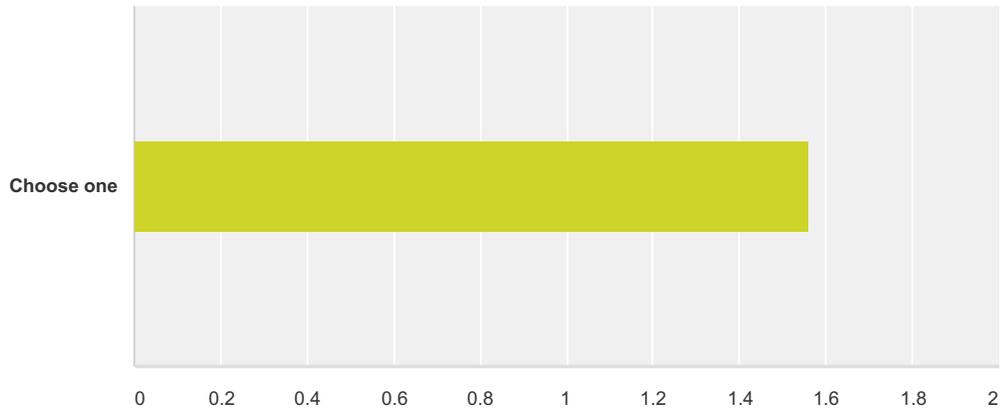
**Responses**



**Answer Choices**

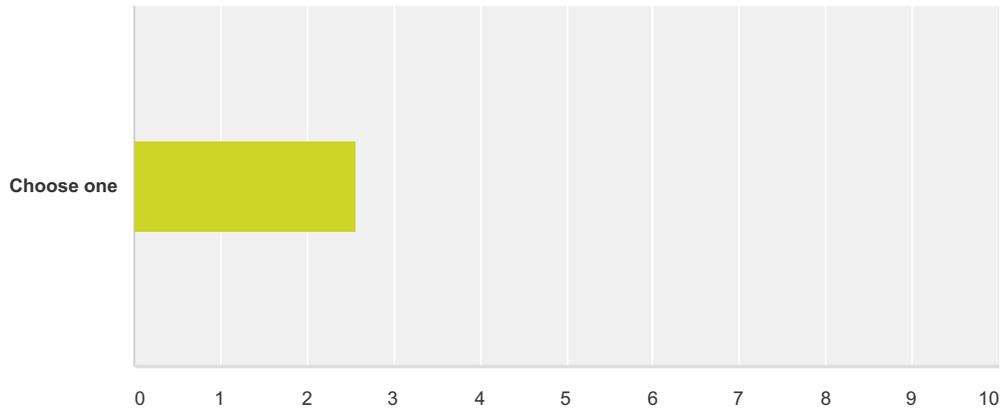
**Responses**

- Yes - Some park at on-street spaces
- Yes - They should park in lots further away
- No - Everyone parks where they should.



**strongly disagree**    **disagree**    **neither agree or disagree**    **agree**    **strongly agree**    **Total**    **Weighted Average**

Choose one

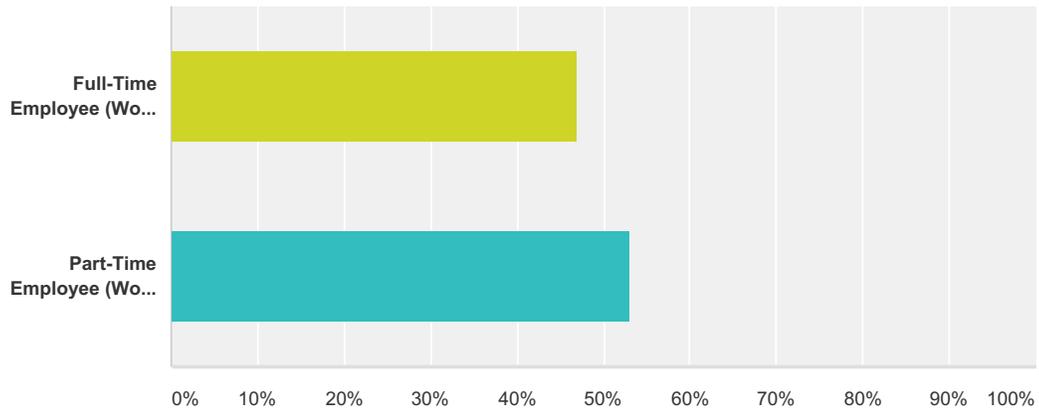


**strongly disagree**    **disagree**    **neither agree or disagree**    **agree**    **strongly agree**    **Total**    **Weighted Average**

Choose one

**Q1 I am a (check all that apply):**

Answered: 34 Skipped: 0

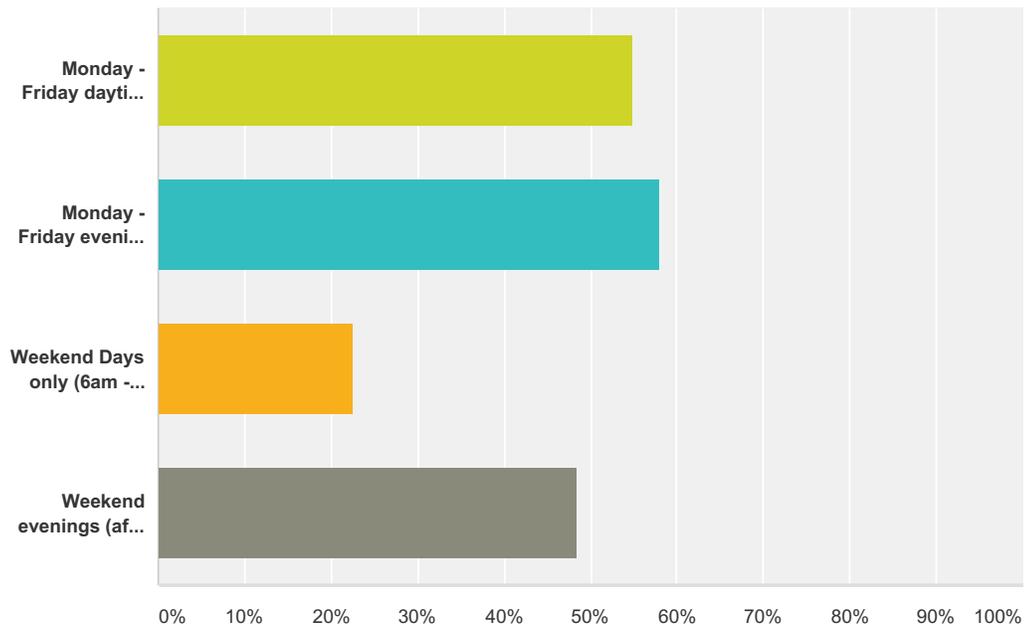


Answer Choices	Responses
Full-Time Employee (Work more than 30 hours per week)	47.06% 16
Part-Time Employee (Work less than 30 hours per week)	52.94% 18
<b>Total Respondents: 34</b>	

#	Other (please specify)	Date
	There are no responses.	

### Q2 When are you generally at work?

Answered: 31 Skipped: 3

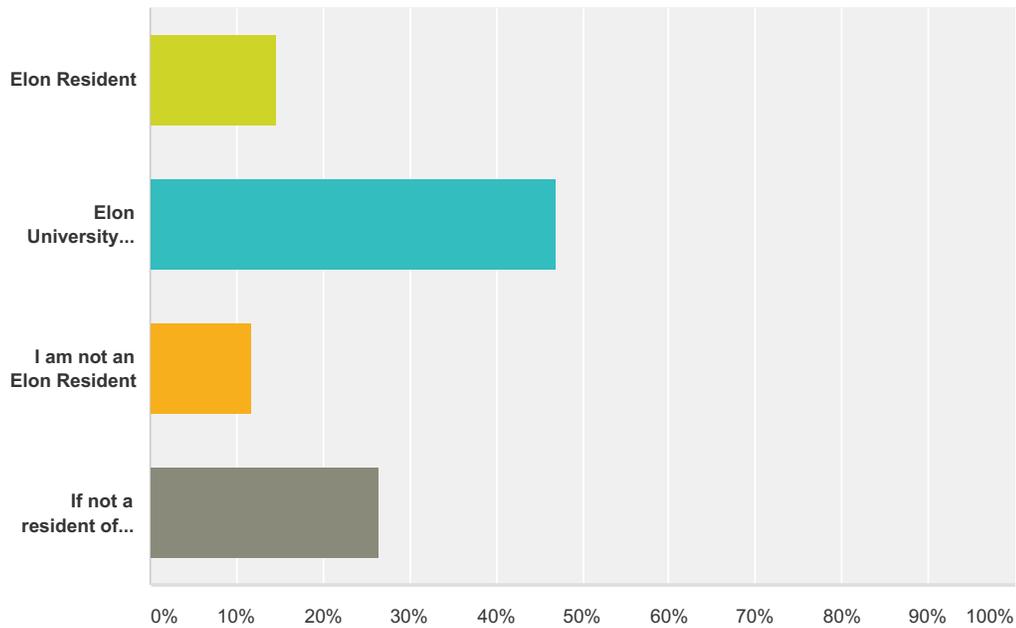


Answer Choices	Responses
Monday - Friday daytime (6am - 5pm)	54.84% 17
Monday - Friday evening (after 5pm)	58.06% 18
Weekend Days only (6am - 5pm)	22.58% 7
Weekend evenings (after 5pm)	48.39% 15
<b>Total Respondents: 31</b>	

