

Boyne City

Parking Study

Final Report



Submitted by



Boyne City, Michigan



RICH & ASSOCIATES
PARKING CONSULTANTS
www.richassoc.com

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EXECUTIVE SUMMARY

This parking study, serves to examine the downtown parking system from both a qualitative and quantitative standpoint. The purpose of this parking study is to assess the current and future parking conditions of downtown Boyne City within a defined study area. The results of this study include a parking demand model detailing current and future needs to use as a tool in evaluation of strategic infill development sites. The assessment of existing conditions combined with projections for future needs lead to the recommendations for improvements to the parking system including demand management strategies, allocation of parking, time restrictions, signage and additional parking needs determinations.

STUDY AREA

Rich & Associates evaluated the parking conditions, supply and activity in the study area along with blocks just outside the study boundaries to determine potential impacts and parking supply opportunities. Within the defined study area there are a total of 21 blocks, though the focus of the study is in 11 blocks representing the core commercial area in the downtown. This area is referred to throughout this study as the **core area**.

PARKING SUPPLY

The following tables summarize the existing parking supply, the first table is the entire study area and the second table focuses on the core area. There are a total of 1,716 parking spaces in the study area. Of these spaces 526 are on-street spaces and 615 are public off-street spaces. The remaining 575 spaces are private. When we consider just the core area there are 792 parking spaces. Of these spaces, 367 are on-street, 176 are public off-street, and the remaining 249 are private spaces.

STUDY AREA			
PUBLIC PARKING SUPPLY			
	ON-STREET	526	31%
	OFF-STREET	615	36%
	PUBLIC PARKING TOTALS	1,141	67%
PRIVATE PARKING SUPPLY			
	PRIVATE PARKING TOTALS	575	33%
	TOTAL PARKING SUPPLY	1,716	

CORE AREA			
PUBLIC PARKING SUPPLY			
	ON-STREET	367	46%
	OFF-STREET	176	22%
PUBLIC PARKING TOTALS		543	69%
PRIVATE PARKING SUPPLY			
PRIVATE PARKING TOTALS		249	31%
TOTAL PARKING SUPPLY		792	

Boyne City manages and controls 67% of the parking in the study area. When we focus in on the core area the percentage of public parking increases to 69%. Based on Rich & Associates experience and best practices, we have found that to successfully manage municipal parking it is desirable for the municipality to control at least 50% of the supply. In addition to fostering a more walkable downtown where a patron can parking once and visit multiple destinations, this allows the municipality to effectively manage parking in terms of allocation, changing demand, and potential market pricing. This also allows the parking to be enforced with greater efficiency. Boyne City exceeds this benchmark.

TURNOVER & OCCUPANCY

Fieldwork for the study included a turnover and occupancy study conducted by Rich & Associates' staff. This study involved an examination of on-street and off-street parking occupancies and vehicle movements encompassing both daytime and evening hours. Parking was observed in both public and private areas. The goal of the turnover and occupancy analysis is to observe a large portion of the overall parking system, not necessarily the entire supply. The turnover and occupancy study occurred on Thursday, June 28, 2018 between the hours of 9:00AM and 9:00PM.

TURNOVER

Turnover is an indicator of how often a parking stall is being used by different vehicles throughout the course of the day. Turnover is most relevant to the short-term customer trying to find parking for a quick errand. If this customer is unable to find a convenient space, they might not stop to patronize the business. The following table summarizes the results of the turnover findings.

CORE PARKING TURNOVER SUMMARY JUNE 28, 2018		
A SAMPLE OF ON STREET SPACES IN THE CORE AREA		
VEHICLES REMAINING LESS THAN 2 HOURS	604	88%
VEHICLES REMAINING BETWEEN 2 AND 4 HRS	44	6%
VEHICLES REMAINING BETWEEN 4 AND 6 HRS	14	2%
VEHICLES REMAINING BETWEEN 6 AND 8 HRS	20	3%
VEHICLES REMAINING BETWEEN 8 AND 10 HRS	5	<1%
VEHICLES REMAINING BETWEEN 10 AND 12 HRS	1	<1%
TOTAL NUMBER OF VEHICLES OBSERVED	688	
TOTAL NUMBER OF STALLS OBSERVED FOR TURNOVER	262	
Source: Rich & Associates Field Observations		

OCCUPANCY

Occupancy is an important aspect of parking because it helps us to understand the dynamic of how demand fluctuates throughout the day.

PARKING TYPE	# SPACES	9:00AM-11:00AM	% OCC.	11:00AM-1:00PM	% OCC.	1:00PM-3:00PM	% OCC.	3:00PM-5:00PM	% OCC.	5:00PM-7:00PM	% OCC.	7:00PM-9:00PM	% OCC.
PUBLIC ON-STREET	554	192	35%	252	45%	263	47%	244	44%	201	36%	209	38%
PUBLIC OFF-STREET	523	101	19%	137	26%	160	31%	197	38%	165	32%	198	38%
PRIVATE OFF-STREET	585	186	32%	209	36%	223	38%	206	35%	171	29%	159	27%
TOTALS	1,662	479	29%	598	36%	646	39%	647	39%	537	32%	566	34%

Key observations from the occupancy counts:

- The peak occupancy was 39% which occurred during two consecutive circuits from 1:00 PM - 5:00 PM, with the counts only being separated by one vehicle.
- The on-street parking had higher occupancies than the off-street throughout the day.
- There were areas that were at or near 100% occupancy, though there were areas nearby with available parking.

CORE OCCUPANCY

When we look at the core area, on-street occupancies were higher during all of the six circuits. Within the core, on-street parking peaked at 58% during the lunch circuit (1:00 PM) with a small decrease until 7:00 PM where the occupancy increased 56%. The 9:00 AM and 5:00 PM circuits were the only two circuits below 50% occupancy for the on-street parking.

CORE AREA	# SPACES	9:00AM-11:00AM	% OCC.	11:00AM-1:00PM	% OCC.	1:00PM-3:00PM	% OCC.	3:00PM-5:00PM	% OCC.	5:00PM-7:00PM	% OCC.	7:00PM-9:00PM	% OCC.
PUBLIC ON-STREET	395	139	35%	217	55%	230	58%	214	54%	184	47%	220	56%
PRIVATE OFF-STREET	147	55	37%	87	59%	96	65%	79	54%	77	52%	77	52%
PUBLIC OFF-STREET	240	64	27%	76	32%	82	34%	78	33%	93	39%	78	33%
TOTALS	782	277	31%	395	44%	430	48%	406	45%	406	45%	425	47%

TURNOVER AND OCCUPANCY SUMMARY

The number of spaces occupied at peak time in downtown Boyne City are relatively low. The peak overall occupancy was 39% with 647 of the 1,622 spaces occupied. When we analyzed the results for the core area we see that the peak overall occupancy increases to 52%, with 408 of the 782 spaces occupied. This tells us that there is still sufficient parking in the downtown area available during peak hours, though all parking may not be available for all users. Additionally, the public parking may not be located as the most convenient spaces for all destinations.

PARKING DEMAND

The current daytime parking condition in the entire study area as calculated, showed an overall surplus of 765 spaces. When considering just the core downtown area (defined in the report text on pg.1 - 2) this surplus is only 302 spaces. Currently there is parking located within a couple of blocks of all areas to accommodate shortages. Recommendations are provided to better manage the parking system. Appropriate management will create a more efficient system making it clear where users should park with an overall goal of keeping the most convenient parking for customers of the downtown.

As development continues and additional businesses come to downtown Boyne City, there is the potential for an increase in the intensity (number of people visiting each land use) and of overall land use (higher density in development). Therefore, it is important to monitor the parking system and update the demand model with any changes to the parking supply or land use. Yearly occupancy counts will need to be conducted to determine changes in peak or overall increase in occupancy and these numbers should then be compared to the demand model. Using these tools together will allow staff to know if and when new parking will be needed.

CORE AREA PARKING DEMAND

TOTALS	DEMAND	PARKING	SURPLUS/ DEFICIT	PROJECTED SURPLUS/ DEFICIT	PROJECTED SURPLUS/ DEFICIT
	CURRENT	SUPPLY	CURRENT	5 YEAR (40%)	10 YEAR (80%)
2	0	11	11	11	11
6	74	122	48	48	-11
7	43	65	22	-3	-3
8	70	77	7	7	7
9	18	37	19	-15	-17
10	74	110	36	-14	-53
11	16	90	74	70	68
12	38	51	13	13	13
14	110	77	-33	-37	-38
15	22	37	15	15	15
16	19	73	54	54	-60
18	35	72	37	37	37
TOTALS	520	822	302	187	(31)
	(STALLS)	(STALLS)	(STALLS)	(STALLS)	(STALLS)

Future development scenarios (5 and 10 year) are detailed on pg. 32, loss and gain of parking and new square footage are calculated in 5 and 10 yr. column

FUTURE PARKING DEMAND

When projecting the future demand scenarios, we used a rate of 40% re-occupancy of vacant space in the five-year projections and 80% in the 10-year projections. Along with showing the re-occupancy of the vacant space for the future projections, Rich & Associates was directed to examine potential scenarios with in-fill development occurring on current parking lots and other potential sites.

The five year projections with re-occupancy of vacant space and in-fill development show that the entire study area would have a projected surplus of 499 spaces while the core area would have a surplus of just 187 spaces. Projecting out to 10 year shows the entire study area surplus reduced by nearly half (275 space surplus) with the core area projected to have a **deficit** of 31 spaces. These values however must be considered with caution because they do not reflect any specific plans but consider more of a full build-out condition. They are presented to demonstrate the importance of carefully considering the potential impact from new development and the resulting effect on the availability of parking and particularly public parking.

The Five-Year Scenario is workable if parking is managed better and employees are parking where they should. Even though there will be a surplus of parking, it will be important to provide direction along with education on where employees can park. The 10 Year Scenario will take strategic planning with an effective and efficient parking system providing employee parking away from but close to the core downtown area. This level of activity in the downtown will need parking enforcement conducted on a regular basis in order to keep the most convenient parking available for customers and visitors of the downtown.

PUBLIC INPUT

Public input was solicited in the form of several meetings with stakeholders of the downtown. Discussions with stakeholders included questions specific to where they worked, businesses they owned, if they were a resident or had encounters with parking in the downtown. The Preliminary Report was also presented to Council, Staff and the general public. All comments provided were taken into account for the final version of the report.

RECOMMENDATIONS

The recommendations presented are intended to enhance the existing supply of parking through operational, management, parking pricing and allocation 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 and provide a plan for accommodating future infill and development of the downtown study area.

The recommendations provided in this report are a set of tools that Boyne City staff can use to manage the parking system. Boyne City will also be given the demand matrix GIS model to maintain and manage the parking supply in the downtown. This model can be updated with new development, vacancy or in-fill, along with any changes to the parking inventory. The model allows staff to understand the impacts of potential development and allocate parking and durations to meet the needs in the downtown.

A parking system is not just about parking vehicles, it also involves the walkability of a downtown, including signage, enforcement, lighting as well as marketing parking to business owners, employee, residents and visitors. The utilization of 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 therefore downtown economics in general. The parking recommendation summary can be found on **pages 36-37**.

NEW PARKING

Rich & Associates was asked to determine locations for new parking. There is currently a surplus of parking in the downtown and not a need for additional parking. At this point additional parking would only be necessary when significant development occurs. The recommendation as stated earlier, is to better manage the current parking supply with the operational recommendations provided and to look for shared use opportunities with private

parking lot owners who are not fully utilizing their parking assets. These opportunities can often occur with banks, medical office buildings, churches and schools.

When the time comes for additional parking it is recommended to look for on-street options first. There is the opportunity to add additional spaces along Lake Street following the pattern of the existing 90 degree spaces near the public restrooms. There was a discussion considering the option of moving Lake Street and developing the parking into the east side of the street in order to keep views for future development. Either option will work and it will be up to the City and residents to determine if the cost of moving the road will be necessary for development.

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 occupied 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 all 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. One circuit of the route took approximately two hours to complete and each space was observed once during that circuit.
- **Block Face** - A number 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 1A would refer to the north face of block 1.
- **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.

INTRODUCTION

The Michigan Municipal League and the Michigan Economic Development Corporation contracted with Rich & Associates on behalf of the City of Boyne City to prepare a Downtown Parking Study. This parking study, serves to examine the downtown existing parking system from both a qualitative and quantitative standpoint. The study will be used as a tool in evaluation of strategic infill development sites.

The purpose of this parking study is to assess the current and future parking conditions of downtown Boyne City within a defined study area. The results of this study include a parking demand model detailing current and future needs along with recommendations for improvements to the parking system including demand management strategies, allocation, time restrictions, signage and when and if new parking is needed. The recommendations are intended for all users of the parking system including locals, visitors, employees and downtown residents.

STUDY AREA

Rich & Associates evaluated the parking conditions, supply and activity in the study area (**Map 1** on **page 2**) along with blocks just outside the study boundaries to determine potential impacts and parking supply opportunities. Within the defined study area there are a total of 21 blocks, though the focus of the study is in 11 blocks representing the core commercial area in the downtown. This area is referred to throughout this study as the **core area** and is identified as blocks 6-12, 14-16 and 18 shown in on **Map 1.2** on **page 3**.



**CITY OF BOYNE
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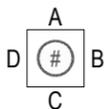


BLOCK
NUMBER

LEGEND:

— STUDY AREA

BLOCK FACE KEY PLAN:



Sheet Title:

**STUDY
AREA**

MAP Number:

MAP 1



**CITY OF BOYNE
PARKING STUDY**

Boyne City, Michigan

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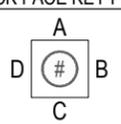
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BLOCK NUMBER

LEGEND:

 CORE STUDY AREA

BLOCK FACE KEY PLAN:



Sheet Title:

**CORE STUDY
AREA**

MAP Number:

MAP 1.2

Pg. 3

ANALYSIS

This analysis provides an assessment of how the existing parking system is operating, the current conditions that affect the system and how potential new developments may affect the system in the future. A primary goal of this analysis is to determine if new parking may be required based on current and anticipated future developments. In completing this study, Rich & Associates compiled and reviewed turnover and occupancy data, parking inventories and land use inventories to develop a working demand model. The analysis was further refined based on our previous experience with similar communities.

The process consisted of two parts, the first part of the analysis included a determination of the current parking demand by block, based on the building inventory provided by Boyne City staff and parking generation factors calculated per 1,000 square feet of gross floor area. 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 for calibration of the surplus and deficit data. Additionally, this information provides an understanding of the problem areas and where the issues are occurring both on-street and off-street.

PARKING INVENTORY

Initial field work for this study entailed a review of the parking supply within the study area. Within the downtown, the supply consists of a mix of on-street and off-street parking. The on-street spaces are free, with a mix of two hour and unlimited parking. The off-street parking supply consists of a mix of public and private surface lots, with the majority of the public parking available without a time constraint.

Table A and B on page 5, summarizes the existing parking supply in the entire study area along with the core area. **Table C on page 6** details the parking throughout the study area. There are a total of 1,716 parking spaces in the study area. Of these spaces 526 are on-street spaces and 615 are public off-street spaces. The remaining 575 spaces are private. When we consider just the core area there are 792 parking spaces. Of these spaces, 367 are on-street and 176 are public off-street, and the remaining 249 are private spaces.

Table A

STUDY AREA			
PUBLIC PARKING SUPPLY			
	ON-STREET	526	31%
	OFF-STREET	615	36%
	PUBLIC PARKING TOTALS	1,141	67%
PRIVATE PARKING SUPPLY			
	PRIVATE PARKING TOTALS	575	33%
TOTAL PARKING SUPPLY		1,716	

Table B

CORE AREA			
PUBLIC PARKING SUPPLY			
	ON-STREET	367	46%
	OFF-STREET	176	22%
	PUBLIC PARKING TOTALS	543	69%
PRIVATE PARKING SUPPLY			
	PRIVATE PARKING TOTALS	249	31%
TOTAL PARKING SUPPLY		792	

Boyne City manages and controls 67% of the parking in the study area. When we focus in on the core area the percentage of public parking increases to 69%. Based on Rich & Associates experience and best practices, we have found that to successfully manage municipal parking it is desirable for the municipality to have control of at least 50% of the supply. This allows the municipality to effectively manage parking in terms of allocation, changing demand, potential market pricing, and allows the parking to be enforced with greater efficiency. Boyne City exceeds this benchmark.

Table C on **page 6** is a detailed supply inventory listing types and durations of parking by each block. **Map 2** is a spatial view of the parking supply. In cases where parking spaces were not marked (on-street and off-street), the number of spaces were estimated.

