

PREPARED BY

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Downtown Windsor Parking Plan

July, 2022



CONTENTS

I. Introduction.....	3
a. Project Overview	3
b. Study Goals.....	4
II. Existing Conditions	5
a. Land Use/ Parking Generators	5
b. Parking Inventory	6
c. Walksheds.....	7
d. Pedestrian Infrastructure.....	8
e. Bike and Trail Infrastructure	9
f. Transit	9
g. Existing Land Use	9
h. Zoning	10
i. Previous Studies	10
j. Parking Utilization	12
i. September 2016 Weekend Parking Utilization.....	12
ii. April 2018 Weekday Parking Utilization	14
iii. August 2018 Weekend Parking Utilization	15
iv. July 2019 Weekday Parking Utilization	15
v. Harvest Festival 2021 Parking Utilization.....	16
vi. September 2021 Weekday and Weekend Parking Utilization.....	17
III. Stakeholder/ Public Outreach	22
IV. Parking Demand Forecasts and Analysis	28
V. Parking Management Strategies and Recommendations	38
VI. Parking Facility Options	42
a. Design and Cost Assumptions.....	42
i. Site 1: Town Hall Annex / Board Grove.....	43
ii. Site 2: 140 North 5 th Street.....	45
iii. Site 3: 213-215 N. 4th Street.....	45
VII. Residential Parking Management	47
VIII. Implementation framework.....	49



List of Figures

Figure 1: Downtown Parking Study Boundaries	4
Figure 2: Downtown Land Use Parking Generators	5
Figure 3: Downtown Parking Study Inventory	7
Figure 4: Downtown Parking Study Walksheds	8
Figure 5: Downtown Parking Study Pedestrian Infrastructure	9
Figure 6: September 2016 Weekday Parking Utilization	13
Figure 7: April 2018 Weekday Parking Utilization	14
Figure 8: August 2018 Weekend Parking Utilization	15
Figure 9: July 2019 Weekday Parking Utilization	16
Figure 10: Harvest Festival 2021 Parking Utilization	17
Figure 11: September 2021 Weekday Parking Utilization	18
Figure 12: September 2021 Saturday Parking Utilization	19
Figure 13: Existing Parking Supply v. Demand	20
Figure 14: Existing Parking Supply v. On- and Off-Street Demand (Weekday)	20
Figure 15: Existing Parking Supply v. On- and Off-Street Demand (Weekend)	21
Figure 16: Public Parking Survey Results	24
Figure 17: Stakeholder Parking Survey Results	26
Figure 18: Summary of Public Comments	27
Figure 19: ITE Parking Demand Graph Example	28
Figure 20: Backlots and DDA Parcels	30
Figure 21: Weekday 2-Year New Parking Demand Forecasts	31
Figure 22: Weekday 5-Year New Parking Demand Forecasts	31
Figure 23: Weekday 10-Year New Parking Demand	32
Figure 24: Weekend 2-Year New Parking Demand Forecasts	33
Figure 25: Weekend 5-Year New Parking Demand Forecasts	33
Figure 26: Weekend 10-Year New Parking Demand Forecasts	34
Figure 27: Weekday 2-Year Future Supply v. Demand	35
Figure 28: Weekday 5-Year Future Supply v. Demand	35
Figure 29: Weekday 10-Year Future Supply v. Demand	36
Figure 30: Weekend 2-Year Future Supply v. Demand	36
Figure 31: Weekend 5-Year Future Supply v. Demand	37
Figure 32: Weekend 10-Year Future Supply v. Demand	37
Figure 33: Low and Medium Cost Capacity	41
Figure 34: Potential New Parking Lot/ Garage Locations	43
Figure 35: Town Hall Annex/ Board Grove Surface Parking Lot Concept	44
Figure 36: Rendering of Town Hall Annex/ Board Grove Parking	44
Figure 37: 140 North 5th Street Surface Parking Lot Concept	45
Figure 38: 213-215 North 4th Street Garage Concept	46
Figure 39: Rendering of 213-215 North 4th Street Parking	46

List of Tables

Table 1: Downtown Parking Breakdown by Spaces	6
Table 2: Summary of Previous Parking Study Recommendations	11
Table 3: Comparison of ITE Parking Demand to Town Code Requirements for Downtown	29
Table 4: Summary of Downtown Land Use Changes	29
Table 5: Summary of Consensus Recommendations	40
Table 6: Summary of Parking Facility Options	47
Table 7: Downtown Parking Implementation Framework	49



I. INTRODUCTION

Located five miles east of the I-25 corridor, Windsor's historic downtown offers shopping, dining and a variety of outdoor events for the local community and northern Colorado. In 2011, the Downtown Development Authority was formed with the intent to provide additional financial resources for investment within the district. In 2012, the DDA conducted a parking study to provide an understanding of parking needs within the corridor and to identify opportunities for improvement. Eight years later, the Town of Windsor and the DDA partnered to reevaluate parking, taking recent community and business growth and seasonal parking trends into consideration. Research and public engagement began in 2020 and the new parking plan is slated for completion and adoption in 2022. The Downtown Parking Plan will provide the town, the DDA, and its constituents with a document that guides improvements and multi-modal networks downtown to ensure safety and public access.

A. PROJECT OVERVIEW

For decades, Windsor's downtown has been a place to gather, socialize and celebrate. As downtown continues to grow into a thriving town center, development has put stress on the Town's transportation infrastructure. For many years, the Town has not required new or redevelopment to include any new parking, as the existing supply was more than adequate for all users. Windsor's increased popularity, charming atmosphere, as well as several new businesses operating along Main Street have steadily increased the number of visitors. The increase in visitors utilizes downtown parking during weekdays, weekends, and special events. As a result, the existing on- and off-street parking facilities have increasingly been nearing capacity during peak times. Additional planned new businesses and other events could cause parking facilities to reach or exceed capacity in the future.

This study will provide quantifiable data on the existing parking supply and demand, as well as present industry best-practices for on-street and off-street parking management strategies to support the parking needs of institutions, businesses, residents, and visitors. Specifically, this study will address existing conditions, existing demand, user experience, future demand, and create a strategic plan for operation and development for the next ten years

The study area, as shown in **Figure 1**, extends from Birch Street and Windsor Lake to the north, Walnut Street to the south, 7th Street to the west and 2nd Street to the east.



FIGURE 1: DOWNTOWN PARKING STUDY BOUNDARIES

B. STUDY GOALS

Having a well-planned and coordinated parking system is vital to the long-term fiscal health of the town and ensures the continued viability of Windsor's small-town character. Through effective management, research and planning, the town can guide sustainable downtown growth. The Downtown Parking Study will:

- Update 2012 parking study with a larger survey area
- Conduct community meetings, surveys and interviews to engage business owners, community members and stakeholders
- Develop a two-, five- and ten-year parking outlook
- Recommend downtown parking strategies to increase accessibility and decrease congestion
- Research best practices for downtown parking management
- Support multi-modal and complete streets initiatives



II. EXISTING CONDITIONS

A. LAND USE/ PARKING GENERATORS

Downtown Windsor is home to numerous destinations that generate parking demand. The majority of trip generators in the study area are commercial, especially along Main Street. Restaurants, places of worship, medical facilities, government buildings, and parks are also present in the study area, as shown in **Figure 2**.



FIGURE 2: DOWNTOWN LAND USE PARKING GENERATORS



B. PARKING INVENTORY

A comprehensive parking inventory was conducted in April 2020. Curbside space was measured and categorized at the block face level by regulation, which include: Angled, Parallel, Handicapped, No Parking and Unregulated. In addition, off-street paved and unpaved parking spaces were also inventoried at the parcel level and categorized by public and private. In total, the study area has 1,625 total parking spaces including 816 curbside and 825 off-street spaces. The space breakdown between residential and commercial blocks as well as public Town and DDA lots is shown in **Table 1** and **Figure 3** below.

TABLE 1: DOWNTOWN PARKING BREAKDOWN BY SPACES

Total Spaces	On-Street	Off-Street
1625	800	825
Residential blocks	475	
Commercial blocks	325	400
DDA lots*		225 - 300
Public lots		125

*Actual parked vehicles may surpass estimated capacity since the parking spaces are not marked or dimensioned

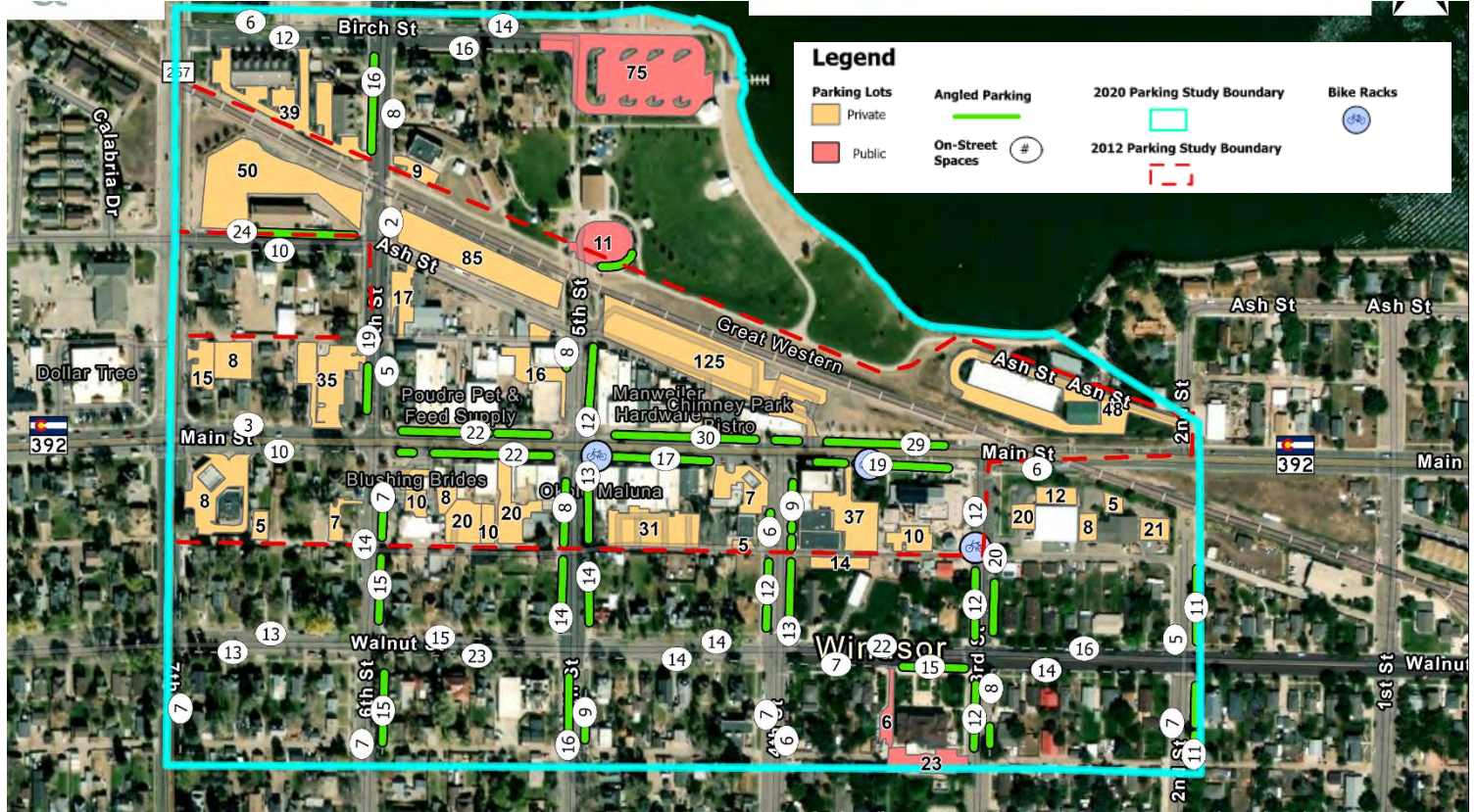


FIGURE 3: DOWNTOWN PARKING STUDY INVENTORY

C. WALKSHEDS

Walkshed analysis helps to visualize distances pedestrians can cover from a specific starting location. The intersection of 5th Street and Main Street, the center of the study area, was selected as a starting point. The concentric polygons around the starting point show distances pedestrians could cover over a quarter mile (green) and a half of a mile (red). A quarter mile translates to a five-to-ten-minute walk dependent upon individual walking pace; this is an industry standard in a walkshed analysis. As shown in **Figure 4**, nearly all of the parking spaces in the downtown area are within a five-minute walk of the center of downtown. A ten-minute walkshed includes some curbside parking along Birch Street and portions of the Windsor Lake public parking lot.

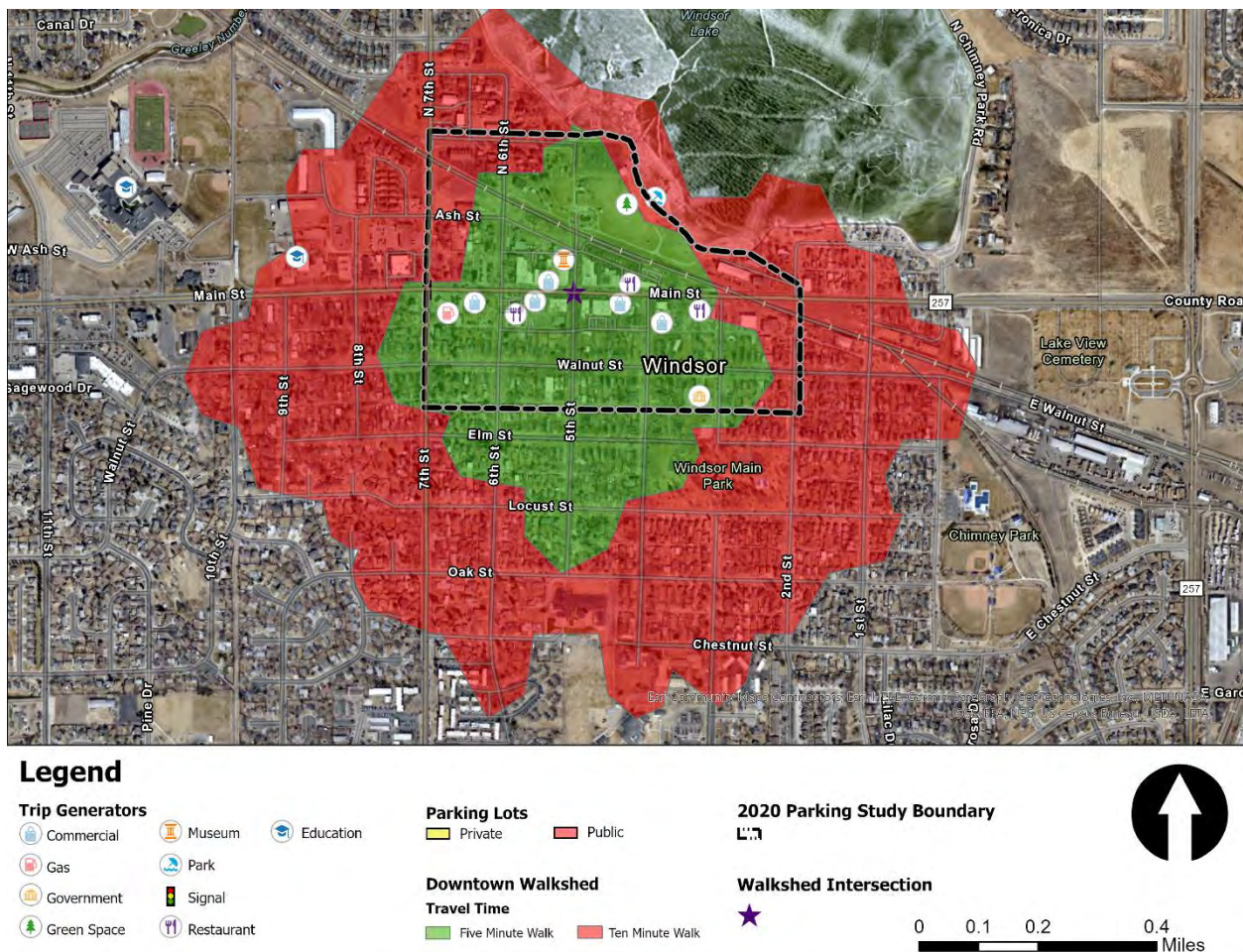


FIGURE 4: DOWNTOWN PARKING STUDY WALKSHEDS

D. PEDESTRIAN INFRASTRUCTURE

The study area contains an interconnected pedestrian network, with sidewalks along both sides of nearly all streets in the study area, as shown in **Figure 5**. Marked crosswalks are also present at all intersections along Main Street and several along Walnut Street. The single traffic signal in the study area is located at the intersection of 7th Street and Main Street. The other intersections in the study area are two-way and one-way stop controlled.