#	Other (please specify)	Date
1	Thursday day and Friday and/or Saturday night	10/9/2016 10:42 PM
2	various hours	10/7/2016 7:45 AM
3	7:30-5:00	10/6/2016 8:17 AM
4	Days and nights on rotation 12 hours.	10/6/2016 7:18 AM

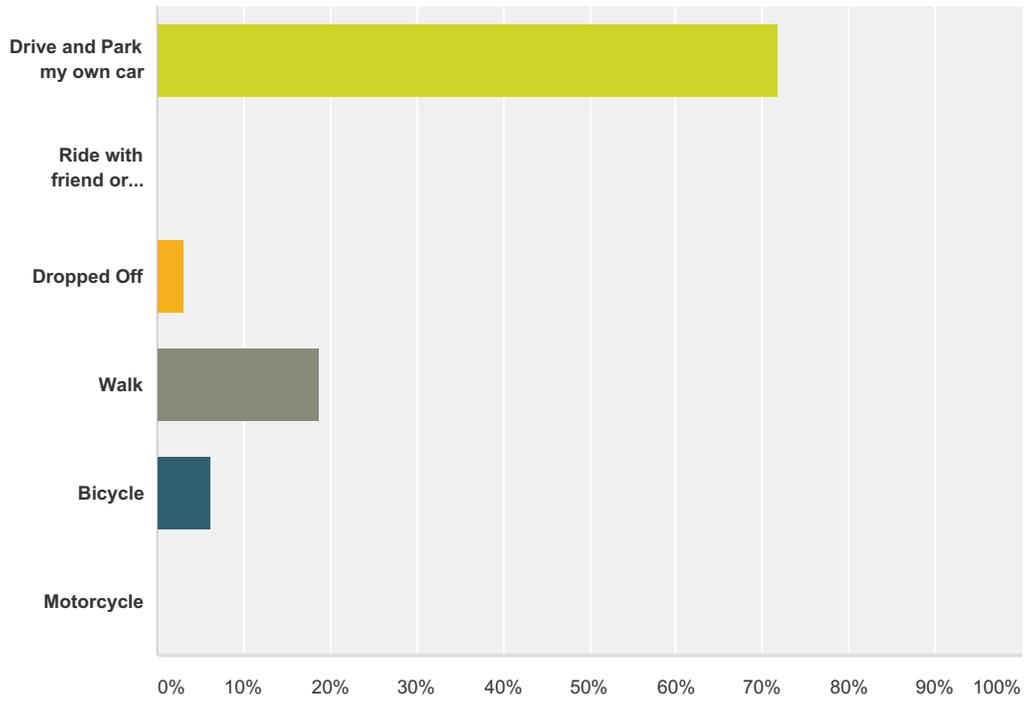
### Q3 Please choose the description that best describes you

Answered: 34 Skipped: 0



Answer Choices	Responses
Elon Resident	14.71% 5
Elon University Student	47.06% 16
I am not an Elon Resident	11.76% 4
If not a resident of Elon, what City, Township or Village do you reside in?	26.47% 9
<b>Total</b>	<b>34</b>

#	If not a resident of Elon, what City, Township or Village do you reside in?	Date
1	Burlington	10/6/2016 10:58 AM
2	Haw River	10/6/2016 8:26 AM
3	Guilford County	10/6/2016 8:25 AM
4	I live in Gibsonville township	10/6/2016 8:17 AM
5	Burlington (County)	10/6/2016 7:18 AM
6	Burlington	10/5/2016 5:06 PM
7	Burlington local	10/5/2016 3:15 PM
8	Graham	10/5/2016 3:14 PM
9	Burlington	10/5/2016 2:35 PM



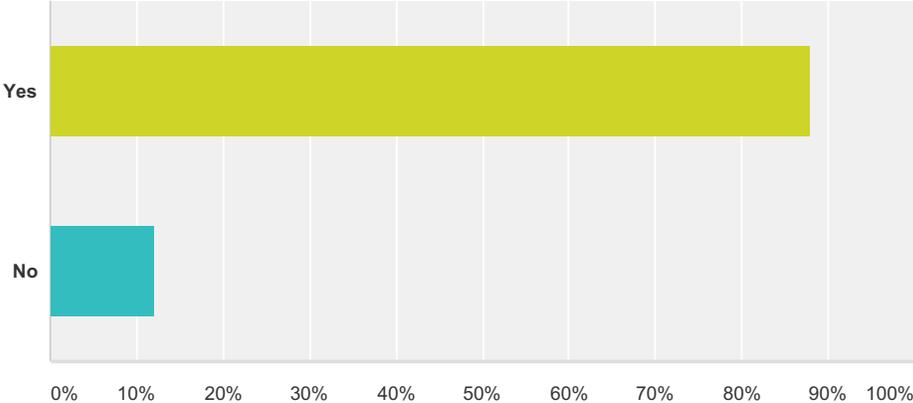
**Answer Choices**

**Responses**

- Drive and Park my own car
- Ride with friend or spouse
- Dropped Off
- Walk
- Bicycle
- Motorcycle

Answer Choice	Percentage	Count
Drive and Park my own car	71.88%	23
Ride with friend or spouse	0.00%	0
Dropped Off	3.13%	1
Walk	18.75%	6
Bicycle	6.25%	2
Motorcycle	0.00%	0
<b>Total</b>		<b>32</b>

