CITY OF PLYMOUTH

DOWNTOWN PARKING STUDY

MACOG

Michiana Area Council of Governments

ACKNOWLEDGEMENTS

STEERING COMMITTEE

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Laura Mann, City of Plymouth Mayor's Assistant
Rick Gaul, City of Plymouth Director of Public Works
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PROJECT TEAM

Michiana Area Council of Governments

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1 INTRODUCTION

The introduction describes the purpose and need of the Downtown Plymouth Parking Study and outlines the planning process used to develop the study and project timeline.

2 KEY FINDINGS

A summary of the key findings is provided in this chapter. A detailed analysis was conducted on the existing conditions, including collecting parking system data such as parking inventory, restrictions, and occupancy, and what the community had to say about parking in downtown.

3 PARKING DEMAND

Chapter 3 describes the analysis conducted on the existing demand for parking in order to understand the impact of future growth scenarios in downtown.

4 PARKING STRATEGIES

Details of the parking system issues are provided in this chapter. Additionally, strategic recommendations are provided that address the challenges and can improve and better manage the downtown parking system.

1


INDIANA
17
NO SKATING OR BICYCLES ON SIDEWALK
FAMILY COSMETIC

INTRODUCTION

A Need for the Parking Study

The City of Plymouth is making great strides in revitalizing the downtown to be a vibrant and walkable destination that attracts all demographics. As a kick-starter, the City developed the River Park Square Master Plan that seeks to revitalize vacant and underutilized properties in the southeast portion of downtown along the Yellow River. The vision for this area is to enhance the destination value of downtown and reclaim the aesthetic value of the Yellow River. Projects from the Master Plan include the newly developed public park, River Park Square, trail connections into the City's greenway network, and the 45-unit apartment complex under construction called River Gate South; aimed to attract talented professionals.

The sight of these recent activities has drawn new businesses such as professional offices, entertainment, restaurants, barbers, salons, and other services to Plymouth's downtown. Yet with new development and change come new challenges.

Plymouth's ability to achieve their vision will be predicated on many factors, with parking management being an integral component to the final outcome. The daily parking experience for businesses, their customers, and downtown residents have been emerging as a defining issue, with many different users now having to compete for parking throughout the day. As the City continues to grow and further define its downtown image, it is imperative that a detailed review of parking be done to ensure new development does not detrimentally impact the needs of all users.

Purpose of the Parking Study

The City of Plymouth, in partnership with Discover Plymouth, identified the need for a parking study to address the arising concerns from downtown businesses and their customers, primarily the perception there is not enough parking in downtown. This study establishes a detailed view of the current parking and land use conditions in downtown Plymouth. It examines the use and adequacy of the existing parking facilities to depict a comprehensive view of parking activity and issues in downtown and identifies short and long-term parking management strategies to ensure downtown can accommodate for new development.

The Downtown Plymouth Parking Study is intended to accomplish the following goals:

1. **Ensure downtown is conducive for development** - Plan for appropriate sized parking to allow varying densities and a mix of uses.
2. **Ensure economic vitality** - Improved parking management can ensure parking provides consistent access for existing and future businesses.
3. **Attract new businesses** - Convenient parking and an improved downtown atmosphere will help attract new employers, talents, and residents.
4. **Accommodate alternative modes of transportation** - Improved parking management and design that supports the inclusion of biking and walking infrastructure will further attract talent and strengthen job opportunities.

Project Steering Committee

The Downtown Plymouth Parking Study was guided by the Steering Committee, including representatives from the City and Discover Plymouth. Committee members include:

Mark Senter
City of Plymouth Mayor

Laura Mann
Office of Mayor Senter

Sean Surrisi
City of Plymouth Attorney

Rick Gaul
City of Plymouth
Director of Public Works

Jim Marquardt
City of Plymouth
Streets Superintendent

Chris Marshall
City of Plymouth
Engineer/GIS Technician

Allison Shook
Discover Plymouth

Planning Approach

Beginning in August of 2017, the City of Plymouth selected the Michiana Area Council of Governments (MACOG) to conduct the parking study. The City and MACOG kicked off the planning process by organizing a Steering Committee, made up of key personnel from the City and Discover Plymouth to serve as the lead representative body overseeing the development of the study.

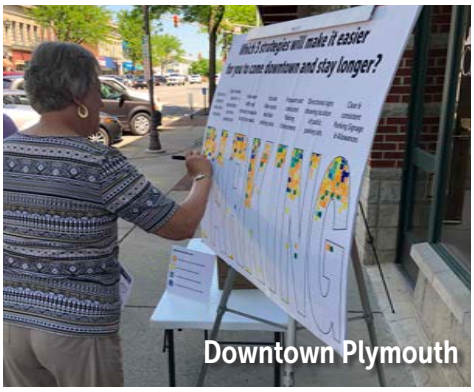
This study supports a data-driven process to dispel the current perceptions on parking and systematically document the key challenges and needs of the business community and its customers. This effort led to the development of a comprehensive parking management plan, guided by the City's goals and objectives for Plymouth's future.

MACOG's approach for this study included:

- **Reviewing recent and ongoing plans** to establish a broad understanding of the City's vision for downtown, the issues, and opportunities.
- Creating a **comprehensive parking database** of on-street, off-street, public and private parking facilities through numerous field visits and existing data sets. Data collected included an inventory of total spaces, restrictions, and utilization.
- **Engaging the community** to solicit feedback on key parking challenges, their needs, and guide the development of the parking management strategies. This was accomplished through stakeholder interviews, online surveys, and interacting with patrons visiting the Plymouth Farmers' Market and downtown businesses.
- Facilitating multiple **Steering Committee meetings** to review findings from the three technical reports and strategize how to best engage the public.
- Conducting a demand analysis of downtown's existing land use and future growth based on activity zones. This allowed MACOG to efficiently **analyze the practical use and model the behavior of parking activity** to show where people are parking and the likely businesses they are walking to.
- Identifying **parking management strategies** to improve the downtown parking system and user experience.

Plymouth Farmers' Market

MACOG engaged patrons at the Plymouth Farmers' Market and downtown businesses to select their top three parking strategies they think would make it easier to come downtown and stay longer.



Downtown Plymouth

Planning Process

Interaction with the community was central through the process to capture the activity and experience with parking in downtown Plymouth. MACOG conducted a series of observation surveys during downtown businesses peak operation times. This allowed MACOG to gauge the level of parking activity during peak performance times and create a baseline of the current parking conditions of the downtown parking assets to frame the existing conditions. The existing conditions include a comprehensive parking inventory, parking utilization, and demand analysis. The existing parking supply and demand framed the future demand analysis that allowed MACOG to model growth scenarios to identify where and how new development would impact the supply of parking. A culmination of these efforts led to the development of parking management strategies to improve the downtown parking system.

In addition to interacting with the built environment to observe parking behavior, MACOG also engaged key stakeholders


Parking at River Park Square

The overwhelming majority of respondents to the Public Resident Input Survey stated they look for longer term parking facilities.

to understand their issues and needs. The process was built on the foundation of community involvement, seeking input from City officials and staff, business owners, their employees and customers, and downtown residents to identify the major opportunities and challenges, and parking management strategies. MACOG created two unique online surveys to garner feedback from downtown business owners and residents on factors that influence their decision on where to park, their parking challenges and desired areas of improvement. This allowed MACOG to analyze the results in comparison with the collected data to systematically discover the challenges and needs of the downtown parking system.