Table C

BLOCK #	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	
PUBLIC ON-STREET																						
15 MINUTE	0	0	0	0	0	8	0	2	0	0	0	0	0	0	0	0	0	1	0	0	0	11
2 HOUR	0	0	0	0	0	16	12	0	12	35	41	0	0	14	6	0	0	13	0	0	0	149
UNLIMITED	0	15	6	30	10	17	24	16	20	10	12	8	0	27	21	27	9	15	43	49	0	359
BARRIER FREE (HC)	0	0	0	0	0	1	4	0	0	1	0	0	0	1	0	0	0	0	0	0	0	7
																						526
OFF-STREET																						
2 HOUR	0	0	0	0	0	0	0	27	0	0	0	0	0	0	0	0	0	0	0	0	0	27
RESERVED	46	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	46
UNLIMITED	80	111	0	0	0	44	0	0	0	54	0	0	69	0	0	44	0	0	0	0	0	402
OVERFLOW (+/-)	40	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	20	60
BARRIER FREE (HC)	10	4	0	0	0	2	0	2	0	1	0	0	0	0	0	2	0	0	0	0	0	21
TRAILER	0	6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	53	59
																						615
PRIVATE																						
OFF-STREET	0	0	116	40	18	34	25	30	5	9	37	43	64	35	10	0	20	51	22	16	0	575
																						575
SUMMARY																						
	176	136	122	70	28	122	65	77	37	110	90	51	133	77	37	73	29	80	65	65	73	1716
SOURCE: RICH & ASSOCIATES																						



<p>CITY OF BOYNE PARKING STUDY</p> <p>Boyne City, Michigan</p>	<p>RICH & ASSOCIATES PARKING CONSULTANTS</p> <p>26877 Northwinds Hwy, Suite 208 Southfield, Michigan 48033</p> <p>Southfield, MI 248.353.3060 Lutz, FL 813.949.9868</p> <p>ARCHITECTS • ENGINEERS • PLANNERS</p> <p>09-14-18 sar</p>	<p>LEGEND:</p> <ul style="list-style-type: none"> STUDY AREA CORE STUDY AREA PRIVATE / RESERVED LOTS PUBLIC / RESERVED LOTS PUBLIC ON-STREET (UNLIMITED) 2 HOUR - ON STREET 15 MINUTE - ON STREET ♿ BARRIER FREE <p>BLOCK FACE KEY PLAN:</p> <div style="text-align: center;"> <p>A</p> <div style="display: flex; justify-content: space-between; width: 40px; margin: 0 auto;"> D <div style="border: 1px solid black; padding: 2px; text-align: center; width: 20px; height: 20px; display: flex; align-items: center; justify-content: center;"> # </div> B </div> <p>C</p> </div>	<p>Sheet Title:</p> <h1 style="text-align: center; margin: 0;">PARKING SUPPLY</h1>	<p>MAP Number:</p> <h2 style="text-align: center; margin: 0;">MAP 2</h2> <p style="text-align: right;">Pg. 7</p>
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TURNOVER & OCCUPANCY ANALYSIS

As previously noted, Rich & Associates conducted a turnover and occupancy analysis in the study area. This study involved an examination of the on-street and off-street parking supply. Additionally, we observed vehicle movements throughout the day, from morning until early evening. Observations occurred in both public and private parking areas in order to understand how the system was working. The goal of the turnover and occupancy analysis is to observe a large portion of the overall parking system, not necessarily the entire supply.

The occupancy study occurred on Thursday, June 28, 2018 between the hours of 9:00AM and 9:00PM. Thursday was chosen to conduct the analysis because Thursdays are most often an overall average day to provide a typical benchmark of activity for the study.

TURNOVER

The turnover portion of the analysis, where license plate numbers were recorded, applied mostly to on-street and a few off-street spaces in the downtown, with most of those spaces being two hour time limited spaces. These same spaces were observed during each two-hour circuit. This is done to determine how long specific vehicles were parked in the most convenient customer spaces. This also allows us to see if any vehicle was parked for a long period of time in a time limited space. At the same time, the turnover information also yields occupancy results for the parking area, and therefore, for each circuit a composite occupancy 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. Turnover is most relevant to the short-term customer trying to find parking for a quick errand. If this customer is unable to find a convenient space, they might not stop to patronize the business. **Table D** on the following page summarizes the results of the turnover findings.

There were 262 parking spaces observed for turnover between the hours of 9:00AM to 9:00PM. The turnover for this day was just over 2.6. Rich & Associates is of the opinion that this number is low. Turnover can be low for two reasons: 1) when vehicles are parking for extended periods in the same space, or 2) the overall on-street occupancy is low. We are of the opinion that the turnover is low because of low occupancy. There were areas with higher occupancy, though the overall occupancy for 262 observed spaces was not high.

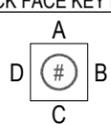
Although vehicles stayed beyond two hours, not all stalls observed had a two-hour time limit and thus there is not a reason for all vehicles to move. **Map 3** details the locations where people are staying beyond two hours. The two-hour time limited spaces are color coded differently than the on-street spaces without time limits. The spaces that are not two-hour were observed because these spaces are close and convenient to customers and visitors and we wanted to see if and how many employees were parking in these spaces.

There were a total of 84 vehicles parked beyond two hours. There were 44 vehicles that stayed between two and four hours, 14 vehicles were observed in the same space between four and six hours and 26 additional vehicles were observed parked in the same space for over six hours. This means that during the course of the day approximately 12% of the 688 vehicles observed in on-street space stayed beyond two hours.

Table D

CORE PARKING TURNOVER SUMMARY JUNE 28, 2018		
A SAMPLE OF ON STREET SPACES IN THE CORE AREA		
VEHICLES REMAINING LESS THAN 2 HOURS	604	88%
VEHICLES REMAINING BETWEEN 2 AND 4 HRS	44	6%
VEHICLES REMAINING BETWEEN 4 AND 6 HRS	14	2%
VEHICLES REMAINING BETWEEN 6 AND 8 HRS	20	3%
VEHICLES REMAINING BETWEEN 8 AND 10 HRS	5	<1%
VEHICLES REMAINING BETWEEN 10 AND 12 HRS	1	<1%
TOTAL NUMBER OF VEHICLES OBSERVED	688	
TOTAL NUMBER OF STALLS OBSERVED FOR TURNOVER	262	
Source: Rich & Associates Field Observations		



<p>CITY OF BOYNE PARKING STUDY</p> <p>Boyne City, Michigan</p>	<p>RICH & ASSOCIATES PARKING CONSULTANTS</p> <p>26077 Northwestern Hwy, Suite 200 Southfield, MI 48033</p> <p>Southfield, MI 248.553.5060 Lutz, FL 813.949.9960</p> <p>ARCHITECTS • ENGINEERS • PLANNERS</p>  <p>09-14-18 sar</p>	<p>LEGEND:</p> <p> STUDY AREA</p> <p>BLOCK FACE KEY PLAN:</p>  <p># VIOLATION OF 2 HR TIME LIMIT</p> <p># BEYOND 2 HRS NOT POSTED 2 HRS.</p>	<p>Sheet Title:</p> <p>PARKING STAYS BEYOND 2 HRS</p>	<p>MAP Number:</p> <p>MAP 3</p> <p>Pg. 10</p>
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OCCUPANCY

Occupancy is an important aspect of parking because it helps us to understand the dynamic of how demand fluctuates throughout the day. The occupancy data is used by Rich & Associates to understand how the parking is operating and to calibrate the parking demand model. **Graph 1, 2, Table E** and **Maps 4, 4.1, 4.2, 4.3, 4.4 and 4.5** are the summary results of the occupancy study. The peak occupancy occurred between 1:00PM and 5:00PM, with both the 1:00PM – 3:00PM and 3:00PM – 5:00PM circuit at 39% occupancy. **Map 4.2** and **4.3** on **page 16** and **17** show the peak occupancies for both circuits. The full occupancy counts can be found in tabular form on **page 13**.

Table E
Occupancy Summary
Thursday June 28, 2018

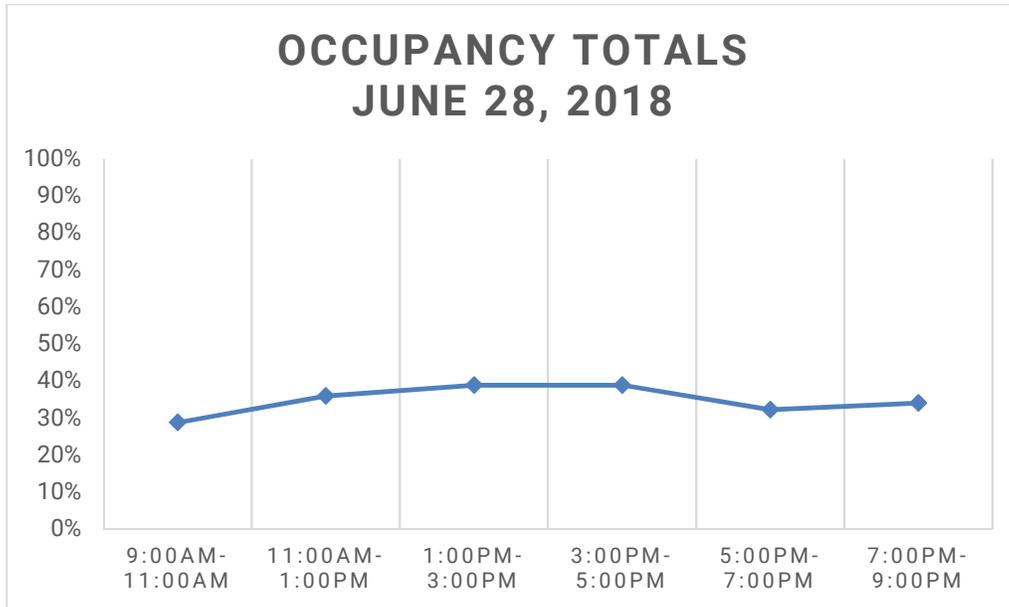
PARKING TYPE	# SPACES	9:00AM-11:00AM	% OCC.	11:00AM-1:00PM	% OCC.	1:00PM-3:00PM	% OCC.	3:00PM-5:00PM	% OCC.	5:00PM-7:00PM	% OCC.	7:00PM-9:00PM	% OCC.
PUBLIC ON-STREET	554	192	35%	252	45%	263	47%	244	44%	201	36%	209	38%
PUBLIC OFF-STREET	523	101	19%	137	26%	160	31%	197	38%	165	32%	198	38%
PRIVATE OFF-STREET	585	186	32%	209	36%	223	38%	206	35%	171	29%	159	27%
TOTALS	1,662	479	29%	598	36%	646	39%	647	39%	537	32%	566	34%

**Number of spaces includes areas outside the study area, on residential streets were counted to see if these areas were being abused by employees.*

Key observations from the occupancy counts:

- The peak occupancy was 39% which occurred during two consecutive circuits from 1:00PM -5:00PM, with the counts only being separated by one vehicle.
- The on-street parking had higher occupancies than the off-street throughout the day.
- The private off-street parking had higher occupancies than the public off-street parking during the first three circuits.
- The public off-street parking had higher occupancies than the private off-street parking for the last three circuits. This is most likely due to restaurant staff and patrons coming into town for dinner.
- There were areas that were at or near 100% occupancy, though there were areas nearby with available parking.

Graph 1



Graph 2

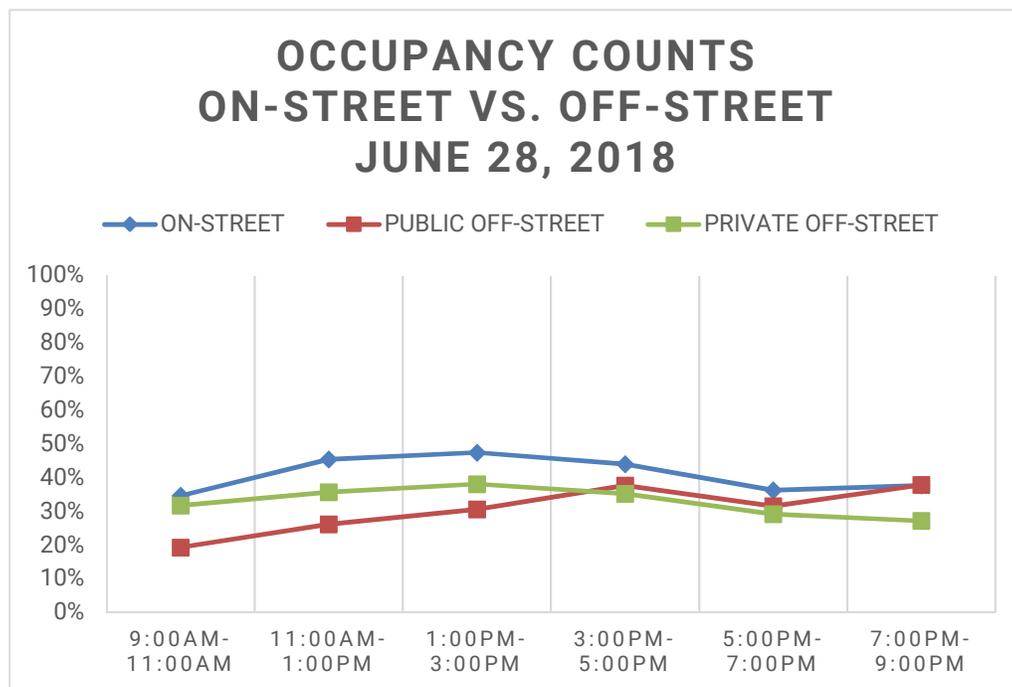
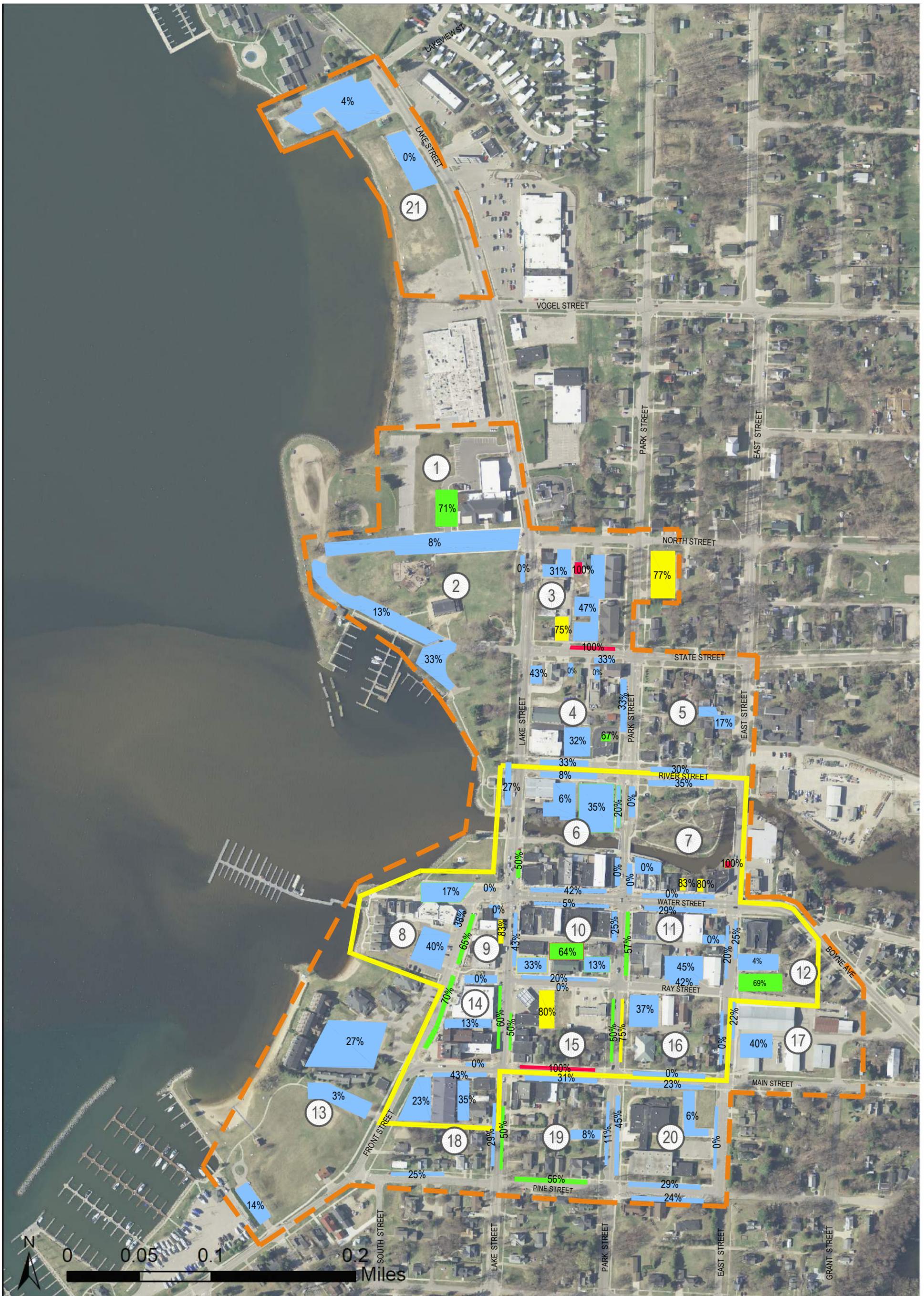