#	Other (please specify)	Date
1	town car	10/7/2016 7:45 AM

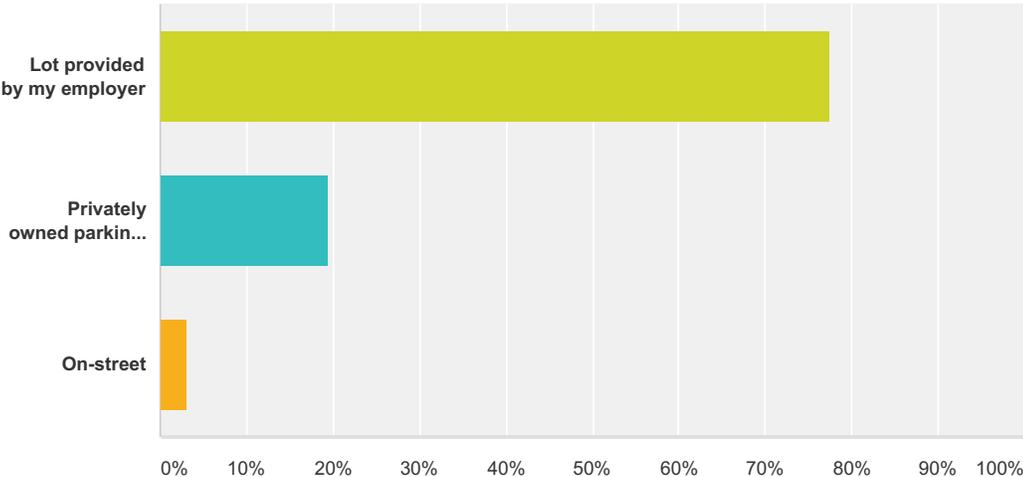


**Answer Choices**

Yes

No

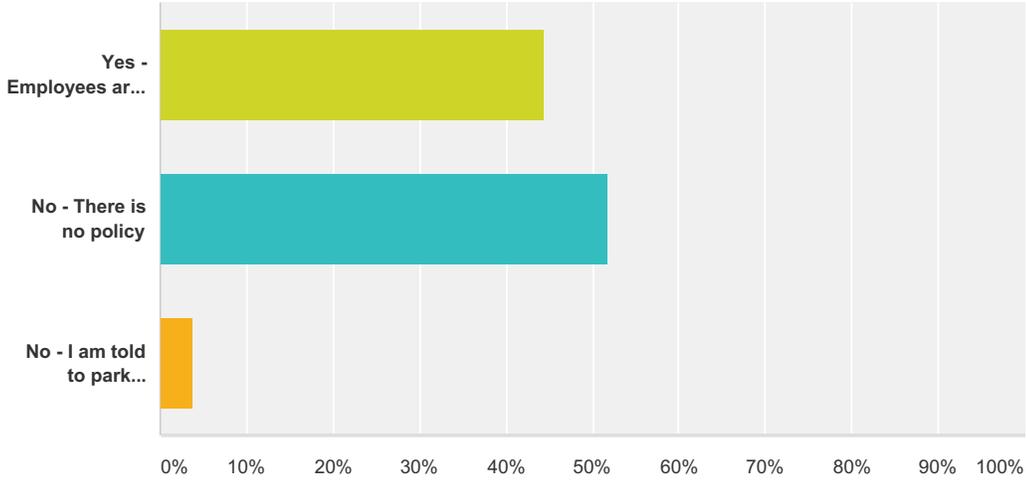
**Responses**



**Answer Choices**

- Lot provided by my employer
- Privately owned parking lot
- On-street

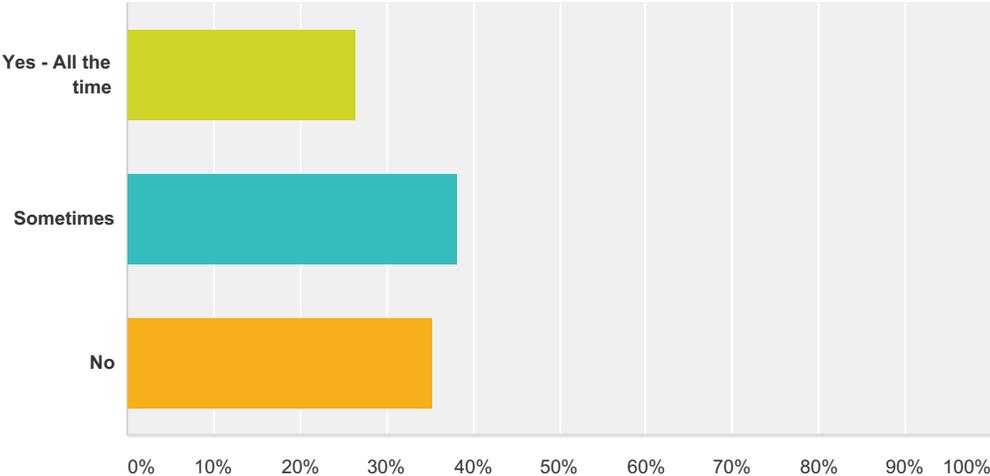
**Responses**



**Answer Choices**

- Yes - Employees are told that on-street parking is for customers
- No - There is no policy
- No - I am told to park on-street

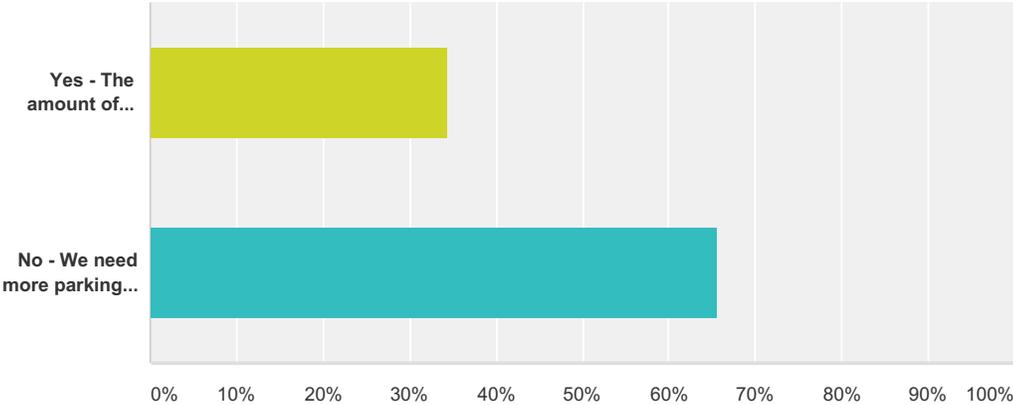
**Responses**



**Answer Choices**

- Yes - All the time
- Sometimes
- No

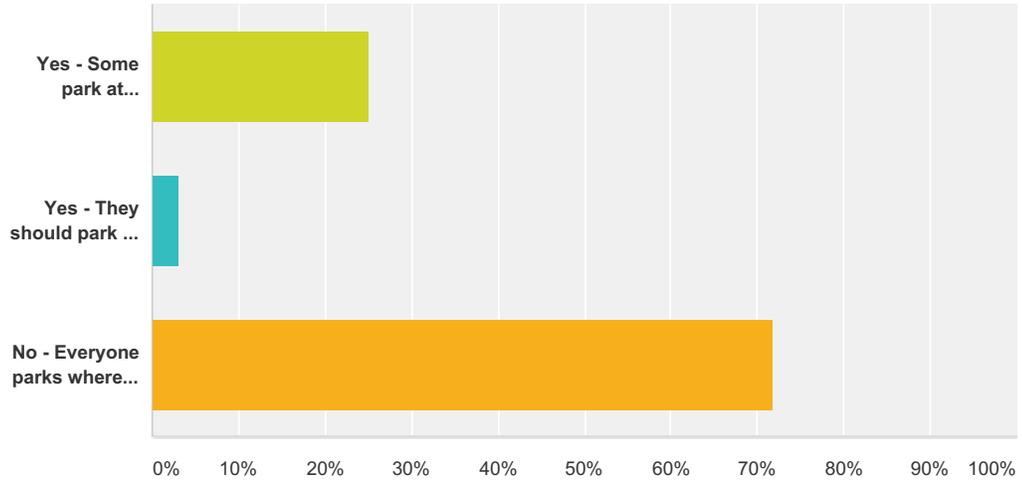
**Responses**



**Answer Choices**

- Yes - The amount of customer/visitor parking is fine
- No - We need more parking for customers and visitors.

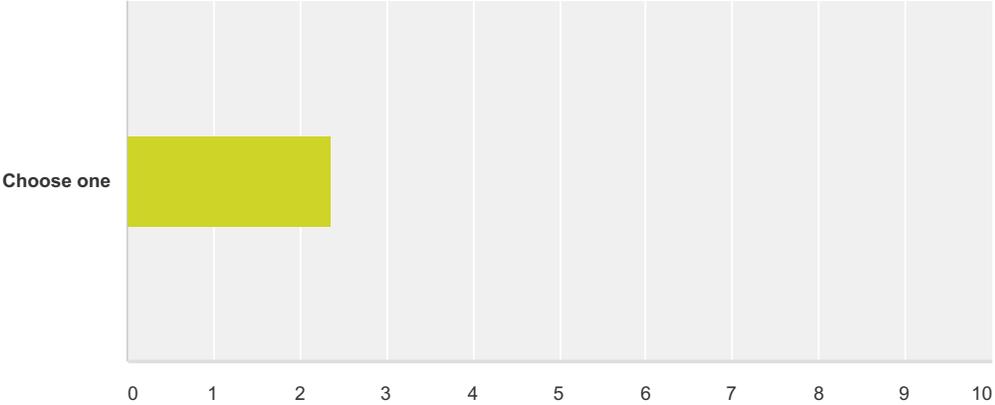
**Responses**



**Answer Choices**

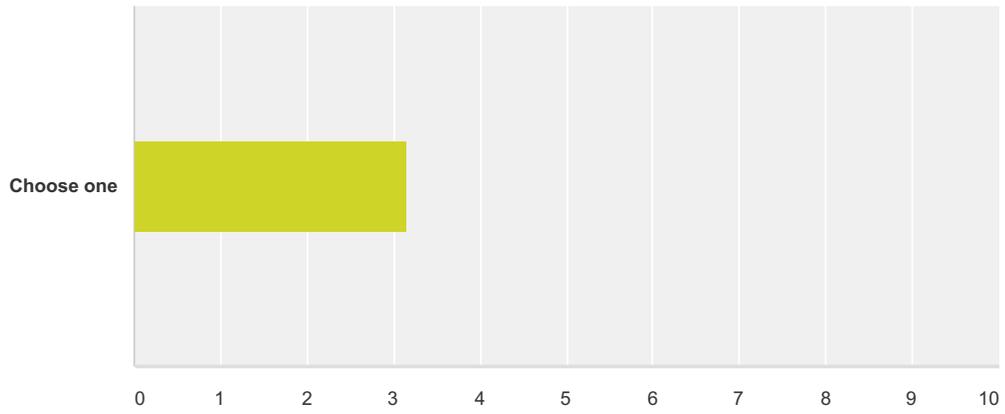
**Responses**

- Yes - Some park at on-street spaces
- Yes - They should park in lots further away
- No - Everyone parks where they should