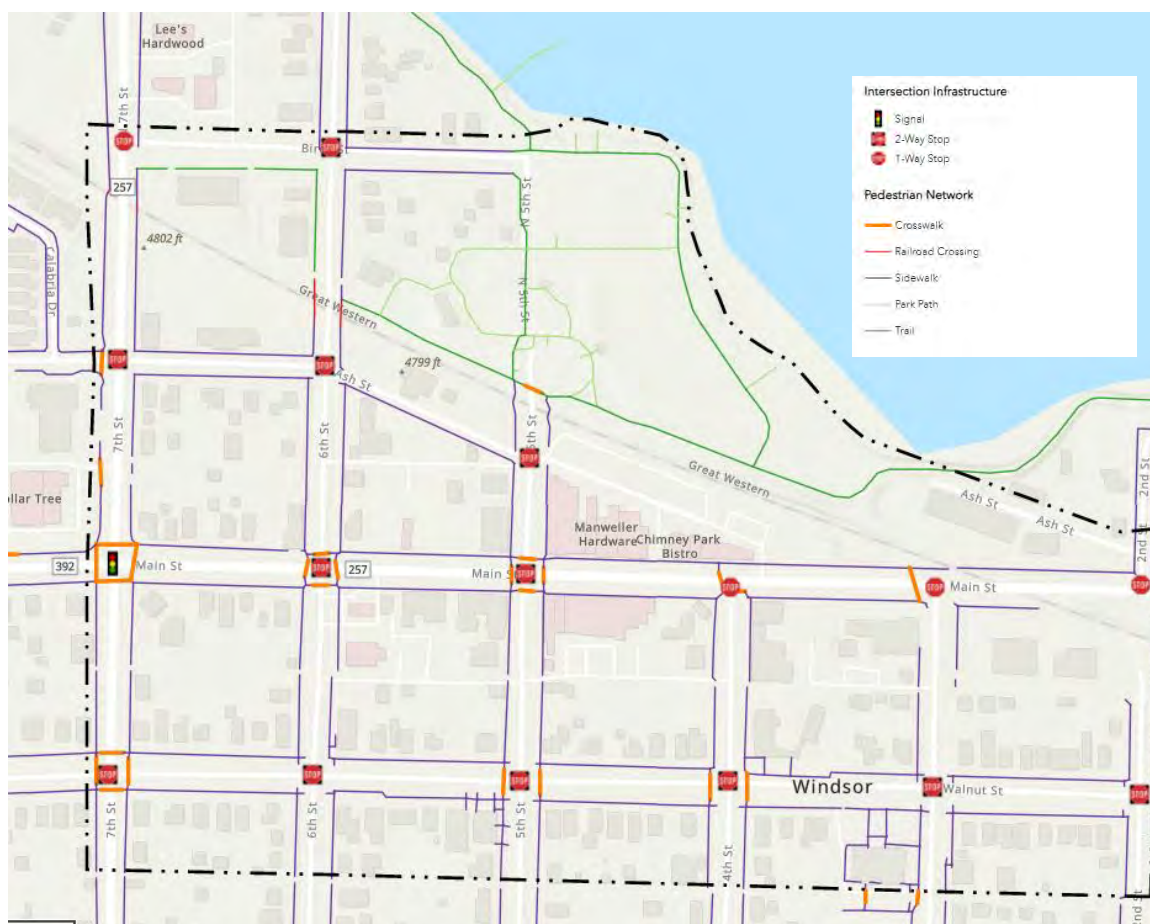


FIGURE 5: DOWNTOWN PARKING STUDY PEDESTRIAN INFRASTRUCTURE

E. BIKE AND TRAIL INFRASTRUCTURE

The study area contains both shared use paths/ trails and designated bike loops. The Windsor Lake Trail, which follows the shoreline around Windsor Lake, is classified as both a bike loop and pedestrian trail. The Outer Loop bike trail follows 7th Street south to Eastman Park Drive. Within the study area, on-street bike routes include portions of Main St and Walnut St.

F. TRANSIT

The Poudre Express, which began running in January 2020, is a commuter line connecting Greeley, Windsor, and Fort Collins. This commuter line runs four times in the morning and three times in the afternoon. Local Windsor stops include locations at 15th & Main Street and Eastman Park Drive & SH 257.

G. EXISTING LAND USE

Existing Land Use in the study area is varied and shows the close relationship of downtown Main Street to adjacent residential areas and recreational park uses. The study area is bisected by the Main Street central business corridor, with mostly single-family residences to the south and mixed-use and multi-family residential to the north. There are other uses throughout the study area as well, including commercial/ light industrial to the east, institutional/ government to the south and public parks space around Windsor Lake to the north.



H. ZONING

The primary zoning classification in the study area is Central Business, covering the area north of Main Street and west of 3rd Street. The remaining Main Street area to the east of 3rd Street is classified as General Commercial. The southern zone of the study area is classified as Single Family Residential and contains Windsor Town Hall and some Main Street businesses.

I. PREVIOUS STUDIES

A review of recent plans and studies was completed to identify previous findings or recommendations related to parking in the downtown area. These documents include the previous DDA parking study, various Town strategic plans (such as Transportation, Comprehensive, Roadway, Trails, Parks, Recreation and Culture), as well as CDOT and Northern Front Range MPO comprehensive plans.

A matrix of relevant recommendations from prior studies is summarized in **Table 2** below. As none of the recommendations from the DDA's previous parking study were implemented, they were retained for consideration in this study.



TABLE 2: SUMMARY OF PREVIOUS PARKING STUDY RECOMMENDATIONS

Study	Recommended Improvement
DDA Downtown Parking Study	• Request employees park in off-street lots, use alternate commuting methods and provide incentives for those who do • Implement time restricted (two-hour parking maximums) for Main Street parking spaces • Improve sidewalks, lighting, and alley access to parking in rear of buildings • Install secure bike parking • Purchase of land and construct off-street parking facility • Construct complete street improvements in downtown area for multimodal access • Improve Main Street safety by strictly enforcing speed limits and expanding pedestrian zones • Convert Main Street Parking to back-in angled parking • Establish event parking through agreements with private owners for additional parking • Install "Customer only" parking signs • Install temporary and moveable signage for event parking • Implement specific parking, shuttle, bike, and walking management plan • Adhere to parking code • Simplify shared parking agreement (from district-based agreements) • Create new parking code requirements for redevelopment
Town Comprehensive Plan	• Develop a payment-in-lieu of parking (PILOT) program to maximize parking use and limit unneeded parking spots/lots
Town Transportation Master Plan	• Create a downtown Bicycle and Pedestrian Safety Plan • Invest in significant, high quality bus stop infrastructure (benches, shelters, lighting, bike parking) • Market and promote transportation options • Implement a bicycle wayfinding program including branding and sign locations
DDA Plan of Development	• Introduction of a parking program that provides sufficient public parking spaces within the district. Options include: - o Construction of new lots/garages - o Increased effectiveness of existing parking - o Implement programs reducing need for parking - o Establish special parking zones and regulations • A revamped pedestrian and vehicular circulation system
Town Strategic Plan	• Revamp of the parking configuration and walkability of the downtown area



In addition, a synthesis of national best practices of similar sized downtowns was reviewed to identify suitable parking management strategies, including local municipalities such as Greeley and Loveland

Notable strategies include:

- Creation of one or more parking districts
- Capital improvements such as signage and wayfinding, striping, parking lot resurfacing, lighting upgrades
- Extending pedestrian walksheds to increase parking options with improvements to mid-block crossings and access to pedestrian streets.
- Multiple options to manage different user groups - on-street time limits, designated employee lots, permit zones, loading zones, ADA spaces, and pay parking options
- Demand management strategies to further reduce parking demand (e.g. transit passes for employees or residents, provision of bike parking/shares, etc.)
- Technology base solutions such as traveler information on the web and printed maps, mobile payment, pay to stay longer
- Regulatory strategies such as graduated parking with free all-day parking zones further from downtown and permit parking

How to Use Passport



J. PARKING UTILIZATION

Over the course of the study, parking utilization was collected multiple times during weekday and weekend periods, event and non-event time periods, and using multiple methodologies (e.g. field and historical aerial imagery) to develop a current snapshot of downtown parking demand.

i. September 2016 Weekend Parking Utilization

Parking data was collected from aerial imagery taken on Saturday September 3, 2016, at 9:30 AM. As shown in **Figure 6**, curbside utilization at this observed time averaged between 15% and 20%, with hotspots near First Christian Church (Walnut and 6th St) and north of Main St on the west side of 5th St. Off-street utilization was between 25% and 30%, with hotspots located in private parking lot near the 7-11 Gas Station on Main St and 7th and the shopping block on the south side of Main St between 6th and 5th St.

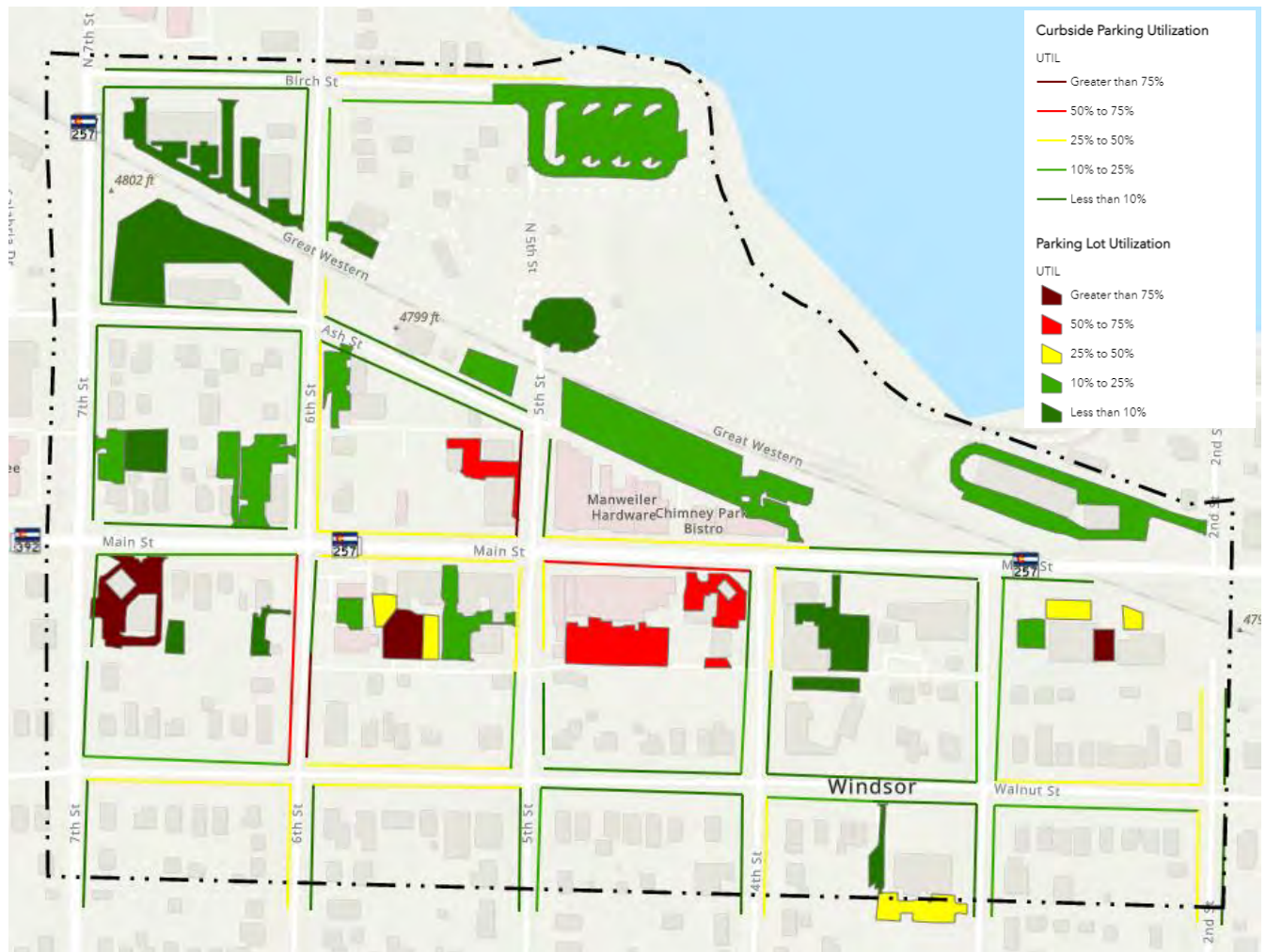


FIGURE 6: SEPTEMBER 2016 WEEKDAY PARKING UTILIZATION

ii. April 2018 Weekday Parking Utilization

Parking data was collected using aerial imagery taken on Tuesday April 3, 2018, at 10:30 AM. As shown in **Figure 7**, curbside utilization at this observed time averaged between 20% and 25%, with hotspots near Town Hall and north of Main St on the west side of 5th St. Off-street utilization averaged between 35% and 40%, with hotspots located at the Town Hall Lot, the private lot near the 7-11 Gas Station, and the private lot south of the Main St shopping center between 5th St and 5th St.



FIGURE 7: APRIL 2018 WEEKDAY PARKING UTILIZATION

iii. August 2018 Weekend Parking Utilization

Parking data was collected from aerial imagery taken on Saturday August 11, 2018, at 9:00 AM. As shown in **Figure 8**, curbside utilization at this observed time averaged between 20% and 25%, with hotspots near First Christian Church (Walnut and 6th St), the north side of Main Street between 5th and 7th St, and near the residential area north of Walnut St and 4th St. Off-street utilization was between 30% and 35%, with a hotspot located in the town lot near the south entrance to Boardwalk Park.



FIGURE 8: AUGUST 2018 WEEKEND PARKING UTILIZATION

iv. July 2019 Weekday Parking Utilization

Parking data was collected from aerial imagery taken on Monday July 19, 2019, at 1:50 PM. As shown in **Figure 9**, curbside utilization at this observed time averaged between 20% and 25%, with hotspots near First Christian Church (Walnut and 6th St), around the shopping area located north of Main St, and between 6th St and 5th St. Off-street utilization averaged between 25% and 30%, with a hotspot located in the private lot north of Main St, behind the shopping area between 7th St and 6th St.



FIGURE 9: JULY 2019 WEEKDAY PARKING UTILIZATION

v. Harvest Festival 2021 Parking Utilization

Mead & Hunt conducted parking data collection activities over Saturday September 4th (9 AM to 7 PM), Sunday September 5th (12 PM to 5 PM) and Monday September 6th (10 AM to 3 PM) surveying all curbside and off-street parking lots within the study area on an hourly basis. The survey time periods coincided with numerous events including the Farmer's Market, an outdoor movie, a concert on the boardwalk, and a parade. Both parking utilization and duration data was collected using license plate recognition technology to digitally scan vehicle license plates. Key findings include:

- Curbside parking utilization: For the entire study area, overall curbside parking utilization averaged between 45% to 55%. On all days, hot spots of 100% parking utilization were found along the 300 and 400 blocks of Main Street and 3rd and 4th Street between Main Street and Walnut Street.
- Off-Street parking utilization: For the entire study area, overall off-street parking utilization averaged between 30 to 50%. On all days, hot spots of 100% parking utilization were found along lakefront and backlots as well as surrounding the Mill.

