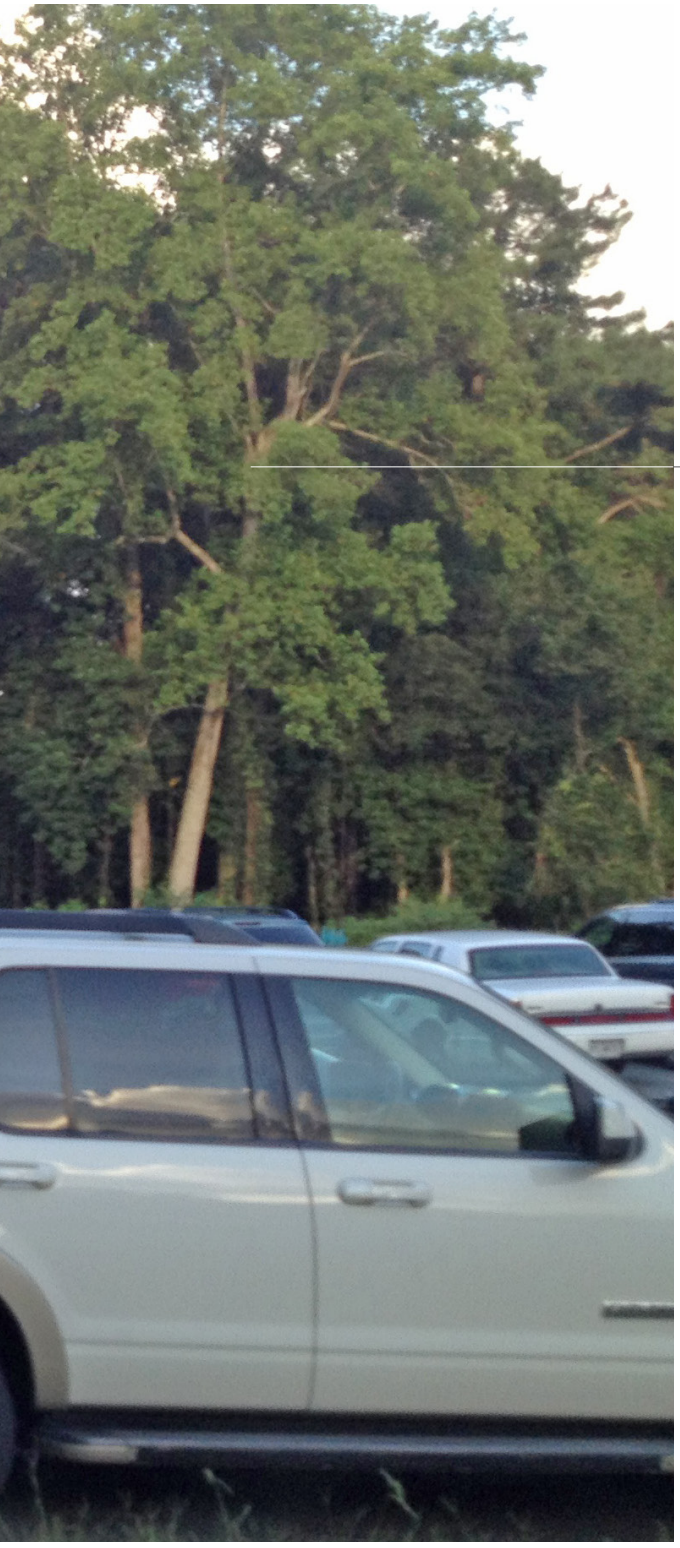


WOODSTOCK
Town Center Plan

DOWNTOWN PARKING STUDY

November 2012

Prepared for the City of Woodstock, GA, by:

POND

the studio for better communities

CITY OF WOODSTOCK 2012 LCI UPDATE

This study was conducted by Pond & Company as part of the City of Woodstock's 2012 Livable Cities Initiative Ten Year Update.

ACKNOWLEDGEMENTS

LCI CORE TEAM

Tessa Basford
Randy Brewer
Christy Bowling
Jennifer Nelson
James Huffman
David Knight
Cheri Morris
Judy Davila
David Potts
Melissa Casteel
Ann Litrell
Alan Wiggins

CITY OF WOODSTOCK ELECTED OFFICIALS

Donnie Henriques, Mayor
Randy Brewer, Council Member, Ward 1
Chris Casdia, Council Member, Ward 2
Bob Mueller, Council Member, Ward 3
Liz Baxter, Council Member, Ward 4
Bud Leonard, Council Member, Ward 5
Tessa Basford, Council Member, Ward 6

PROJECT MANAGEMENT TEAM

Richard McLeod, City of Woodstock, Community Development Director
Brian Stockton, City of Woodstock, City Planner
Joel Reed, Pond & Company, Project Manager
Richard Fangmann, Pond & Company, Transportation Planner
Allie Looft, Pond & Company, Urban Designer
Aria Finkelstein, Pond & Company, Urban Designer
Niwana Ray, Pond & Company, City Planner
Robert Gibbs, Gibbs Planning Group, Economic and Retail Advisor
Marisa Ghani, Atlanta Regional Commission, Senior Land Use Planner

PURPOSE + OVERVIEW

The downtown area of Woodstock is the historic center for commerce in the city. As residential growth occurred throughout the city and in surrounding areas within Cherokee County, the retail shopping areas were decentralized to the Towne Lake Parkway and Highway 92 corridors. The significant redevelopment of downtown Woodstock added retail shopping, quality restaurants, and additional residential units within a mixed-use community to the heart of downtown. The design and density of development promotes walking between residential and commercial uses and has re-established downtown Woodstock as a key destination within the city and the surrounding region.