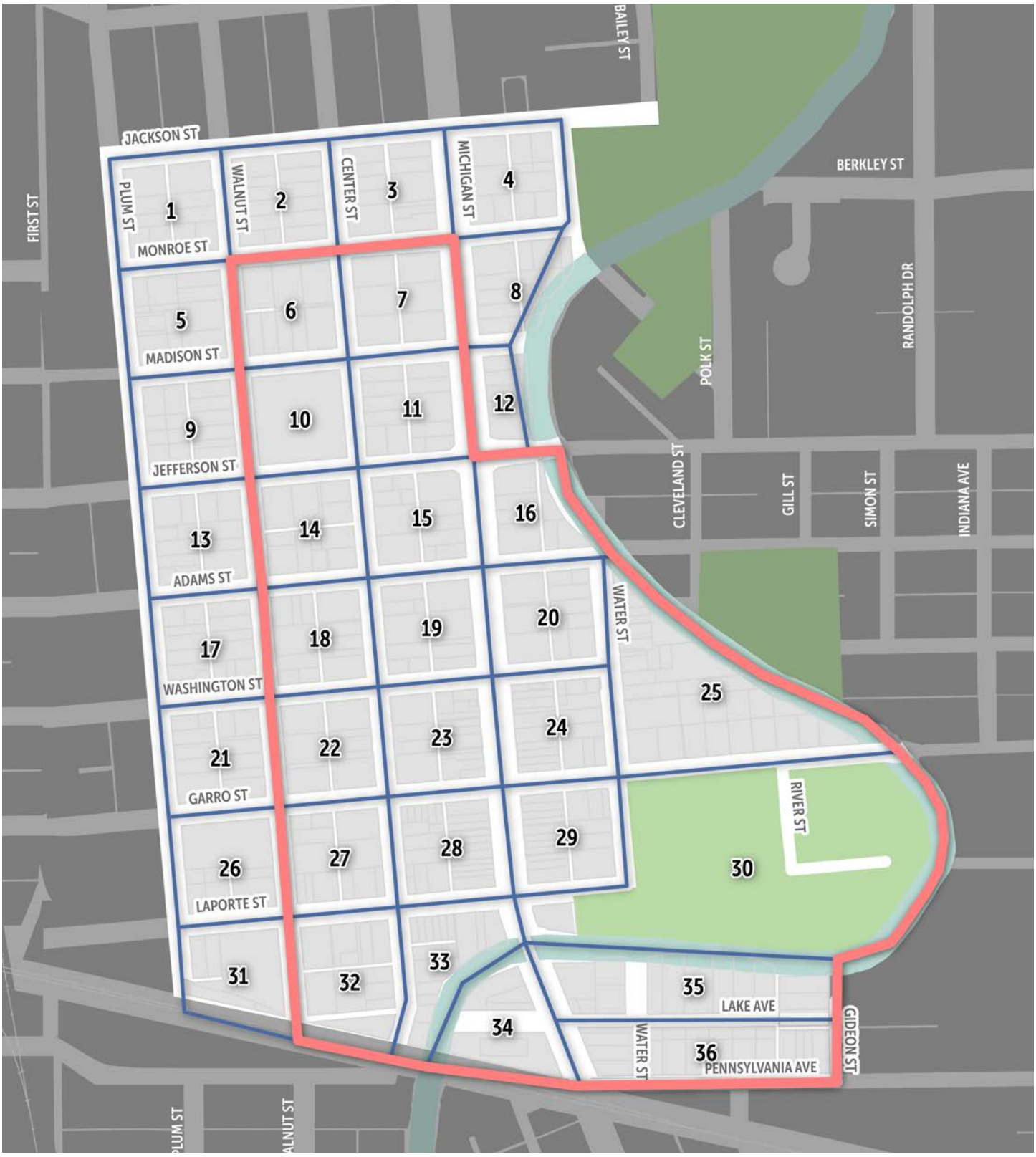
MACOG documented the details of each task in a series of technical reports that summarize the existing conditions, results of the stakeholder surveys, and parking demand analysis. The findings of this parking study, combined with stakeholder engagement, present a clear view of the current parking conditions, including the level of activity and demand used to identify strategies that improve parking management and accommodates existing and future development.

Study Area

Downtown Plymouth is a distinct, inviting place for residents and visitors with local businesses, parks, multi-use trails, and river access. The study area, determined by the Steering Committee and shown as the red outline in **Figure 1**, is comprised of the central business district and a mix of land uses including civic, government, retail, restaurants, salons and other service businesses, and professional offices.

In order to collect and draw meaningful supply and demand relationships, the study area was divided into 36 blocks that extend beyond the central business district. The block boundaries were defined by the centerline of the street, this allowed an accurate assignment of on-street parking to the adjacent block. Each block was assigned an identification number to assist with tracking data, displaying a summation of on-street and off-street parking, identifying areas that have a surplus or deficiency of parking spaces, and the assessment of new development and its impact on parking conditions.

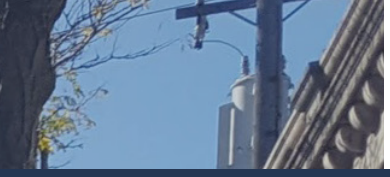
Figure 1: Downtown Plymouth Study Area



Legend

- Study Area
- Blocks
- Study Area Parcels
- City Parks

2



KEY FINDINGS

The Downtown Plymouth Parking Study took on a comprehensive effort to document the current parking system and capture parking behavior, solicit community input regarding concerns and desired outcomes, and model future development impacts.

In order to gauge the City's parking issues and opportunities, MACOG first reviewed recent and ongoing community plans such as the City's **2013 Comprehensive Plan**, the **Innovate Indiana Regional Development Plan**, and MACOG's **Michiana on the Move: 2040 Transportation Plan**. To gauge the parking issues and opportunities, MACOG facilitated multiple community engagements. MACOG conducted numerous field surveys, stakeholder interviews, created two unique online surveys and visited the Plymouth Farmers' Market to solicit public input on the major challenges and the strategies to improve the parking system.

Additionally, a crucial step was creating a comprehensive parking database to document the City's parking assets. This involved multiple field surveys to inventory the parking supply for on-street and off-street parking facilities. MACOG also documented the parking activity by observing the utilization of parking during peak business hours in the morning and afternoon across two months.

MACOG produced a series of technical reports to document the findings from the existing conditions, stakeholders input to the surveys, and parking demand analysis. A culmination of these efforts allowed the Steering Committee to better understand the parking issues and what can be improved. This set the framework to guide the Steering Committee to develop the parking management strategies that can improve the downtown parking system.

Parking Availability

There are approximately 2,250 available parking spaces within the study area. This includes public and private, on-street and off-street facilities.

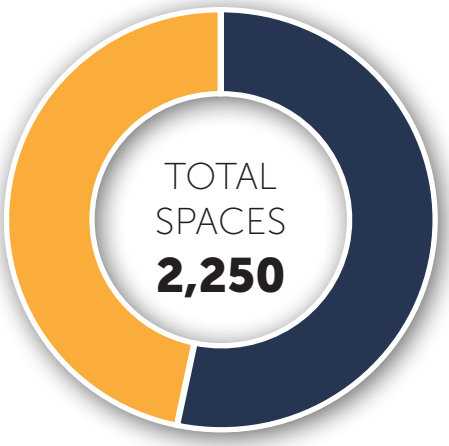
Parking Restrictions

Type	On-Street Parking	Off-Street Parking
None	830	577
Reserved	29	362
Timed	42	112
No Overnight	68	-
Timed & No Overnight	230	-
TOTAL	**1,199**	**1,051**

In the study area, there are:

OFF-STREET SPACES
1,051

ON-STREET SPACES
1,199



City of Plymouth

Operates **17 lots** with **459 total spaces:**

- **425 spaces** are available to the public
- **34 spaces** are reserved for City employees
- **13 lots (374 spaces)** are restricted to 24-hr parking
- **4 lots (85 spaces)** are restricted to 2-hr parking

Marshall County

Operates **6 lots** with **124 total spaces:**

- **27 spaces** are available to the public
- **97 spaces** are reserved for County employees

On-Street Parking Supply

1,199 total spaces

1,170 are public

29 are private

Off-Street Parking Supply

1,051 total spaces

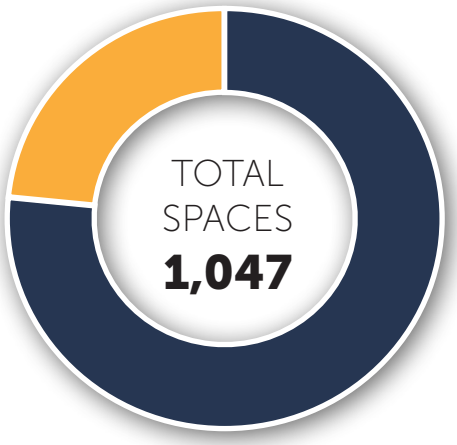
452 are public

599 are private

In the central business district, there are:

PRIVATE SPACES
23%

PUBLIC SPACES*
77%



**A general rule of thumb is that public parking should account for at least 50 percent of the total parking supply in the central business district.*

Parking Utilization

An effective plan to manage the parking system should respond to parking conditions observed during typical, weekday business peak hours of operation. To assess the current peak parking conditions, MACOG conducted parking occupancy surveys to determine how many vehicles are utilizing on-street and off-street parking facilities. Staff conducted the occupancy surveys on four separate weekdays in August and September, twice during morning peak hours and twice during evening peak hours.