Figure 10 illustrates a time lapse of parking utilization for Saturday September 4th.

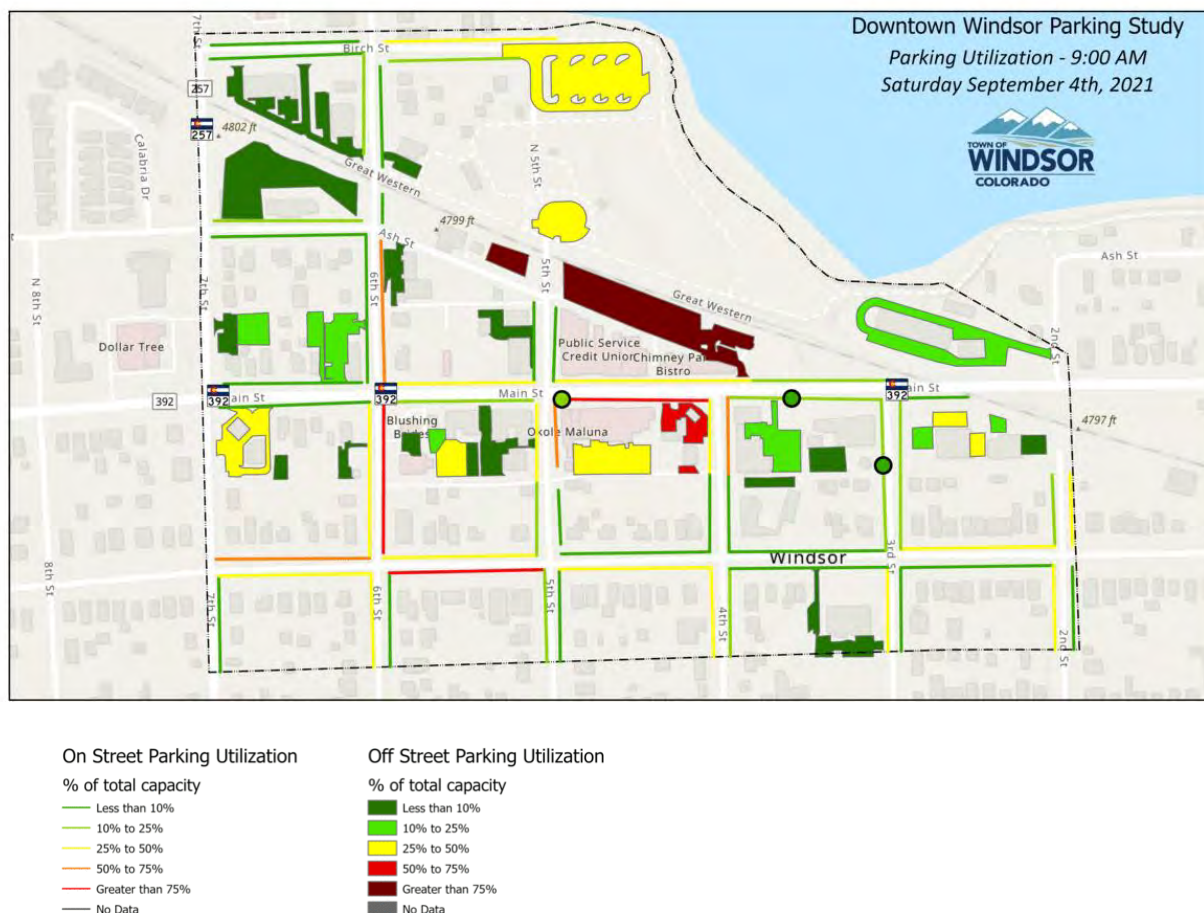


FIGURE 10: HARVEST FESTIVAL 2021 PARKING UTILIZATION

vi. September 2021 Weekday and Weekend Parking Utilization

Mead & Hunt conducted parking data collection activities over several weekday and Saturdays in September when schools, businesses and government offices were open, in-person, and on normal schedules. The hourly parking data collection was conducted from 7 AM to 7 PM for all curbside and off-street parking lots within the study area on an hourly basis. Both on-street and off-street parking utilization averaged 25% throughout the study area. Hotspots of up to 75% utilization included off-street lots south and north of Main Street in the AM and midday. This includes the backlots and the 500 and 600 blocks of Main Street. **Figures 11 and 12** illustrate a time lapse utilization of weekday and weekend parking utilization.

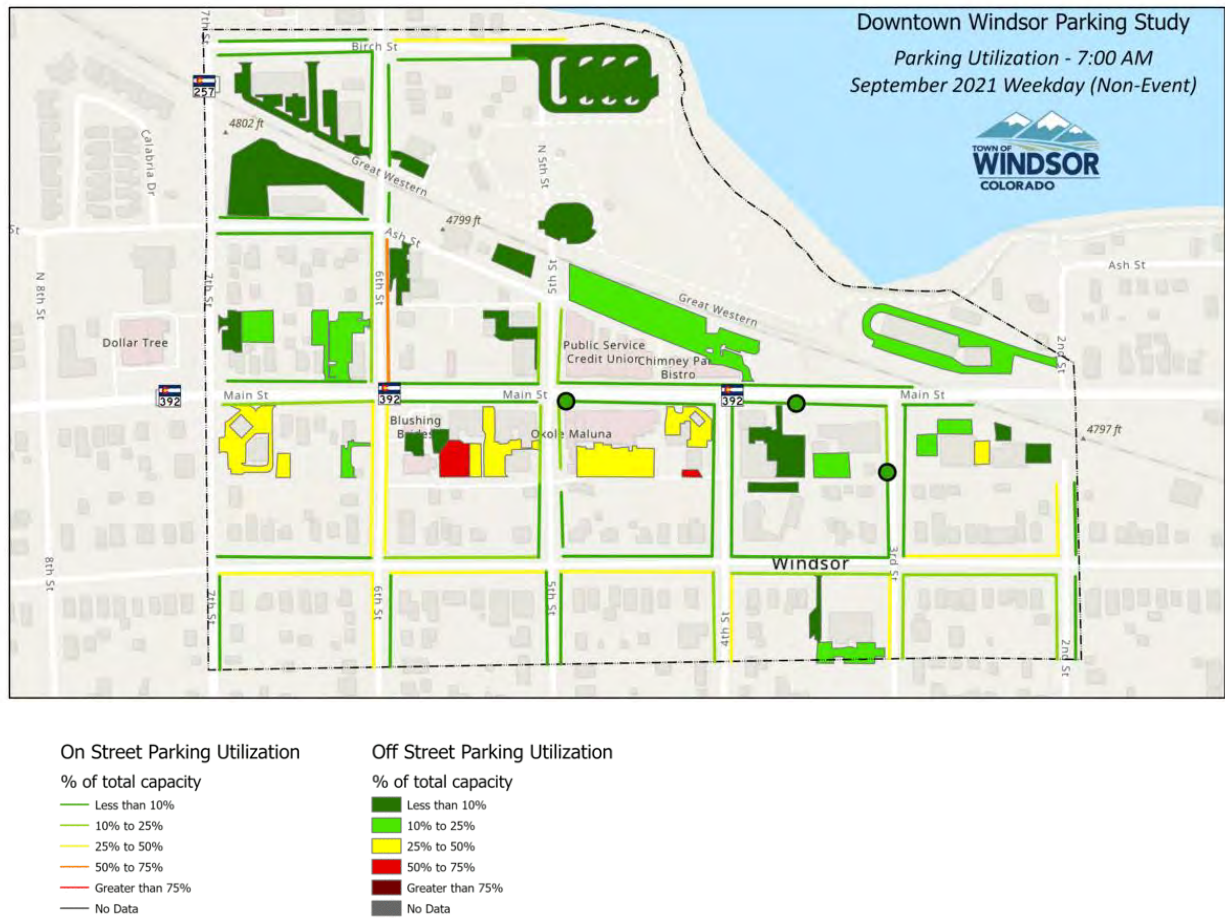


FIGURE 11: SEPTEMBER 2021 WEEKDAY PARKING UTILIZATION

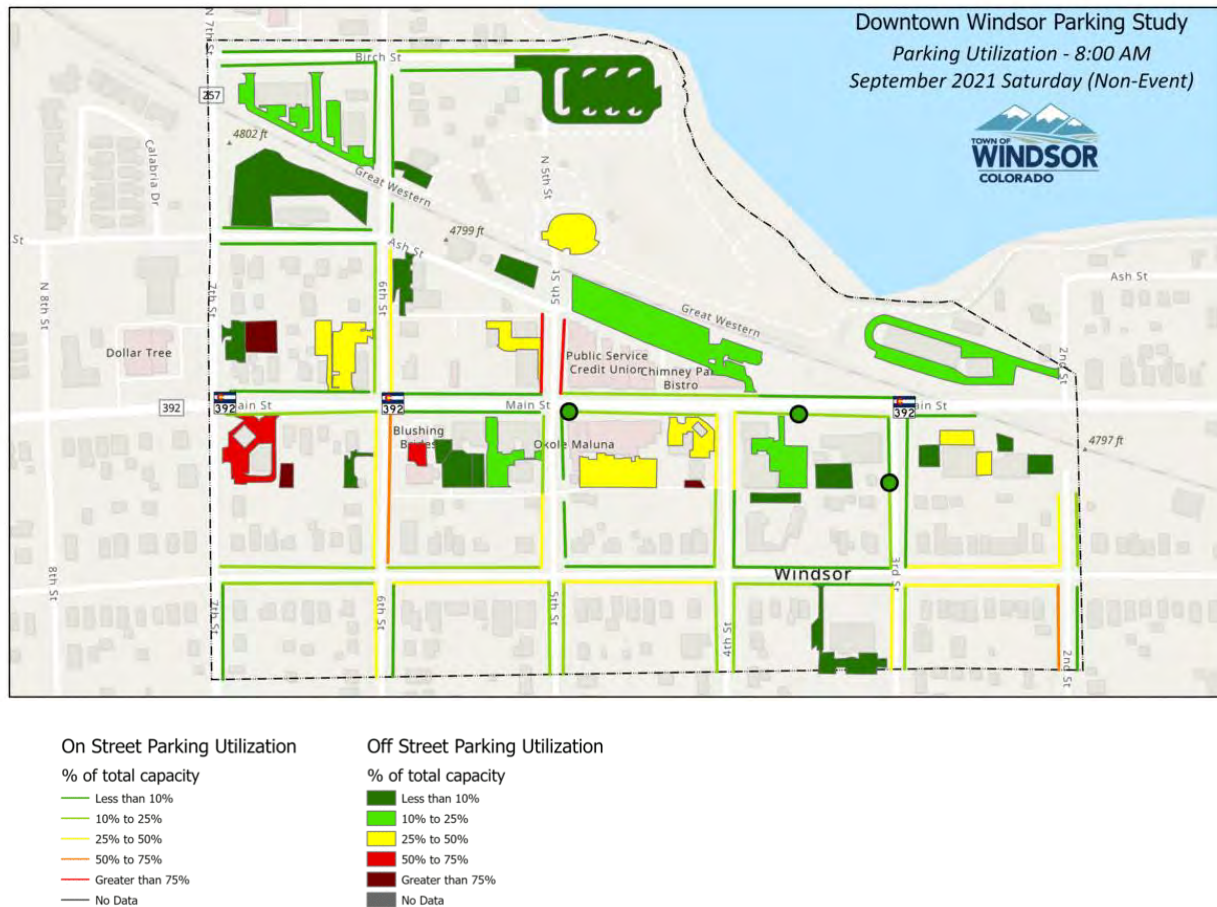


FIGURE 12: SEPTEMBER 2021 SATURDAY PARKING UTILIZATION

A further breakdown of existing parking demand vs. supply on an hourly basis for a typical weekday and weekend day for on- and off-street spaces can be seen in **Figures 13-15**. Although some specific blocks experience more concentrated demands, the current parking supply exceeds the demand during all time periods for the overall downtown area.

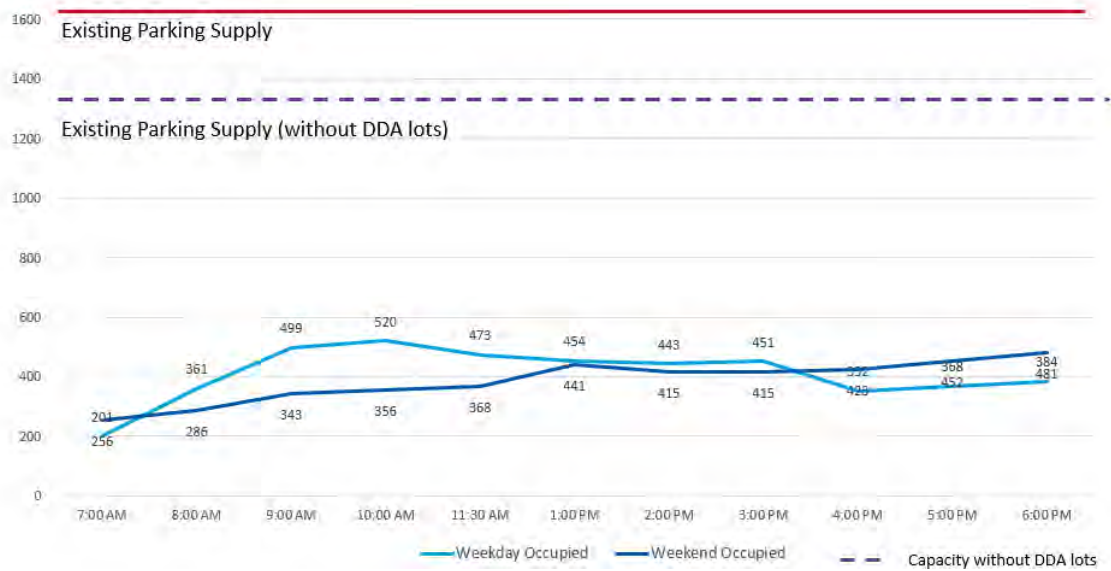


FIGURE 13: EXISTING PARKING SUPPLY V. DEMAND



FIGURE 14: EXISTING PARKING SUPPLY V. ON- AND OFF-STREET DEMAND (WEEKDAY)

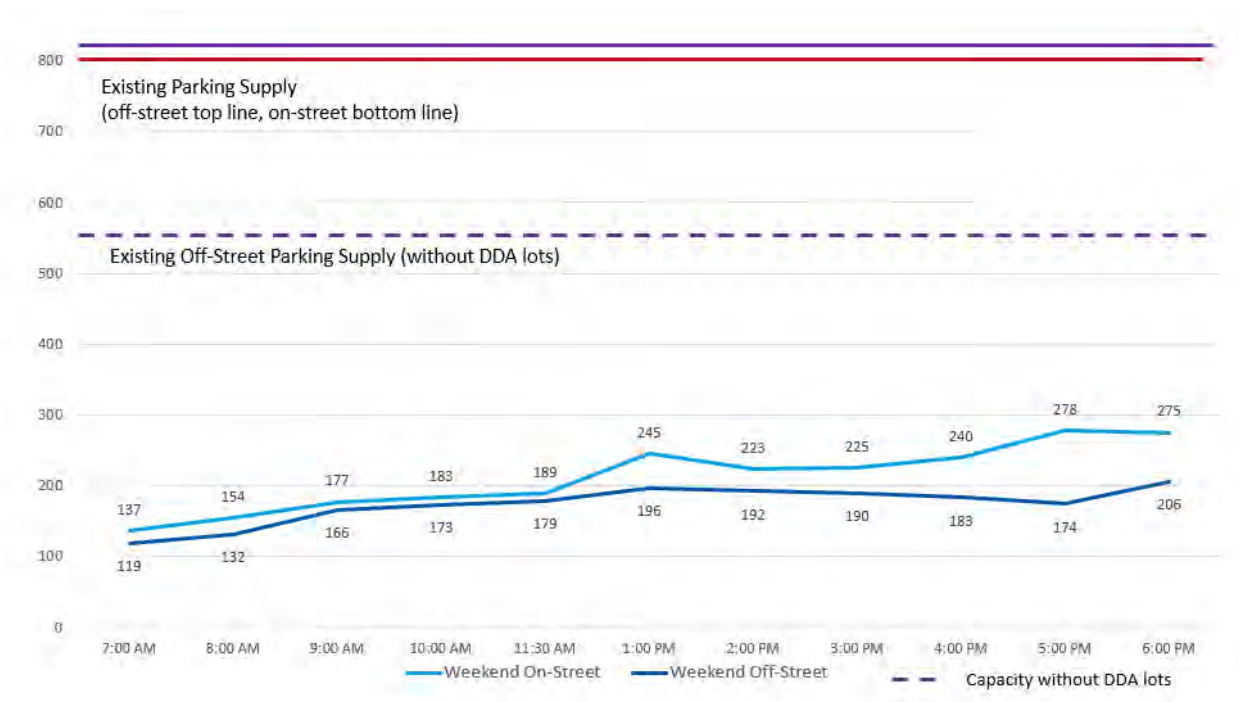


FIGURE 15: EXISTING PARKING SUPPLY V. ON- AND OFF-STREET DEMAND (WEEKEND)

III. STAKEHOLDER/ PUBLIC OUTREACH

The study conducted extensive stakeholder and public outreach. A project webpage/ storyboard was available on the Town's website and project members attended Town events such as the Harvest Festival. Also, several public meetings occurred during the study to present existing conditions and draft recommendations. In addition, a downtown parking committee was formed and met throughout the study to discuss existing conditions, parking management strategies and to develop consensus on study recommendations. A timeline of activities is shown in below.