**strongly disagree    disagree    neither agree or disagree    agree    strongly agree    Total    Weighted Average**

Choose one

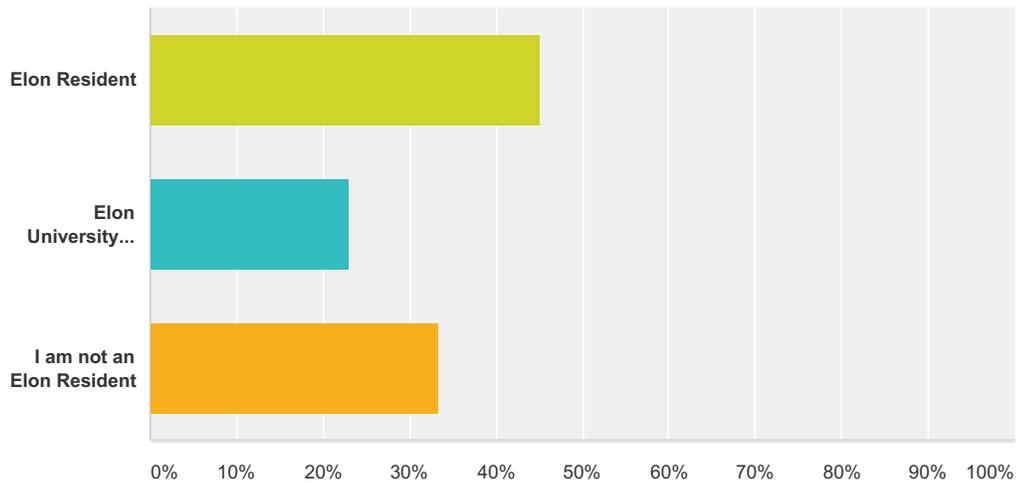


**strongly disagree**    **disagree**    **neither agree or disagree**    **agree**    **strongly agree**    **Total**    **Weighted Average**

Choose one

### Q1 Please choose the description that best describes you

Answered: 239 Skipped: 2



Answer Choices	Responses	Count
Elon Resident	45.19%	108
Elon University Student	23.01%	55
I am not an Elon Resident	33.47%	80
<b>Total Respondents: 239</b>		

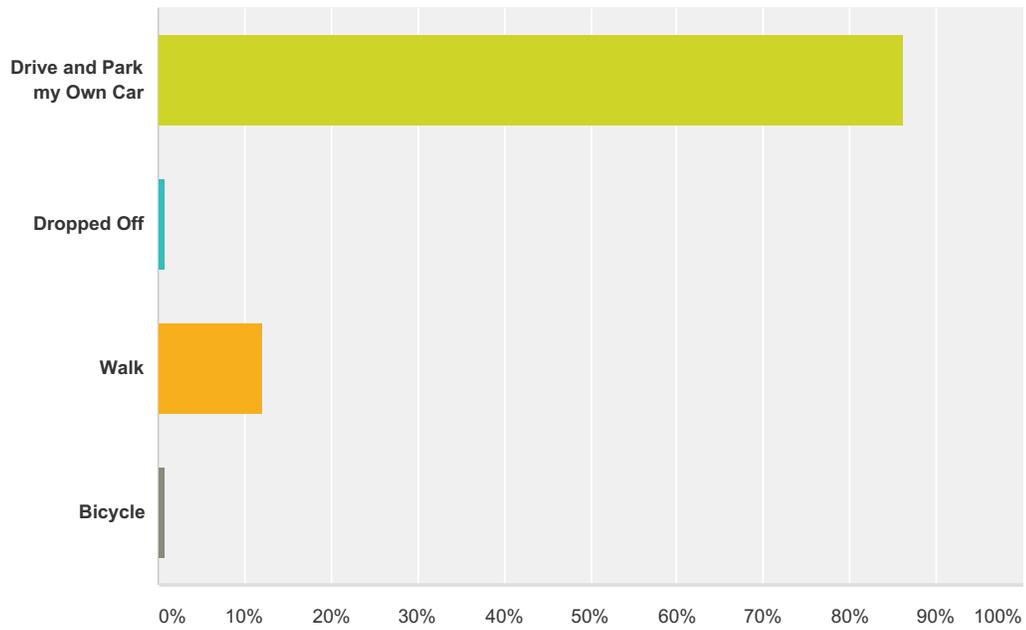
#	If not a resident of Elon, what City, Township or Village do you reside in?	Date
1	Burlington	10/22/2016 9:40 AM
2	Burlington	10/17/2016 5:48 PM
3	Burlington	10/17/2016 3:43 PM
4	Burlington	10/17/2016 2:58 PM
5	Burlington	10/14/2016 6:44 AM
6	Burlington	10/13/2016 10:37 PM
7	Gibsonville / Washington township	10/12/2016 8:38 AM
8	Burlington	10/11/2016 8:29 PM
9	My mailing address is Elon. I'm in Morton Township.	10/11/2016 8:20 PM
10	Burlington	10/11/2016 4:46 PM
11	Burlington	10/11/2016 4:42 PM
12	Burlington	10/11/2016 4:23 PM
13	Burlington NC	10/11/2016 2:57 PM
14	Boone Township	10/11/2016 2:56 PM
15	Burlington	10/11/2016 1:23 PM
16	Gibsonville	10/11/2016 1:17 PM
17	Burlington	10/11/2016 10:56 AM

## Elon - Customer Survey

## Appendix C

18	Graham	10/11/2016 10:34 AM
19	Burlington	10/11/2016 9:38 AM
20	Burlington	10/11/2016 9:26 AM
21	Burlington (27217)	10/11/2016 9:17 AM
22	Burlington	10/11/2016 9:10 AM
23	Burlington	10/10/2016 11:32 PM
24	Twin Lakes	10/10/2016 3:31 PM
25	Gibsonville	10/10/2016 10:06 AM
26	burlington	10/9/2016 11:42 AM
27	Out of state	10/9/2016 4:05 AM
28	Gibsonville	10/6/2016 6:23 PM
29	Gibsonville	10/6/2016 5:28 PM
30	West Burlington	10/6/2016 2:51 PM
31	Burlington (Somerton)	10/6/2016 1:59 PM
32	Burlington	10/6/2016 12:31 PM
33	Greensboro	10/6/2016 11:48 AM
34	Gibsonville	10/6/2016 10:05 AM
35	Gibsonville	10/6/2016 9:23 AM
36	BURLINGTON	10/6/2016 8:45 AM
37	Burlington	10/6/2016 8:35 AM
38	Mill Pointe	10/6/2016 6:54 AM
39	Gibsonville	10/6/2016 12:38 AM
40	Gibsonville	10/5/2016 9:37 PM
41	Burlington	10/5/2016 9:12 PM
42	Burlington NC	10/5/2016 9:05 PM
43	Burlington	10/5/2016 9:01 PM
44	Burlington	10/5/2016 8:52 PM
45	In the county	10/5/2016 8:09 PM
46	Chapel Hill	10/5/2016 7:34 PM
47	Gibsonville	10/5/2016 7:32 PM
48	Gibsonville	10/5/2016 7:24 PM
49	Burlington	10/5/2016 7:17 PM
50	Gibsonville	10/5/2016 6:52 PM
51	Burlington	10/5/2016 6:23 PM
52	McLeansville	10/5/2016 6:14 PM
53	Westbrook forest	10/5/2016 6:03 PM
54	Greensboro	10/5/2016 6:00 PM
55	Burlington	10/5/2016 5:34 PM
56	Mebane	10/5/2016 5:02 PM
57	Burlington	10/5/2016 4:59 PM
58	Danville va	10/5/2016 4:50 PM