Occupancy Survey Times

August 7, 2017
10:30 AM to 12:30 PM

August 14, 2017
5:00 PM to 7:00 PM

September 19, 2017
10:30 AM to 12:30 PM

September 20, 2017
5:00 PM to 7:00 PM

Morning Peak Occupancy

339 OCCUPIED ON-STREET SPACES

466 OCCUPIED OFF-STREET SPACES

PEAK BUSINESS TYPES
Professional & Service Offices

PEAK BUSINESS TIMES
11:30 AM - 12:30 PM

PEAK OCCUPANCY
36% of spaces are occupied

Evening Peak Occupancy

294 OCCUPIED ON-STREET SPACES

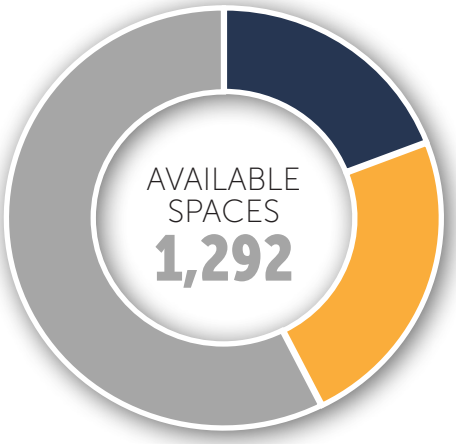
370 OCCUPIED OFF-STREET SPACES

PEAK BUSINESS TYPES
Restaurants & Entertainment

PEAK BUSINESS TIMES
5:00 PM - 7:00 PM

PEAK OCCUPANCY
30% of spaces are occupied

Maximum Peak Occupancy*



ON-STREET SPACES
431

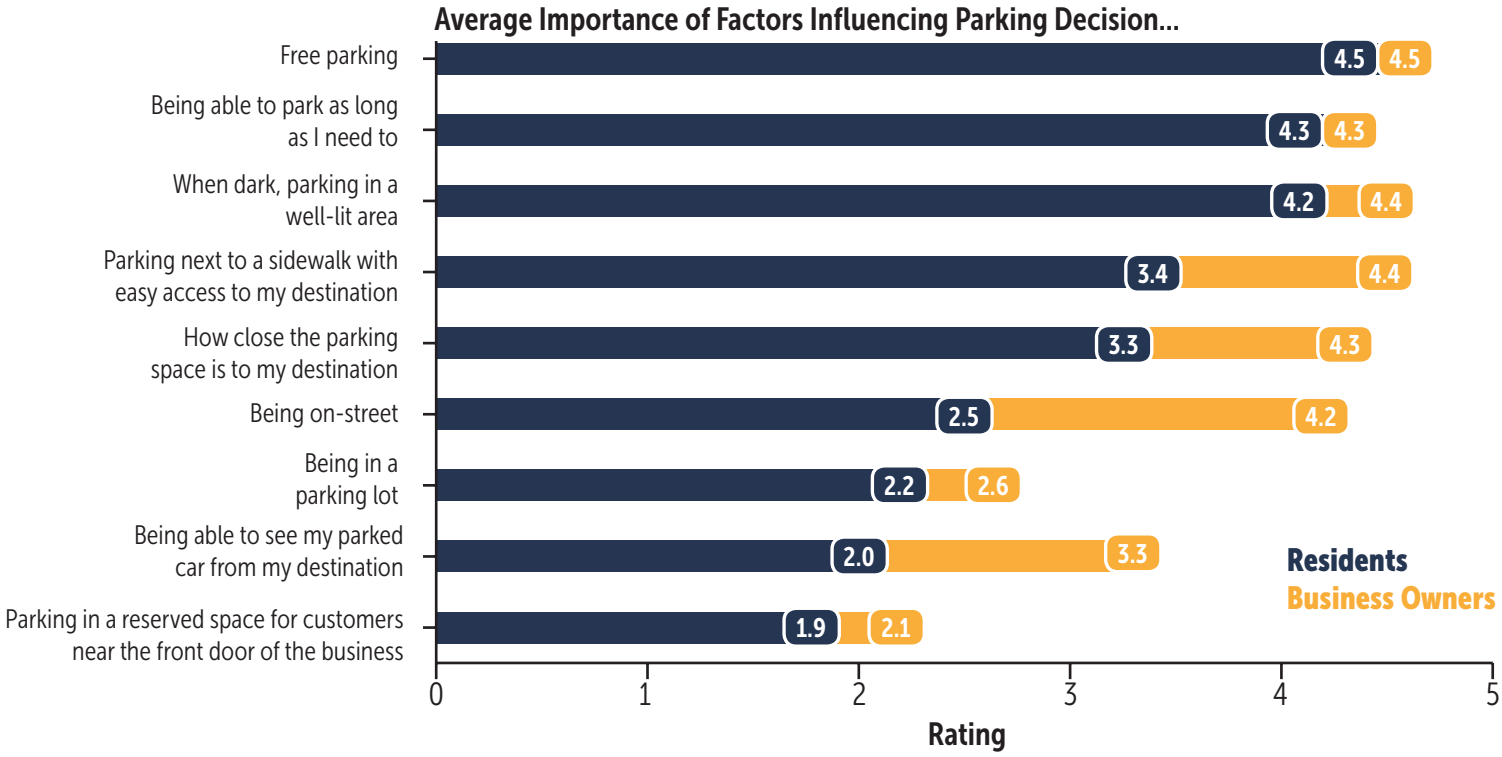
OFF-STREET SPACES
527

43% of spaces are occupied during peak business hours

The maximum peak occupancy represents the peak parking utilization for on-street and off-street parking facilities, regardless of time of day.

Stakeholder Input

As part of the public engagement process, the Steering Committee crafted two unique surveys to gauge the different needs and perspectives of downtown business owners and residents about parking in downtown Plymouth. There were 239 participants who completed the Downtown ***Plymouth Public Resident*** and ***Business Owner Input Surveys***. The Public Resident Input Survey asked participants to indicate the factors most likely to affect their parking decisions, illustrated as blue bars in the chart below. Residents prioritized availability of free and 24-hour parking, as well as parking in a well-lit area when dark as the top three factors. Business owners were asked what they thought residents valued, and their prioritized response concurred with the residents, illustrated as orange bars in the chart below.



What Does the Community Think About Parking?

When asked to indicate their overall satisfaction with the parking experience in downtown, the overwhelming majority of respondents indicated they are satisfied with the ease of walking from their car to their destination, as well as with the maintenance of parking facilities. However, the majority of respondents are unsatisfied with the availability of bicycle parking racks and having time-restricted spaces.

What are the Major Parking Issues when Trying to Park in Downtown? A Sample of Responses...

"Business owners and employees, especially the 200 block of Michigan Street, taking up parking spaces in front of their businesses. This, of course, prevents their customers from easy access to the businesses."

"Several of our customers complain if they go to multiple businesses they could easily spend more than 2 hours downtown, but don't want the hassle of moving their vehicle to avoid getting a ticket."

"I sometimes struggle when trying to leave/back out of the on-street parking along Michigan, due to the heavy traffic and difficulty of seeing around other parked vehicles."

"Pedestrians are not a priority in the downtown either. The way the traffic moves through the downtown area (speed) does not seem optimal or conducive to stopping to shop or browse."

"No Handicap Parking Spaces in front of our business. Many of our clients have mobility issues."

What would be the Single Parking Improvement for Downtown? A Sample of Responses...

"Asking business owners and workers to park in the parking lots or behind their stores if they have space."

"Improvements that make it easier, more appealing and safer to encourage pedestrians and bicyclists and slow down traffic."