As part of the stakeholder and public outreach, a public survey questionnaire and business/ property owner questionnaire were administered to understand experiences, perceptions, and concerns about parking downtown. The surveys were administered in August and September of 2021 via the Town's social media platforms, postcards, and SurveyMonkey. Surveys were also emailed and hand delivered to over 75 business/ property owners on the DDA's distribution list, and over 350 responses were received. The most





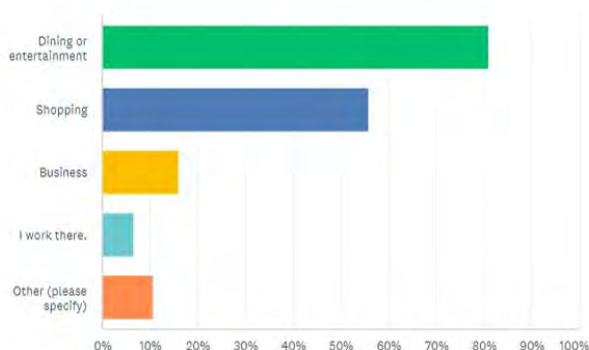
popular trip purpose to downtown was for dining or entertainment (80%), and most respondents currently utilized on-street parking for their trips (90%). 65% of respondents preferred to park within one block of their destination, and over 90% stated they could typically find a parking space within 1-2 blocks from their destination. Less than 20% of trips were made by bike or foot.

Approximately 60% of respondents stated that if they could not find a space at a convenient distance, they would park further than desired; however, 35% said they would drive somewhere else outside of downtown instead. The stated level of support for the following parking and technology practices were as follows:

- Timed parking limits – 40% moderately support
- Paid parking – 79% oppose
- Better parking availability information – 31% strongly support
- Signage/ wayfinding – 40% strongly support
- Designated curb zones for pick up and drop off – 36% moderately support

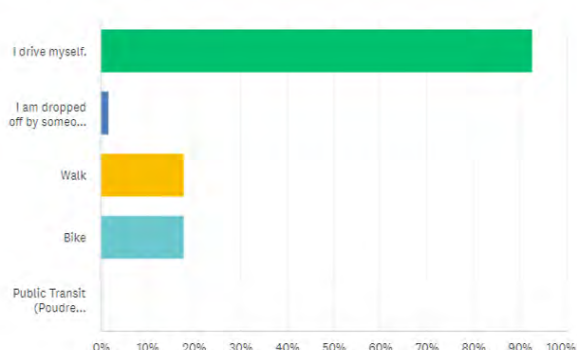
What are your top reasons for visiting downtown Windsor?

Answered: 369 Skipped: 0



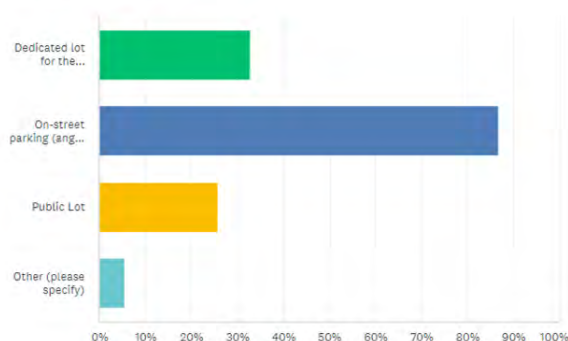
How do you typically travel to downtown Windsor?

Answered: 369 Skipped: 0



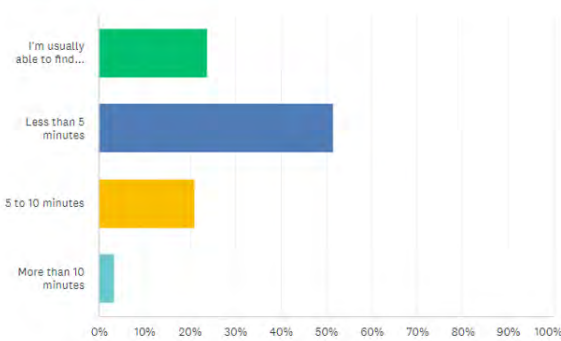
When you drive downtown, which options do you utilize for parking?

Answered: 323 Skipped: 46



How much time do you typically spend looking for a parking space?

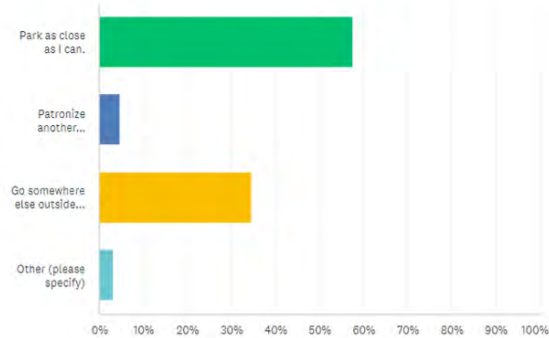
Answered: 322 Skipped: 47





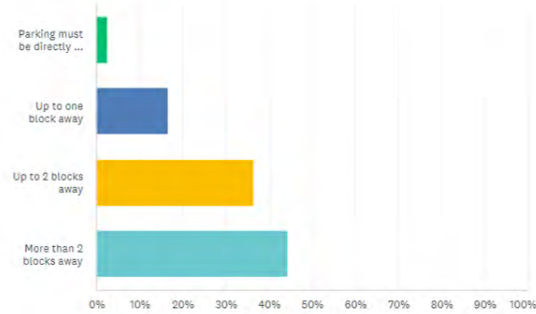
If there is not any parking available within the distance away from your destination that you are willing to park, what would you typically do?

Answered: 321 Skipped: 48



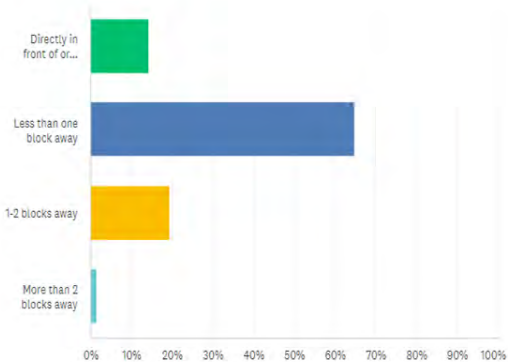
When you drive to downtown Windsor for a special event (concert, farmers market, festival, etc.), how far away from your destination are you willing to park?

Answered: 318 Skipped: 51



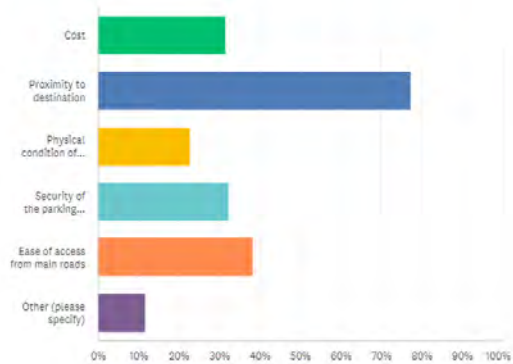
How close to your destination do you expect to be able to park?

Answered: 321 Skipped: 48



Which factors are most important to you when deciding where to park?

Answered: 333 Skipped: 46



Which of the following factors related to parking would you like to see improved in downtown Windsor?

Answered: 312 Skipped: 57

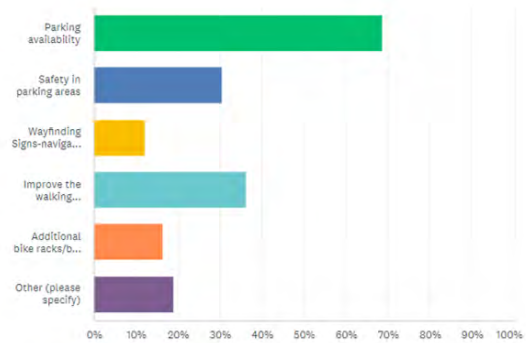
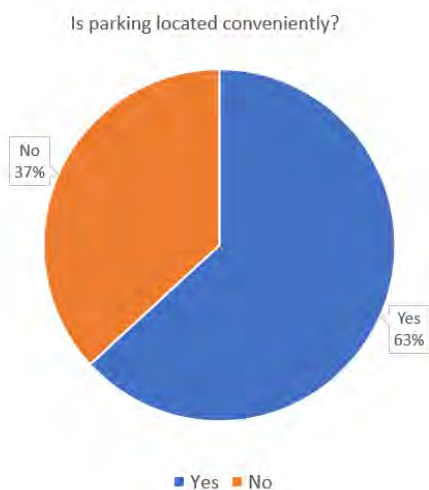
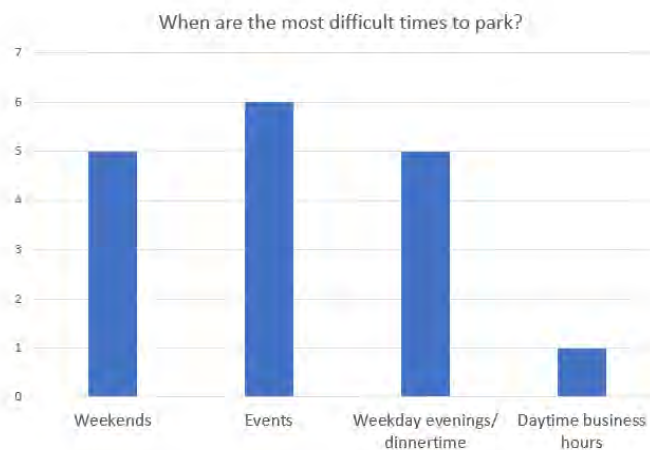
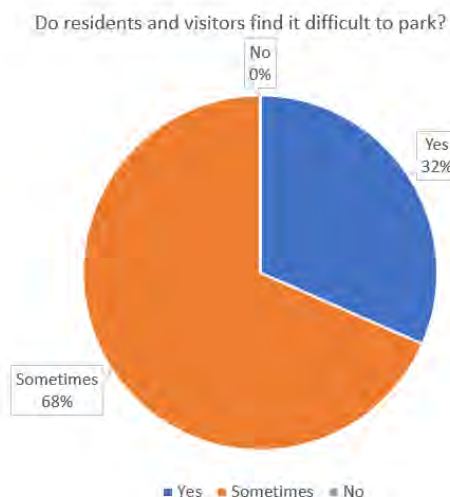


FIGURE 16: PUBLIC PARKING SURVEY RESULTS



Stakeholder survey questions inquired about customer parking experiences and business/property owner perceptions, and over 20 stakeholders responded. The results are shown in **Figure 17**. Most stakeholders felt that finding a parking space was sometimes difficult (68%) with weekday evenings and events as the most difficult time periods to find a parking space. While 63% felt that parking was located conveniently, the same percentage opposed any additional parking regulations. Stakeholders also requested improved pedestrian and bicycle access such as safer pedestrian crossings, and designated bicycle lanes.



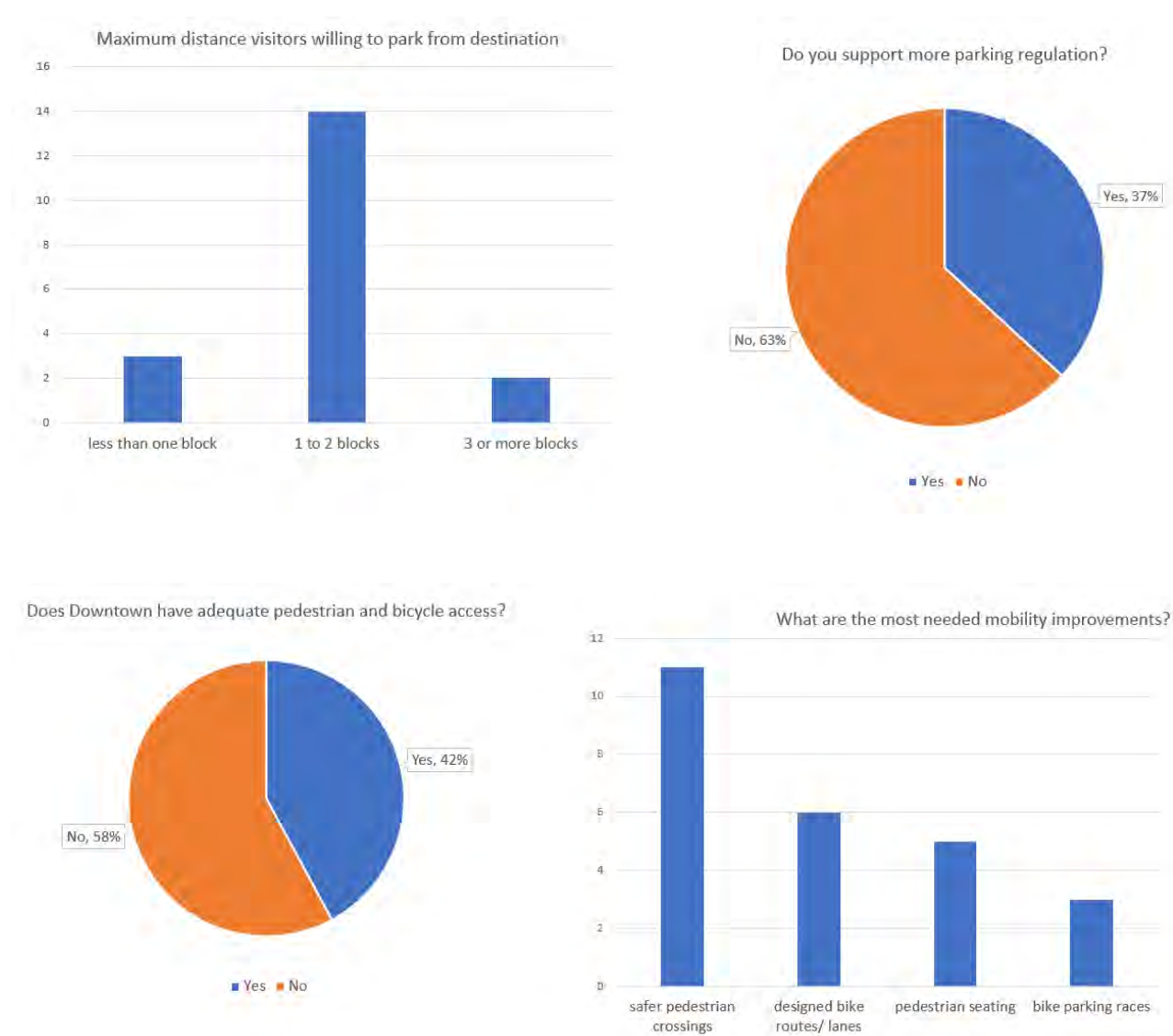


FIGURE 17: STAKEHOLDER PARKING SURVEY RESULTS

Public meeting comments were also tabulated and recoded. The most frequently expressed comments focused on the design and location of a new parking garage, land use/ density in downtown, and pedestrian safety, as shown in **Figure 18**.