Table F Thursday June 28, 2018 Occupancy Results

Block #	Description	Type	# Spaces	9:00AM-11:00AM OCC.	%	11:00AM-1:00PM OCC.	%	1:00PM-3:00PM OCC.	%	3:00PM-5:00PM OCC.	%	5:00PM-7:00PM OCC.	%	7:00PM-9:00PM OCC.	%
1	CITYHALL	LOT	92	7	8%	10	11%	5	5%	42	46%	3	3%	30	33%
1	EMPLOYEES	LOT	21	15	71%	14	67%	14	67%	15	71%	5	24%	4	19%
2	LOOP	LOT	115	15	13%	18	16%	21	18%	22	19%	14	12%	20	17%
2	TRAILERS	LOT	6	2	33%	1	17%	2	33%	4	67%	4	67%	3	50%
2	2-B	ON-STREET	4	0	0%	0	0%	0	0%	0	0%	0	0%	0	0%
2	2-BB	ON-STREET	11	3	27%	2	18%	1	9%	1	9%	3	27%	6	55%
3	CLINIC LOT	LOT	35	27	77%	28	80%	27	77%	23	66%	9	26%	0	0%
3	3-GRAVEL	LOT	3	3	100%	2	67%	2	67%	0	0%	1	33%	0	0%
3	3-34	LOT	34	16	47%	17	50%	22	65%	21	62%	3	9%	3	9%
3	3-8	LOT	8	6	75%	5	63%	6	75%	7	88%	0	0%	0	0%
3	3-36	LOT	36	11	31%	4	11%	6	17%	1	3%	0	0%	0	0%
3	3C	ON-STREET	6	6	100%	6	100%	5	83%	5	83%	2	33%	0	0%
4	4-2	LOT	3	2	67%	2	67%	2	67%	2	67%	2	67%	0	0%
4	4-22	LOT	22	7	32%	5	23%	7	32%	10	45%	1	5%	1	5%
4	4-7	LOT	7	3	43%	3	43%	2	29%	2	29%	1	14%	0	0%
4	4-4	LOT	4	0	0%	1	25%	1	25%	1	25%	1	25%	0	0%
4	4-ATT	LOT	4	0	0%	0	0%	0	0%	0	0%	3	75%	3	75%
4	4A	ON-STREET	6	2	33%	2	33%	3	50%	2	33%	1	17%	1	17%
4	4B	ON-STREET	15	5	33%	2	13%	2	13%	3	20%	6	40%	4	27%
4	4C	ON-STREET	9	3	33%	1	11%	0	0%	0	0%	2	22%	0	0%
5	5-18	LOT	18	3	17%	3	17%	3	17%	2	11%	0	0%	0	0%
5	5C	ON-STREET	10	3	30%	1	10%	2	20%	1	10%	0	0%	0	0%
6	6-34	LOT	34	2	6%	9	26%	9	26%	5	15%	22	65%	12	35%
6	6-46	LOT	46	16	35%	25	54%	28	61%	24	52%	30	65%	32	70%
6	6A	ON-STREET	12	1	8%	0	0%	0	0%	0	0%	3	25%	0	0%
6	6B	ON-STREET	5	1	20%	1	20%	3	60%	3	60%	2	40%	2	40%
6	6BB	ON-STREET	8	0	0%	2	25%	4	50%	2	25%	4	50%	3	38%
6	6C	2HR ON-STREET	12	5	42%	9	75%	6	50%	6	50%	10	83%	8	67%
6	6D	2HR ON-STREET	4	2	50%	0	0%	3	75%	4	100%	2	50%	3	75%
7	7-5	LOT	5	4	80%	4	80%	3	60%	4	80%	1	20%	2	40%
7	7-6	LOT	6	5	83%	6	100%	4	67%	4	67%	1	17%	0	0%
7	7-2	LOT	2	2	100%	2	100%	1	50%	2	100%	2	100%	1	50%
7	7-12	LOT	12	0	0%	0	0%	2	17%	0	0%	1	8%	0	0%
7	7A	ON-STREET	23	8	35%	7	30%	10	43%	7	30%	7	30%	3	13%
7	7C	2HR ON-STREET	10	0	0%	4	40%	8	80%	3	30%	4	40%	10	100%
7	7D	2HR ON-STREET	2	0	0%	1	50%	1	50%	1	50%	1	50%	1	50%
7	7DD	ON-STREET	5	0	0%	1	20%	0	0%	0	0%	1	20%	0	0%
8	8-29	2HR ON-STREET	29	5	17%	18	62%	19	66%	14	48%	14	48%	28	97%
8	8-30	LOT	30	12	40%	21	70%	24	80%	23	77%	28	93%	30	100%
8	8A	2HR ON-STREET	2	0	0%	1	50%	0	0%	0	0%	0	0%	0	0%
8	8B	ON-STREET	16	6	38%	10	63%	13	81%	11	69%	8	50%	13	81%
9	9-5	LOT	5	0	0%	1	20%	1	20%	0	0%	0	0%	1	20%
9	9B	2HR ON-STREET	12	10	83%	8	67%	12	100%	5	42%	7	58%	10	83%
9	9DD	ON-STREET	20	13	65%	14	70%	15	75%	14	70%	9	45%	16	80%
10	10-15	LOT	15	2	13%	4	27%	9	60%	9	60%	6	40%	7	47%
10	10-22	LOT	22	14	64%	18	82%	22	100%	22	100%	16	73%	22	100%
10	10-18	LOT	18	6	33%	13	72%	14	78%	13	72%	11	61%	9	50%
10	10A	2HR ON-STREET	21	1	5%	14	67%	12	57%	19	90%	19	90%	19	90%
10	10B	2HR ON-STREET	8	2	25%	6	75%	6	75%	4	50%	2	25%	6	75%
10	10C	ON-STREET	10	2	20%	8	80%	10	100%	8	80%	5	50%	6	60%
10	10D	2HR ON-STREET	7	3	43%	3	43%	4	57%	6	86%	4	57%	3	43%
11	11-6	LOT	6	0	0%	1	17%	0	0%	0	0%	1	17%	2	33%
11	11-31	LOT	31	14	45%	16	52%	15	48%	16	52%	11	35%	12	39%
11	11A	2HR ON-STREET	17	5	29%	13	76%	8	47%	10	59%	4	24%	16	94%
11	11B	2HR ON-STREET	10	2	20%	3	30%	4	40%	4	40%	2	20%	6	60%
11	11C	ON-STREET	12	5	42%	8	67%	10	83%	7	58%	4	33%	0	0%
11	11D	2HR ON-STREET	14	8	57%	9	64%	10	71%	8	57%	8	57%	9	64%
12	12-27	LOT	27	1	4%	1	4%	1	4%	1	4%	0	0%	0	0%
12	12-16	LOT	16	11	69%	11	69%	11	69%	11	69%	11	69%	11	69%
12	12D	ON-STREET	8	2	25%	5	63%	3	38%	4	50%	3	38%	5	63%
13	13-64	LOT	64	17	27%	14	22%	12	19%	10	16%	15	23%	16	25%
13	13-40	LOT	40	1	3%	2	5%	9	23%	21	53%	33	83%	36	90%
13	13-29	LOT	29	4	14%	1	3%	2	7%	5	17%	7	24%	4	14%
14	14-12	LOT	12	0	0%	0	0%	4	33%	3	25%	3	25%	5	42%
14	14-23	LOT	23	3	13%	2	9%	7	30%	9	39%	8	35%	7	30%
14	14B	ON-STREET	15	9	60%	13	87%	12	80%	15	100%	12	80%	14	93%
14	14C	2HR ON-STREET	4	0	0%	0	0%	0	0%	2	50%	3	75%	1	25%
14	14D	ON-STREET	23	16	70%	19	83%	19	83%	20	87%	16	70%	13	57%
15	15-10	LOT	10	8	80%	9	90%	10	100%	8	80%	11	110%	7	70%
15	15A	ON-STREET	2	0	0%	0	0%	1	50%	0	0%	1	50%	2	100%
15	15B	ON-STREET	10	5	50%	6	60%	5	50%	4	40%	6	60%	1	10%
15	15C	ON-STREET	9	9	100%	9	100%	9	100%	8	89%	4	44%	2	22%
15	15D	ON-STREET	6	3	50%	4	67%	5	83%	3	50%	4	67%	4	67%
16	16-46	LOT	46	17	37%	27	59%	23	50%	11	24%	14	30%	7	15%
16	16B	ON-STREET	9	0	0%	2	22%	0	0%	0	0%	0	0%	0	0%
16	16C	ON-STREET	10	0	0%	4	40%	3	30%	1	10%	1	10%	0	0%
16	16D	ON-STREET	8	6	75%	4	50%	3	38%	5	63%	5	63%	2	25%
17	17 LOT	LOT	20	8	40%	9	45%	7	35%	10	50%	0	0%	0	0%
17	17D	ON-STREET	9	2	22%	0	0%	6	67%	3	33%	0	0%	0	0%
18	18-31	LOT	31	7	23%	6	19%	8	26%	8	26%	9	29%	6	19%
18	18-20	LOT	20	7	35%	8	40%	6	30%	7	35%	12	60%	12	60%
18	18A	ON-STREET	7	3	43%	3	43%	2	29%	6	86%	1	14%	3	43%
18	18B	ON-STREET	14	4	29%	6	43%	9	64%	9	64%	5	36%	5	36%
18	18C	ON-STREET	8	2	25%	4	50%	3	38%	4	50%	5	63%	3	38%
19	19-12	LOT	12	1	8%	0	0%	0	0%	0	0%	0	0%	0	0%
19	19A	ON-STREET	13	4	31%	5	38%	8	62%	7	54%	2	15%	1	8%
19	19B	ON-STREET	9	1	11%	2	22%	0	0%	0	0%	0	0%	0	0%
19	19C	ON-STREET	9	5	56%	4	44%	3	33%	1	11%	3	33%	5	56%
19	19D	ON-STREET	12	6	50%	6	50%	6	50%	6	50%	5	42%	3	25%
20	20-14 SCHOOL	LOT	16	1	6%	1	6%	1	6%	2	13%	0	0%	0	0%
20	20A	ON-STREET	13	3	23%	5	38%	2	15%	3	23%	0	0%	0	0%
20	20B	ON-STREET	11	0	0%	0	0%	0	0%	0	0%	0	0%	0	0%
20	20C	ON-STREET	14	4	29%	3	21%	2	14%	3	21%	2	14%	0	0%
20	20CC	ON-STREET	29	7	24%	7	24%	6	21%	3	10%	1	3%	0	0%
20	20D	ON-STREET	11	5	45%	5	45%	4	36%	3	27%	2	18%	0	0%
21	21-BOAT LAUNCH	LOT	53	2	4%	4	8%	11	21%	9	17%	22	42%	20	38%
21	21-OVERFLOW	LOT	20	0	0%	0	0%	0	0%	0	0%	0	0%	4	20%
	TOTAL OCCUPANCY		1,662	479	29%	598	36%	646	39%	647	39%	537	32%	566	34%



**CITY OF BOYNE
PARKING STUDY**

Boyne City, Michigan

RICH & ASSOCIATES
PARKING CONSULTANTS

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09-14-18 sar

BLOCK NUMBER

LEGEND:

- STUDY AREA
- CORE STUDY AREA

BLOCK FACE KEY PLAN:

PARKING OCCUPANCY

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

Sheet Title:

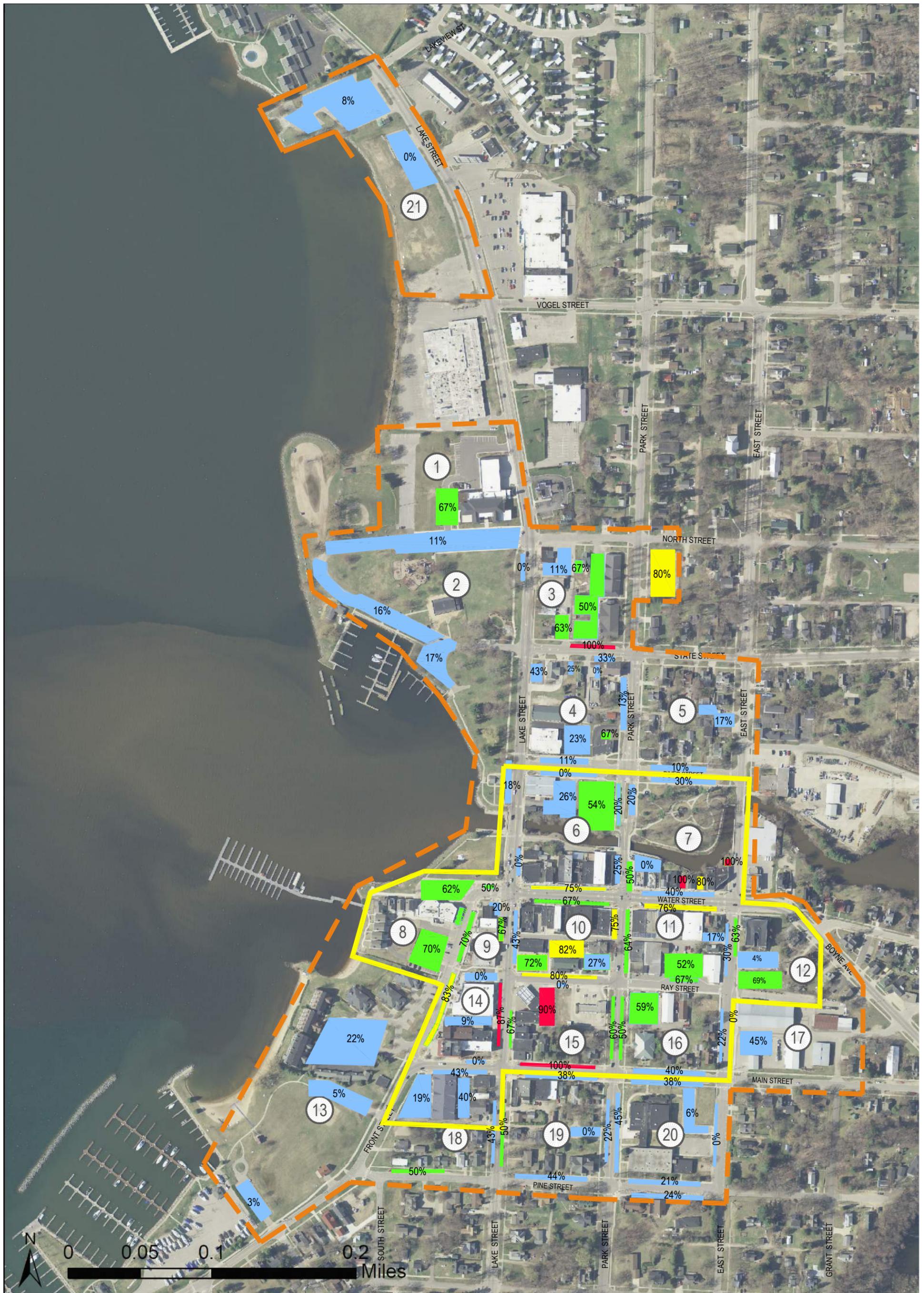
OCCUPANCY

Thursday June 28, 2018
9 AM - 11 AM

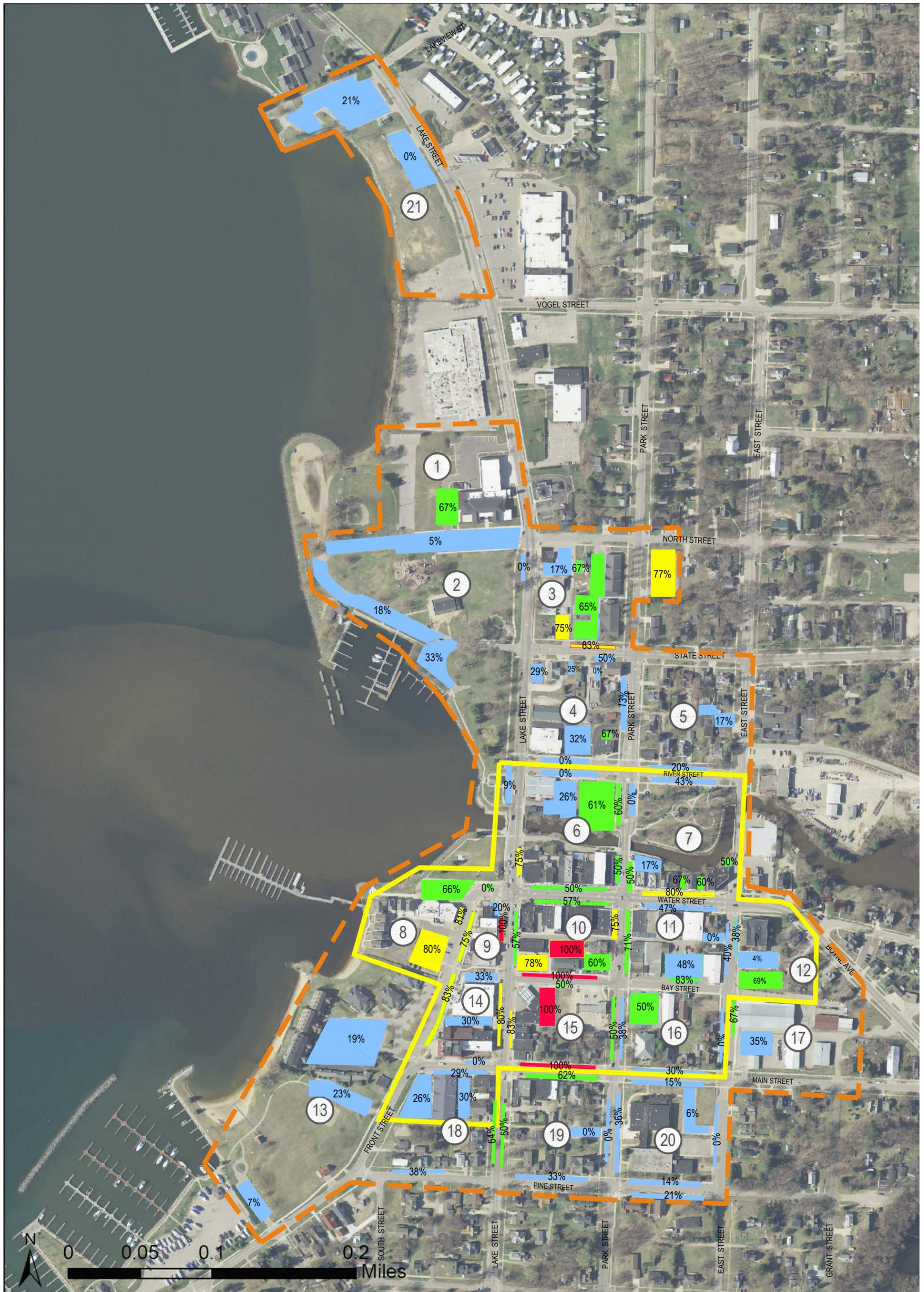
MAP Number:

MAP 4

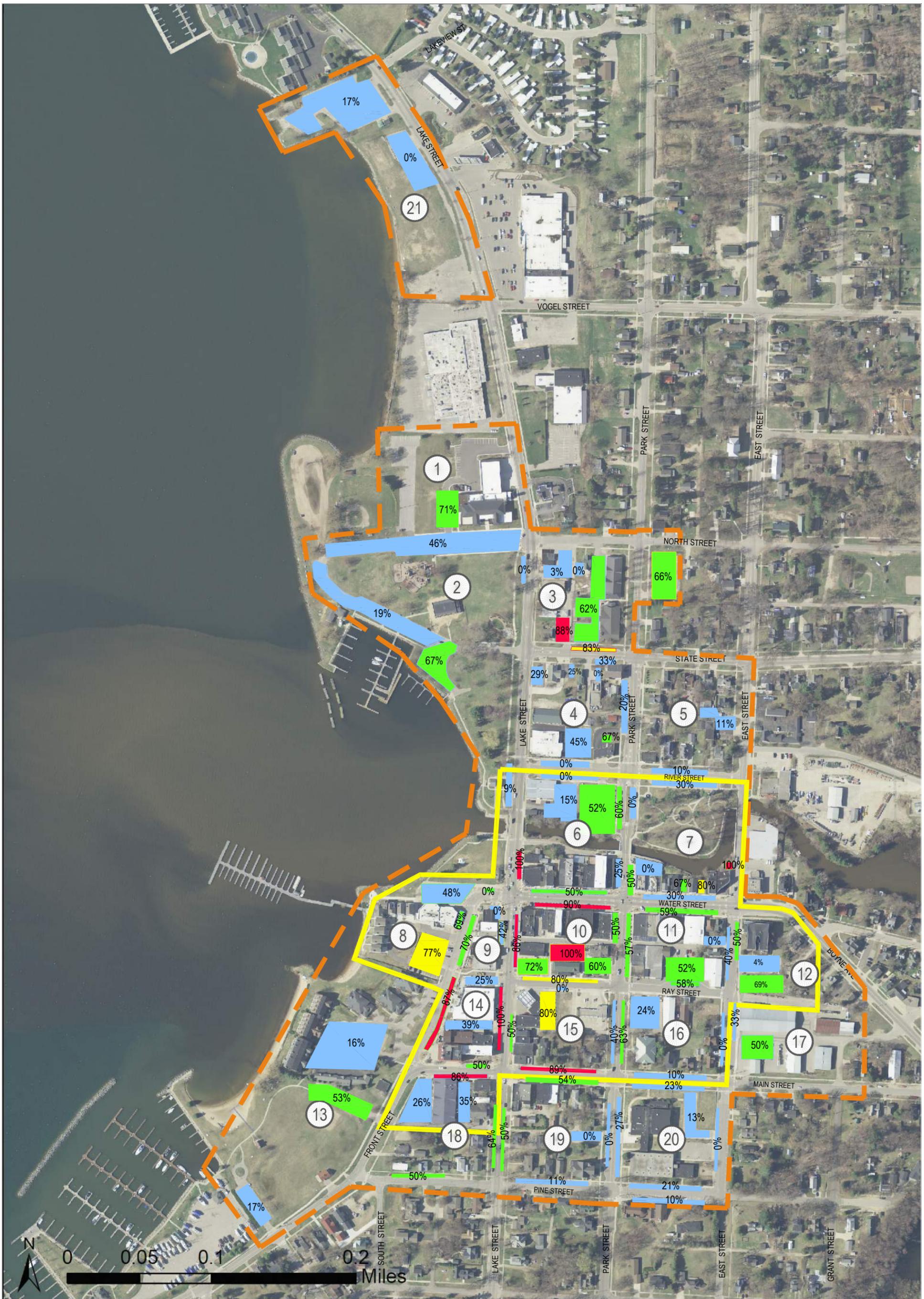
Pg. 14



<p>CITY OF BOYNE PARKING STUDY</p> <p>Boyne City, Michigan</p>	<p>RICH & ASSOCIATES PARKING CONSULTANTS</p> <p>26877 Northwestern Hwy. Suite 208 Southfield, Michigan 48033</p> <p>Southfield, MI 48033 Lutz, FL 33549 748.353.5280 813.648.9666</p> <p>ARCHITECTS • ENGINEERS • PLANNERS</p> <p>09-14-18 sar</p>	<p>LEGEND:</p> <p>— STUDY AREA — CORE STUDY AREA</p> <p>BLOCK FACE KEY PLAN:</p>	<p>PARKING OCCUPANCY</p> <p>■ 85% through 100% ■ 75% through 84% ■ 50% through 74% ■ 0 through 49%</p>	<p>Sheet Title:</p> <p style="text-align: center;">OCCUPANCY</p> <p style="text-align: center;">Thursday June 28, 2018 11 AM - 1 PM</p>	<p>MAP Number:</p> <p style="text-align: center;">MAP 4.1</p> <p style="text-align: right;">Pg. 15</p>
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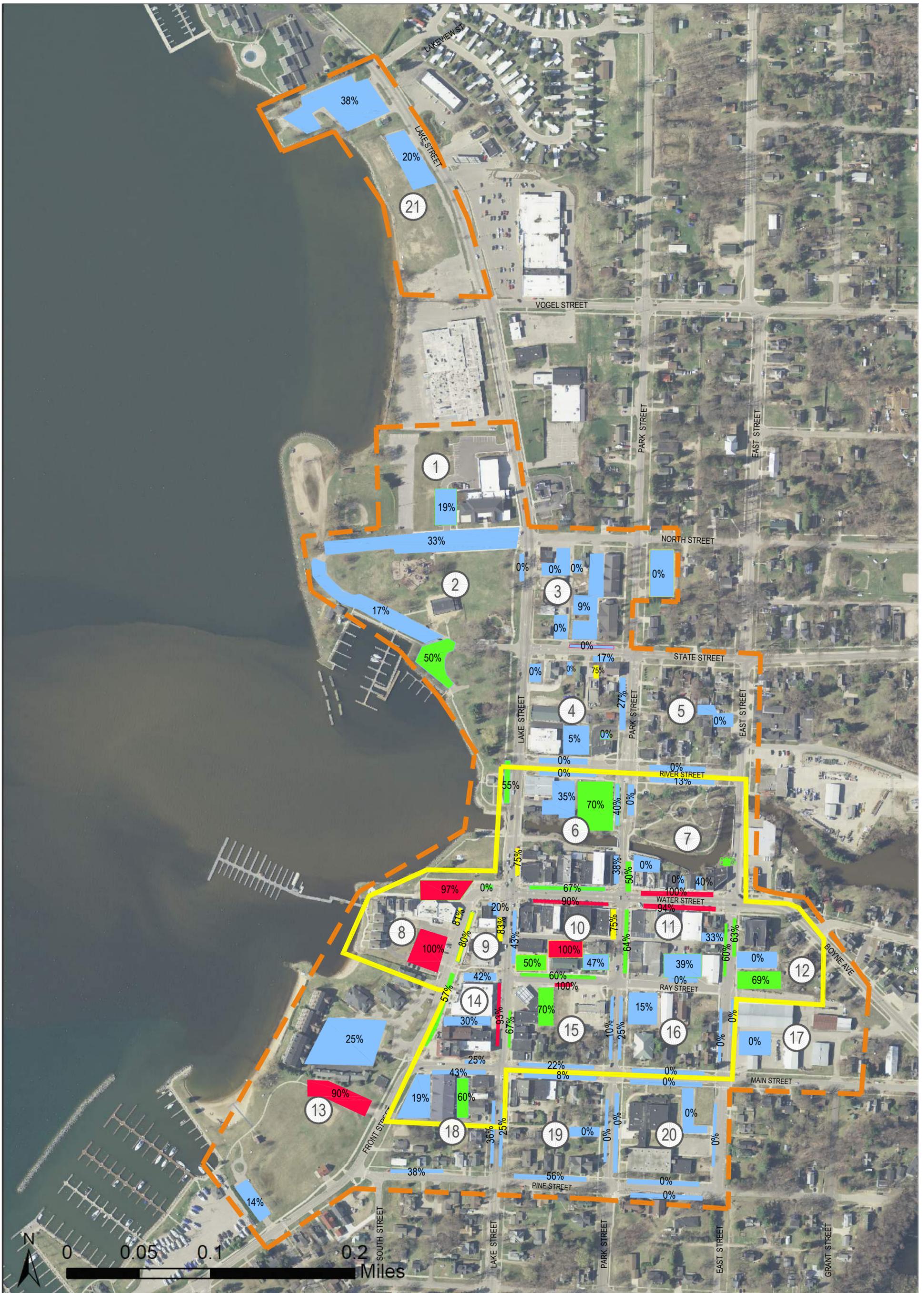


<p>CITY OF BOYNE PARKING STUDY</p> <p>Boyne City, Michigan</p>	<p>RICH & ASSOCIATES PARKING CONSULTANTS</p> <p>26877 Northwestern Hwy, Suite 209 Southfield, Michigan 48033</p> <p>Southfield, MI Lutz, FL 248.353.9580 813.949.9868</p> <p>ARCHITECTS • ENGINEERS • PLANNERS</p> <p>09-14-18 sar</p>	<p>LEGEND:</p> <p>— STUDY AREA — CORE STUDY AREA</p> <p>BLOCK FACE KEY PLAN:</p>	<p>PARKING OCCUPANCY</p> <p>■ 85% through 100% ■ 75% through 84% ■ 50% through 74% ■ 0 through 49%</p>	<p>Sheet Title:</p> <p style="text-align: center;">OCCUPANCY</p> <p style="text-align: center;">Thursday June 28, 2018 1 PM - 3 PM</p>	<p>MAP Number:</p> <p style="text-align: center;">MAP 4.2</p> <p style="text-align: right;">Pg. 16</p>
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<p>CITY OF BOYNE PARKING STUDY</p> <p>Boyne City, Michigan</p>	<p>RICH & ASSOCIATES PARKING CONSULTANTS</p> <p>25877 Northwestern Hwy, Suite 206 Southfield, Michigan 48033</p> <p>Southfield, MI Lutz, FL 248.953.5280 813.949.5866</p> <p>ARCHITECTS - ENGINEERS - PLANNERS</p> <p>09-14-18 sar</p>	<p>LEGEND:</p> <p>STUDY AREA (Orange dashed line)</p> <p>CORE STUDY AREA (Yellow solid line)</p> <p>BLOCK FACE KEY PLAN:</p> <p>A B D # C</p> <p>PARKING OCCUPANCY</p> <ul style="list-style-type: none"> 85% through 100% (Red) 75% through 84% (Yellow) 50% through 74% (Green) 0 through 49% (Blue) 	<p>Sheet Title:</p> <p>OCCUPANCY</p> <p>Thursday June 28, 2018 5 PM - 7 PM</p>	<p>MAP Number:</p> <p>MAP 4.4</p> <p>Pg. 18</p>
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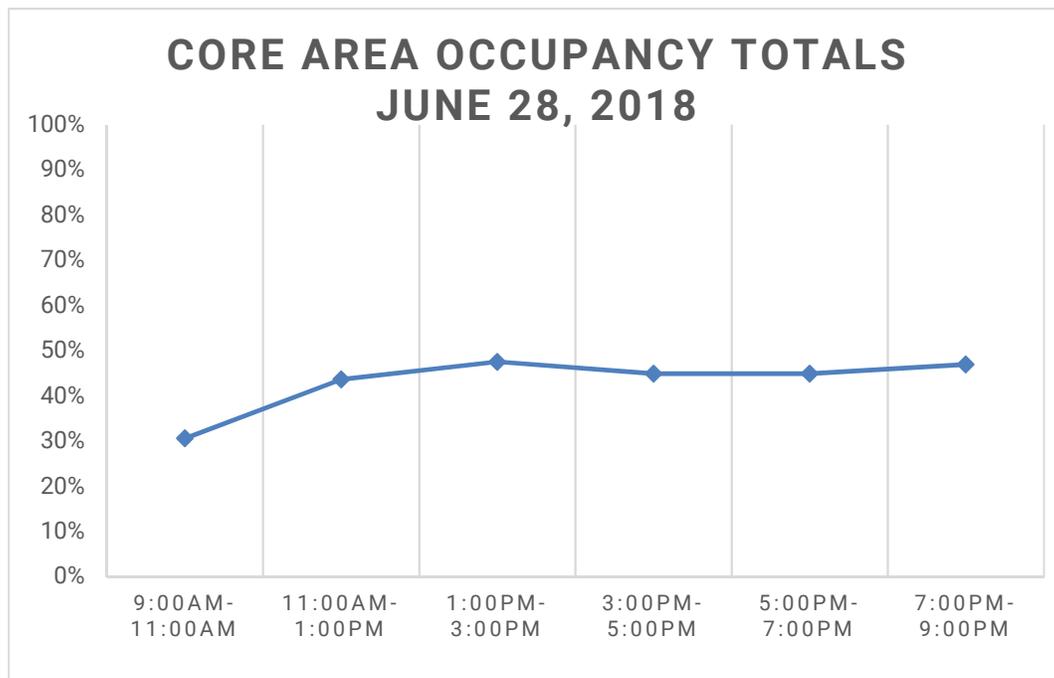
<p>CITY OF BOYNE PARKING STUDY</p> <p>Boyne City, Michigan</p>	<p>RICH & ASSOCIATES PARKING CONSULTANTS</p> <p>23677 Northland Drive, Suite 209 Southfield, MI 48033</p> <p>Southfield, MI 48033 Lutz, FL 33549 813-949-9860</p> <p>ARCHITECTS • ENGINEERS • PLANNERS</p> <p>0 0.05 0.1 0.2 Miles</p>	<p>LEGEND:</p> <p>— STUDY AREA — CORE STUDY AREA</p> <p>BLOCK FACE KEY PLAN:</p> <p>PARKING OCCUPANCY</p> <ul style="list-style-type: none"> ■ 85% through 100% ■ 75% through 84% ■ 50% through 74% ■ 0 through 49% 	<p>Sheet Title:</p> <h1 style="text-align: center;">OCCUPANCY</h1> <p style="text-align: center;">Thursday June 28, 2018 7 PM - 9 PM</p>	<p>MAP Number:</p> <h2 style="text-align: center;">MAP 4.5</h2> <p style="text-align: right;">Pg. 19</p>
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CORE OCCUPANCY

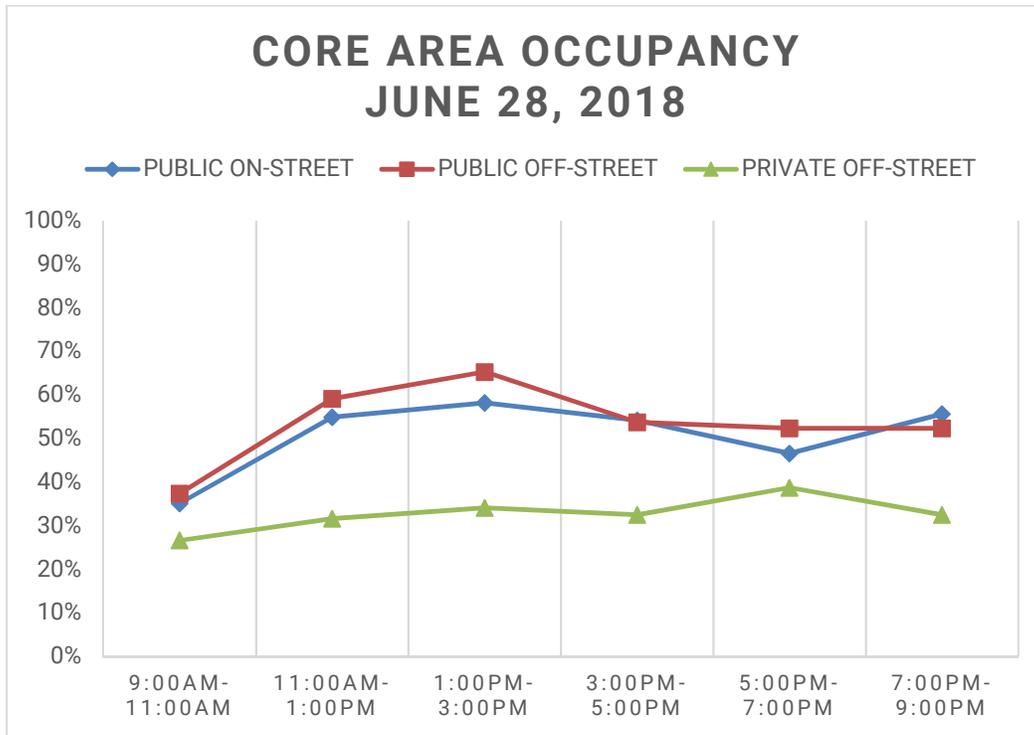
When considering the downtown core area (Blocks 6-12, 14-16 and 18) the proportion of spaces occupied is higher during all circuits compared to the total study area. The peak time within the core remains at the 1:00PM to 3:00PM circuit, though the proportion of spaces occupied is increased from 39% (total study area) occupancy to 48% (core area) occupancy of the available and observed spaces. This equals 430 vehicles observed in the 782 parking spaces in the downtown core area.