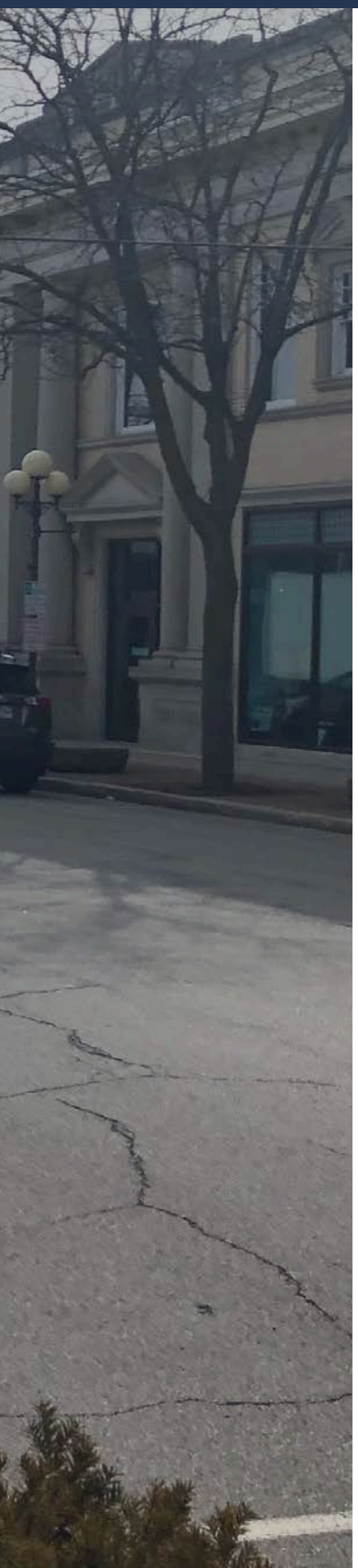
"Not having a limit on time you can park in a lot."

"Better parking along Michigan Street so that nobody has to pull out blindly into traffic because they can't see past the vehicle next to them."

"Extend the length of 2 hour parking to 3-4 hours to not detour visitors from shopping and dining downtown. We have loads of visitors annually that enjoy our downtown and we do not want to detour them from coming back and spending money, which equals economic development!"

3

PARKING DEMAND



The parking demand in downtown Plymouth is far different than the outlying areas around SR 17 and US 30. Downtown Plymouth has a mix of land uses, offers a walkable street grid, and has the ability to encourage people to park once and not drive to each destination.

In order to model future growth impacts on parking in downtown, MACOG further defined the study area into activity zones. This allowed MACOG to conduct a detailed parking demand analysis to closely portray where people are parking and the likely businesses they are visiting. This approach is based on national standards and practices while using observed behaviors and local data to better account for downtown Plymouth's parking patterns. This analysis provides the City and Discover Plymouth the current and future parking demands to later be used to frame the recommendations in Chapter 4.

Traditional Approach

Traditionally, land use planners and civil engineers have utilized the Institute of Transportation Engineers (ITE) Parking Generation Manual peak parking demand rates to determine a development's demand for parking. ITE rates are derived from several case studies around the nation and provide an analysis based on the size of development in an urban and suburban context multiplied by the standard peak parking rate to generate the maximum number of spaces each use or building needs.

However, ITE rates and methodologies often fail to capture the actual parking behavior or demand and assume that spaces are utilized at a constant rate throughout the day, calculating a peak demand rate for the worst-case scenario. The Business Input Survey indicated that downtown businesses have different peak demands throughout the day, see ***Stakeholder Input Report*** for survey results. Therefore, analyzing Plymouth's parking system using only ITE rates and methodologies at the block level for the entire study area is not an efficient way to understand the actual parking behavior between the existing supply and demand of parking as calculations would show Plymouth would need to build an "oversupply" of parking spaces. This would likely cause available land for prime real estate development to be sacrificed for a surface lot to meet the calculated demand on parking, which would not reflect the City's vision and goals for downtown Plymouth of being a vibrant, walkable destination.

Traditional Peak Demand Calculations

The traditional approach to calculate peak parking demand rates is to provide a designated supply for each land use based on the highest parking demand for that use. However, this does not account for fluctuations in demand by time of day and results in parking being overbuilt.

Activity Zone Analysis

To efficiently analyze the practical use and model the behavior of parking activity in downtown Plymouth, MACOG divided the study area into seven activity zones. Activity zones are comprised of no more than three blocks in any direction and are based on the major activity that is likely generating the parking demand. **Figure 2** on the subsequent page displays the seven activity zones and the available on-street and off-street public parking facilities.

Activity Zones

ZONE A: Courthouse & County Building

ZONE B: Mix of Professional Offices

ZONE C: Plymouth Public Library

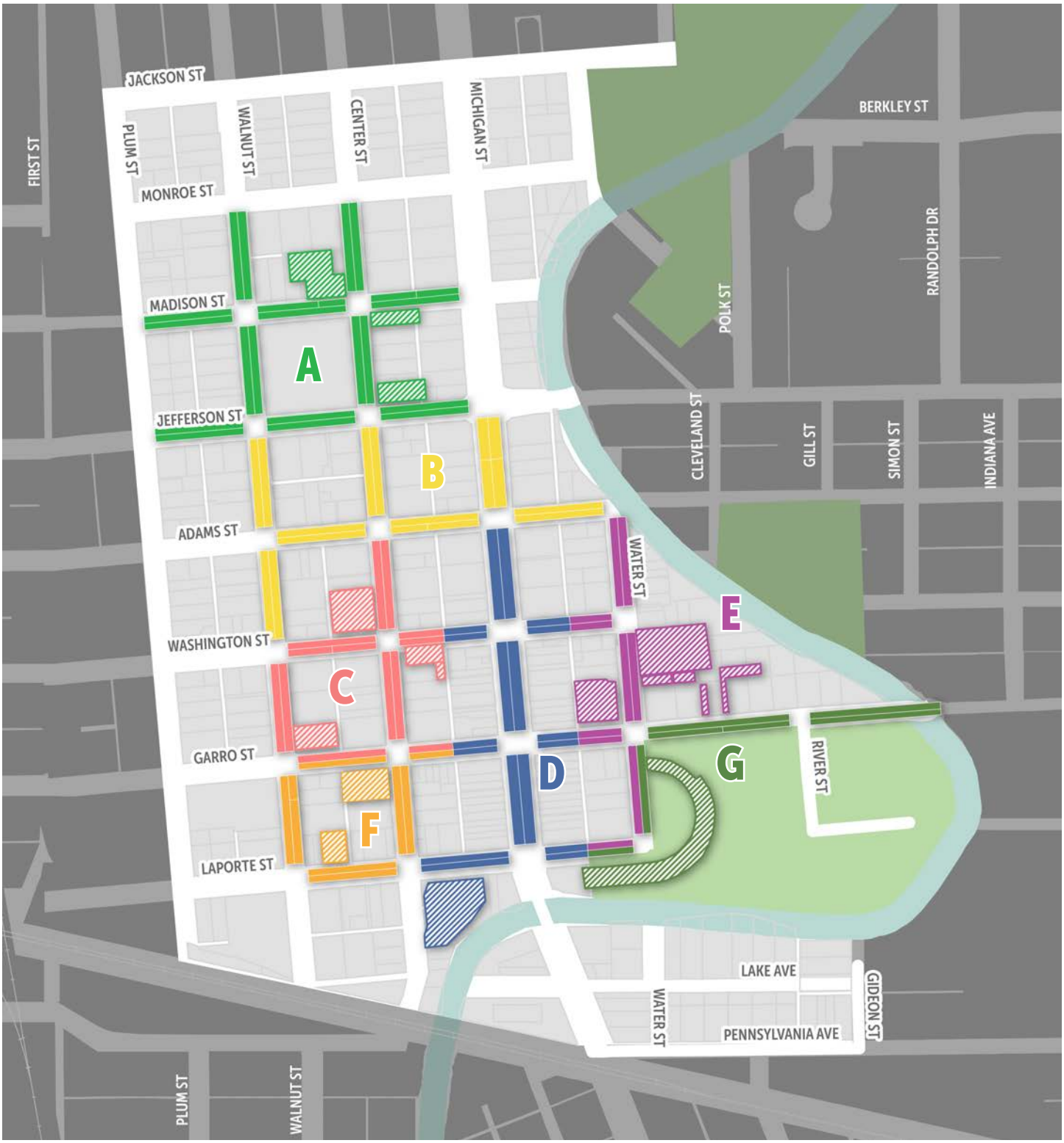
ZONE D: Downtown Plymouth Central Business District