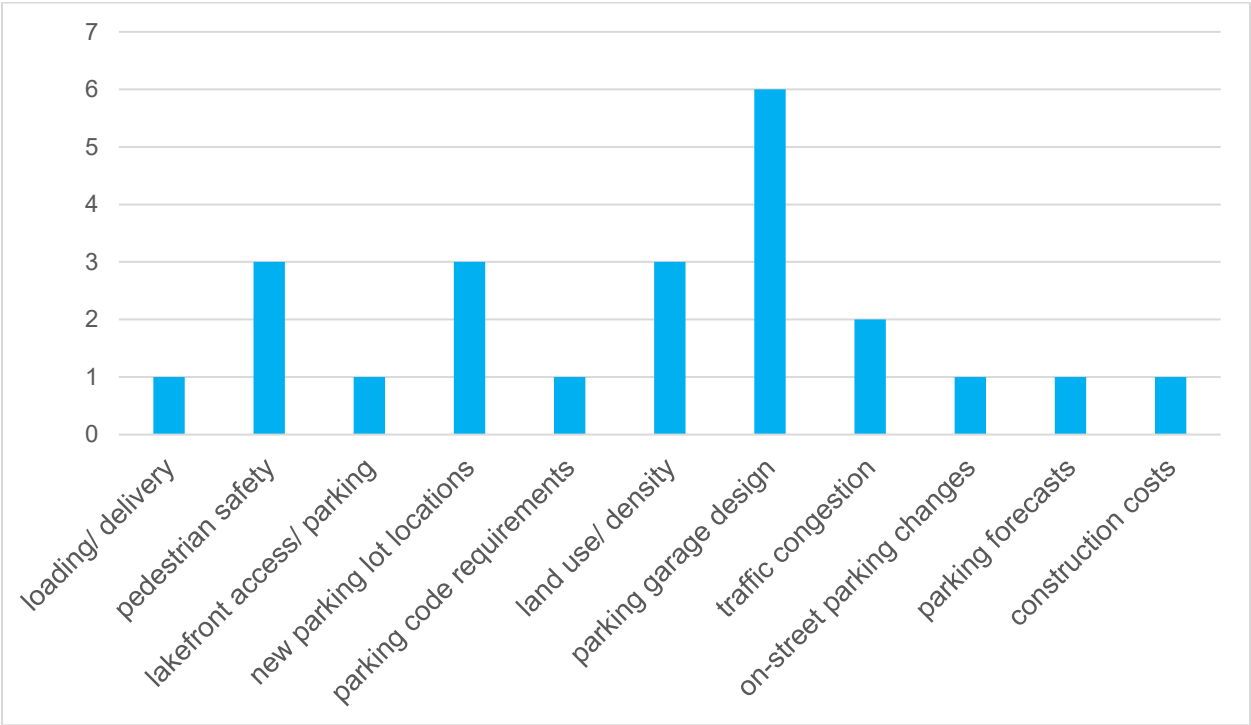


FIGURE 18: SUMMARY OF PUBLIC COMMENTS



IV. PARKING DEMAND FORECASTS AND ANALYSIS

The future parking demand in Downtown Windsor was estimated based on assumed land use changes (e.g. redevelopment) in the downtown area as well as increased demand from external generators.

Demand forecasts were based on the Institute of Transportation Engineer's Parking Demand Manual, 5th Edition. The manual compiles observed parking rates for various land uses such as residential, office and retail across diverse geographics (e.g. urban, rural and suburban) and develops average parking rates using linear regression equations based on an independent variable such as number of dwelling units or square footage. An example is shown in **Figure 19** for multifamily housing.

The observed parking demand rates were compared to the current Town parking code requirements for the Downtown Zone in **Table 3**. The code requirements for multifamily residential, retail, and office are in line with industry standards. However, the code requirements for restaurants are well below industry standards by about 8 spaces, which has the potential to create a parking deficit in future years with continued growth in the number of eating and drinking establishments downtown. The Downtown Windsor parking code can be viewed [here](#).

The ITE parking demand rates were developed from the regression equations for different given land uses, as mentioned above.

- The multifamily residential parking demand estimate was developed from ITE land use code 220 using an independent variable of number of dwelling units. The time period was a Weekday (Monday-Friday), with the peak period of parking demand occurring between 11:00 PM – 6:00 AM.
- The retail parking demand estimate was developed from ITE land use code 820 using an independent variable of 1000 Sq. Ft. GLA. The time period was a non-December Saturday with the peak period of parking demand occurring between 11:00 AM – 5:00 PM.
- The restaurant parking demand estimate was developed from ITE land use code 930 using an independent variable of 1000 Sq. Ft. GFA. The time period was a Weekday (Monday-Friday), with the peak period of parking demand occurring between 12:00 – 1:00 PM.
- The office parking demand estimate was developed from ITE land use code 710 using an independent variable of 1000 Sq. Ft. GFA. The time period was a weekday (Monday-Thursday), with the peak period of parking demand occurring between 9:00 AM – 3:00 PM.

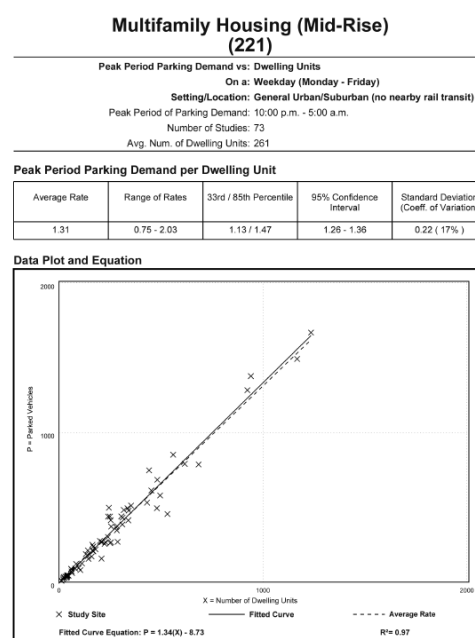


FIGURE 19: ITE PARKING DEMAND GRAPH EXAMPLE



TABLE 3: COMPARISON OF ITE PARKING DEMAND TO TOWN CODE REQUIREMENTS FOR DOWNTOWN

Land Use	ITE Parking Demand Estimates	Town Code Requirement (Downtown Zone)
Multifamily Residential	1.25 spaces/ Unit	1 space (one bedroom) 2 spaces (two bedrooms)
Retail	2.5 spaces/ 1,000 SF	2 spaces per 1,000 SF <20,000 SF
Restaurant	10 spaces / 1,000 SF	2 spaces per 1,000 SF <20,000 SF
Office	2.5 spaces / 1,000 SF	2 spaces per 1,000 SF < 20, 000 SF

Based on discussions with Town Planning staff and the DDA, both publicly owned parcels and potential privately owned properties were reviewed for potential revitalization/ redevelopment and potential land uses. The following land uses and densities were used to develop the future parking demand forecasts for a 2-year, 5-year and 10-year horizon as shown in **Table 4**. The numbers shown are aggregate totals for each horizon year from existing conditions. **Figure 20** illustrates the location of the 'backlots'

TABLE 4: SUMMARY OF DOWNTOWN LAND USE CHANGES

Land Use	2-year forecast	5-year forecast	10-year forecast
Multifamily Residential (units)	200	250	325
Retail (SF)	80,000	90,000	100,000
Restaurant (SF)	30,000	40,000	50,000
Commercial/ Government Office (SF)	15,000	25,000	47,000

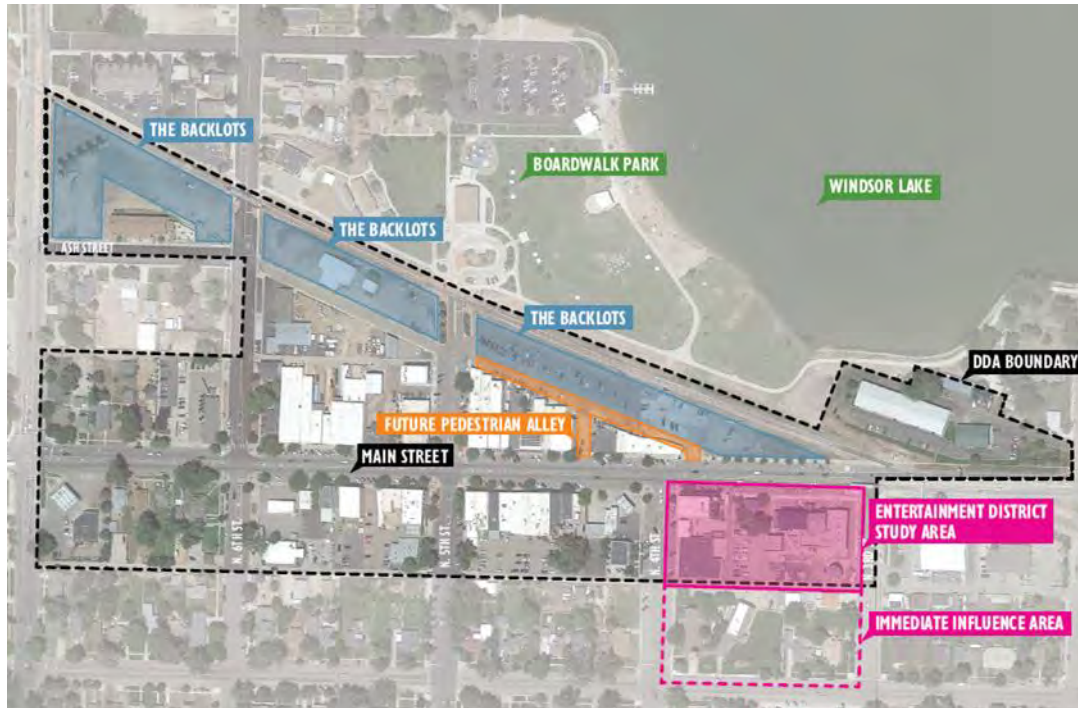
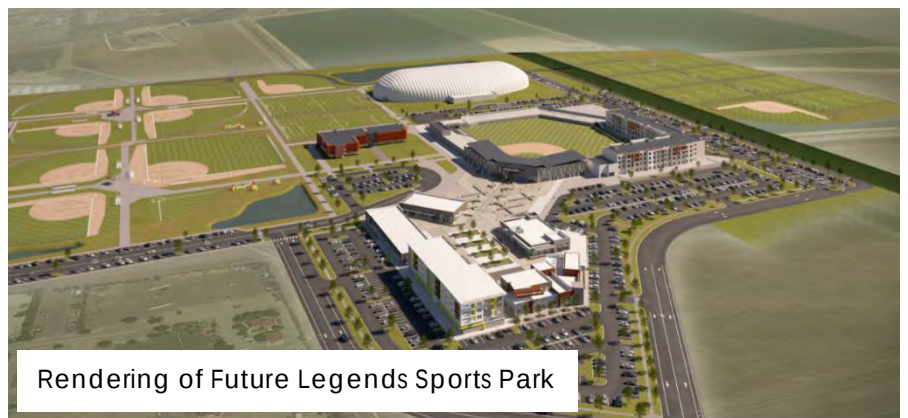


FIGURE 20: BACKLOTS AND DDA PARCELS

In addition to land use changes within the downtown area, several external parking demand generators beyond the downtown were also considered. Future Legends is a sports park with 10 baseball diamonds and 12 soccer fields and a 64-team dorm that will host major youth sporting events throughout the year, with an estimated million visitors annually. It was assumed that approximately 35% of Legends visitors would pass through downtown and stop to shop or dine. That would equate to approximately 6,700 visitors over a typical 3-day tournament weekend, or 2,250 visitors per day. Assuming an average vehicle occupancy of 4 persons per car, up to 550 additional parking spaces would be required for retail and restaurant patrons throughout a typical weekday or weekend day.



Rendering of Future Legends Sports Park

Similarly, new subdivisions external to the Town will add over 5,000 new residential units in the coming decade according to project building permit trends in Weld County and Larimer County. A portion of these households were also assumed to shop and dine in Downtown Windsor. It was assumed approximately 10% of new external residents would shop and dine downtown daily, or 500 patrons. Assuming an average vehicle occupancy of 2 persons per car, up to 250 new parking spaces would be required for retail and restaurant customers throughout a typical weekday or weekend day.



The cumulative parking demand forecasts by year and land use and hour were developed using the ITE linear regression formulas for each time period in a spreadsheet demand model and illustrated in **Figures 21-26** for the 2-year, 5-year and 10-year horizons. For the weekday, by the 10-year horizon approximately 1,400 new parking spaces will be required. For the weekend day, by the 10-year horizon, approximately 1,800 new parking spaces will be required.