When we look at the core area, on-street occupancies were higher during all of the six circuits. Within the core, on-street parking peaked at 58% during the lunch circuit (1:00PM) with a small dip until 7:00PM where the occupancy increased 56%. The 9:00AM and 5:00PM circuits were the only two circuits below 50% occupancy for the on-street parking. **Graphs 3 and 4 and Table G** are a summary of findings for the core occupancy.

Graph 3



Graph 4



**Table G
 Core Area Occupancy Summary
 Thursday June 28, 2018**

CORE AREA	# SPACES	9:00AM-11:00AM	% OCC.	11:00AM-1:00PM	% OCC.	1:00PM-3:00PM	% OCC.	3:00PM-5:00PM	% OCC.	5:00PM-7:00PM	% OCC.	7:00PM-9:00PM	% OCC.
PUBLIC ON-STREET	395	139	35%	217	55%	230	58%	214	54%	184	47%	220	56%
PRIVATE OFF-STREET	147	55	37%	87	59%	96	65%	79	54%	77	52%	77	52%
PUBLIC OFF-STREET	240	64	27%	76	32%	82	34%	78	33%	93	39%	78	33%
TOTALS	782	277	31%	395	44%	430	48%	406	45%	406	45%	425	47%

OCCUPANCY SUMMARY

The number of spaces occupied at peak time in downtown Boyne City are relatively low. When the parking demand is higher, best practices are to manage the parking such that between 85% and 90% of the parking is occupied. Parking policy and management recommendations are provided in this study to help better manage the parking system.

The peak overall occupancy was 39% with 647 of the 1,622 spaces occupied. When we analyzed the results for the core area we see that the peak overall occupancy increases to 52%, with 408 of the 782 spaces occupied. This tells us that there is still sufficient parking in the downtown area available during peak hours, though all parking may not be available for all users. Additionally, the public parking may not be located as the most convenient spaces for all destinations.

PARKING DEMAND CALCULATION

Analyses were performed to determine the current and future parking demands and needs for the study area. The data collected and compiled by Rich & Associates to calculate the parking demand included:

- An inventory of the study area on-street and off-street parking supplies.
- Turnover and occupancy studies for public and private on-street and off-street parking areas.
- Block-by-block analysis of square footage and type of land use in the study area. (Building inventory was provided by Boyne City staff)
- This demand analysis 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 square footage. The mathematical model multiplies a parking generation ratio (PGR) by the gross area of specific land uses to derive the number of spaces needed. The second is a method of using field observations and data to calibrate the mathematical model and help to establish projected spaces needed.
- The demand model is based on a weekday peak between 9:00AM and 9:00PM.

A point to consider regarding the parking supply and demand is that motorists in general perceive off-street spaces with occupancies greater than 85% to be at capacity. The greater the capacity of the parking area, the less this perception is valid. When this occurs, motorists will begin to re-circulate to seek more parking, adding to traffic congestion and the drivers' perception that there is no parking available in the downtown.

The PGR's were established from Rich & Associates field work and previous experience with work in similar communities. The demand factor for each land use type includes an estimate for employees and patrons to that particular land use and reflect a daytime peak. Once parking demand has been calculated for both current and future conditions, a comparison with the existing supply of parking is made. The resulting figures are parking surplus or deficit figures for each block.

The PGR's are used in conjunction with information from the Institute of Transportation Engineers (ITE) and the Urban Land Institute (ULI). These two sources are the generally accepted standards for parking generation. Rich & Associates uses experience along with these sources to modify or customize the parking generation ratios specifically to the study area.

Once a parking demand model is developed that illustrates the surpluses and deficits numerically and graphically, we then compare the model with the actual field observations, specifically the turnover and occupancy counts. The comparison serves as a test of the demand model and allows Rich & Associates staff to make further revisions or adjustments where necessary, thus ensuring accuracy to the overall parking dynamic in the downtown area. It is important to note that the demand calculations are slightly higher than the observed observations due to changes in land use, intensity in demand and allowance for some growth of current businesses.

The assumptions used in developing the PGR's and 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. Demand computed for one block was not affected by the amount of gross floor area available on surrounding blocks. Therefore, a block with surplus parking supply is not used to offset calculated shortfalls on adjacent blocks.
- Assumption 2:** The projected parking demand for the future was derived under the assumption that currently occupied properties would remain occupied at existing or higher than existing levels into the future.
- Assumption 3:** The projected vacant space is shown reoccupied at a rate of 40% in five years and 80% in 10 years.

PARKING NEED

Once we have determined the base parking demand calculation we then need to adjust the parking generation factors to demonstrate the actual parking need for the downtown. Rich & Associates factors in the reality of parking to the demand such as walking distances to public parking locations, conditions of parking lots and the conditions of the path to and from the lots. We increased the demand model by approximately 10% to account for changes in intensity and

the reality that a Saturday will have a higher demand (even with many office land uses being closed).

Parking need will fluctuate based on several factors such as use changes and intensity of land use. A restaurant or retail spaces could become a destination in the region increasing the overall demand for that specific land use or an office space could go from selling insurance to a call center which requires a much larger staff and will have an evening shift. The following are issues that are considered when developing the number of parking spaces needed:

- Building size, purpose and special use conditions.
- Alternative modes of transportation, including availability, level of use, attractiveness and policy impacts.
- Proportion of the downtown trips that are multiple-use or linked (available shared use parking).
- Vehicle traffic.
- Cost of parking.
- The intensity of developments in the downtown.
 - The overall number of businesses in a downtown drawing customers.

The gross square footage of the sorted land use categories by block was provided by Boyne City staff. The different land uses for each block are in general multiplied by a parking generation ratio (PGR) of spaces required per 1,000 square feet. The resulting demand number is deducted from the available parking supply on each block to determine a surplus or deficit condition for each block. The Dilworth Hotel (22 rooms and restaurant) is currently under renovation so this is included in the current demand scenario.

Table H on page 26 is the Parking Demand Matrix, followed by a summary of the parking demand represented spatially in **Map 5 on page 28**. This model is intended to be used as a tool to determine the current parking demand and help project the future parking demand. The parking generation ratios are not for zoning purposes. They are to be used along with the demand matrix as a tool to determine the parking impact of existing and new development coming into the study area. The results from the parking demand matrix are compared to the turnover and occupancy results to make sure that there is a reasonable correlation with the observed needs of the downtown.

In our opinion, one of the biggest reasons that people perceive a parking shortage in the downtown is because some employees and business owners are parking on-street, taking prime customer and visitor spaces. When an employee parks on-street due to greater convenience when their business has a private parking space available for their use, the employee is actually taking two spaces out of the parking supply. This is because the private space is not a shared parking space, instead it is reserved only for the business, whereas the public on-street spaces

are intended to be available for anyone visiting the downtown. Shared use is an important component of parking that allows municipalities to develop less parking for each land use due to the ability to park once and visit multiple locations.

The current daytime parking situation in the entire study area as calculated showed an overall surplus of 765 spaces. When looking at the core area this surplus is only 302 spaces. Currently there is parking located within a couple of blocks of all areas to handle shortages. As development continues and additional businesses come to downtown Boyne City, there is the potential for an increase in the intensity (number of people visiting each land use) and of overall land use. Therefore, it is important to constantly monitor the parking system and update the demand model with any changes to the parking supply or land use. The updated model should then be compared to occupancy counts from the parking system.

Table H

Daytime Parking Demand Matrix																			
A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T
TOTALS	OFFICE	MEDICAL OFFICE	RETAIL	SERVICE	MIXED USE	RESTAURANT/ BAR	HOTEL	RESIDENTIAL	LIBRARY	PARK	MARINA	WAREHOUSE	CHURCH	VACANT	DEMAND	PARKING	SURPLUS/	PROJECTED SURPLUS/	PROJECTED SURPLUS/
							(PER ROOM)	(PER UNIT)		(PER ACRE)	(PER BERTH)				CURRENT	SUPPLY	DEFICIT	DEFICIT	DEFICIT
PARKING GENERATION RATIOS	1.85	2.15	1.65	1.75	2.00	4.00	1.15	1.00	1.50	1.50	0.59	0.75	0.35	2.25			CURRENT	5 YEAR (40%)	10 YEAR (80%)
1	71,400	-	-	-	-	-	-	-	-	-	-	-	-	-	132	178	46	46	46
2	-	-	-	-	-	-	-	-	-	7	42	-	-	-	35	136	101	101	101
3	-	14,503	-	-	-	2,160	-	-	-	-	-	-	-	6,232	40	122	82	77	74
4	11,882	-	2,604	-	-	-	-	-	3	-	-	5,000	-	1,102	33	70	37	-103	-104
5	-	1,500	-	-	-	-	-	-	-	-	-	3,700	-	-	6	28	22	22	22
6	2,000	-	20,472	4,952	-	6,060	-	2	-	-	-	-	6,000	-	74	122	48	48	-11
7	5,510	-	3,609	-	-	6,371	-	1	-	-	-	-	-	-	43	65	22	-3	-3
8	-	-	-	-	-	15,000	-	-	10	-	-	-	-	-	70	77	7	7	7
9	1,355	1,116	3,176	4,192	-	-	-	1	-	-	-	-	-	5,064	18	37	19	-15	-17
10	1,139	-	21,711	-	6,708	5,200	-	2	-	-	-	-	-	5,250	74	110	36	-14	-53
11	-	-	3,000	1,200	-	-	-	-	-	-	-	12,502	-	4,297	16	90	74	70	68
12	-	-	-	-	-	-	33	-	-	-	-	-	-	-	38	51	13	13	13
13*	-	-	-	-	-	-	-	-	-	6	-	-	-	-	9	69	60	60	60
14	-	-	-	7,000	-	20,540	-	16	-	-	-	-	-	3,751	110	77	-33	-37	-38
15	5,948	-	2,424	956	-	-	-	5	-	-	-	-	-	-	22	37	15	15	15
16	-	-	-	-	-	-	-	-	10,000	-	-	2,804	4,000	-	19	73	54	54	-60
17	-	-	1,000	-	-	-	-	-	-	-	-	-	-	-	2	29	27	27	27
18	-	-	1,452	-	14,000	-	-	3	-	-	-	-	4,000	-	35	80	45	45	45
19	1,024	3,546	1,056	-	-	-	-	9	-	-	-	750	10,000	5,124	24	65	41	36	34
20	-	-	-	-	-	-	-	-	-	-	-	-	45,000	-	16	65	49	49	49
TOTALS	100,258	20,665	60,504	18,300	20,708	55,331	33	52	10,000	13	42	24,756	69,000	30,820	816	1,581	765	499	275
															(STALLS)	(STALLS)	(STALLS)	(STALLS)	(STALLS)

*Block 13 Residential units and associated parking have been removed from the parking demand.

*Block 21 Is not included in the parking demand

Future development scenarios (5 and 10 year) are detailed on pg. 32, loss and gain of parking and new square footage are calculated in column S and T

Table I
Core Area Parking Demand

TOTALS	DEMAND	PARKING	SURPLUS/ DEFICIT	PROJECTED SURPLUS/ DEFICIT	PROJECTED SURPLUS/ DEFICIT
	CURRENT	SUPPLY	CURRENT	5 YEAR (40%)	10 YEAR (80%)
2	0	11	11	11	11
6	74	122	48	48	-11
7	43	65	22	-3	-3
8	70	77	7	7	7
9	18	37	19	-15	-17
10	74	110	36	-14	-53
11	16	90	74	70	68
12	38	51	13	13	13
14	110	77	-33	-37	-38
15	22	37	15	15	15
16	19	73	54	54	-60
18	35	72	37	37	37
TOTALS	520	822	302	187	(31)
	(STALLS)	(STALLS)	(STALLS)	(STALLS)	(STALLS)

Future development scenarios (5 and 10 year) are detailed on pg. 32, loss and gain of parking and new square footage are calculated in 5 and 10 yr. column



FUTURE

When projecting the future demand scenarios, we used a rate of 40% re-occupancy of vacant space in the five-year projections and 80% in the 10-year projections. With only 30,820 square feet of vacant space in the downtown, the future numbers do not change much. Along with showing the re-occupancy of the vacant space for the future projections, Rich & Associates was directed to examine potential scenarios with in-fill development occurring on current parking lots and other potential sites. These five and 10-year scenarios are detailed on **page 32** with the locations shown on **Map 6**.

The Five-Year Scenario (**Map 5.1**) in the entire study area has a surplus of 499 spaces with the core area showing a surplus of only 187 spaces. While the 10-Year Scenario (**Map 5.2**) shows the entire study area surplus reduced to 275 spaces with the core area surplus turning into a deficit of -31 spaces. These numbers are all speculative and will most likely not be the actual square footages proposed. With that being said, it is important to understand the potential impact of developments on these sites along with the impact of losing public parking lots.

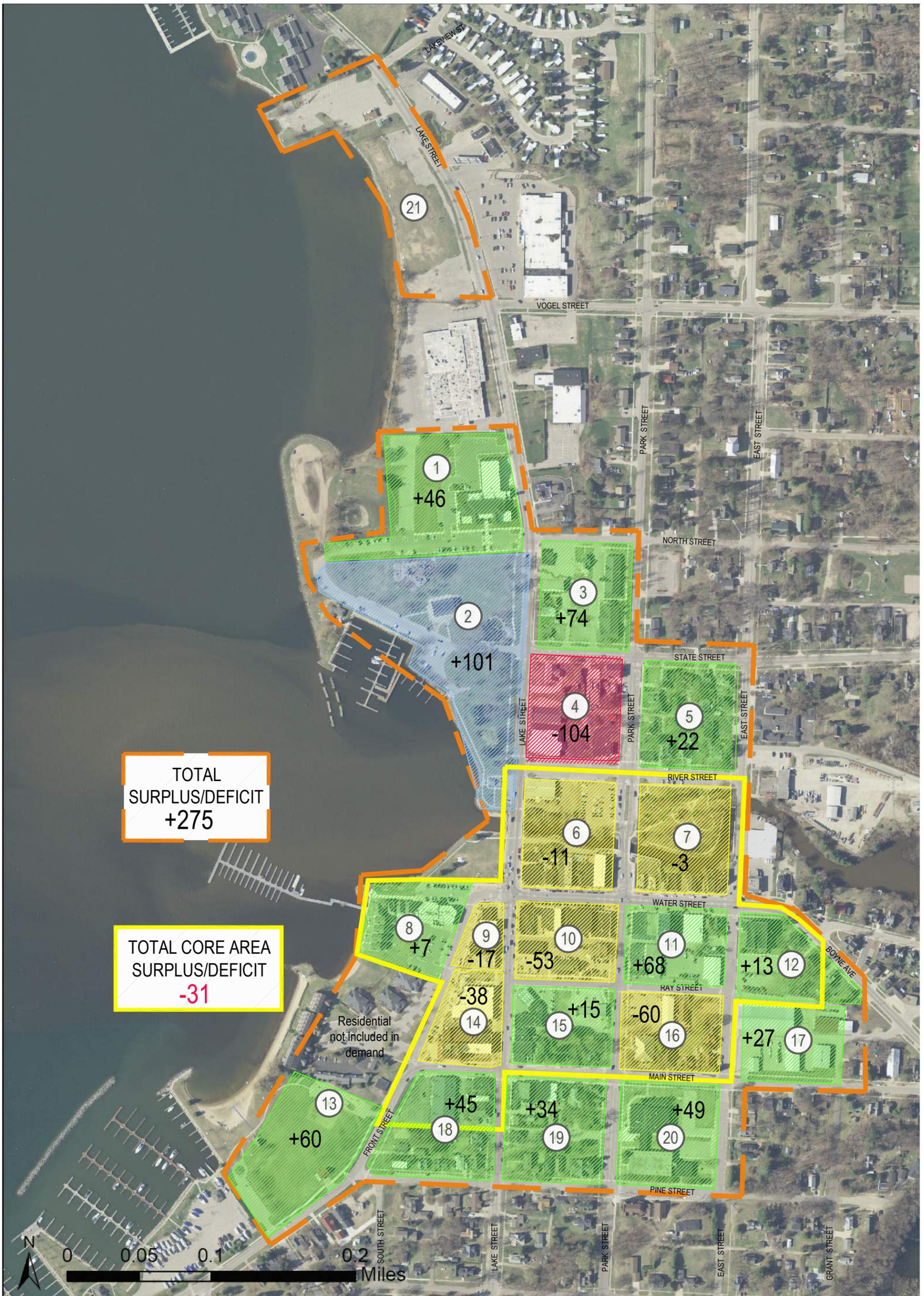
The Five-Year Scenario is workable if parking is managed better and employees are parking where they should. It will be important to provide direction along with education on where employees can park. The 10 Year Scenario will take strategic planning with a well run parking system and providing employee parking close to the core. This level of activity in the downtown will need parking enforcement conducted on a regular basis in order to keep the most convenient parking available for customers and visitors of the downtown.