ZONE E: Mix of Service Businesses

ZONE F: Plymouth Fire Department

ZONE G: River Park Square

Figure 2: Public Parking Activity Zones



Legend

Activity Zone: On-Street Public Parking

- Zone A
- Zone B
- Zone C
- Zone D
- Zone E
- Zone F
- Zone G

Activity Zone: Off-Street Public Parking

- Zone A
- Zone C
- Zone D
- Zone E
- Zone F
- Zone G

These seven activity zones provide a more accurate portrayal of where people are parking and the likely businesses or services within each zone they are walking to. Contrary to the ITE methodology of generating a peak demand rate by the individual use, MACOG generated demand rates by the activity zones to provide an observed peak rate. This allowed MACOG to understand the current and future parking needs identified in the next section of this report, and will later be used to provide strategic recommendations per zone rather than general strategies for the entire study area.

Although private parking is located within the activity zones, restricted parking for specific users will not satisfy the greater need for general public parking, unless shared-use parking agreements are established to allow public parking during periods when businesses are not in operation. Therefore, MACOG analyzed public parking as it better reflects the general public needs, where parking currently is shareable and will help the City of Plymouth understand when and where the parking supply in a given zone is occupied. This, in turn, will aid in identifying targeted parking management strategies for these zones.

Table 1 summarizes the observed parking demand by activity zone. The estimated parking surpluses are based on the maximum occupancy data contained in the ***Existing Conditions Report***.

As shown in the chart below, no activity zone has a parking deficiency. Each zone has a surplus parking supply with Zone C (Plymouth Public Library area) having the highest parking demand with 68 percent of the parking supply occupied. Zone A (County Courthouse and Services) had the second highest demand at 60 percent occupancy. Zone D (Central Business District) had the third highest demand at 56 percent occupancy.

Practical Capacity

Industry standards acknowledge parking facilities are efficiently utilized when 85 percent of spaces are full or reaches its practical capacity. Beyond this threshold, motorists have difficulty finding a space; causing an inconvenience to have to circulate and search longer and farther to find an available space. It may also lead to an increase in congestion, travel times, and potential safety concerns. If the practical capacity is factored in then the perceived available spaces are 961. MACOG observed 62 percent of the 961 spaces was occupied. That still leaves a surplus of 370 parking spaces.

Total Observed Demand

591 OCCUPIED SPACES

539 UNOCCUPIED SPACES

Table 1: Observed Parking Demand by Activity Zone

Zone	Available Capacity	Occupied Spaces	Percent Occupied	Surplus/ Deficit
A	202	122	60%	+80
B	113	48	42%	+65
C	171	116	68%	+55
D	228	128	56%	+100
E	208	102	49%	+106
F	86	41	48%	+45
G	122	34	28%	+88
Total	1,130	591	52%	+539

The perceived lack of parking may likely be from all users wanting to park closer to their destination. However, based on the ***Public Resident Input Survey***, employees are likely arriving early and consume the spaces closest to their employment, even the 2-hour on-street spaces. This leaves visitors searching longer and farther for the most convenient spaces, thus the perception of a parking shortage.

***Based on the observed demand, no zone has a deficient supply of parking.**

Parking Surplus
539 SPACES

Parking Demand Analysis

MACOG then incorporated the observed demands from each activity zone, as provided in **Table 1**, to generate an observed parking demand rate. This will give the City of Plymouth a better representation of the existing parking demands based on the land use for each activity zone and will aid in determining if the observed surplus from **Table 1** will be sufficient to accommodate future development demands.

Existing Parking Demand (Land Use Mix)

MACOG created a downtown business database by collecting a business' building information such as the property address, property owner, the number of occupants, total building area, and the type of business (categorized by land use) using Marshall County property tax records, Discover Plymouth's business inventory data, and MACOG GIS data. **Table 2** shows a summary of the existing land use mix by activity zones.

Using the summarized building area by activity zone, MACOG was able to calculate a zone's parking supply rate, the observed demand rate, as well as the number of spaces needed to support peak demand. Overall, there are approximately 1.51 parking spaces provided per 1,000 square feet of occupied downtown businesses with an observed peak demand rate of 0.93 spaces per 1,000 square feet. MACOG compared the adjusted parking needs by activity zone with the available parking supply to determine a zone's calculated parking deficiencies. The available parking supply in the seven activity zones is 1,130 spaces and the calculated spaces needed to support the current parking demands is 591 spaces. The analysis shows there is a surplus of 539 spaces and is adequate to meet current parking needs.

Table 2: Existing Downtown Land Use Mix

Land Use	Building Area (Sq. Ft.)
Retail	108,515
Restaurant	48,951
Service	11,395
Office	305,781
Industrial	12,067
Civic	150,251
Total	**636,960**
Vacant	68,441
Residential	238 D.U.

Rendering of the River Gate South Apartment Project

Future Parking Demand

The City has identified a couple of redevelopment sites (old train depots off of West LaPorte and Garro Streets) in the City of Plymouth's 2013 Comprehensive Plan; however, these sites are located several blocks outside of the study area and any future demands from these sites are not anticipated to impact downtown parking. Additionally, a new 45-unit apartment complex (River Gate South) is under construction on the south side of the Yellow River, located in the study area at the corner of Michigan Street and Lake Avenue as an effort to attract new families and individuals looking to live in an urban environment. The new complex will have reserved resident parking on-site and is not anticipated to impact downtown parking as residents will be within walking distance to downtown businesses and amenities.

Growth Scenarios

Although the aforementioned projects are not foreseen to have an impact on the parking demand in downtown, MACOG did estimate growth scenarios by activity zones to aid the City in making future planning decisions to accommodate parking impacts from future developments. MACOG identified minimal, moderate, and maximum growth scenarios and modeled the impacts of new development using the calibrated peak demand rate of 0.93 spaces per 1,000 square feet as a linear growth rate. This will aid the City to understand how parking demand would grow at the minimal, moderate, and maximum scenarios. MACOG also analyzed the impacts of a "full business occupancy" in downtown by activity zones to determine its demand and added parking deficiencies to the current parking activity. MACOG determined an overall growth scheme would assume a similar mix of existing land uses as the likely additions to downtown in the future.

The following growth scenarios were established:

Minimal Growth Scenario

+100,000 SF

-39 parking spaces*

Moderate Growth Scenario

+200,000 SF

-125 parking spaces*

Maximum Growth Scenario

+400,000 SF

-181 parking spaces*

****As growth occurs in downtown, it is likely that some of the parking supply such as surface lots would be lost to accommodate for new development.***

How will growth affect parking?

Current Scenario

591 PARKING DEMAND

+539 PARKING SURPLUS

BUILDING AREA
636,960 SF

Minimal Growth Scenario

684 PARKING DEMAND — **+93 vehicles**

+407 PARKING SURPLUS — **-39 spaces**

BUILDING AREA
736,960 SF — **+100k SF**

Moderate Growth Scenario

777 PEAK DEMAND — **+186 vehicles**

+228 PARKING SURPLUS — **-125 spaces**

BUILDING AREA
836,960 SF — **+200k SF**

Maximum Growth Scenario

962 PEAK DEMAND — **+371 vehicles**

-13 PARKING DEFICIENCY — **-181 spaces**

BUILDING AREA
1,036,960 SF — **+400k SF**

Scenario Takeaways

Over time as development increases, the City will experience an increasing demand for parking. In order to accommodate new development, it is anticipated that the supply of parking will be sacrificed such as surface lots to make way for new buildings. However, it is not until the maximum growth scenario, when the City could see 400,000 square feet added to the downtown land use mix that the City will experience a parking deficiency. Adding more parking alone in response to an increasing demand will not achieve the City's goals for downtown. **The City, in partnership with downtown businesses, will need to balance the provision of parking with improved management.**

4

PARKING STRATEGIES

The parking management strategies support the City of Plymouth's and Discover Plymouth's vision and goals to improve the parking experience and management in downtown Plymouth. The City and its diverse stakeholders will need to continue to work together to implement the strategies as each strategy supports another to improve the overall parking system and experience.