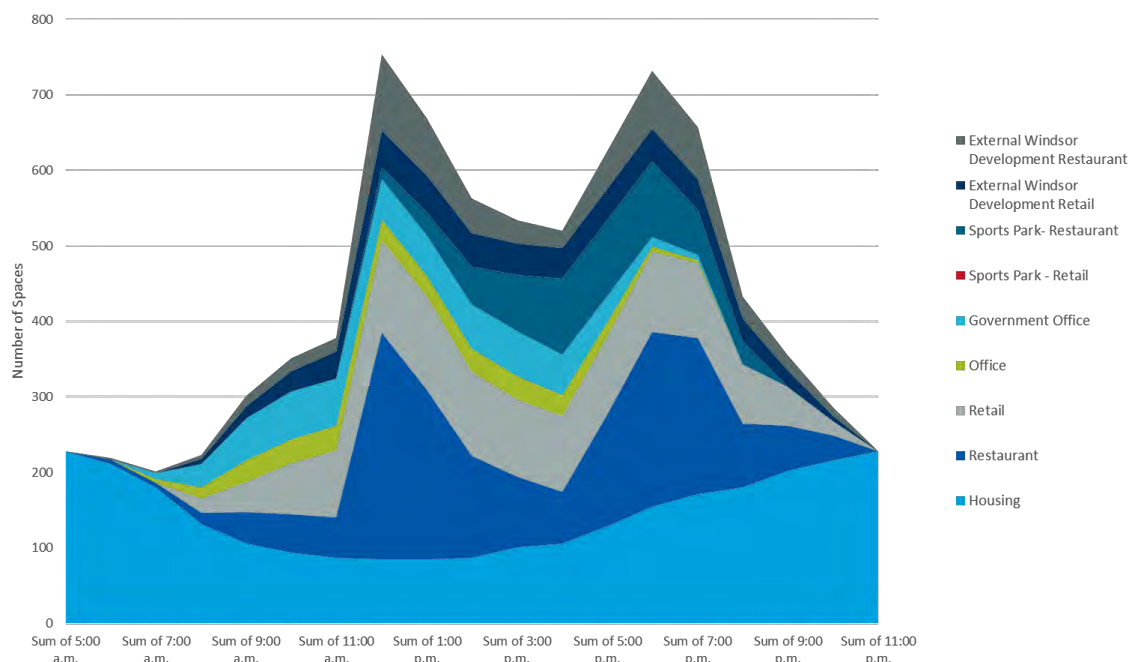


FIGURE 21: WEEKDAY 2-YEAR NEW PARKING DEMAND FORECASTS

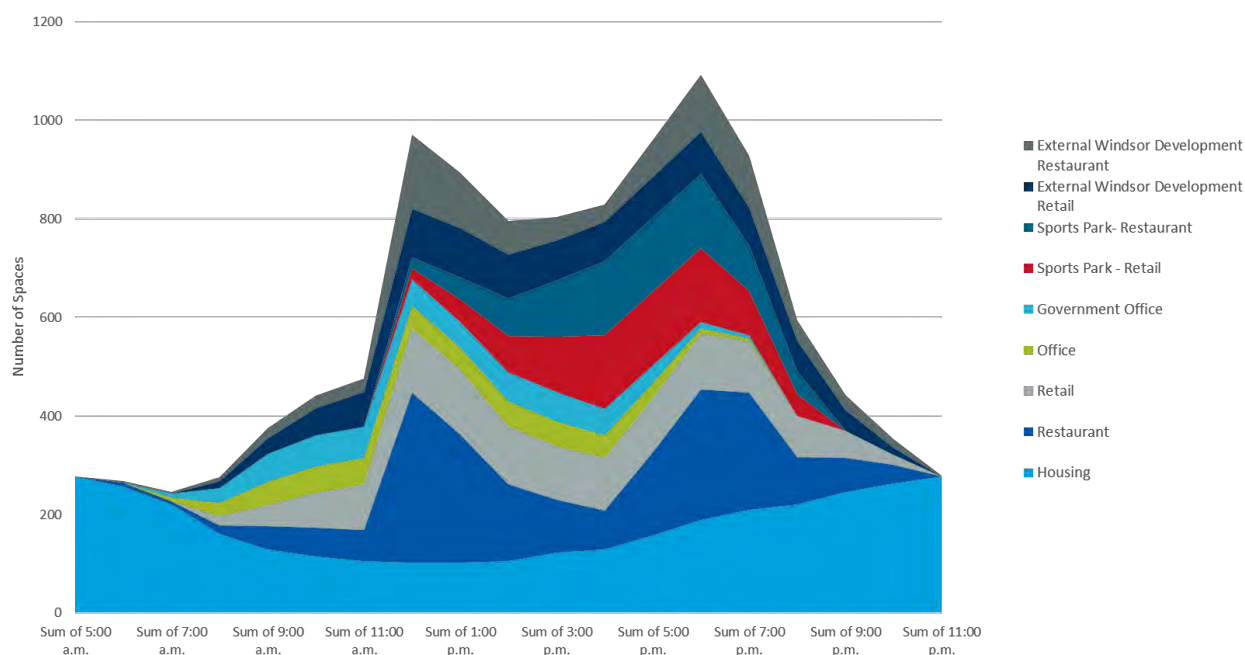


FIGURE 22: WEEKDAY 5-YEAR NEW PARKING DEMAND FORECASTS

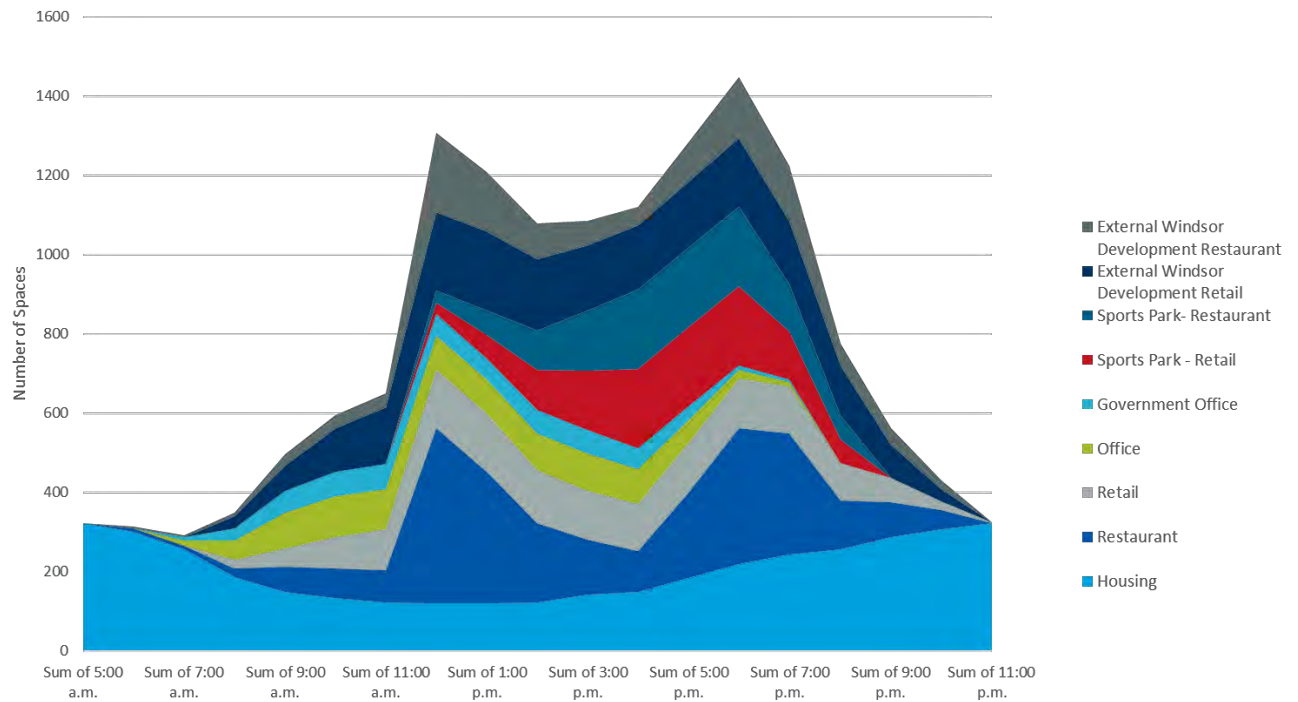


FIGURE 23: WEEKDAY 10-YEAR NEW PARKING DEMAND

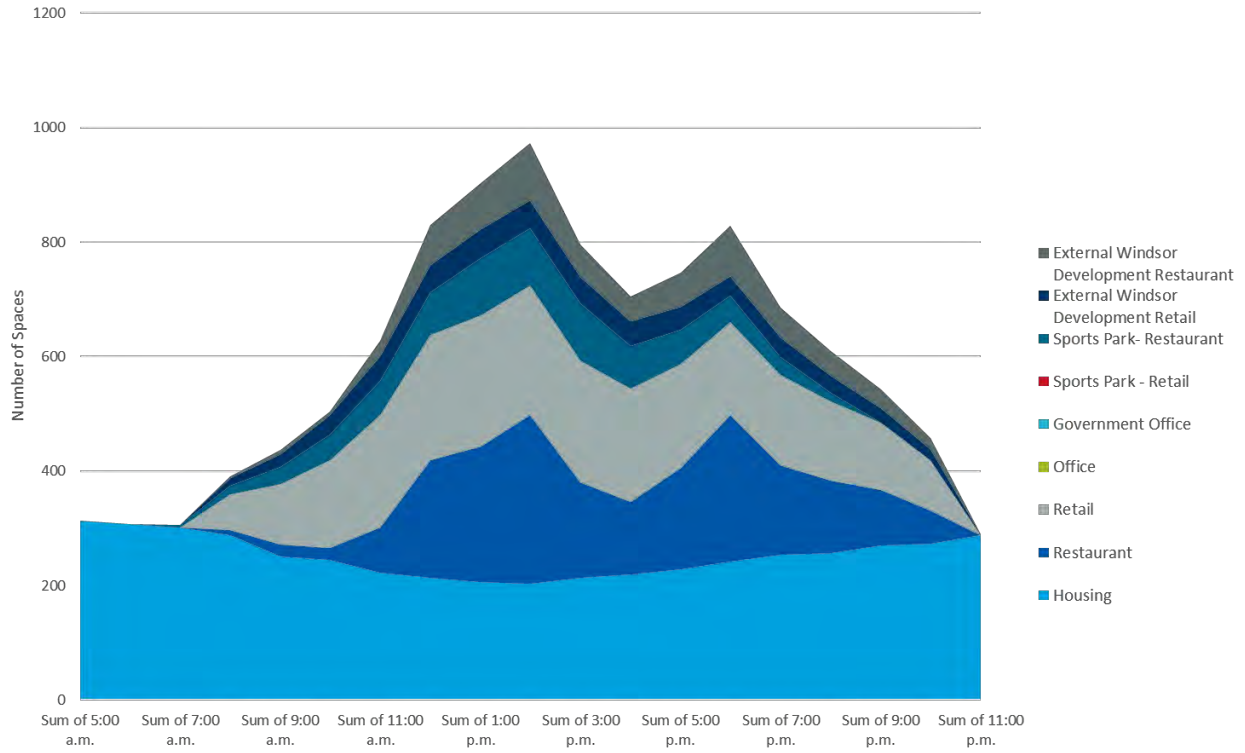


FIGURE 24: WEEKEND 2-YEAR NEW PARKING DEMAND FORECASTS

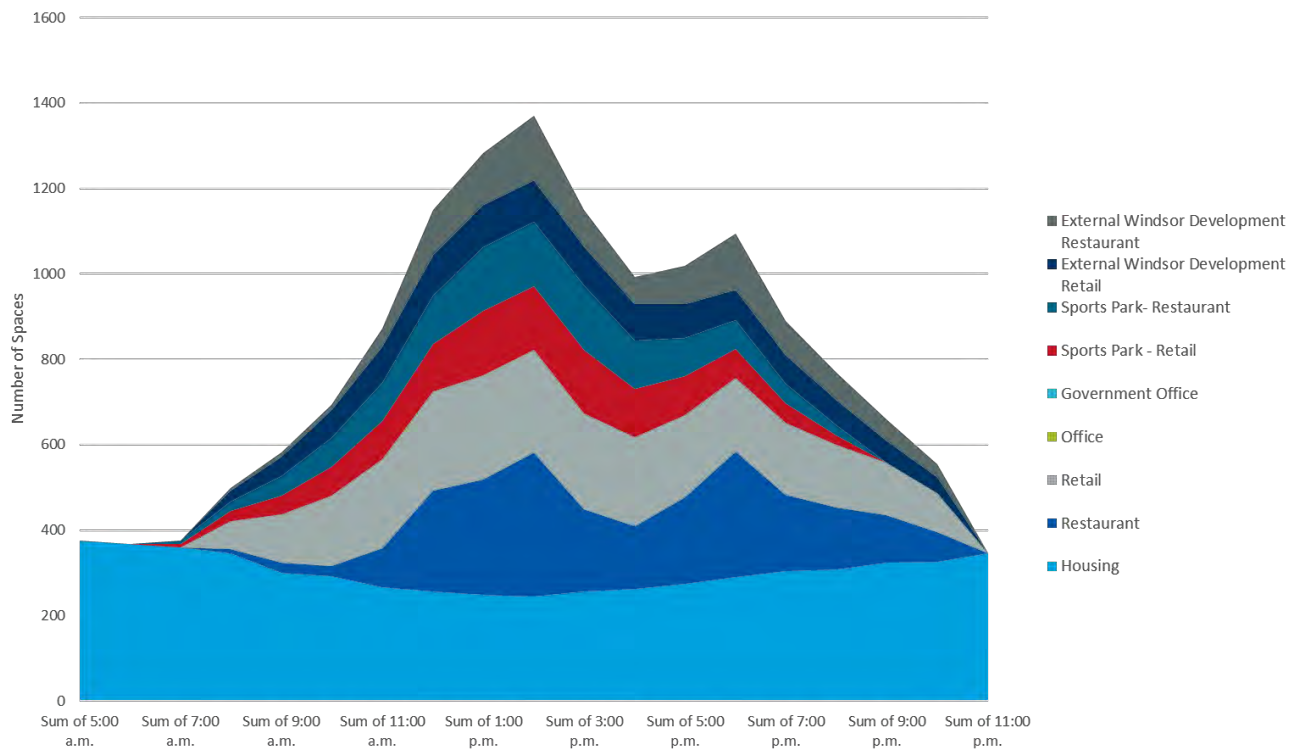


FIGURE 25: WEEKEND 5-YEAR NEW PARKING DEMAND FORECASTS

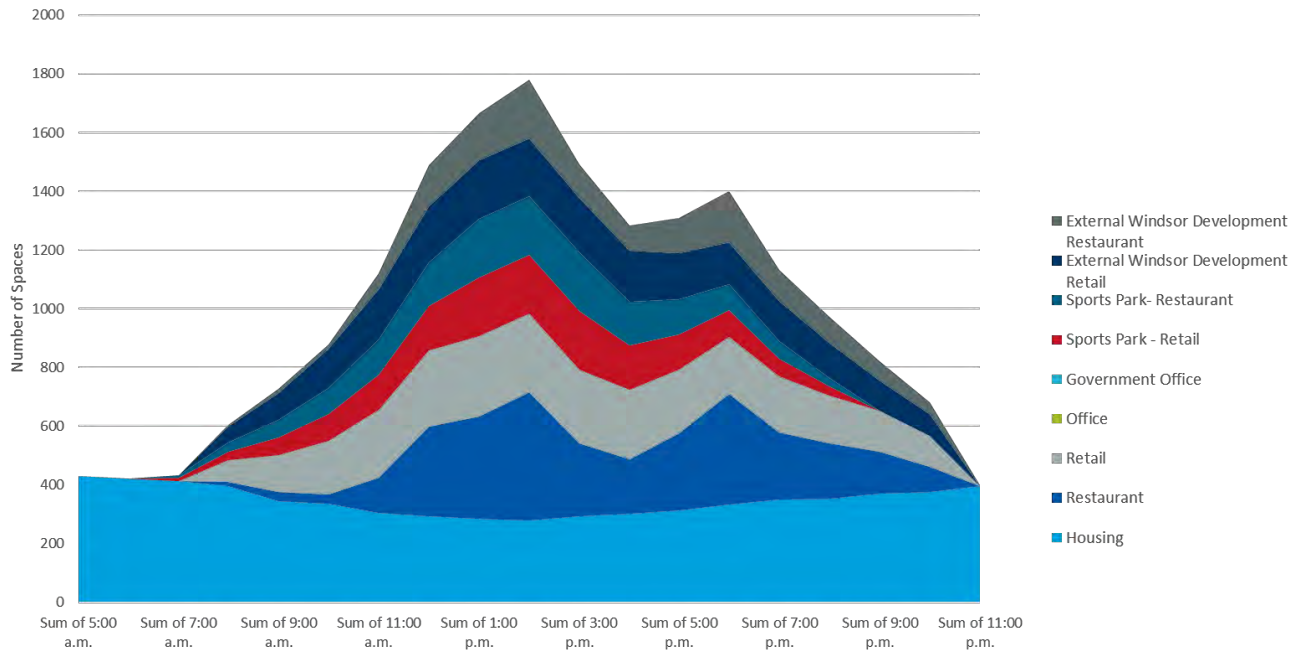


FIGURE 26: WEEKEND 10-YEAR NEW PARKING DEMAND FORECASTS

To calculate future parking deficits for the downtown study area, the future demand was added to the existing parking demand and compared to the existing parking supply for each hour of a typical day. It should be noted that changes in existing parking supply, such as removal of existing surface lot parking spaces for new development, was not included. A reference line is shown for the parking supply reduction should the backlot parking be eliminated. However, any new development that provides self-parking or additional public parking would be calculated against the forecasted parking deficit, reducing the number of new parking spaces required. The results are summarized in **Figures 27-32** below.