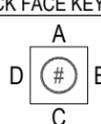


TOTAL SURPLUS/DEFICIT
+499

TOTAL CORE AREA SURPLUS/DEFICIT
+187

Residential
not included in
demand



<p>CITY OF BOYNE PARKING STUDY</p> <p>Boyne City, Michigan</p>	<p>RICH & ASSOCIATES PARKING CONSULTANTS</p> <p>28877 Northwestern Hwy, Suite 250 Southfield, Michigan 48033</p> <p>Southfield, MI 248.353.5283 Lutz, FL 813.949.1866</p> <p>ARCHITECTS • ENGINEERS • PLANNERS</p>  <p>09-14-18 sar</p>	<p>LEGEND:</p> <p>— STUDY AREA — CORE STUDY AREA</p> <p>BLOCK FACE KEY PLAN:</p>  <p>SURPLUS OF PARKING</p> <p>+100 0 through 99</p> <p>DEFICIT OF PARKING</p> <p>-99 through -1 -100 +</p>	<p>Sheet Title:</p> <p>SURPLUS/ DEFICIT</p> <p>FUTURE 10 YEARS</p>	<p>MAP Number:</p> <p>MAP 5.2</p> <p>Pg. 31</p>
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5 Year Scenario - Potential Development Sites:

- **Site 1** - Potential development (2-3 sty mixed use) on a privately owned site on block 4.
 - 3 floors = 69,960sf (23,320sf per floor) of mixed use and 22 parking spaces.
- **Site 3** - Potential development (1-2 sty mixed use) on privately owned parking lot on block 7.
 - 2 floors = 3,000sf (1,500sf per floor) of mixed use (west site).
- **Site 4** - Potential development (1-2 sty mixed use) on privately owned parking lot on block 7.
 - 2 floors = 3,000sf (1,500sf per floor) of mixed use (east site).
- **Site 5** - Potential development (1-2 sty mixed use) on the site of 1 portion of the public lot on block 10 with frontage on Lake Street.
 - 2 floors = 11,700sf (5,850sf per floor) of mixed use (Lake Street).
- **Site 7** - Potential development (2-3 sty mixed use) on privately owned site on block 9 (116-118 Lake Street).
 - 3 floors = 12,555sf (4,185sf per floor) of mixed use.

10 Year Scenario - Potential Development Sites:

- **Site 2** - Potential development (2-3 sty mixed use) on the site of the public lot on block 6.
 - 3 floors = 11,700sf (35,856sf per floor) of mixed use, leaving 14 parking spaces.
- **Site 6** - Potential development (1-2 sty mixed use) on the site of 1 portion of the public lot on block 10 with frontage on Park Street.
 - 2 floors = 9,600sf (4,800sf per floor) of mixed use (Park Street).
- **Site 8** - Potential development (1-2 sty mixed use) on a privately owned site on block 16.
 - 2 floors = 30,140sf (15,070sf per floor) of mixed use.

***Sites were provided by the City with approximate building levels, square footage was estimated by the size of the site. This is a potential scenario with proposed numbers and maximum number of floors, they are only to be used for predicting potential future parking impacts. The demand matrix should be updated with actual proposed development plans and land uses when available.**



**CITY OF BOYNE
PARKING STUDY**

Boyne City, Michigan

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09-14-18 sar

LEGEND:

— STUDY AREA
— CORE STUDY AREA

BLOCK FACE KEY PLAN:

SITE NUMBER

□ 5-YEARS
□ 10-YEARS

Sheet Title:

**POTENTIAL
DEVELOPMENT SITES**

MAP Number:

MAP 6

Pg. 33

PUBLIC INPUT

Public input was solicited in the form of several meetings with stakeholders of the downtown. Discussions with stakeholders included questions specific to where they worked, businesses they owned, lived or had encounters with parking in the downtown. The Preliminary Report was also presented to Council, Staff and the general public. All comments given were taken into account for the final version of the report.

Many stakeholders stated that there is only a parking shortage during a few weeks of the year and during special events. It was also stated that it is sometimes difficult to find parking on street, though additional parking is available within a reasonable walking distance. Other discussions that came out of the stakeholder meetings included discussions of how parking shortages will become an issue for future developments.

Other Stakeholder comments:

- Many employers and employees are parking on the street and should park in the lots or farther away.
- Employees are not willing to walk more than 2 blocks in the downtown.
- Signage.
- Not enough boat trailer parking.
- Need RV parking.
- Snow removal or lack of snow removal.
- People will not walk in the winter.
- Wayfinding signs.
- Not enough parking for employees.
- Some felt that there is not enough parking while others felt that there was sufficient parking.
- Do not want paid parking.
- Do not want parking enforced/Parking needs to be enforced.

PRELIMINARY RECOMMENDATIONS

Introduction

The recommendations presented here are intended to enhance the use of the existing supply of parking through operational and management 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 downtown today as well as provide a plan for accommodating future growth of the downtown.

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

Managing a parking system is not just about parking vehicles, it also involves the walkability of a downtown. Elements such as signage, enforcement, lighting and marketing parking to business owners, employees and visitors effect the overall usage of the parking system. 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 the downtown economics in general.

Rich & Associates believes that it is most important to first provide recommendations on how to better manage the existing parking supply in the downtown, or in this case, set up a system of parking management. Overall management of the parking system will need to be conducted in order to make the system equitable for all users.

There are several recommendations that will make the parking in the downtown easier to use. Some of these recommendations can be implemented easily with little or no cost to the City while others may require significant budgeting and time to complete. The Recommendations section of the report focuses on policy and actions to address the current parking condition while providing a direction to develop an efficient system for the future. With a unified approach, Boyne City will be best prepared to address parking related issues and handle new development now and in the future. A recommendations summary matrix is provided and followed by detailed parking recommendations.

Downtown Parking Study Implementation Plan		Time Frame				
		Immediate Action	As needed	0-3 Years	3-6 Years	6-10 Years
Recommendations Summary						
1. Parking Management						
1.1	Appoint a person to oversee the parking system.	✓				
2. Parking Duration & Allocation						
2.1	Regular enforcement will need to be conducted to make sure that the vehicles are not parked beyond posted time limits.		✓			
2.2	Work with business owners to get employees to park in the recommended long-term parking during the summer months and special events to help provide additional customer spaces in the core area		✓			
2.3	Change the parking duration to three hours and add three hour duration signs to Block 7D (1st two spaces off Water Street), 11A, 10C, 9A and 8B.		✓			
2.4	Work to add loading zones for large truck deliveries that convert back to three-hour parking after a designated time period throughout the downtown.		✓			
2.5	Consider adding loading zone spaces (15 to 30 minute) at either the ends of the block or the middle stall on all blocks where these are not currently provided.		✓			
2.6	Lots need to be well lighted and well signed in order to encourage people to utilize off-street parking.		✓			
2.7	During the peak times work with business owners to encourage employees to not park in the lot on Block 10 along Ray Street, instead park in the on-street parking around Blocks 2, 4, 5 and 20.		✓			
2.8	Work with Boyne City Municipal Airport to see if a plan can be developed for Boyne Thunder to provide a parking area for the boats/boat trailers.		✓			
2.9	Consider using the overflow lot between City Hall and the baseball diamond for RV's and potentially overflow boat trailer parking					
3. Residential Parking /Overnight Parking						
3.1	Create a residential parking flyer clearly defining residential parking locations approved for overnight parking.	✓				
4. ADA Parking						
4.1	Add additional barrier free spaces to the public lots listed as needing spaces in Table N.	✓				
4.2	Follow the ADA proposed guidelines for on-street parking in the core downtown area and add additional barrier free spaces where needed.	✓				
5. Marketing						
5.1	Develop flyers that can be distributed to all parking users, customers/visitors, employees, residents and special event attendees.	✓				
6. Special Event Parking						
6.1	Develop a flyer that can be distributed to businesses and purchase sandwich boards to be used as temporary wayfinding signs during special events.	✓				
7. Parking Signs						
7.1	Name all public lots and add introduction signs to all public lots. The text should be large enough to read while driving.	✓				
7.2	Rich & Associates recommends the addition of a family of parking wayfinding (three sign types Boyne City currently has vehicular wayfinding) in the downtown.		✓			

Downtown Parking Study Implementation Plan		Time Frame				
		Immediate Action	As needed	0-3 Years	3-6 Years	6-10 Years
Recommendations Summary						
7.3	All duration parking signs on-street and off-street should be consistent in color and text. They should also be placed at a height that will not be obstructed by an SUV parking in front of the sign.			✓		
7.4	Unauthorized parking duration signs placed on buildings degrade the system and create confusion and frustration. Work with business owners to stop the trend of placing parking duration signs in front of public parking.	✓				
8. Pedestrian Enhancements & Activity						
8.1	Follow landscaping criteria outlined in the land use ordinance for all parking lots in the downtown (public and private) in order to enhance pedestrian experience in well lit and landscaped parking lots. This provides a perception of safety and provides clearly defined areas for cars and pedestrians.			✓		
8.2	Encourage shared dumpsters/compactors/grease bins in lots that have several businesses surrounding the lot.			✓		
9. Bicycle Racks						
9.1	Add additional bicycle racks to the downtown following the guidelines provided.			✓		
10. Parking Enforcement						
10.1	Consider conducting peak season enforcement of the short term parking spaces if the recommendations do not change the behavior of employees and residents. If that time comes, follow the recommendations provided				✓	
11. Parking Fines						
11.1	If needed, adopt the recommended fine schedule along with courtesy tickets.				✓	
11.2	It is recommended that all fines revenue go into the parking fund.	✓				
12. Maintenance of Parking Spaces On-street and Off-street						
12.1	Work with the Chamber and the Main Street program to develop a business text alert system that allows the City to share important information.	✓				
12.2	Develop a maintenance schedule for the lots to keep up with maintenance needs and help budget yearly costs.	✓				
13. Create a Sinking Fund for Maintenance and Upgrades to the Parking System						
13.1	Create a sinking fund for maintenance and upgrades to the parking system.	✓				
14. Valet Parking						
14.1	Develop a policy on Valet parking.			✓		
15. Discourage the Development of Any New Private Parking Lots in the Downtown that are not Shared Use Parking						
15.1	The City should continue to discourage the development of any new private parking lots in the downtown that are not for residential use or public parking and continue to encourage the use of the ordinance allowing shared use parking.	✓				
16. Work with Private Parking Lot Owners in the Downtown to Create Shared Use Parking.						
16.1	City should work with owners of private lots to allow for public shared use of the private parking areas where possible.			✓		

1. Parking Management

As the City grows it should consider having one person overseeing the overall parking system. There is currently not a person who oversees the parking system as a whole. This person would act as a liaison between the City Council, City departments, the public and enforcement. A managed parking system is able to adapt to changes that are brought on by new development, businesses moving in and or out, along with land use changes.

Having a single parking point of contact expedites decision making and allows for better integration of the various aspects of parking. The administration of the parking system under the direction of one person will benefit the parking system allowing it to adapt to changes. If possible, it is helpful to have all parking related expenditures and enforcement under one budget, allowing for an efficient way to track the system and create checks and balances.

Actions, Time Frame and Cost:

1.1 Action – Appoint a person to oversee the parking system

Time Frame – As needed

Cost – N/A

2. Parking Duration & Allocation

On-Street

Two-hour on-street parking is often the predominant duration for on-street parking as it suits the needs of the majority of customers and visitors. Based on parking Best Practices, it is generally agreed that on-street parking should be reserved for customers and visitors. Due to the tourist nature of the downtown it is recommended that the on-street parking duration in the downtown core area be extended to three hour parking. The goal being to let the customer visit multiple locations without having to move their vehicle. It should be noted that a strong marketing effort will need to be conducted (see **Recommendation 4**) in order to keep employees from parking on-street.

Moving to three-hour on-street parking would cut down on the need for parking enforcement staff and would help Boyne City market the area as a customer friendly downtown. This change allows the customer to stay longer and potentially visit more restaurants and stores on their visit.

Individuals requiring more than three 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 and 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.

Long term (beyond three hours) 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 on-street parking where turnover is not required is typically used for employee parking. It is important that the employees are not pushed into residential areas. This will only create a new parking issue causing the residents to not have available parking.

Recommendations for On-Street Parking:

- Work with business owners to get employees to park around block 20, 19B and on 16C during the summer months and special events. There are 97 on-street spaces in this area to provide long term parking less than a five-minute walk from most businesses in the downtown.
- The lot around the park is just at a five minute walk and can be a great place for employees to park in the summer peak season as well. This lot peaked at 19% occupancy.
- The on-street parking along River Street is not well utilized and would be another good employee parking location. There are 54 spaces along this street.
- Change the two-hour duration to three-hour parking on-street in the core area and add three-hour duration signs to block 6B (all but two of the 15 minute stalls), 7D (1st two spaces off Water Street), 8B, 9D, 10C, 11C, 15B and 19A.
- Work to add loading zones for large truck deliveries that convert back to two-hour parking after a designated time period throughout the downtown. These spaces do not have to be on each block face, if located properly several block faces can share one space. In order for the time restrictions to work it is vital to provide consistent enforcement.
- Spread out the 15-30 minute on-street spaces. There are 8, 15-30 minute spaces along Park Street on block 6. There should be one to two spaces per block face where needed. These spaces are not intended to belong to one business, they are for all businesses on the block. The highest observed occupancy in these spaces during the study was 50%.

- Marketing will be vital to a successful transition of adding time limited durations to the downtown.
 - Employees will need to understand the importance of leaving the most convenient spaces for customers/visitors of the downtown along with the impact this will have in helping businesses to be successful.
 - Customers/visitors will need to easily see signs posting duration limits and what parking is public.

Off-Street

The majority of the off-street parking should be long term for customers and visitors who plan on spending longer periods of time in City. Public off-street parking is where most employees of City businesses that do not have their own parking should park. It is important that long term parking be differentiated from the short-term parking with signs that are easy to understand. Currently there are no time restrictions in the public lots. There needs to be a clear definition of where employees should park and where customers wanting long term parking can park.

Recommendations for Off-Street Parking:

- Lots need to be well lighted and well signed in order to encourage people to utilize off-street parking. People will not park in a lot that feels unsafe.
- During the peak times work with business owners to encourage employees to not park in the lot on block 10 along Ray Street, instead parking in the on-street parking around blocks 2, 4, 5, and 20. This lot is a prime location for customers and visitors.
- Stakeholders brought up the need for additional boat trailer and RV parking. It appears that the majority of the issue with boat trailer parking is during Boyne Thunder. Work with the Boyne City Municipal Airport to see if a plan can be developed for this event to provide a parking area for the boats/boat trailers.
- The overflow lot between City Hall and the baseball diamond could potentially be used for RV's along with overflow boat trailer parking.

Walking Considerations for locating parking in a downtown

Customer and visitor parking should remain close and convenient, while it is generally expected that employees walk farther in downtown settings. Educating business owners, managers and employees on appropriate parking behaviors is important. There should be a clear understanding with business owners and employees that leaving on-street parking and the close, convenient off-street spaces for customers is vital to the success of businesses in the downtown.

The intent of a City parking program, is to provide an equitable parking system that works for all businesses in the downtown. As discussed earlier, education and marketing are a key component to a successful parking system. **Table L** details people’s tolerance for walking depending on the environment. We understand that every community is different and that individual’s tolerance for walking will vary depending on the weather, vibrancy, density and age of the downtown. Following the chart is **Map 7** detailing the walking distances from the center of the study area.