This section of the final report is categorized by the identified parking management themes. Each theme includes a description of the challenges and recommended solutions, as well as the action strategies the City can incrementally implement to improve parking.

These strategies emphasize the need to:

- Increase the awareness and attractiveness of parking facilities;
- Provide clear and consistent information on allowances;
- Improve parking management through consistent enforcement;
- Reduce parking demand in high activity areas to support development; and,
- Increase the utilization of underserved parking assets.

Community engagement was central through the process and held as the foundation to understand the stakeholders' challenges and needs with parking. The Steering Committee engaged the public on two different days of the week to garner public input on the proposed strategies and prioritize the timeframe for implementation.

Plymouth Farmers' Market

Downtown Plymouth

Parking Management Strategies

The Steering Committee identified the strategies that will improve the daily parking experience and system. These strategies focus on achieving the Steering Committee's goals of ensuring downtown is conducive for development, strengthen economic vitality, attract new talent and businesses, and accommodate alternative modes of transportation. There are 32 action strategies organized by six (6) parking management themes or categories:

- **Wayfinding**
- **Parking Allowance**
- **Parking Enforcement**
- **Connections**
- **Safety**
- **Maximize Parking Usage**

An overview of the parking management themes, how it applies to the City of Plymouth, and the strategies are provided on the subsequent pages. Additionally, a strategy's timeframe and priority level for implementation are also included. Each of the parking management strategies was identified by the Steering Committee based on the findings from the series of technical reports. To prioritize the strategies, the Steering Committee engaged the public at a Farmers' Market event and at downtown businesses. Committee members asked the public to select their top three strategies they thought would make it easier for users to want to come downtown and stay longer. Over 140 individuals participated. The top three strategies participants selected were: being able to "park once" in a lot without time restrictions, include more bike routes and bicycle parking racks, and provision of clear and consistent parking signage and allowances as the top three strategies.


River Park Square

Wayfinding

One key component of an efficient parking system must include comprehensive parking signage that is clear and consistent. Providing direction to appropriate parking locations for those unfamiliar with the area, information on time and usage restrictions, and enforcement periods are few of the functions for a comprehensive parking signage system. Parking signs must be easily seen, clearly understood, and consistently present around destination areas to eliminate any confusion as to whether a parking facility has any restrictions. The table below summarizes the strategies to improve signage.

Although the City of Plymouth has installed a directional signage system directing users to major destinations and some parking locations in Plymouth, as shown to the right, publicly accessible lots are not clearly identified or marked and were observed to be underutilized during all times of the day. Directional signage for public parking is provided at the intersections through Michigan Street but no parking lot identification signs are provided to clearly let drivers know where the public lots are located. Public lots should have a name on the sign to help those unfamiliar with the area identify their location and be able to navigate back to the lot concluding their visit. Additionally, information regarding the parking allowances should be displayed.

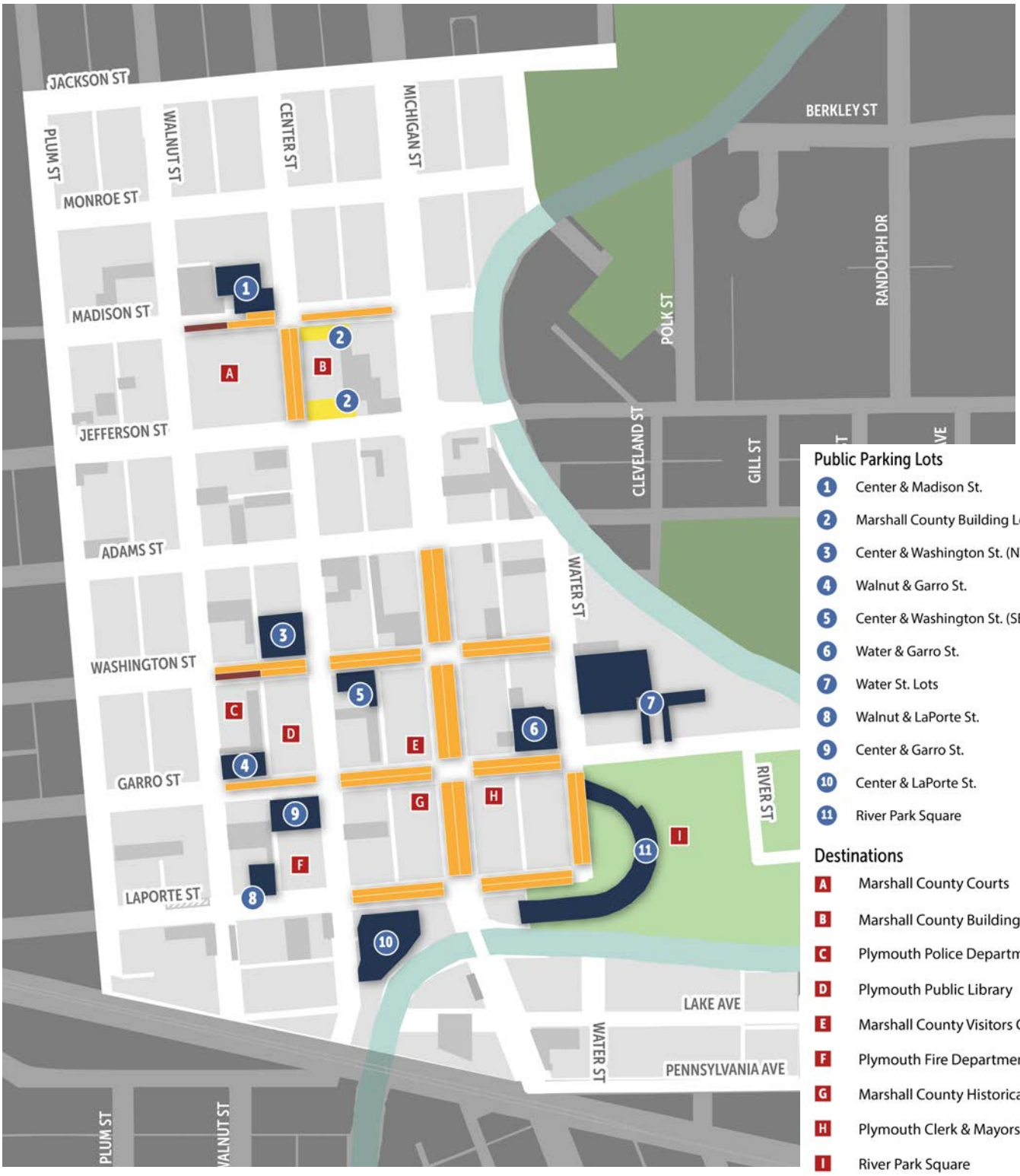
To maximize usage, it is recommended that the City implement a comprehensive directional signage system that is scaled towards drivers and pedestrians to consistently guide them to the publicly accessible lots. **Figure 3** on the subsequent page is a proposed parking map that highlights public parking locations and parking allowances.

Current wayfinding signage throughout downtown Plymouth.

A short-term strategy could include using a pedestrian-scale sign system similar to the depicted "Walk Your City" example.

Strategy	Action Items	Time Frame
Implement a comprehensive parking wayfinding system to make it easier to identify parking facilities for all types of travelers	Utilize a pedestrian-scale sign system similar to "Walk Your City" to direct users	Short term
	Design and implement formal directional and informational wayfinding signs for drivers to locate parking lots	Long term
Increase awareness of parking restrictions	Make on-street and off-street signs more uniform and visible	Short term
Increase awareness of parking facilities	Create a parking brochure and an online parking map	Short term
	Install on-site informational kiosks to disseminate information on parking locations, regulations, walk times to area attractions, bike parking locations, events, and any related changes to parking options	Long term

Figure 3: Proposed Public Parking Map



Legend

Proposed On-Street Parking Allowances
- 2 Hour Parking
- Reserved Parking

Current Off-Street Parking Allowances
- Reserved & Private Parking

Proposed Off-Street Parking Allowances
- 24 Hour Parking
- 45 Minute Parking

Parking Allowance

While parking signs are prevalent throughout the study area, many parking facilities surrounding destinations like the Plymouth Public Library and Marshall County Courthouse do not have parking signs and are unclear about parking allowances. This creates confusion for the user in knowing if they are parked illegally. Additionally, this creates confusion as to whether the user is in a time restricted space, causing the user to be in fear of receiving a parking violation or deciding to avoid downtown altogether. It is recommended that parking signs be posted consistently around major destinations so allowances are clearly understood by all users.