59	Burlington	10/5/2016 4:38 PM
60	Faucette	10/5/2016 4:28 PM
61	Whitsett	10/5/2016 4:12 PM
62	Burlington	10/5/2016 4:09 PM
63	Gibsonville	10/5/2016 4:02 PM
64	Haw River	10/5/2016 3:46 PM
65	Burlington	10/5/2016 3:37 PM
66	I work at Twin Lakes Community in Elon	10/5/2016 3:30 PM
67	Cary nc	10/5/2016 3:28 PM
68	Mcleansville	10/5/2016 3:22 PM
69	Burlington	10/5/2016 3:02 PM
70	Burlington	10/5/2016 2:28 PM
71	Greensboro	10/5/2016 2:22 PM
72	Elon parent and frequent visitor---live in Virginia though	10/5/2016 2:13 PM
73	Burlington	10/5/2016 2:06 PM
74	McLeansville	10/5/2016 1:52 PM
75	Burlington, NC	10/5/2016 1:31 PM
76	Climax	10/5/2016 1:22 PM
77	Brown Summit	10/5/2016 1:11 PM
78	Burlington	10/5/2016 12:45 PM
79	Burlington	10/5/2016 12:40 PM
80	Burlington	10/5/2016 12:27 PM
81	Gibsonville	10/5/2016 12:05 PM
82	Greensboro	10/5/2016 9:28 AM



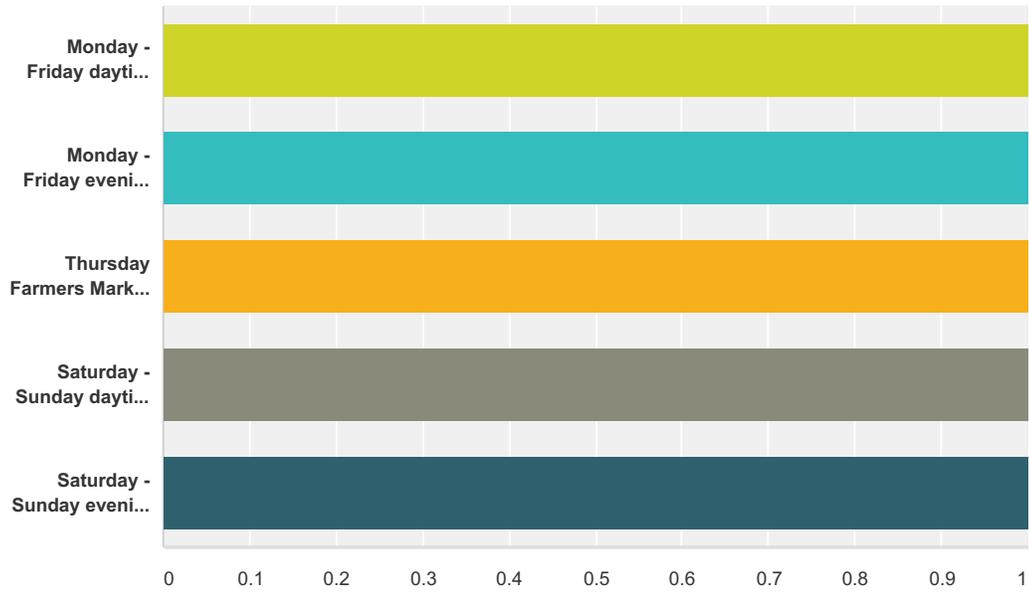
**Answer Choices**

**Responses**

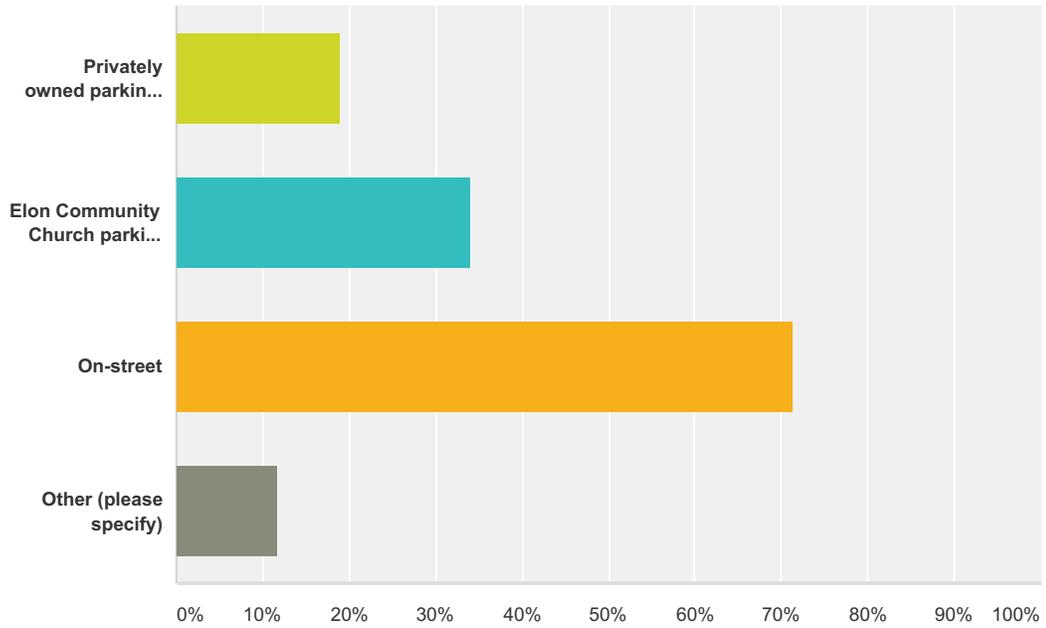
- Drive and Park my Own Car
- Dropped Off
- Walk
- Bicycle

Answer Choice	Percentage	Count
Drive and Park my Own Car	86.25%	207
Dropped Off	0.83%	2
Walk	12.08%	29
Bicycle	0.83%	2
<b>Total</b>		<b>240</b>

#	Other (please specify)	Date
1	I also walk to downtown Elon because I parked on Elon University's campus parking lot	10/13/2016 10:37 PM
2	Park in employee parking on campus	10/11/2016 9:17 AM
3	I do not go downtown. If I did I would drive.	10/6/2016 7:49 PM



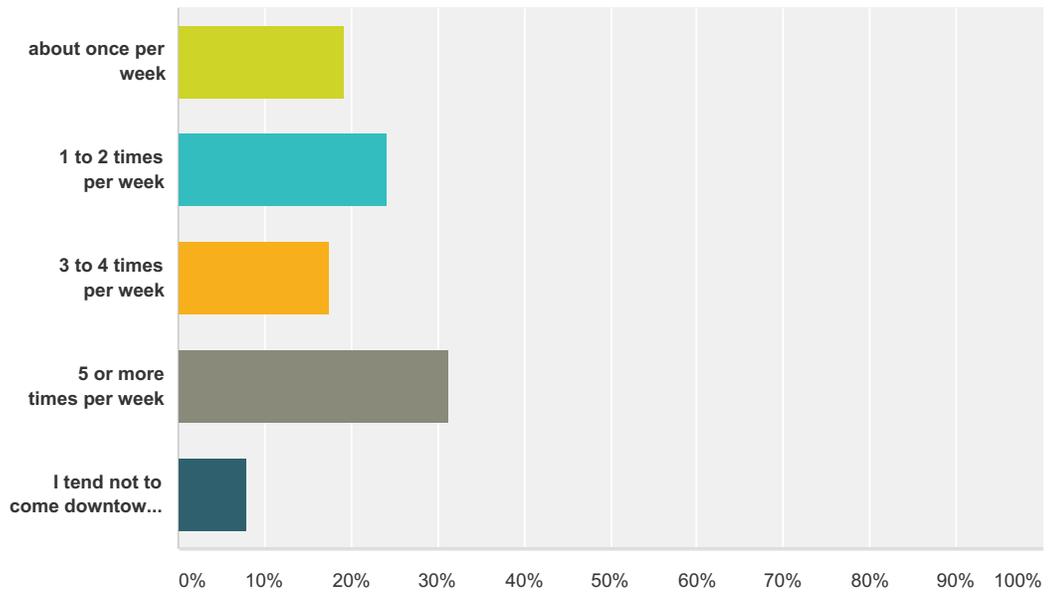
	Mainly	Occasionally	I avoid downtown during this time	I do not go to the downtown	Total	Weighted Average
Monday - Friday daytime (6am - 5pm)						
Monday - Friday evening (after 5pm)						
Thursday Farmers Market (3pm - 5pm)						
Saturday - Sunday daytime (6am - 5pm)						
Saturday - Sunday evenings (after 5pm)						



**Answer Choices**

- Privately owned parking lot
- Elon Community Church parking lot
- On-street
- Other (please specify)