Table L
 CHART TO ILLUSTRATE INDIVIDUAL’S TOLERANCE FOR WALKING

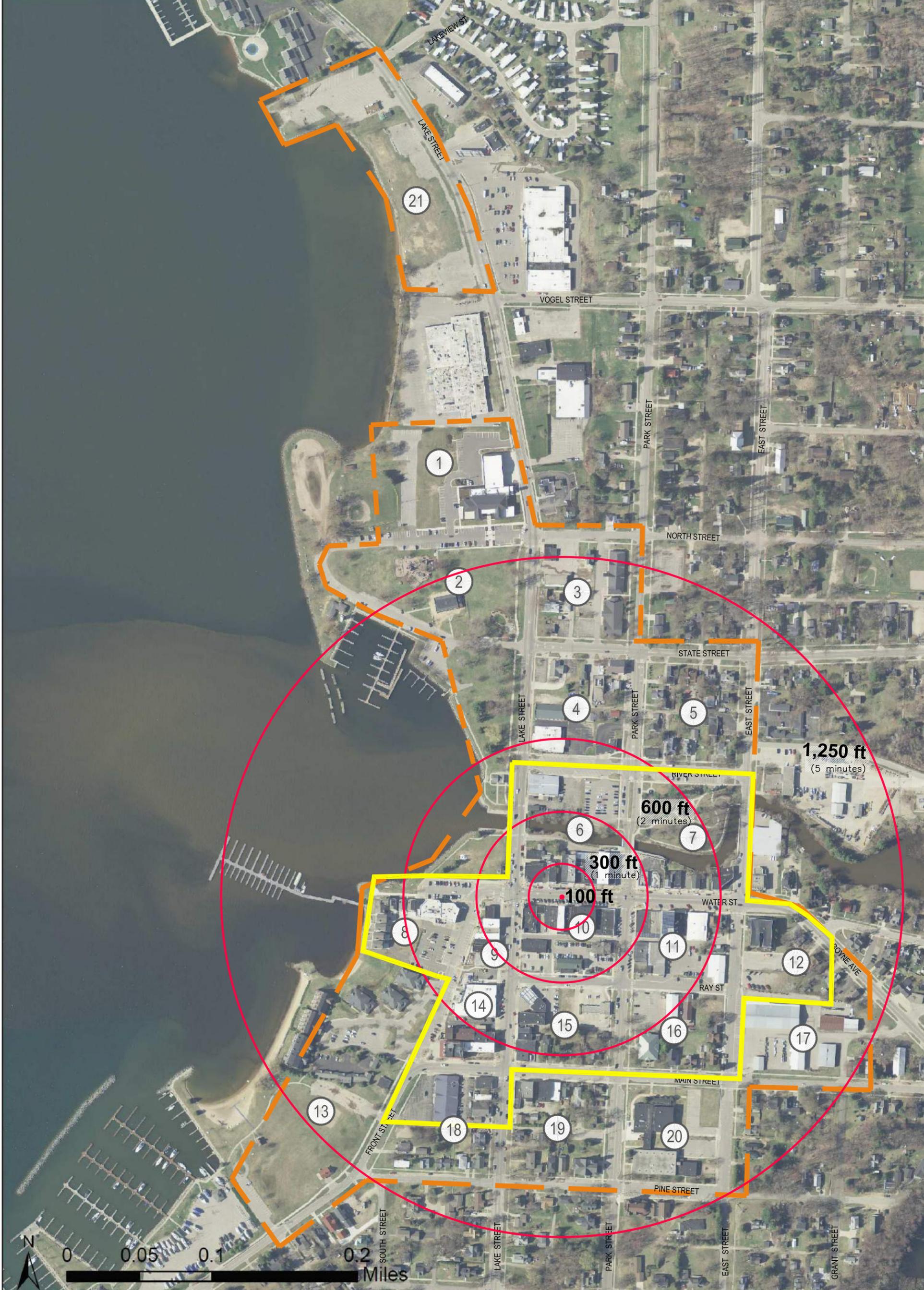
	Minutes	Feet
In a highly attractive, completely weather protected and artificially acclimatized environment	20	5,000
In a highly attractive environment in which sidewalks are protected from sunshine and rain	10	2,500
In an attractive but not weather-protected area during periods of inclement weather	5	1,250
In an unattractive environment (parking lot, garage, traffic-congested streets)	2	600

Gruen, Victor, The Heart of Our Cities. The Urban Crisis: Diagnosis and Cure. Simon and Schuster 1964, New York, p. 250:

“An average walk is at a speed of 2.5 miles per hour. This converts to 13,200 feet per hour or 220 feet per minute. On this basis, a 5-minute walk would be 1,100 feet and a 10- minute walk would be at 2,200 feet.”

Pushkarev and Zupan. Public Transportation and Land Use Policy. Indiana University Press from a study by Regional Plan Association of New York (RPA).

During the turnover and occupancy surveys, 12% of the vehicles observed were overstaying the posted time durations in on-street spaces in front of and near retail businesses. It is difficult for a retail business to survive in an area when there is no convenient on-street parking available. If a customer wanting to visit a retail store to run a specific errand cannot find convenient parking they may go elsewhere. When a customer is planning on visiting more than one retail location they will be willing to park a bit further away and when a customer is planning on spending longer periods of time in a downtown they may be more willing to park off-street and even further away. It is important to move the employees to further away on-street spaces where turnover is not needed and or into the off-street parking.



**CITY OF BOYNE
PARKING STUDY**

Boyne City, Michigan

**RICH & ASSOCIATES
PARKING CONSULTANTS**

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ARCHITECTS • ENGINEERS • PLANNERS

09-14-18 sar

LEGEND:

- STUDY AREA
- CORE STUDY AREA

BLOCK FACE KEY PLAN:

**WALKING DISTANCES
IN MILES**

Sheet Title:

**WALKING
DISTANCE**

MAP Number:

MAP 7

Pg. 42

Action, Time Frame and Cost:

2.1 Action- Regular enforcement will need to be conducted to make sure that the vehicles are not parked beyond posted time limits.

Time Frame – 0-3 years

Cost – Minimal (signs)

2.2 Action- Work with business owners to get employees to park in the recommended long term parking during summer months and special events to help provide additional customer spaces in the core area.

Time Frame – 0-3 years

Cost – N/A

2.3 Action- Change the parking duration to three hours and add three-hour duration signs to block 7D (1st two spaces off Water Street), 11A, 10C, 9A and 8B.

Time Frame – 0-3 years

Cost – Minimal, cost of signs and enforcement.

2.4 Action- Work to add loading zones for large truck deliveries that convert back to three-hour parking after a designated time period throughout the downtown.

Time Frame – 0-3 years

Cost – Minimal, cost of signs and enforcement.

2.5 Action- Consider adding loading zone spaces (15 to 30-minute) at either the ends of the block or the middle stall on all blocks where these are not currently provided.

Time Frame – 0-3 years

Cost – Minimal (signs)

2.6 Action- Lots need to be well lighted and well signed in order to encourage people to utilize off-street parking.

Time Frame – 0-3 years

Cost – Cost to be determined.

- 2.7** Action- During the peak times work with business owners to encourage employees to not park in the lot on block 10 along Ray Street, instead parking in the on-street parking around blocks 2, 4, 5, and 20.

Time Frame – 0-3 years

Cost – Minimal (signs)

- 2.8** Action- Work with the Boyne City Municipal Airport to see if a plan can be developed for Boyne Thunder to provide a parking area for the boats/boat trailers.

Time Frame – 0-3 years

Cost – Minimal (signs)

- 2.9** Action- Consider using the overflow lot between City Hall and the baseball diamond for RV's and potentially overflow boat trailer parking.

Time Frame – 0-3 years

Cost – Minimal (signs)

3. Residential Parking/Overnight Parking

Downtown residents are an important component of downtown revitalization. With a desire to increase the number of residential developments in the downtown it will be important to develop regulations on when, where and how long residents are allowed to park. It will be beneficial to create an ordinance and downtown residential parking permit to meet this need.

The City should track who purchases the parking permits for each vehicle. As the parking system grows and more permits are sold it may become necessary to track permits using permit software and a comprehensive application form. The form would ask for the parkers name, home and business address, phone numbers, vehicle type(s), and license plate numbers(s) of those vehicles. Additionally, the application should list the rules and penalties possible if they do not park in the appropriate locations and do not pay on time. This contact information will assist in contacting the owner of the vehicle if there is any damage in a lot or a vehicle is inappropriately parked. It may also be necessary to change to a permit that is difficult to reproduce using holograms or plastic permits.

At this time, it will be important to work with landlords to create a flyer for locations of permitted overnight parking. The flyer should include a map identifying locations to park overnight without the worry of a parking citation, the ordinance relating to overnight parking and the fine for parking in the parking spaces that are not identified as overnight parking. This flyer would be provided to new downtown residents when signing leases.

Action, Time Frame and Cost:

3.1 Action- Create a residential parking flyer clearly defining residential parking locations approved for overnight parking.

Time Frame – As soon as possible.

Cost – Minimal

4. ADA Parking

As part of the parking analysis, Rich & Associates reviewed the number of barrier free (handicap) parking stalls. **Table M** is a copy of the Americans with Disabilities Act (ADA) parking guidelines followed by **Table N** listing the public lots and the number of barrier free parking stalls provided. It should be noted that it is permissible in the ADA recommendations that the spaces required in one lot can be provided in another lot if they would be along a more accessible pathway. However, the aggregate total of spaces must be provided.

Table N details the number of barrier free spaces currently in the public lots along with the number of spaces that should be provided. Five of the public lots need additional barrier free spaces. All barrier free parking spaces should be signed and striped the same. Generally barrier free spaces are blue to distinguish these spaces from the others. Follow the 2010 ADA Standards for Accessible Design, and the Access Board guidelines and standards:

- https://www.ada.gov/2010ADAstandards_index.htm,
- <https://www.access-board.gov/guidelines-and-standards/buildings-and-sites/about-the-ada-standards/guide-to-the-ada-standards/chapter-5-parking#spaces>

Exhibit 1 detailing a layout of barrier free parking from ADA National Network.

<https://adata.org/factsheet/parking>

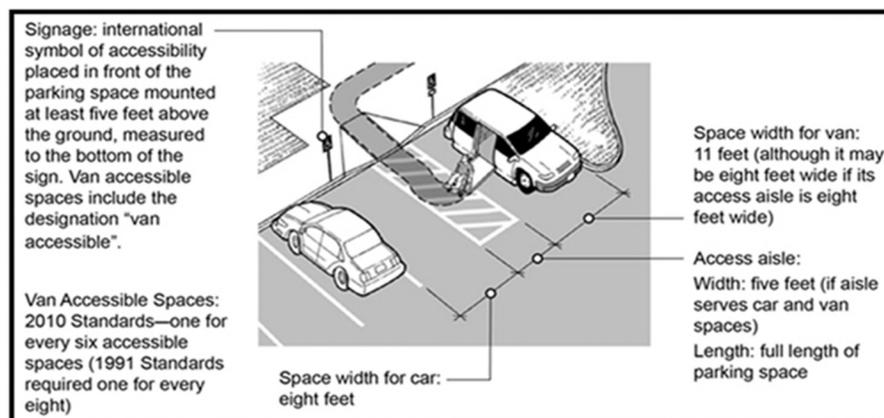


Table M
ADA Parking Guidelines

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% of total
1001 and over	20, plus 1 for each 100 over 1000

At least one of every 6 accessible spaces, or fraction of 6, in each parking facility must be sized to accommodate vans.

Table N
Number of Barrier Free Stalls in Public Lots

Block #	Lot	Total Capacity	# of Barrier Free Spaces Required	# of Barrier Free Spaces Provided	Surplus/Shortfall
1	City Hall (including reserved)	136	5	10	+5
1	Park/Marina	121	5	4	-1
6	Public	46	2	2	~
8	Public	29	2	2	~
10	Public (as one lot or 3 lots this is 2 HC stalls short)	55	3	1	-2
13	Public	40	2	0	-2
13	Public	29	2	0	-2
16	Library	46	2	2	~
21	Boat Launch	51	3	1	-2
				TOTAL	-9

Rich & Associates encourages the development of on-street barrier free stalls to ensure the downtown is accessible to everyone. The ADA has a draft guideline for on-street parking minimums that uses the same requirements for off-street parking (not in residential areas). This draft was developed in 2011 and has not been updated or finalized. A link to the guidelines can be found on the following page.

Generally it is best to have one on-street barrier free space per block face in the dense downtown areas. Locating these spaces as either the first or last space of the block tends to work best due to the space being located next to a ramped sidewalk. Angled spaces must provide access isles and details can be found in the link provided below for the ADA proposed guidelines. Currently there are 7 barrier free on-street spaces that are located throughout the downtown. It is recommended that Boyne City follow the ADA proposed guidelines for the core downtown area.

ADA Proposed Guidelines for On-street Parking:

<https://www.access-board.gov/guidelines-and-standards/streets-sidewalks/public-rights-of-way/background/access-advisory-committee-final-report/x02-6-vehicular-ways-and-facilities>

Action, Time Frame and Cost:

4.1 Action- Add additional barrier free spaces to the public lots with deficiencies, using **Table N**.

Time Frame – As soon as possible.

Cost – Approximately \$500-\$600 per space.

4.2 Action- Follow the ADA proposed guidelines for on-street parking in the core downtown area and add additional barrier free spaces where needed.

Time Frame – As soon as possible.

Cost – Approximately \$500-\$600 per space.

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 the entire community. It is important to 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 Boyne City is greatly enhanced if they know ahead of time where they can park and what, if any, restrictions are on parking.

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, like the one put out by Main Street. The flyer is even more beneficial if it includes the durations of parking, both on-street and off-street, and clearly defines where all user types should park. This flyer can be specifically designed for different user types such as employee, residential, special event and customer/visitor. This can aid in educating employees or residents on specifically where they should be parking.

Rich & Associates included an example of a parking flyer on **page 38** and **39**. This flyer is intended to be specific to parking in the downtown and should also include locations of bicycle racks. Selling advertising space to businesses on the flyer can help defray the expense of printing, though it can also take away from the message if there are too many adds and text.

Actions, Time Frame and Cost:

5.1 Action - Develop flyers that can be distributed to all parking users; customers/visitors, employees, residents and special event attendees.

Time Frame – 0-1 year and continued yearly.

Cost – \$300-\$500 for flyers with \$500 annually for ongoing maintenance.

Welcome to Boyne City

Whether you are a first time visitor, a local resident who enjoys all that downtown Boyne City has to offer, a business operator or employee, we want to make your downtown experience even better. This brochure will guide you to where you can park.



Parking is Easy in Downtown Boyne

The map indicates time restrictions for on-street parking, lots open to the public and lots with parking available for monthly lease.

Public lots are available for use free of charge. Please be aware of overnight restrictions in public lots and on-street .

If you would like to check on availability of leasing a parking space in a public lot or if you would like to discuss a parking idea or concern please contact the Police Department.



Parking Fines

Visitor Information

City of Boyne City
319 North Lake Street
Boyne City, MI 49712
Ph: 231.582.6597 ♦ Fax: 231.582.6506

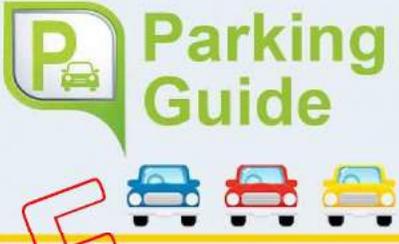
Hours:
Monday - Friday
9:00 am - 5:00 pm

Questions?

Police Department
Phone: 231.582.6611

Hours:
Monday - Friday
8:00 am - 4:00 pm

Parking Guide



Welcome to Boyne City, Michigan



5. Special Event Parking



Rich & Associates recommends that a plan be developed for parking during special events. This plan should include a remote lot location (public school, church, City or Municipally owned lot) and if necessary an agreement with the lot owner. Additionally, some form of shuttle service may need to be arranged with the local transit service, or schools.

Purchase sandwich boards and develop a flyer to be used during special events. The flyers can be handed out to businesses and used in marketing the event (further discussed in the Marketing recommendation). The sandwich boards are used as temporary wayfinding signs during special events leading parkers to the temporary overflow lots.

Actions, Time Frame and Cost:

5.1 Action - Develop a flyer that can be distributed to businesses and purchase sandwich boards to be used as temporary wayfinding signs during special events.

Time Frame – Monitor the need.

Cost - \$200-\$550 for signs \$150 - 200 annually for flyers.

6. 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 lots. The parking lots need identification signs to inform a visitor of the downtown that the specific parking area is not only for public use, but also at no charge (free). 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 their vehicle and transitions to walking. Being able to follow wayfinding maps or signs, aid pedestrians in locating key destinations, and then back to where they parked. These are particularly important elements in tourist/customer/-visitor oriented downtowns. Boyne City should consider adding one or two kiosks to the downtown with business listings and parking locations.

Rich & Associates has developed a parking signage best practices package that is detailed in this recommendation. The information is provided to show how the signs work together and provide a comprehensive wayfinding system. Boyne City is in the process of purchasing and installing wayfinding signs, and therefore this recommendation is to show how parking wayfinding will work with the overall wayfinding signage package.

Best Practice Sign types include

The following four types of parking signs are strongly recommended as best practices for improving driver wayfinding. 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:



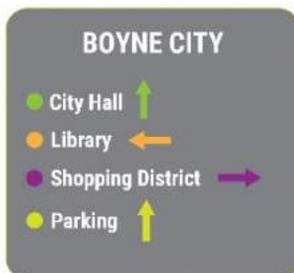
Directional-parking signage is distinct in color, size and logo and directs drivers to off-street parking areas. Parking location signage complements the directional parking signage. The signs can have arrows pointing to the off-street lots. The signs are mounted on poles at standard heights, on the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

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 are listed on the signage. The identification signage is distinctive in color and size, and it is located on a pole at a lower height. The text should be large enough to read while driving.

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 key locations easily found by a driver and are intended to help a driver orient themselves to the downtown area. Arrows should always point forward, to the left and right. Avoid using downward pointing arrows.

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.

The duration parking signs on-street should be consistent in color and text. They should also be placed at a height that will not be obstructed by a SUV parking in front of the sign and approximately 100ft apart. Many of the signs in the downtown are difficult to see if a SUV is parked in front of the sign. It is also important that there are enough signs on a block that it is clear that the parking is time restricted. All signs should be posted perpendicular to the roadway.



Action, Time Frame and Cost:

6.1 Action - Name all public lots and add introduction signs at the entrance to all public lots. The text should be large enough to read while driving. This will aid in marketing and wayfinding.

Time Frame – As soon as possible

Cost – See 7.2.

6.2 Action - Rich & Associates recommends the addition of a family of parking wayfinding (3 sign types, Boyer City currently has vehicular wayfinding) in the downtown.

Time Frame – 0-3 years

Cost – \$75,000-\$150,000 for a package of signs.

6.3 Action – All duration parking signs on-street and off-street should be consistent in color and text. They should also be placed at a height that will not be obstructed by a SUV parking in front of the sign.

Time Frame – 0-3 years

Cost – To be determined

6.4 Action – Unauthorized parking duration signs placed on buildings degrade the system and create confusion and frustration. Work with business owners to stop the trend of placing parking duration signs in front of public parking.