Parking lots 3 and 9 (see **Figure 3**) adjacent the Plymouth Public Library and lot 10 off LaPorte Street (see **Figure 3**) have inconsistent parking allowances with only the front row of spaces having a 2-hour time restriction while the remaining spaces in the lot have no indication of restrictions. This is confusing and unclear for potential users to know if the entire lot has restrictions.

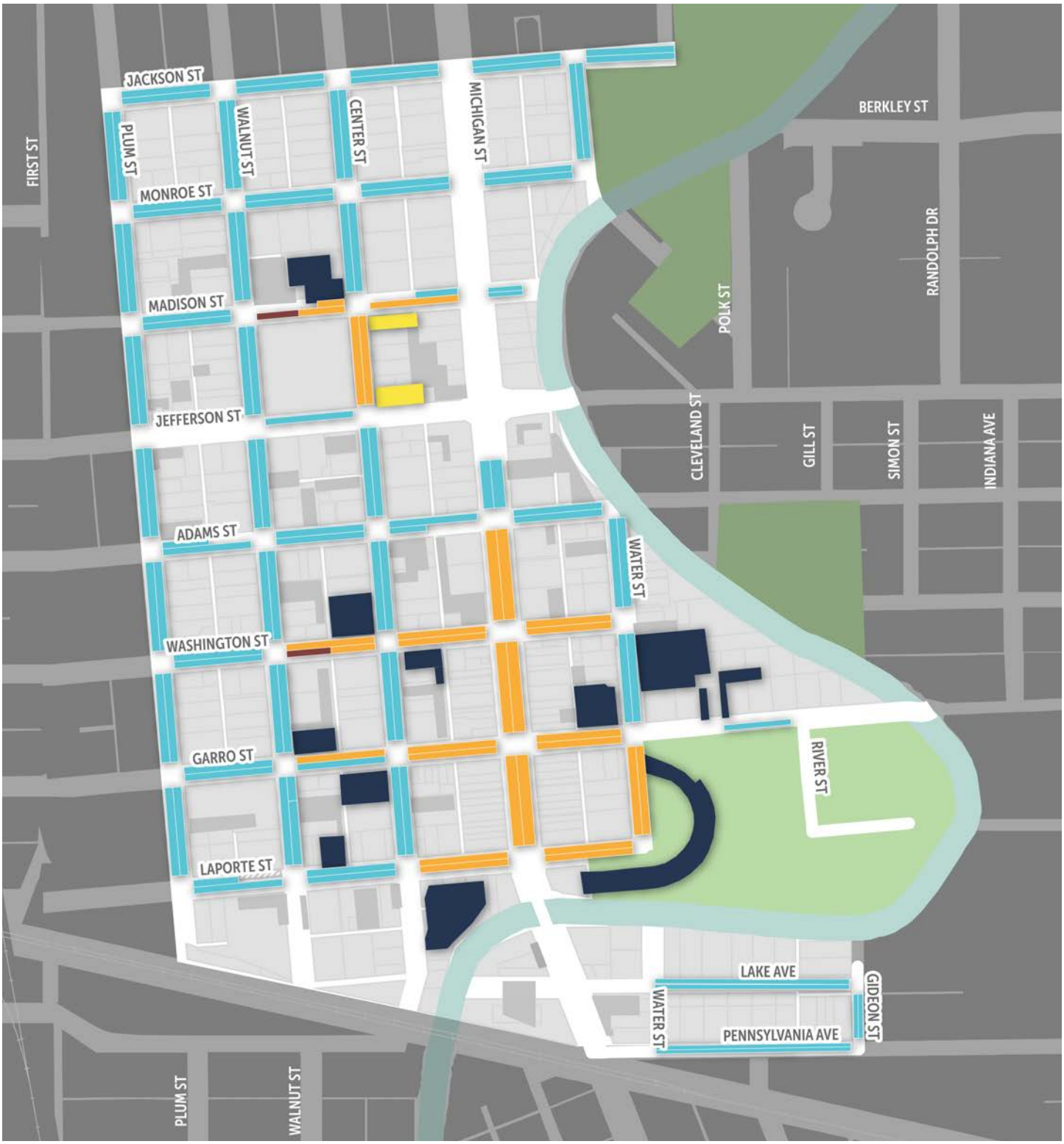
A majority of on-street parking within the study area is marked with a 2-hour time limit. Although parking in the Central Business District is primarily marked with a 2-hour time limit, several prime spaces in front of businesses are restricted to 15 minutes. For clarity and consistency, it is recommended retaining the 2-hour limit for on-street parking in the Central Business District, around the Public Library, and Courthouse. This also encourages turnover but is not too short to limit someone's ability to complete their visit. All other on-street parking locations should have no time restrictions, see **Figure 4** on the subsequent page for proposed parking allowances. The City should explore the feasibility of retaining the 15-minute spaces in front of City Hall for quick drop-off trips.


Marshall County Courthouse

LaPorte Street Public Lot

Strategy	Action Items	Time Frame
Encourage high-turnover for prime parking spaces near businesses	Continue the use of the 2-hour time restrictions along Michigan Street and side streets within one block of Michigan Street between Adams Street and LaPorte Street	Short term
Reevaluate time restrictions at key locations	Explore the feasibility of retaining the 15-minute restriction	Short term
	Explore the feasibility to provide an exception to the 2-hour restriction in front of businesses who provide services requiring more time (i.e. dentist)	Short term
	Explore the feasibility to remove the 2-hour time restrictions on parking lots to accommodate for 24-hour parking	Short term
	Explore the opportunity to provide all-day, on-street options in low demand areas that may be more convenient than parking lots	Short term

Figure 4: Proposed Parking Allowances



Legend

Proposed On-Street Parking Allowances

- No Restriction
- 2 Hour Parking
- Reserved Parking

Proposed Off-Street Parking Allowances

- 24 Hour Parking
- 45 Minute Parking

Current Off-Street Parking Allowances

- Reserved & Private Parking

Parking Enforcement

On-street parking in downtown is seen as a high demand need for customers and business owners. Customers want the convenience of parking in front of the business they intend to visit and for the entire duration of their visit. Business owners want the quick access to their business and convenience for deliveries. Another key component of an efficient parking system is enforcement of the parking regulations. The intent of enforcement is not to be seen as a primary revenue source from fines but to discourage offenders from abusing the parking limits. Patrons need to realize that long-term parking in short-term spaces, while convenient, is discouraged and not the most reliable parking facility for long-term visits. Additionally, the City should encourage business owners to utilize back alleyways for deliveries and other business activities to leave these prime on-street spaces for their customers.

Water Street Public Parking Lot

There is a mix of perceptions that enforcement is either non-existent and patrons abuse the parking limits or it is too targeted in certain areas and receives frequent violations. An effective parking enforcement strategy is clear and consistent enforcement in the high parking demand areas such as Michigan Street, Plymouth Public Library, and Marshall County Courthouse. The City, through dedicated staff and/or use of modern parking management technology, can improve the efficiency of parking enforcement.

2-Hour Limits on Michigan Street

Several businesses in low parking demand areas were observed to have reserved on-street customer spaces and there is a question from the community as to whether these spaces are enforced being two blocks away from Michigan Street. Without proper enforcement, non-customers of the business could take advantage of the limited enforcement. The City should engage these businesses to explore the feasibility of removing the reserved spaces as ample public parking is available surrounding these businesses.