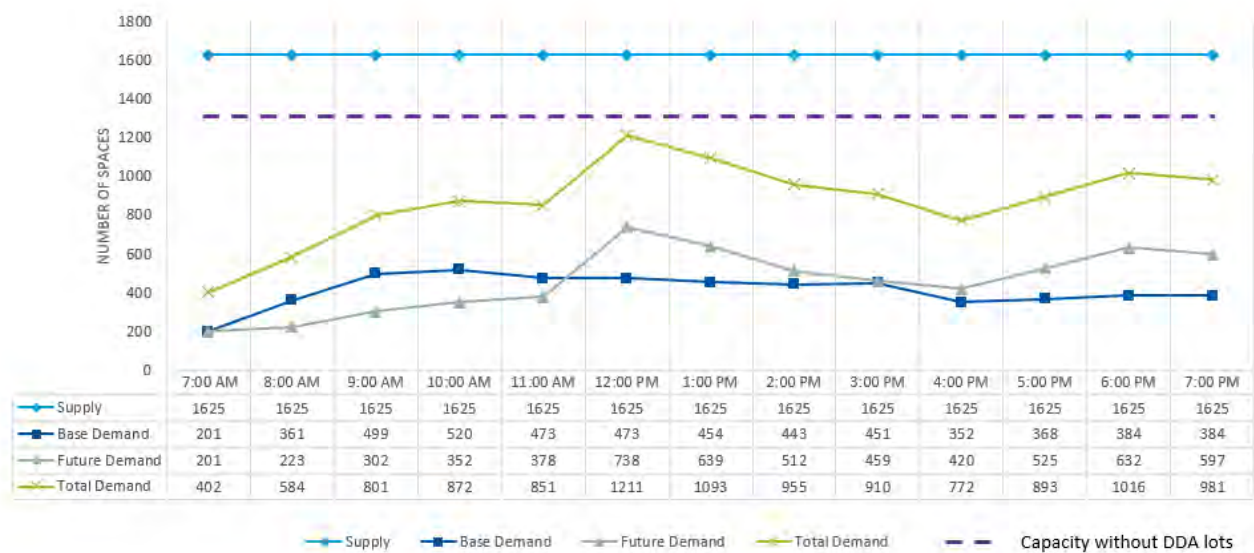


FIGURE 27: WEEKDAY 2-YEAR FUTURE SUPPLY V. DEMAND

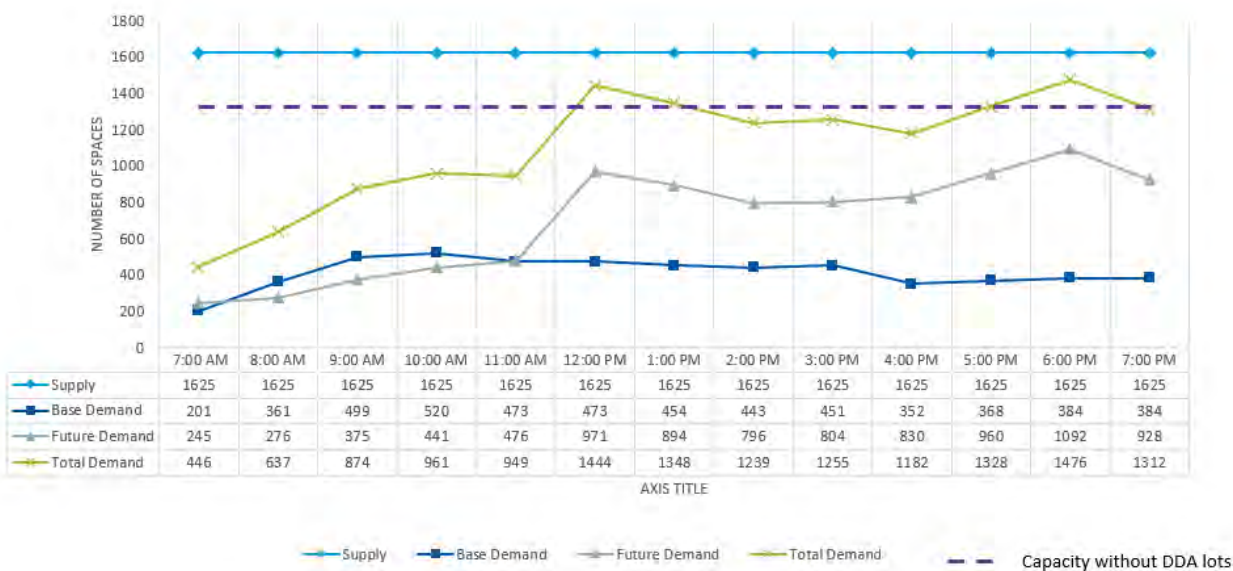


FIGURE 28: WEEKDAY 5-YEAR FUTURE SUPPLY V. DEMAND

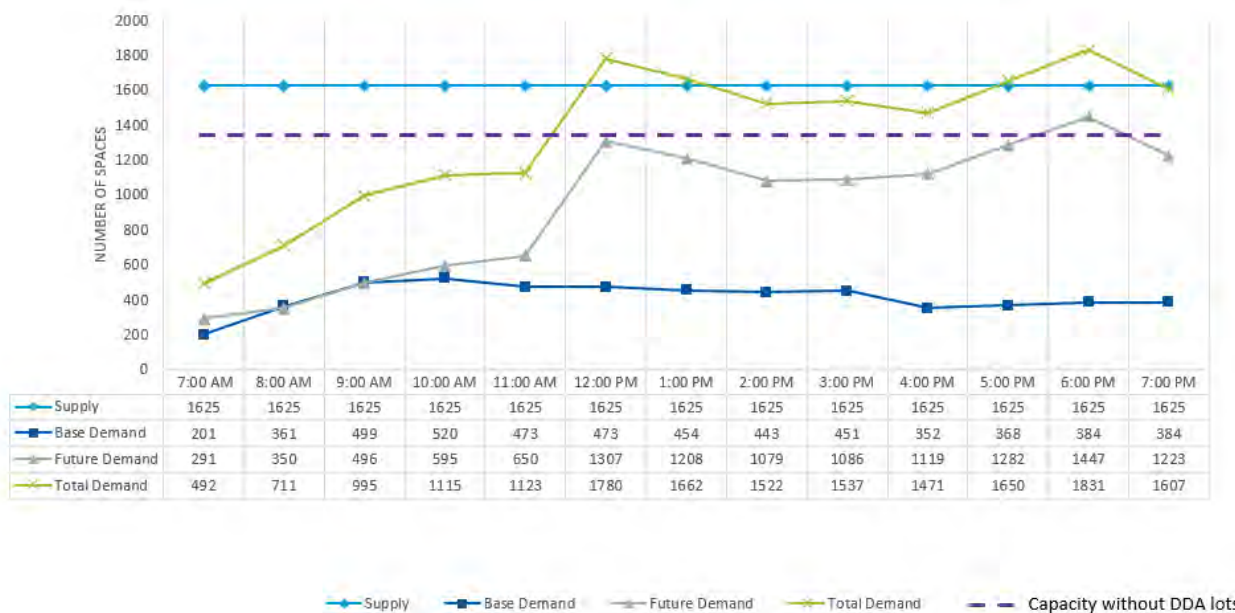


FIGURE 29: WEEKDAY 10-YEAR FUTURE SUPPLY V. DEMAND



FIGURE 30: WEEKEND 2-YEAR FUTURE SUPPLY V. DEMAND

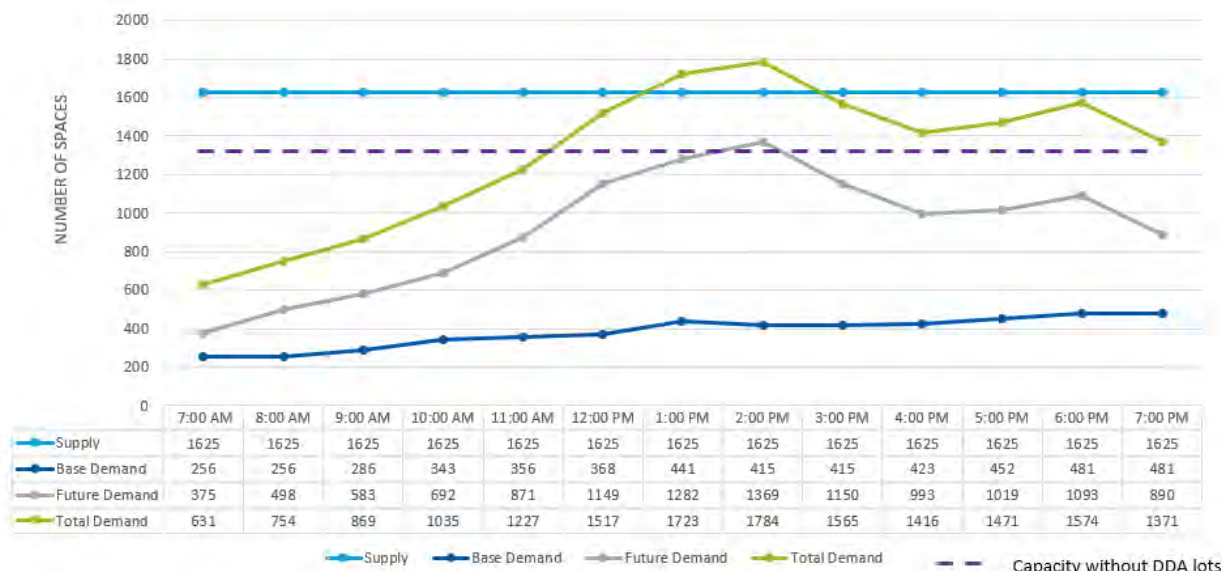


FIGURE 31: WEEKEND 5-YEAR FUTURE SUPPLY V. DEMAND



FIGURE 32: WEEKEND 10-YEAR FUTURE SUPPLY V. DEMAND

In summary, the following parking surpluses or deficits are projected for each horizon year and time period:

- 2-year forecasts – weekday – No deficit, 300 space surplus
- 2-year forecasts – weekend day – No deficit, 200 space surplus
- 5-year forecasts – weekday – at capacity, no surplus or deficit
- 5-year forecasts– weekend day – up to 300 space deficit
- 10-year forecasts – weekday – up to 350 space deficit
- 10-year forecasts– weekend day – up to 700 space deficit

V. PARKING MANAGEMENT STRATEGIES AND RECOMMENDATIONS

Based on the best practices research, public and stakeholder input, and forecasted parking deficits, a toolbox of parking operations, regulatory, design and management strategies were developed customized for Downtown Windsor. The goal of the parking strategies is to maximize the use of the existing parking supply, better balance supply and demand, and reduce future parking demand by providing other travel options. Strategies include:

1. Increasing Curbside Capacity

Convert additional blocks to angled parking to provide additional parking spaces near key generators. Potential locations include Walnut Street between 1st and 3rd, the west curb of 2nd Street north of Elm, 3rd Street south of Main, 6th Street south of Ash Street, and the south side of Birch Street.

2. Implementing Time Limits for Curbside Parking

Post and enforce time limits for premium on-street parking located immediately in front of businesses or on adjacent side streets where turnover will accommodate access to those businesses. Two- or three-hour limits are standard, but a small number of spaces limited to 15-to-20-minute pick-up/drop-off zones should be considered. Restrictions may be removed during times outside the normal hours of the adjacent businesses.

3. Provide Satellite Parking and Shuttles for Events and Peak Periods

Identifying lots outside of the downtown for use by eventgoers and providing connecting shuttle service can improve access and reduce the number of vehicles driving into downtown for events and the corresponding number of required parking spaces. Curbside valets and attendant assisted lots are complimentary measures to enhance the utilization of satellite parking.



Free downtown satellite event parking shuttle in Colorado Springs

4. Improve Pedestrian and Bicycle Infrastructure

Improving crosswalks, providing pedestrian-activated signals where appropriate, and adding high quality on-road bicycle lanes can expand the watershed of downtown destinations. This is accomplished by making walking safer and more inviting as well as encouraging more visitors to access the downtown from surrounding neighborhoods without driving.

5. Parking Lot Signage/wayfinding

Installing additional signage on the approach routes to downtown and within the downtown to direct drivers to public off-street parking can increase utilization of off-street parking facilities and reduce overall traffic volumes of vehicles circulating for on-street parking. Wayfinding signs must be thoughtfully designed and



Rendering of Downtown Windsor Wayfinding Sign

located to guide motorists entering downtown from all gateways.

6. Off-Street Lot Improvements

Reconfiguring and improving existing off-street parking lots such as repaving, lighting, signing and pavement marking can increase the number of spaces and enhance visibility.

7. New Off-Street Parking facilities

Constructing new surface parking lots or converting existing lots to structured parking structures will directly increase parking supply.

8. Increase Bicycle Parking

Currently there are only a few bicycle parking racks in the downtown area. Converting several curbside vehicle spaces to bicycle corrals at key destinations can provide dozens of new bicycle parking spaces in a highly visible location.



Example on-street bicycle corral parking

9. Introduce New Modes

Providing new modes on a pilot, seasonal, event, or permanent basis such as pedicabs, bicycle shares and scooter shares will expand travel options, increase walksheds and reduce parking demand downtown.

10. Code Changes

The Downtown parking code was last revised during a time of economic downturn for Windsor. Updating the downtown parking to require the provision of new or shared parking spaces with new or changed land uses in line with current industry standards will reduce the future parking deficits. Additionally, options may include a fee-in-lieu payment to the Town where a project cannot build new on-site parking spaces so that the town is able to build off-site parking. Alternatively, should a project build more parking than is required, a credit can be provided toward development fees or taxes.

11. Parking Management District

The creation of a downtown Parking Management District will allow any future revenue through enforcement or parking revenues to be targeted for improvements such as new streetscaping, shuttles, landscaping, street lighting, or other public realm improvements.

12. Shared Parking

Shared parking agreements can maximize use of existing parking supply by connecting parking needs of distinct generators that have peak demands at different times during the day. For example, allowing use of parking lots connected to daytime-focused businesses (banks, drug stores, coffee shops) after 5:00 PM for restaurant patrons can help to alleviate parking pressures in downtown areas during evening hours.

13. Residential Permit Parking Program

A residential parking permit program would require the display of a permit on residential block faces where signs are posted. Residential permit programs usually are limited to blocks immediately adjacent to high-generating commercial land uses and hours of peak parking demand.



Table 5 summarizes the consensus recommendations of this study, and detailed actions which could yield up to 1,000 new parking spaces within or near downtown if implemented, which exceeds the estimated parking deficit. **Figure 33** illustrates the location of the low and medium cost capacity recommendations.

TABLE 5: SUMMARY OF CONSENSUS RECOMMENDATIONS

Strategy	Action Details
Neighborhood Parking Permits on Residential Blocks	Implement residential parking permit program on key blocks adjacent to the Mill during evenings and weekends
Time Limits on Commercial Blocks	Establish 2-hour parking limits on Main Street during evening and weekends
Enforcement	Implement graduated enforcement of parking permits and time limits including warnings, notices, and graduated fines
Satellite Parking/ Event Shuttles	- Chimney and Eastman Park events and holiday weekends - Curbside shared valet/ attendant assisted lots - Introduce/ encourage new modes / multimodal – pedicabs, scooters, golf carts
Establish Parking Benefits District	Direct new parking revenue to funding to public streetscape improvements and shuttles
Parking Code Policy Revisions	- Revise parking code requirements for new developments to require sufficient parking e.g. to self-park - Establish Fee-In-Lieu - New development can 'buy' off-site parking within the downtown - New development can get 'credit' for providing additional public parking beyond current Town code
Increase bicycle parking/ multimodal access	- Bicycle corrals (100+ bicycle parking spaces) replacing 5 vehicle parking spaces) - Bicycle / scooter share stations at satellite parking and downtown
Enhance Pedestrian Crossings	- Install flashing beacons at 5th Street - Construct median refuge at 5th Street
Convert Additional On-Street Parking to Angled	Additional 100 to 125 spaces
Construct New Off-Street Lot/ Garage	Up to 250 spaces



Formalize Shared Parking Arrangements	• South and north side of Main Street 200 to 600 blocks • Evening and weekend time periods • Capital Improvements to resurfacing, re-stripe, light and sign lots • Up to 200 available spaces
Satellite Parking/ Year-round shuttle	• Chimney Park (200 spaces) • Windsor High/ Middle School (300 spaces) • Thursday-Sunday, year round • Employee parking areas • Consider autonomous on-demand shuttle



FIGURE 33: LOW AND MEDIUM COST CAPACITY



VI. PARKING FACILITY OPTIONS

Based on the recommended parking capacity improvements, several options were explored for surface and structured parking facilities within the downtown. The project team held multiple confidential conversations with public agency and private property owners throughout the study to ascertain the viability of specific parcels that could be used for new parking capacity.