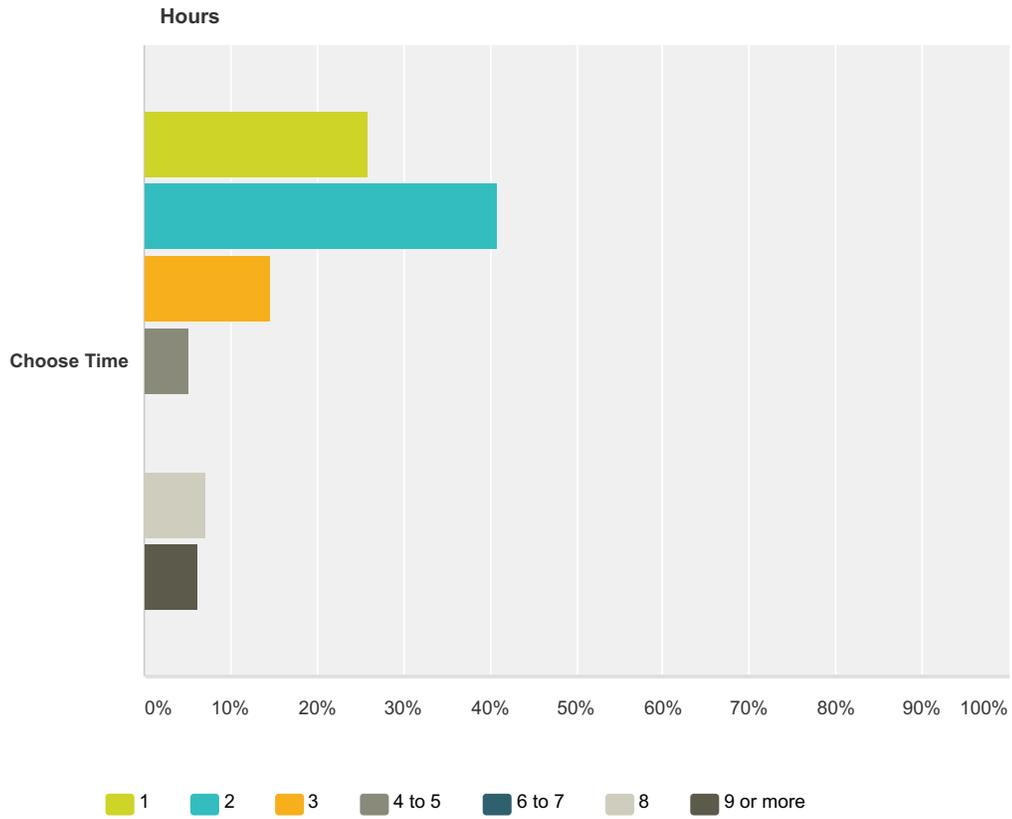
**Responses**



**Answer Choices**

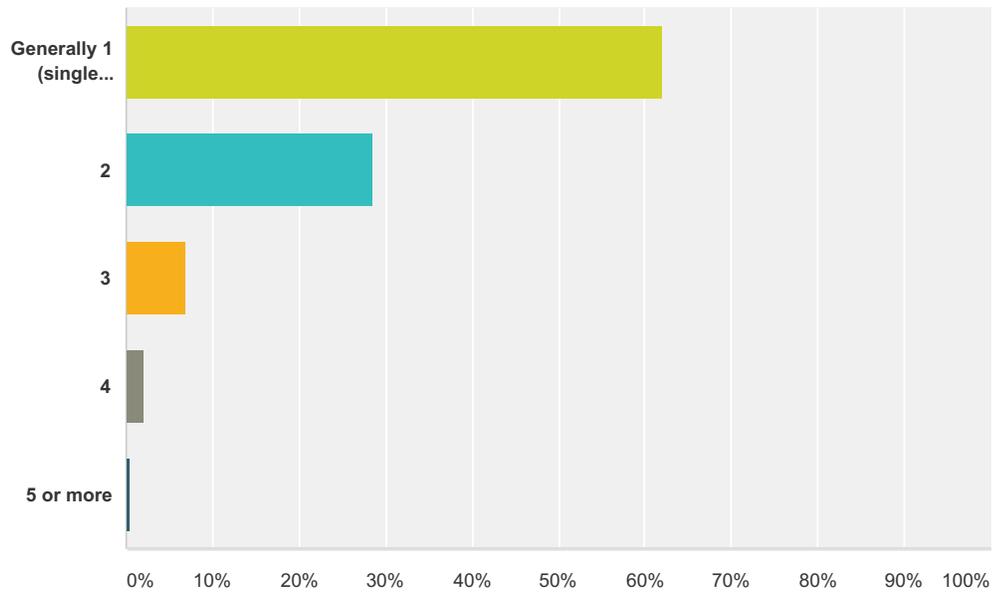
**Responses**

- about once per week
- 1 to 2 times per week
- 3 to 4 times per week
- 5 or more times per week
- I tend not to come downtown because



1      2      3      4 to 5      6 to 7      8      9 or more      Total

Choose Time



**Answer Choices**

**Responses**

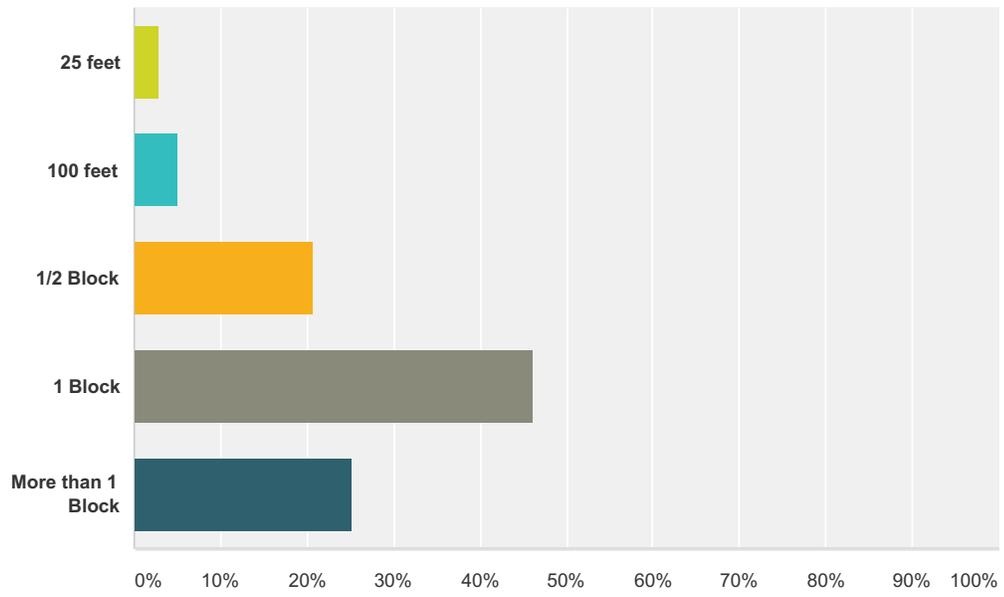
Generally 1 (single purpose)