Strategy	Action Items	Time Frame
Clear and consistent parking enforcement	Dedicate City Police staff or partner with Discover Plymouth to establish an ambassador to consistently patrol parking	Short term
	Encourage employees and customers who need longer term parking to utilize the 24-Hour limit public parking lots	Short term
	Encourage business owners in the Central Business District to use the back alleys for deliveries	Long term
Utilize modern parking management technology	Use license plate recognition or other technology to efficiently patrol parking	Long term

Downtown Post Office

Bicycle Parking Racks at River Park Square

Connections

While sidewalks and other pedestrian infrastructure are highly prevalent in the Central Business District, as you move out of the downtown core, the pedestrian experience frays and diminishes with a lack of lighting around parking facilities, crosswalks, and appealing landscape at parking facilities. Participants of the ***Stakeholder Input Surveys***, when asked their top three factors in choosing a place to park, indicated being able to park in a well-lit area as one of their top factors.

Although pedestrian infrastructure is prevalent in the Central Business District, accommodations for bicyclists are not. Bicycle parking racks are sparingly seen in the study area with accommodations at the library and River Park Square. Participants of the ***Stakeholder Input Surveys***, when asked their level of satisfaction with parking in downtown, indicated they are unsatisfied with the availability of bicycle parking racks. Additionally, there are no dedicated bicycle lanes prevalent in the study area leading to and from the Central Business District.

Providing better opportunities to safely walk and bike to downtown destinations will encourage patrons to walk or bike more, reducing the demand for parking and help create a "park once" environment. It is recommended the City continue to promote bicycle and pedestrian connections to the downtown area, improve lighting, and landscaping at parking facilities.

Strategy	Action Items	Time Frame
Enhance the walking environment with adequate pedestrian access to parking facilities	Improved lighting on walkways and in parking lots to decrease the safety concern at night	Short term
	Install pedestrian countdown timers in areas not provided or ensure existing timers are working adequately	Short term
	Ensure sidewalk networks are complete, accessible, and appealing for a positive experience in downtown	Long term
Enhance the biking environment in downtown	Create a program to install bicycle parking racks in downtown	Short term
	Explore opportunities to install on-road bicycle facilities, and that are complete and accessible	Long term
Enhance the landscaping and stormwater management	Consistent landscape and planter maintenance and enhancements	Short term
	Decrease the amount of impervious surface to include rain gardens, bio-swales, and other green infrastructure	Long term

Safety

Currently, Michigan Street holds the highest potential for accidents and dangerous conditions. It is a major thoroughfare with the highest traffic out of any street in the immediate area, including high foot traffic. The high amount of traffic is an issue for vehicles attempting to pull out from angled on-street parking and for any pedestrians attempting to cross the road. Participants of the Stakeholder Input Survey expressed an issue of needing better pedestrian countdown timers along Michigan Street during peak traffic hours. It may take two or three traffic signal cycles before someone is able to cross the street, forcing people to cross even if they do not have the right of way. This is hazardous for anyone, but especially so for children or persons with a disability.


Michigan Street
Angled On-Street Parking


Michigan Street
Angled On-Street Parking

Due to the angle of the pavement markings, it can be extremely difficult for vehicles to leave their parking spaces on Michigan Street because adjacent vehicles can create blind spots. The street itself is also narrow enough that fast-moving cars may not be able to avoid collisions with someone backing out of a parking space along the street. The overwhelming majority of patrons expressed in the Stakeholder Input Surveys that having to pull out from a space onto Michigan Street during high volumes of traffic flow is dangerous and keeps them away from downtown.

These conditions also cause issues with patrons wanting to ride their bikes into downtown. No dedicated bicycle lane means bicyclists must be wary of all cars on the road, forcing them to use the sidewalks which causes safety hazards for pedestrians.

It is recommended the City partner with the Indiana Department of Transportation (INDOT) to explore opportunities to install traffic calming measures along Michigan Street such as bump-outs to reduce crossing distances and narrow travel lanes to slow drivers down. The City and INDOT should also explore opportunities to install on-street bicycle facilities, as well as maintain high visibility crosswalks and improve countdown timers.

Strategy	Action Items	Time Frame
Reevaluate the on-street parking configuration along Michigan Street to increase the safety and awareness of all users	Partner with INDOT to create alternative pavement marking configurations	Short term
	Coordinate improvements with the City's Complete Streets initiative	Long term
Implement traffic calming measures along Michigan Street to make it safer and accessible to bike and walk	Maintain high visibility crosswalks	Short term
	Reduce crossing distances with bulb-outs and narrow vehicular travel lanes	Long term
	Reexamine corner radii to minimize crossing distances and speed of cars turning	Long term

Water Street Public Parking Lot

River Park Square Parking Lot

Maximize the Use of Parking Facilities

In order to increase awareness of facilities and create a built environment that supports new development, the City should create a "park once" environment. That means a patron can feel comfortable and conveniently park their car one time and walk or bike to several destinations before returning to their car. As new development occurs, private isolated surface parking should be minimized as this development pattern does not create an inviting and appealing environment. Several private lots were observed to be underutilized during any time of the day. It is anticipated as new development occurs that some public and private surface parking would be lost and it is recommended that the City and business owners partner together to create a shared parking program. This would give the public an opportunity to utilize private surface parking during off-peak business times to offset the demand for parking.

Although there are several public parking lots within a block of Michigan Street, many of the lots were observed to be underutilized because patrons do not want to walk from the public parking lot to their destination due to not feeling comfortable, safe, or perceived inconvenience. Similarly, business owners and employees instinctively choose to park in front of their business for convenience and move around to avoid the 2-Hour limit rather than parking a block away in a public lot and walk. In order to accommodate those who need long-term parking, it is recommended the City allow a 24-hour limit on public parking lots. See **Figure 4** for proposed public parking allowances.

Strategy	Action Items	Time Frame
Increase the demand in underutilized parking lots	Encourage business owners and employees to park in 24-hour limit parking lots to leave prime parking spaces near the front of businesses available for customers	Short term
Create "Park Once" shared parking opportunities	Explore opportunities to create a shared parking program that increases the utilization of underserved private parking facilities in which makes private lots accessible to the public	Short term
Increase the viability to live and work in downtown Plymouth to increase non-auto trips and reduce the demand for parking	Review the City's Zoning Ordinance to ensure parking requirements best reflects the strategies from this study	Short term
	Support walkable, mixed-use development within downtown	Long term
	Encourage infill residential development	Long term
	Work with developers to integrate new public parking into developments to accommodate for lost in parking	Long term

Principles to Manage Parking

This study discovered that specific locations for new parking were not warranted as the analysis indicated the study area has an adequate supply of parking. This study identified that even during peak demand numerous off-street parking facilities surrounding high demand activity areas such as the Library, Courthouse, and Central Business District were shown to have a surplus of parking spaces available. However, when the Steering Committee engaged the community to garner input on the proposed strategies, many people indicated that they did not know the surface lots near these high activity areas were available for public parking. This is a major parking management issue as this is the likely cause for the lack of parking perception. Patrons first look for the convenient on-street spaces and will circle until a parking space becomes available but do not realize there is plenty of off-street parking one block away from their destination. Adding more parking, especially private spaces, will only worsen the City's parking issues.

These parking management strategies address the issues related to the high on-street demand, confusing signage, and inconsistent allowances. Additionally, these strategies will help guide the City through land development decisions in downtown as the modeled growth scenarios show future development will continue to generate new off-street parking supply. The City will be able to collaborate with developers to ensure developments support bicycle and pedestrian connections to downtown and new parking facilities is shared and publicly accessible to efficiently offset parking demand. Decisions to build new parking should be evaluated in the context of the City's and Discover Plymouth's goals from this study.

Principles to Manage Parking

- Ensure **parking is shared and publicly accessible** to the greatest degree possible.
- Manage new parking in context to the larger system to **support the needs of all users and reduce parking demand**.
- **Enhance the downtown experience** through cohesive urban design, an appealing and active environment, access for bicyclists and pedestrians, and safety.
- Ensure **parking facilities are attractive and easy to locate and use**.

River Park Square Image: Courtesy of Troyer Group

CITY OF PLYMOUTH

DOWNTOWN PARKING STUDY

Michiana Area Council of Governments
227 W. Jefferson Blvd.
County-City Building, Room 1120
South Bend, IN 46601