A. DESIGN AND COST ASSUMPTIONS

In developing conceptual layouts for new parking facilities, the following assumptions were utilized

- 9' wide by 18' deep parking stall
- Two way 20' drive aisles in most cases
- One way 12' drive aisles where 45-degree or 60-degree parking is present

The conceptual site layouts do not account for ADA spaces and pedestrian walkways. All new parking facilities are assumed to be fully paved and marked. Based on current industry statistics, the cost per new surface parking space ranges between \$10,000 to \$12,000 and the costs per structure parking space ranges between \$40,000 to \$50,000. Any new parking garage will require further structural feasibility assessment, financing, and cost recovery.

Figure 34 illustrates the quadrants within downtown where parcels were identified for potential surface lots and/ or garages. While not all parcels can be identified at this time due to confidential discussions, three sites in blue below are discussed in more detail in the following section. These sites were vetted by the Parking Committee for inclusion in the Downtown Parking Plan for further investigation and feasibility assessment.

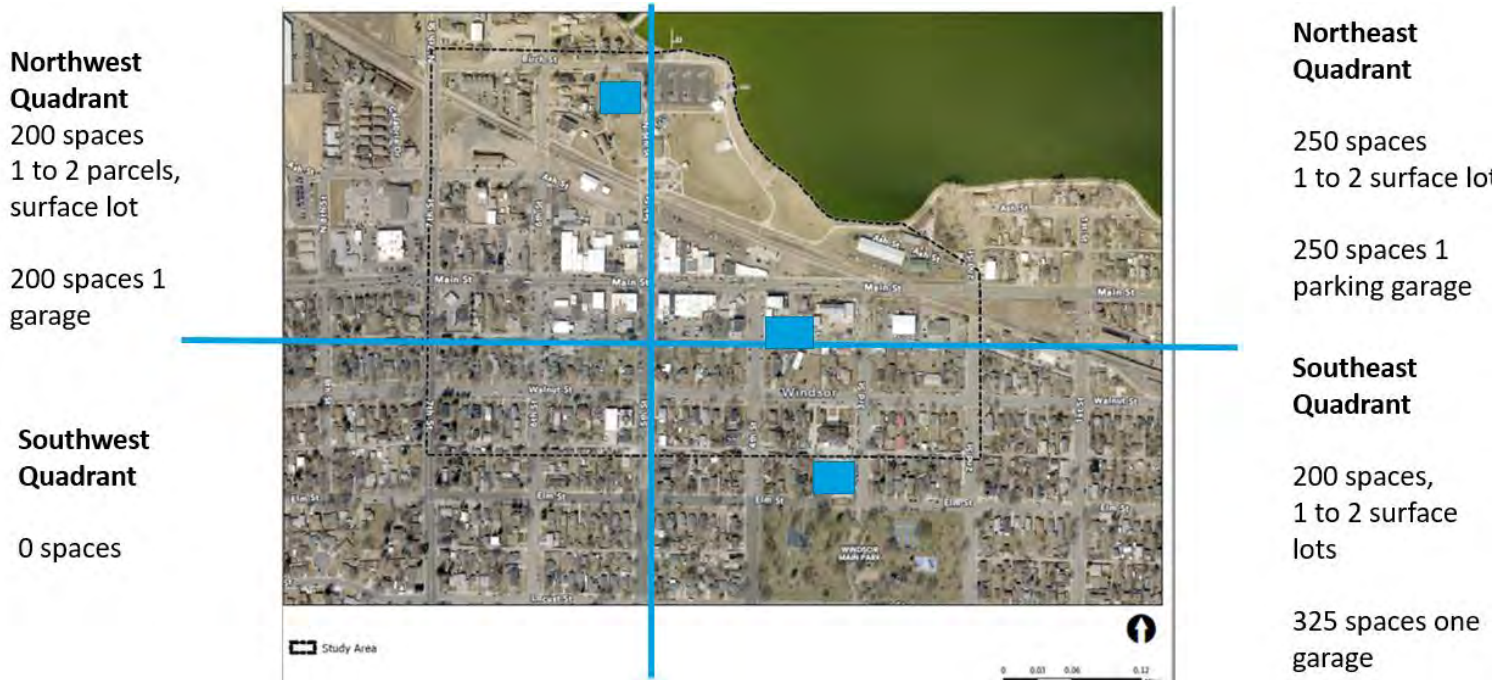


FIGURE 34: POTENTIAL NEW PARKING LOT/ GARAGE LOCATIONS

i. Site 1: Town Hall Annex / Board Grove

This location at the intersection of 3rd and Elm can potentially provide up to 175 spaces configured as a surface lot, and up to 250 spaces in a 2-level garage. The lot footprint is approximately 215' X 190'. A phased construction approach would be recommended, initially constructing a surface lot first, then structure if needed. The development of this parcel for parking uses also includes constructing pedestrian improvements between Board Grove and Main Street along 3rd Street to enhance connectivity to Main Street. **Figures 35 and 36** illustrate a conceptual parking lot layout and garage rendering at this location.



FIGURE 35: TOWN HALL ANNEX/ BOARD GROVE SURFACE PARKING LOT CONCEPT



FIGURE 36: RENDERING OF TOWN HALL ANNEX/ BOARD GROVE PARKING

ii. Site 2: 140 North 5th Street

This location at the corner of 5th and Birch can potentially provide up to 125 spaces as a surface parking lot and 200 spaces in a 2-level parking garage. The lot footprint is 200' X 175'. A phased construction approach would be recommended, initially constructing a surface lot first, then structure if needed. This site would potentially require the relocation of Eaton house to an adjacent property to the south. **Figure 37** illustrates the conceptual layout.

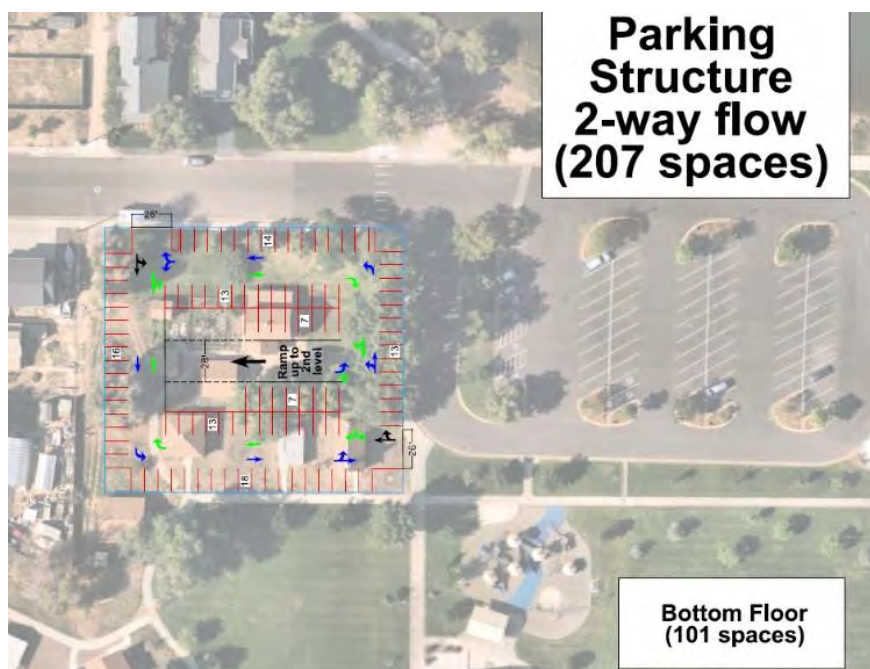


FIGURE 37: 140 NORTH 5TH STREET SURFACE PARKING LOT CONCEPT

iii. Site 3: 213-215 N. 4th Street

This location near the intersection of 4th and Main can potentially provide up to 150 spaces as a 2-level parking garage. The lot footprint is 190' X 135'. The existing one story buildings are intended to remain, with the garage constructed above it, at an approximate 45' height (15' existing building plus 30' garage). As part of this lot redevelopment for parking use, a new north-south service alley parallel to 4th Street from Walnut Street to the existing alley would be constructed through the Church property to allow for continued service and delivery access that would be eliminated at the garage entrance on 4th Street. The new alley would also provide an additional 30 angled parking spaces. **Figure 38** illustrates the conceptual layout and **Figure 39** illustrates a street level rendering.

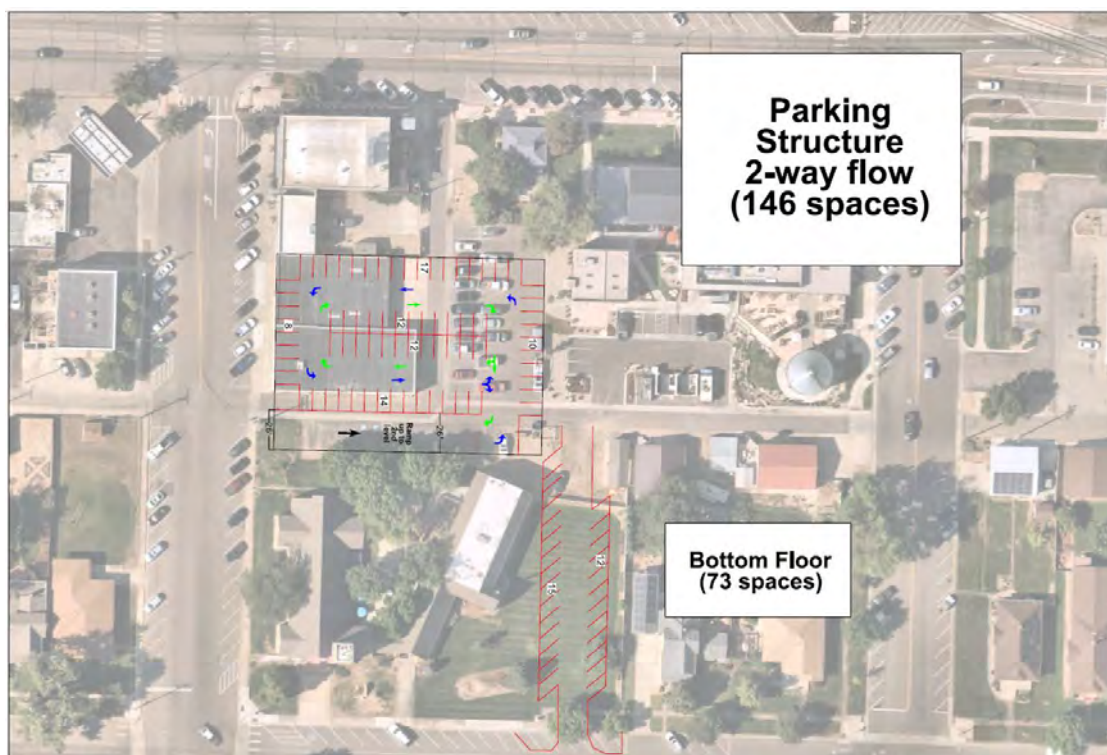


FIGURE 38: 213-215 NORTH 4TH STREET GARAGE CONCEPT



FIGURE 39: RENDERING OF 213-215 NORTH 4TH STREET PARKING

A summary of the parking facility options is presented in **Table 6**.



TABLE 6: SUMMARY OF PARKING FACILITY OPTIONS

Location	Pros	Cons
Town Hall Annex/ Board Grove	- No acquisition costs - Largest footprint	- Distance from Main Street/ Lakefront - Loss of park space - Adjacent to residential blocks
North 4th/ Alley	Adjacent to Main Street	- Cost of acquisition / structural feasibility - Impact to alley/ loading and delivery
North 5th/ Birch	Adjacent to Lakefront	- Cost of acquisition - Resolution of historic property status

VII. RESIDENTIAL PARKING MANAGEMENT

To address the spillover impact of customer parking on select residential blocks in proximity to high generating eating and drinking establishments along Main Street such as the Mill, several options are presented for graduated implementation of protection of residential block curbside parking for residents. These strategies represent a graduated approach in residential curbside parking management that should be discussed with the affected blocks/ neighbors in more detail prior to implementation.

1) Install temporary 'resident parking only' signs – this option entails installing removable signs on key blocks during high demand weekday evenings/ weekends/ events to designate resident parking spaces. The advantages include low cost, easy implementation, and ease of understanding. The disadvantages including lack of a statute for enforcement/ penalty for violators and difficulty in identifying violators.

2) Install curbside space numbering – this option entails permanently signing or marking curbside spaces by property address and would designate parking spaces to each house. Unnumbered spaces would remain be open for visitors. This is a common parking management tactic in residential communities. The advantages include low cost, easy implementation, and ease of understanding. The disadvantages include low visibility and lack of a statute for enforcement/ penalty for violators.

3) Install permanent 'resident parking only' signs – this option entails installing permanent signs on key blocks to designate resident parking spaces; the spots would only be available for residents. The advantages include low cost, easy implementation, and ease of understanding. The disadvantages including lack of a statute for enforcement/ penalty for violators and difficulty in identifying violators.





4) Residential parking permit zone – this option entails create a designated permit zone/ restrictions on key blocks with restrictions on visitor parking during high demand times. This is a formal program where residents would need to register all vehicles within a permit zone, as well as obtain visitor permits for guests. The advantages include high compliance and ability to enforce. The disadvantages include the cost and effort by the Town to administer the permit program and enforcement.



VIII. IMPLEMENTATION FRAMEWORK

In summary, a multi-pronged and multi-phased toolbox of strategies is recommended to manage downtown parking assets moving forward. **Table 7** identifies an implementation framework including the lead agency, approximate cost, funding sources and suggested timeline for action. Several of the strategies can be advanced in parallel to provide additional parking resources ahead of the anticipated parking deficit timelines. However, the new parking lots/ structures and any associated revenue controls will require more lead time and further engineering feasibility.

TABLE 7: DOWNTOWN PARKING IMPLEMENTATION FRAMEWORK

Strategy	Lead Agency	Capital Cost	Funding	Timeline/ Next Steps
Angled Parking	Town	\$5,000/ block signing and marking (\$500/ space)	General	6 months to 1 year
Shared Parking	Town/ DDA	\$500,000 resurfacing, signing, marking, lighting (\$10,000 to \$12,000)	General/ DDA	1 to 2 years, one-on-one meetings with property owners, create MOUs, engineering design of parking lots
New Surface Lot	Town/ DDA	\$250,000 to \$500,000 (\$10,000 to \$12,000 per space)	General	1-2 years, Property acquisition, engineering design
Satellite Parking/ Shuttles	Town/ DDA/	\$50,000 to \$100,000 / year	IIJA/ FTA micro mobility Grant or Benefits District	1-2 years, MOUs with Weld County Schools, Rec and Parks. RFI/ RFP to shuttle operator, discussions with TransFort
New Parking Structure	Town	\$6M to \$8M (\$35,000 per space)	Fee-in-Lieu, General	2-4 years, Engineering design, consider phased construction (1 level at a time), and parking concessionaire



Time restrictions. Residential Parking Permits	Town/ DDA	\$TBD	Fee-in-Lieu, General	6 months to 1 year
Parking Code Revisions/ Benefits District/ Fee-In-Lieu	Town/ DDA	Staff time	n/a	1 year
Bicycle parking/ shares Pedestrian crossing enhancements	Town/ CDOT	\$250,000	General	6 months to 1 year, work with bicycle share/ scooter vendor