2

3

4

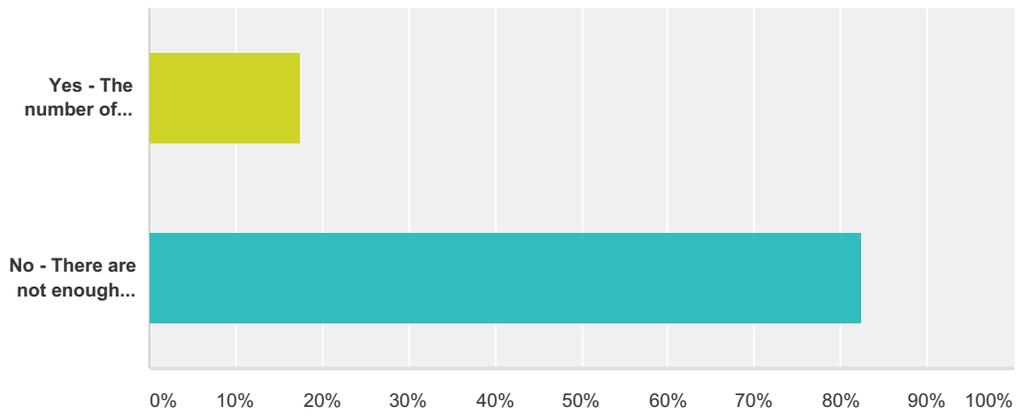
5 or more



**Answer Choices**

- 25 feet
- 100 feet
- 1/2 Block
- 1 Block
- More than 1 Block

**Responses**

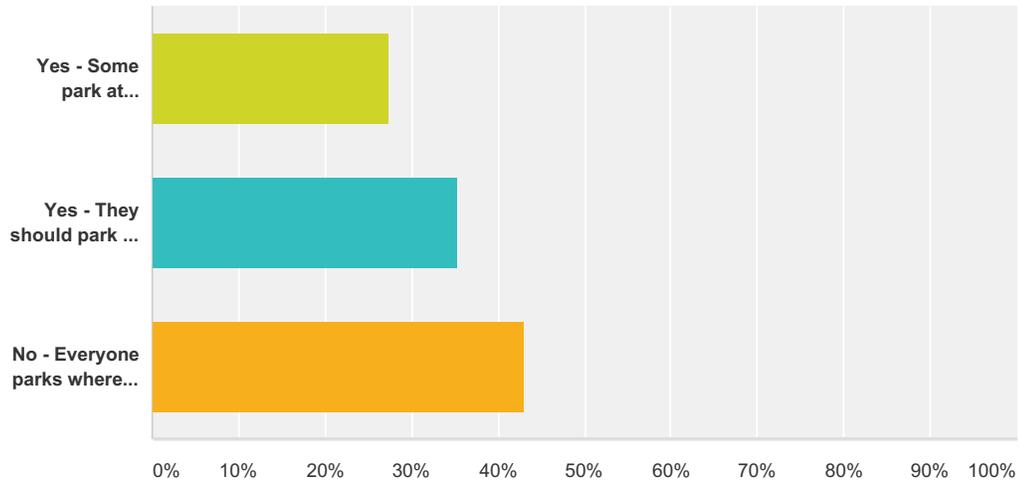


**Answer Choices**

**Responses**

Yes - The number of parking spaces seems to be okay

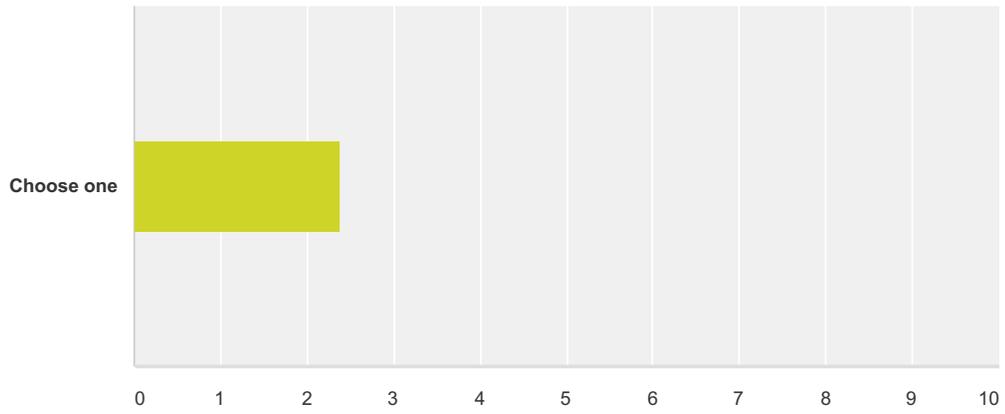
No - There are not enough spaces.



**Answer Choices**

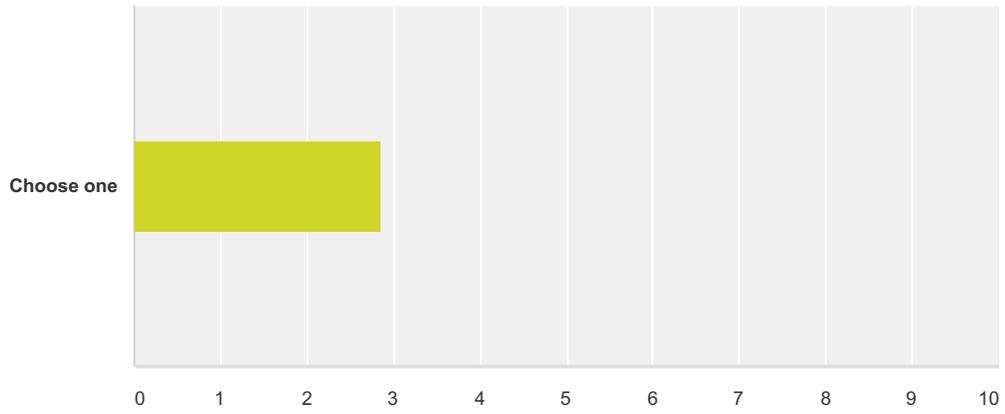
**Responses**

- Yes - Some park at on-street spaces
- Yes - They should park in lots further away
- No - Everyone parks where they should.



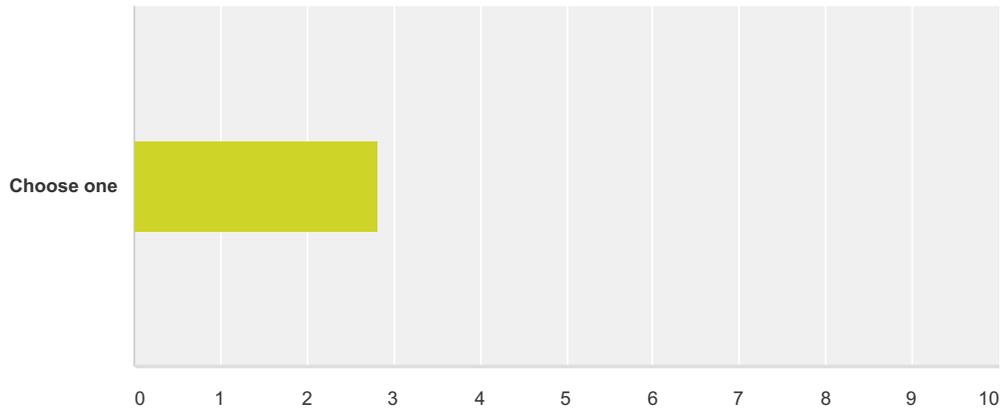
**strongly disagree**    **disagree**    **neither agree or disagree**    **agree**    **strongly agree**    **Total**    **Weighted Average**

Choose one



**strongly disagree**    **disagree**    **neither agree or disagree**    **agree**    **strongly agree**    **Total**    **Weighted Average**

Choose one



**strongly disagree**      **disagree**      **neither agree or disagree**      **agree**      **strongly agree**      **Total**      **Weighted Average**

Choose one

## Q14 Please feel free to make any additional comments regarding parking below.

Answered: 63 Skipped: 178

#	Responses	Date
1	Now can we have a survey on people not looking before they cross the street, crossing at other than the crosswalk. AND WHY are there 2 crosswalks right next to each other... can the students not walk the 10 steps to cross at just one. This makes traffic twice as crazy.	10/31/2016 1:42 PM
2	We mainly just go to eat a few times a month @ Pandora's. We try to go more often when school is not in session. We have never had a problem finding parking at the church but not sure we should be doing this.	10/22/2016 9:40 AM
3	Its the chicken or the egg. Do you have to have more merchants downtown to have a parking shortage or will parking spurn new business to come downtown?	10/20/2016 4:40 PM
4	Its the chicken or the egg. Do you have to have more merchants downtown to have a parking shortage or will parking spurn new business to come downtown?	10/18/2016 8:34 PM
5	great survey idea, more spaces necessary and no time limit!!	10/17/2016 11:49 PM
6	Spots should be 1.5-2 hour parking minimum. First time violation should be a warning and no fine. Increased parking should also be examined and permitted if possible. Also examine some level of town parking permit crossover cost with Elon university for students to not have to pay for multiple tags	10/17/2016 10:13 PM
7	the marking of the tires is ridiculous many times I will park on Williamson 2-3 times a day. If my tires are marked from my first visit then I run the risk of being ticketed. Just learned of this as a colleague got a ticket for thus very reason. Completely bogus on the towns part. Your signs do not state you cannot park on the same street twice a day or you run the risk of getting a ticket. This is unacceptable.	10/17/2016 6:36 PM
8	You need to take away 1 hour parking on railroad tracks in front of IT building. These spots are only in use 3 or 4 times a year during specific events and are wasted because of the limit!	10/17/2016 5:48 PM
9	There are already very limited spots and the fact that Elon tows cars that are there for a few hours or less is ridiculous	10/17/2016 5:05 PM
10	We all know Elon needs many more parking spots, even a small parking garage.	10/17/2016 3:43 PM
11	I come to ELON exclusively to patronize restaurants. I have been ticketed 2 x while enjoying my meal... This very much discourages me from coming to Elon!	10/17/2016 2:58 PM
12	Not clear that you can't move your car after x amount of hours to a different spot on same street (you must change streets). It's a town ordinance but basically nobody knows that	10/17/2016 1:39 PM
13	Tickets always come from being in 1hr or 2hr parking too long but it's often the most convenient and sometimes the only parking.	10/17/2016 12:05 PM
14	It would be nice if there was a common public space like an outdoor plaza-garden-park where people can sit, gather, eat, hang out, have music/art/summer activities/community, etc. near the businesses. It would also help it feel less cramped and congested.	10/13/2016 10:37 PM
15	The one-hour limit on parking is not long enough. It's hard to walk to a restaurant, have a meal, and walk back within an hour.	10/11/2016 8:20 PM
16	It seems like most lots are reserved for Elon parking passes. There are not a lot of places for the general public, especially during the weekday morning/afternoon.	10/11/2016 4:46 PM
17	we need a parking garage or a space available for parking	10/11/2016 4:30 PM
18	Strongly disapprove of parking ticket my son received while visiting from MA. ?? Not so hospitable!	10/11/2016 4:23 PM
19	Parking deck should be considered	10/11/2016 3:23 PM
20	signage around campus can be confusing and subject to change which makes parking limited to the row near the railroad tracks. At 6 am that is not an issue. I am generally the only person parking. I do know that lunch time can be difficult to find parking for quick pickups. A few 30 minute or less spots would be wonderful near the Subway and Tangent.	10/11/2016 3:18 PM
21	Parking generally seems to work when I am visiting, except during special events (church or university).	10/11/2016 3:09 PM