Time Frame – As soon as possible

Cost – To be determined

7. 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. Murals, art, window decorations and flowers can create a pleasant walking experience during the day and night. It is important to follow the landscaping criteria Boyne City has developed for designing parking for all lots in the downtown.

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 handicap accessibility at all intersections.

Trees, banners, art and window displays are other ways to help reduce the speed in downtowns. Bump outs or bulb outs help provide an area of safety when pedestrians are crossing the street. Creating a more pedestrian friendly downtown encourages people to park once while visiting the downtown helping cut down on congestion. It is important to keep trees trimmed so they do not block signs or lighting.

Minimize surface lots and large breaks between buildings to promote walking in the downtown. People tend to walk further without complaint if the walk is pleasant enjoyable and engaging. Boyne City has several sculptures and art features located in the downtown along with decorated store windows, flowers and landscaping that make the walking experience enjoyable.

Dumpsters are an issue in some of the parking lots. Consider trying a combined dumpster service and work with private lot owners to try and limit the number of dumpsters with the use of a shared dumpster plan. This would free up parking spaces in lots and provide aesthetically pleasing alleys. It also creates safer walkways because it eliminates places for people to hide.

Examples:



Action, Time Frame and Cost:

7.1 Action - Follow landscaping criteria outlined in the land use ordinance for all parking lots in the downtown (public and private) in order to enhance the pedestrian experience in well lighted and landscaped parking lots. This provides a perception of safety and provides clearly defined areas for cars and pedestrians.

Time Frame – 0-3 years

Cost – Must be determined on a case by case basis.

7.2 Action - Encourage shared dumpsters/compactors/grease bins in lots that have several businesses surrounding the lot.

Time Frame – 0-3 years

Cost: \$500-\$1,000 per area, Shared dumpsters would include dumpster enclosure and collection of dumpster fees from agreements.

8. Bicycle Racks

Consider providing additional bicycle parking which in turn cuts down on the number of motor vehicle spaces needed during peak season.



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 or pavement markings.



These are examples of on-street bike facilities, that meet the guidelines for bicycle racks. Both are a version of the popular U-rack. The pictures show an on-street parking space turned into 14 to 12 parking spaces for bicycles.

Actions, Time Frame and Cost:

8.1 Action - Add additional bicycle racks to the downtown following the guidelines provided.

Time Frame - 0-3 years

Cost - \$100 - \$300/rack, depending on size and number of racks

9. Parking Enforcement

The enforcement is currently done only when a complaint is made about a vehicle. A police officer will locate the owner of the vehicle and have a discussion about the time limits. As discussed in the Turnover and Occupancy section there were several vehicles parking beyond the posted time limits in the two-hour parking spaces. These vehicles could be business owners, employees, visitors or potentially residents or renters of condominium units. The additional employee spaces and residential parking permits should help get people parking in the correct spaces. The three hour on-street duration change should help customers/visitors have additional time to spend in the downtown without moving their vehicles.

Parking enforcement is typically an important component of a parking system. By differentiating the time limits of parking between off and on-street parking, with shorter limits for convenient on-street spaces to encourage turnover we are helping to ensure that customers and visitors always have adequate and convenient parking. Once the recommendations are completed an occupancy analysis should be conducted by staff to see how many vehicles are overstaying the three hour time limits. If it is necessary to enforce the parking time limits in order for the allocation to work, this recommendation has been provided on how to conduct parking enforcement.

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 parking citation. Enforcement must be fair and consistent. 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 systems efficiency is degraded.

One part time Parking Enforcement Officer (PEO) should 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 (as permitted with scheduling). 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.

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. Begin with Police staff and as budgeting allows, follow the recommendations below for parking enforcement. The officer should work varying schedules between 11:00AM – 6:00PM Monday through Friday.

It is recommended that enforcement be conducted with handheld parking ticket writers that track license plate numbers and print tickets. A handheld unit allows PEO's to issue a courtesy ticket for first time offenders (discussed in Recommendation 10). Due to the tourist nature of the downtown it is important to invest in the handheld unit so a courtesy ticket can be issued for the first offense. 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 and following a route, every parking space, whether occupied or not, is then entered into the device (typed in or a picture taken of plate) 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.

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.

PEO’s may only be necessary during peak season and adjusted as necessary. Street signs should indicate that parking is enforced from 11:00AM to 6:00pm Monday – Friday in any and all areas where there is a limited duration or restrictions for parking.

Action, Time Frame and Cost:

9.1 Action- Consider conducting peak season enforcement of the short term parking spaces if the recommendations do not change the behavior of employees and residents. If that time comes follow the recommendations provided.

Time Frame – When needed.

Cost – To be determined.

10. Parking Fines

When needed, if handheld ticket writers are purchased, it is recommended that the City move to a graduated fine system (i.e. the first ticket would be a courtesy ticket which is currently \$20.00, 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 recommended graduated parking fine schedule for overtime parking tickets is:

1st– Courtesy ticket

2nd –\$25.00

3rd –\$30.00

4th –\$35.00

Offer courtesy tickets during the first few weeks of enforcement. 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 the previous 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.

All fine revenue should go to a parking fund and should be used to cover parking operating expenses with any net revenue going 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.

Action, Time Frame and Cost:

10.1 Action- If needed, adopt the recommended fine schedule along with courtesy tickets.

Time Frame – 3-5 years as budgeting allows for handheld units to be purchased.

Cost – Covered in the cost of handheld units, with a loss of revenue of the first ticket.

10.2 Action- It is recommended that all fine revenue go into the parking fund.

Time Frame – As soon as possible

Cost – N/A

11. 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.

Work with the Chamber and the Main Street program to develop a business text alert system that allow the City to share important information. This system can share changes to the parking system, street closures, plowing routes and times, special event information as well as emergency situations.

Action, Time Frame and Cost:

11.1 Action- Work with the Chamber and the Main Street program to develop a business text alert system that allows the City to share important information.

Time Frame – As soon as possible

Cost – To be determine

11.2 Action- Develop a maintenance schedule for the lots to keep up with maintenance needs and help budget yearly costs.

Time Frame – As soon as possible

Cost – To be determined

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

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.

Action, Time Frame and Cost:

12.1 Action- Create a sinking fund for maintenance and upgrades to the parking system.

Time Frame – As soon as possible

Cost – Minimal

13. Valet Parking

Valet parking is currently not used in the downtown. As more restaurants come to the downtown and additional development occurs, there is the potential for use of valet parking for restaurant and entertainment venues that makes coming downtown a more attractive adventure. The City would not necessarily operate the valet parking, though the City should have a policy in place for regulating how valet operations would be run and where vehicles can be parked.

This policy should include using public parking areas and private off-street lots as valet parking storage and on-street spaces for vehicle drop off and pick up. The policy should specify rental charges for on-street parking spaces and used for pick-up and drop-off. If any public lots are used there will also need to be a fee set up for the use of these spaces. It is important to limit the number of pick up and drop off-spaces as often valet companies want to reserve more spaces than they actually need.

13.1 Action- Develop a policy on Valet parking.

Time Frame – 0-3 years

Cost – Minimal

14. Discourage the Development of Any New Private Parking Lots in the Downtown that are not Shared Use Parking

A parking system works best when the parking can be shared and the municipality is in control of 50% or more of the available parking in the downtown. This is an important benchmark because it allows for shared use parking. Maximizing the percentage of the parking supply that is shared among different users and recognizing that different types of land use will peak at

different times of the day, allows the parking needs of the City to be met with fewer spaces, thereby requiring less investment. The City's control of 63% of the parking meets the 50% minimum benchmark. At higher percentages of public 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, many spaces may often go unused during parts of the day. While the current parking demand analysis showed that there is an overall sufficient parking supply, the availability of shared use public parking is vital for downtown businesses to succeed. When there is a lack of available public 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 without having to move a vehicle. This also makes it difficult to provide a sufficient amount of employee parking off-street for those businesses without their own lots.

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 development.

When a community chooses to discourage private parking within a specific business district, the Municipality takes on the task of providing enough parking to support economic activity for all developments (other than uses such as hotel or residential) within the district. Like Boyer City, many downtowns do not require parking in the Central Business Districts. The reasoning behind this move is that a dense downtown can be created without an excess of parking. The parking that is built, is intended to be shared among all businesses increasing the efficient use of the spaces. This also encourages walking, thus encouraging customers to visit multiple locations. Additionally, this allows the City to keep development where they want, parking in locations that benefit the whole district and provide a more pedestrian friendly downtown.

Currently the majority of the parking need in the downtown is provided by the City. In order for the City to pay for additional parking it may become necessary to consider charging for parking, an in-lieu of parking fee (or Parking Improvement Fund fee) for new development and/or create an assessment district to fund new parking projects. It most often takes more than an assessment district or an in-lieu of fee to pay for new parking. Many communities have to use multiple funding sources.

Excepting parking requirements for development in the downtown core encourages density, mixed land use and development in the district. Currently the Zoning Ordinance allows the Planning Commission the option of reducing or waiving parking requirements. Most communities do require residential developments to provide parking in a Downtown Business District. 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 without multiple forms of public transportation.

Actions, Time Frame and Cost:

14.1 Action - The City should continue to discourage the development of any new private parking lots in the downtown that are not for residential use or public parking, and continue to encourage the use of the ordinance allowing shared use parking (Article X.- CBD, Sec. 10.10.)

Time Frame - Immediately

Cost – To be determined

15. Work with Private Parking Lot Owners in the Downtown to Create Shared Use Parking

Public/private partnerships are another key factor in providing additional shared use parking. It is recommended that the City work with lot owners that have underutilized lots to bring these spaces into the public parking system, through a lease or an agreement to clean, light and enforce. Where possible it will benefit the City to seek out public/private partnerships with banks, churches, schools or other entities that have large parking lots that are not needed every day or all day. There is a church on block 19 that has twelve spaces, a private lot on block 12 with 16 spaces, a private lot on block 15 with 10 spaces, the school lot on block 20 and there is a bank on block 4 that may be willing to work together with the City. This will increase the amount of publicly available shared use parking. Even though there is enough parking in the study area it would be beneficial for agreements to be developed to share parking lots, especially to help provide convenient employee parking.

Actions, Time Frame and Cost:

15.1 Action - The City should work with owners of private lots to allow for public shared use of the private parking areas where possible.

Time Frame – 0-3 years

Cost – Potentially would require cleaning, lighting, and enforcement of lots.



<p>CITY OF BOYNE PARKING STUDY</p> <p>Boyne City, Michigan</p>	<p>RICH & ASSOCIATES PARKING CONSULTANTS</p> <p>26077 Northwestern Hwy., Suite 200 Southfield, MI 48033 248.553.5050</p> <p>ARCHITECTS • ENGINEERS • PLANNERS</p> <p>09-17-18 sar</p>	<p>LEGEND:</p> <p>— STUDY AREA</p> <p>— CORE STUDY AREA</p> <p>BLOCK FACE KEY PLAN:</p> <p>A D # B C</p> <p>Employee Parking</p> <p>3-Hour Parking</p> <p>15-Minute Parking</p> <p>Potential New Parking</p>	<p>Sheet Title:</p> <p style="text-align: center;">PARKING RECOMMENDATIONS</p>	<p>MAP Number:</p> <p style="text-align: center;">MAP 8</p> <p style="text-align: right;">Pg. 60</p>
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NEW PARKING

Rich & Associates was asked to determine locations for new parking. There is currently a surplus of parking in the downtown and at this point additional parking would only be necessary when there are re-occupancies of vacant space and additional development occurs.

When the time comes for additional parking it is recommended to look for on-street options first. There is the opportunity to add additional spaces along Lake Street following the pattern of the existing 90-degree spaces near the public restrooms. There was some discussion of moving Lake Street and developing the parking into the east side of the street in order to keep views for future development. Either option will work and it will be up to the City and residents to determine if the cost of moving the road will be necessary for development.

While there were no immediate recommendations for new parking some stakeholders stated that the downtown needed a parking garage. It is important to understand parking structure development costs and how they may be financed in order to have a conversation on the price difference between surface parking and structured parking. Surface parking typically cost between \$3,500 and \$5,000 per space not including land cost. The construction costs for a parking structure in this region, depending on site constraints, number of spaces and overall efficiency of the layout, is estimated to be in the range of \$70-\$85 per square foot. Project soft costs without land costs are generally between 15% and 17% and then finance costs are between 5% and 7% of the project cost.

There are other costs for parking improvements such as new signs, lot improvement, etc. No specific funding mechanism has been identified, though there are several options.

- Paid parking
- In -lieu of fee
- Assessment district
- General fund
- General Obligation Bond
- TIF

Timing for Additional Parking Development

Parking development in the City of Boyer City will need to be coordinated with demand to ensure that as development occurs the City will have the ability to decide when to begin considering new parking. The City will need to regularly check occupancy levels and updated the demand matrix provided with any land use or parking changes to keep a firm grasp on the overall parking system.

Discussion on Meters and Charging for Parking

At this time, it is not recommended to charge for parking. As the downtown continues to grow and develop there may be a point in which the parking is operating at or near 85%-90% occupancy and at that point meters could become necessary as a part of managing parking.

Generally, cities that have parking systems that are self-sufficient rely upon revenue from several sources. This includes revenue from a paid parking system, fine revenue and fee-in-lieu programs. It is difficult if not impossible to build future parking downtown and have it fully amortized without a pooled system of revenue. This is why pooling other parking revenue sources such as all lots and on-street parking, is so important.

Based on parking Best Practices it is generally agreed that on-street parking should be reserved for customers and visitors. In areas that have little commercial activity, the on-street spaces can have longer durations of stay allowed. There is a body of information that has been prepared by Donald Shoup from UCLA that suggests that all on-street parking should be metered. The rationale, simply put, is that on-street parking is the most sought after and thus the most valuable parking. Therefore, there should be a charge that places a premium on this type of parking.

Further, it is suggested by Shoup, that revenue from parking meters should be used to cover parking operating expenses and any net revenue go back into the downtown assessment area for things such as sidewalk cleaning, signs, lighting, banners etc. Parking revenue is then helping to pay for the upkeep of the downtown.

Parking meters and other parking technology encourage turnover in a downtown, though enforcement can also work to keep parking spaces turning over. Parking meters or some other type of system to pay for use of a parking space in downtown Boyne City makes sense from a Best Practices standpoint and would provide a revenue stream to improve, maintain and expand the parking in the downtown. Our experience has been that unless there is a properly conducted education process explaining why metered parking is necessary to get property owners and business owners behind paid on-street parking, the implementation of the system will be difficult.

The following is a review of potential ways to charge for parking:

Individual Meters

This option would use individual meter heads for each parking space. The meter can accept coin or credit card and can work with a phone payment application. This option can be the least expensive for initial install if there is not a credit card option. The down side of these meters is

that not all will offer the ability for flexible rates and you need one post along the sidewalk for every two meter heads. Cost - \$300-600

Permit Parking

Permit parking can work with any type of meter. This system can be as simple as a hang tag or a sticker and as complicated as gated lots with cards or codes. Using permits can complement a metered parking system and is simple to enforce. As long as the hang tag or sticker is up to date, showing and the permit holder is parked in the appropriate location they will not receive a citation.

If a permit parking system is started it will be necessary to create a database of all permit holders and to what vehicle each permit is registered. As the system grows it will most likely be necessary to purchase permit software that will help to run and keep track of the system. This type of software will also work together with enforcement software to help in enforcing the system. Cost – depending on number of permits (starting with printing and staff time)

Multi Space Meter

The multi space meter was designed to handle both on-street and off-street parking. The simplest multi space meters are simply a meter head that can cover multiple spaces. This type of machine will typically only accommodate credit card and coins. The more complex multi space meter can handle any number of spaces and can accommodate someone paying for parking by coin, bills, credit or value card. The parker simply inputs their stall number or license plate number into the machine and then either selects the amount of time they want to stay (up to a maximum if applicable) and then pays the amount on the screen. A receipt is issued and the parker continues on to the downtown.

The system allows a parker to add time to their space, though ideally would not tell them how much available time was on the space to dissuade someone from driving up and using someone else's unused time. The enforcement officer either wirelessly downloads a report or gets a printout from the machine that indicates spaces or vehicles that have time paid for. Cost - \$6,500-\$10,000/per unit

Pay by Phone and Meter/Machineless

With either option there is the potential to use a pay by phone system. The parker would have to establish an account with the company which can be done in advance or while parking. Once a vehicle is parked the parker would then enter a web address into their smart phone which would then prompt the parker to enter in their stall number along with the length of time they want to purchase. This information would be incorporated in the real time wireless data system allowing an enforcement officer to pull a report from the machine or handheld ticket writer, giving the pay by phone payment and valid time along with the payments to the meter. Cost – Minimal

Potential ways to pay for a parking system when not charging for parking:

Assessment Districts

This option collects yearly fees from all business or building/land owners within a defined district and in this case the money collected would go into a parking fund to offset maintenance, enforcement and management of a parking system. This option is typically used along with a metered parking system and sometimes along with an in-lieu of fee. This option will not pay for new parking alone, it is typically used to help offset the maintenance and day to day costs of running a parking system. Cost – N/A

In-Lieu of Fees

In-Lieu of parking fees are typically based on a percentage of the cost of providing one parking stall in a new parking structure. The rate determined needs to be mindful of the need to redevelop the downtown. If the rate is set too high this can discourage development. The rate will need reviewed every three to five years to keep the amount in line with market prices and construction costs. Cost – N/A