PAGE 1

Q1: City/Town/Village

Davidson

Q2: What City department(s) administers the parking system?

Police, Public Works, Economic Development

Q3: Does a private contractor administer any part of the parking system?

No

Q4: If you answered yes to number 3, please specify what part(s) of the parking system a private contractor administers

*Respondent skipped this question*

Q5: Number of municipal parking spaces?

# of Parking Structures	0
# of Parking Structure spaces	0
# of Parking Lots	8
# of Parking Lot spaces	240
# of On-Street Parking spaces	367

Q6: Do you have a paid parking system?

No

Q7: If yes, to question 6, what is the cost to park

*Respondent skipped this question*

Q8: What are the posted hours and days of the week for parking enforcement?

	hr begins	hr ends	days of week
On-Street	8am	6pm	Monday - Saturday
Off-Street	8am	6pm	Monday - Saturday

Q9: What are the allowed duration's for parking?

On-Street	2 hour
Off-Street	2 hour

Q10: Types of parking control?

	Gates	Meters	Signs with parking durations	Free without time limits
Parking Structures				

	Gates	Meters	Signs with parking durations	Free without time limits
<b>Parking Lots</b>			Yes	Yes
<b>On-Street Parking spaces</b>			Yes	Yes

**Q11: Violation Rates**

<b>Overtime parking</b>	\$30
<b>Illegal parking</b>	\$30
<b>Do you issue multiple tickets in one day?</b>	no
<b>Do you issue courtesy tickets?</b>	no

**Q12: Enforcement**

<b>Which Department oversees enforcement?</b>	Police
<b>Are they motorized or on foot?</b>	on foot
<b>Do you use computerized ticket writers?</b>	no

**Q13: Parking System Staff**

	# of Staff
<b>Supervisory</b>	
<b>Cashier / Attendants</b>	
<b>Maintenance</b>	
<b>Enforcement</b>	1
<b>Clerical</b>	1
<b>Other</b>	

PAGE 1

Q1: City/Town/Village

Town of Carrboro

Q2: What City department(s) administers the parking system?

Public Works/Economic Development

Q3: Does a private contractor administer any part of the parking system?

Yes

Q4: If you answered yes to number 3, please specify what part(s) of the parking system a private contractor administers

We lease parking spaces from a private parking deck

Q5: Number of municipal parking spaces?

# of Parking Structures	1 (not town owned)
# of Parking Structure spaces	250
# of Parking Lots	8
# of Parking Lot spaces	700
# of On-Street Parking spaces	10

Q6: Do you have a paid parking system?

No

Q7: If yes, to question 6, what is the cost to park

*Respondent skipped this question*

Q8: What are the posted hours and days of the week for parking enforcement?

	hr begins	hr ends	days of week
On-Street	7am	5pm	Monday - Friday
Off-Street	7am	5pm	Monday - Friday
Other (please specify)	Times are actually 7:30am-5:30pm		

Q9: What are the allowed duration's for parking?

On-Street	2hr
Off-Street	2hr

Q10: Types of parking control?

Gates	Meters	Signs with parking durations	Free without time limits

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<b>Parking Structures</b>	Yes
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<b>Parking Lots</b>	Yes
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<b>On-Street Parking spaces</b>	Yes
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**Q11: Violation Rates**

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<b>Overtime parking</b>	\$35
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<b>Illegal parking</b>	\$35
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<b>Illegal parking in barrier free space</b>	\$35
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**Q12: Enforcement**

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<b>Which Department oversees enforcement?</b>	Police
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<b>Are they motorized or on foot?</b>	Motorized
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<b>If motorized, what type of vehicle?</b>	Cruiser
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**Q13: Parking System Staff**

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*Respondent skipped this question*

PAGE 1

Q1: City/Town/Village

Belmont

Q2: What City department(s) administers the parking system?

No official system

Q3: Does a private contractor administer any part of the parking system?

No

Q4: If you answered yes to number 3, please specify what part(s) of the parking system a private contractor administers

*Respondent skipped this question*

Q5: Number of municipal parking spaces?

# of Parking Structures 0

# of Parking Structure spaces 0

# of Parking Lots 3

# of Parking Lot spaces 281

# of On-Street Parking spaces 221

Q6: Do you have a paid parking system?

No

Q7: If yes, to question 6, what is the cost to park

*Respondent skipped this question*

Q8: What are the posted hours and days of the week for parking enforcement?

	hr begins	hr ends	days of week
<b>On-Street</b>	8am	5pm	Monday - Friday
<b>Off-Street</b>			

Q9: What are the allowed duration's for parking?

On-Street 2 hour parking

Off-Street no limit

Q10: Types of parking control?

	Gates	Meters	Signs with parking durations	Free without time limits
<b>Parking Structures</b>			Yes	

<b>Gates</b>	<b>Meters</b>	<b>Signs with parking durations</b>	<b>Free without time limits</b>
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**Parking Lots**

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**On-Street Parking spaces**

**Q11: Violation Rates**

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*Respondent skipped this question*

**Q12: Enforcement**

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<b>Which Department oversees enforcement?</b>	No formalized enforcement.
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**Q13: Parking System Staff**

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*Respondent skipped this question*

Parking Study Public Meeting  
11/14/2016  
5pm, Elon Community Church

Kathleen Patterson opened the meeting at 5pm with a welcome and introduction of Annaka Norris.

Ms. Norris presented her preliminary draft information to the attendees.

Suggestions and questions from the audience:

- 2 loading zones for the 1<sup>st</sup> block
- How do we ensure that students don't overstay in the 2hr spots along W. Lebanon Ave? - Enforcement
- Students vs. Retail is a large issue
- Can we create "no student" parking? No, public parking is for everyone. Need to have enforcement of the parking so everyone is able to use it.
- Students biking downtown? Currently, not safe right now due to a lack of bike lanes and crowded sidewalks. Students do use their bikes but not sure about their use downtown. Town and Gown need to work closely on this issue.
- Can we create on street parking on W. College and N. Holt? Currently the roads are too narrow for this. You could have a developer create the on street parking for this area as they develop property.
- How do we address the Elon University faculty/staff that are parking downtown? They are not using the parking available to them at the university. they should move their staff out of downtown and create a shuttle system from their far lots. Currently, the university is eliminating staff & faculty lots.
- The church parking lot is in need of \$75k to stripe the lot and they are looking at charging for parking in their lot to generate funds. Burden of the lease for the lot should be equitable between each participant whether it is the University or the Town and the Church. Church might look at creating a paid parking situation in the future.
- Do we know how many students vs customers are in the parking lots? We can work with enforcement to document who's parking where.
- What about the Downtown Master Vision Plan? It requires private parking lots. Should the Town begin looking for places to buy to cover that development plan? Yes, the Town should acquire lots for public parking in the future. No private lots should be encouraged.
- Have you seen communities with a lot of private parking? Not to this degree. Church is hesitant to open the lot to the public because of maintenance. Maintenance could be addressed in a long-term lease with the Town.
- The Town has to determine whether it is worth purchasing the lots currently downtown especially in the 1<sup>st</sup> block of N Williamson Ave.
- Need to recommend - request for on street spaces should be paid for; develop a parking commission around downtown to move these recommendations forward.