Additional mixed-use development is underway, with more planned through the city's Livable Centers Initiative (LCI) and Comprehensive Plan. The success of the new development and re-establishment of Downtown Woodstock as a destination has led to increased levels of traffic and parking congestion during peak periods of activity. In order to address the parking and traffic circulation issues, the City of Woodstock included a study of these key transportation needs as part of the LCI 10-year update. This report documents parking occupancy and traffic circulation needs in downtown Woodstock and recommends strategies to address these needs, which will be considered in the developing the LCI 10-year plan update.

METHODOLOGY

The parking occupancy and circulation study examined conditions in downtown Woodstock during periods of high activity for retail shopping and restaurant use. Traffic observations and parking occupancy counts were conducted during the following four time periods:

- Typical weekday
- Typical Friday
- Special event Friday evening
- Special event Saturday evening

This data was used to determine the parking occupancy by parking lot, subarea, and downtown as a whole. The results of the parking occupancy review provide a picture of parking use today. Additional development which is underway and programmed in the study area was also considered, as was potential new development identified in the current 2002 LCI Plan.

Strategies to address parking deficiencies were developed, grouping potential improvements into the following categories:

- Management of parking supply
- Expansion of parking supply
- Parking to support future LCI land use policies

BACKGROUND

The development regulations for the City of Woodstock provide information on the number of parking spaces needed to provide sufficient parking for peak demand of each type of land uses. The number of parking spaces the city requires (Table 1) meets or exceeds those indicated in the Institute of Transportation Engineeer's *Parking Generation* (2004). This results in parking supply that supports peak time periods without overspilling parking lots. It also results in parking lots that are underutilized for much of the year, particularly for retail establishments that see a large peaking in activity during winter holiday months.

Creating areas that are considered walkable by most users requires a large percentage of available land be devoted to the primary site use, limiting the space that can be used for parking. Typical retail uses generate the need for approximately 3.0 spaces per 1000 square feet, and restaurants typically generate demand for 5-10 spaces per 1000 square feet of use (see Table 1). However, surface parking ratios this high make it difficult to achieve a walkable urban center. In order to provide walkable communities in areas with higher parking demand, additional parking supply is suggested in the form of structured and/or shared parking resources.

In areas where parking demand exceeds supply, traffic congestion increases sharply, as traffic must circulate long distances. Visitors to downtown Woodstock experience this additional circulation with high parking occupancy during high demand times during weekday lunch periods and weekend evenings, as well as with special events.

USE	PARKING SPACES
Agricultural Services	1 per 400 sq. ft. gross floor area
Auditorium, including Assembly Hall	1 per 100 sq. ft. gross floor area
Automobile Repair, including Oil Change	1 per service bay
Automobile Sales, not including service area	1 per 1,000 sq. ft. gross sales floor area
Bank	1 per 400 sq. ft. gross floor area
Bar, Tavern	1 per 100 sq. ft. gross floor area
Bed and Breakfast	1 per guest room
Boarding House	1 per room
Church, Synagogue or Place of Worship	1 per 400 sq. ft. gross floor area
Day Care Center	1 per 15 children of design capacity
Dance, Gymnastics or Martial Arts School	1 per 300 sq. ft. of gross floor area
Discount Store	1 per 300 sq. ft. gross floor area
Elderly Housing	1 per dwelling unit
Funeral Home	1 per 1,000 sq. ft. of gross floor area
Furniture Store	1 per 1,000 sq. ft. of gross floor area
Gas Station, including Convenience store	1 per 300 sq. ft. gross floor area
Grocery Store	1 per 300 sq. ft. gross floor area
Golf Course	4 per each golf hole
Golf Driving Range	1 per tee
Hospital	1 per four beds
Hotel/Motel	1 per rental unit
Library	1 per 1,000 sq. ft. gross floor area
Manufacturing	1 per 2,000 sq. ft. gross floor area
Movie Theater	1 per 100 sq. ft. gross floor area
Museum	1 per 1,000 sq. ft. gross floor area
Nursing Homes and Personal Care Facilities	1 per two beds
Office, Including Medical, Dental, Veterinary	1 per 300 sq. ft. gross floor area
Post Office	1 per 500 sq. ft. gross floor area
Recreation and Amusement Centers	1 per 250 sq. ft. gross floor, building or ground area
Research and Development Facility	1 per 800 sq. ft. gross floor area
Residential, Multi-Family	1 per one bedroom, .5 per additional bedroom
Restaurant	1 per 200 sq. ft. gross floor area
Restaurant, Fast Food	1 per 150 sq. ft. gross floor area
Retail, Outdoor	1 per 1.000 sq. ft. per lot or gross floor
Retail Store	1 per 300 sq. ft. gross floor area
School	1 per 20 students of design capacity
Shopping Center	1 per 300 sq. ft. gross floor area
Stadium or Arena	1 per five seats
Storage Facility	1 per 2000 gross sq. ft.
Transit Terminals	1 per 1000 sq. ft. gross floor area
Warehouse	1 per 1000 sq. ft. gross floor area

TABLE 1: WOODSTOCK LAND DEVELOPMENT CODE ARTICLE 7.767 REQUIRED SPACES

RESULTS

The parking and circulation study inventoried and examined the existing parking supply, evaluated parking occupancy during typical days and special events, and examined traffic circulation for access to parking in Downtown Woodstock.

PARKING INVENTORY

As shown in Figure 1, the study examined a total of 1,968 spaces. In addition to these 1,968 spaces, the city is adding on-street parking spaces along Towne Lake Parkway/Arnold Mill Road, and along roads being newly constructed as part of the Woodstock West development in the southwest quadrant of downtown. Woodstock has parking in several forms: Within the parking study area there are 672 parking spaces in public, city-owned lots, 352 spaces on public streets, 254 spaces in lots the city leases from private owners, and 690 spaces in private lots.

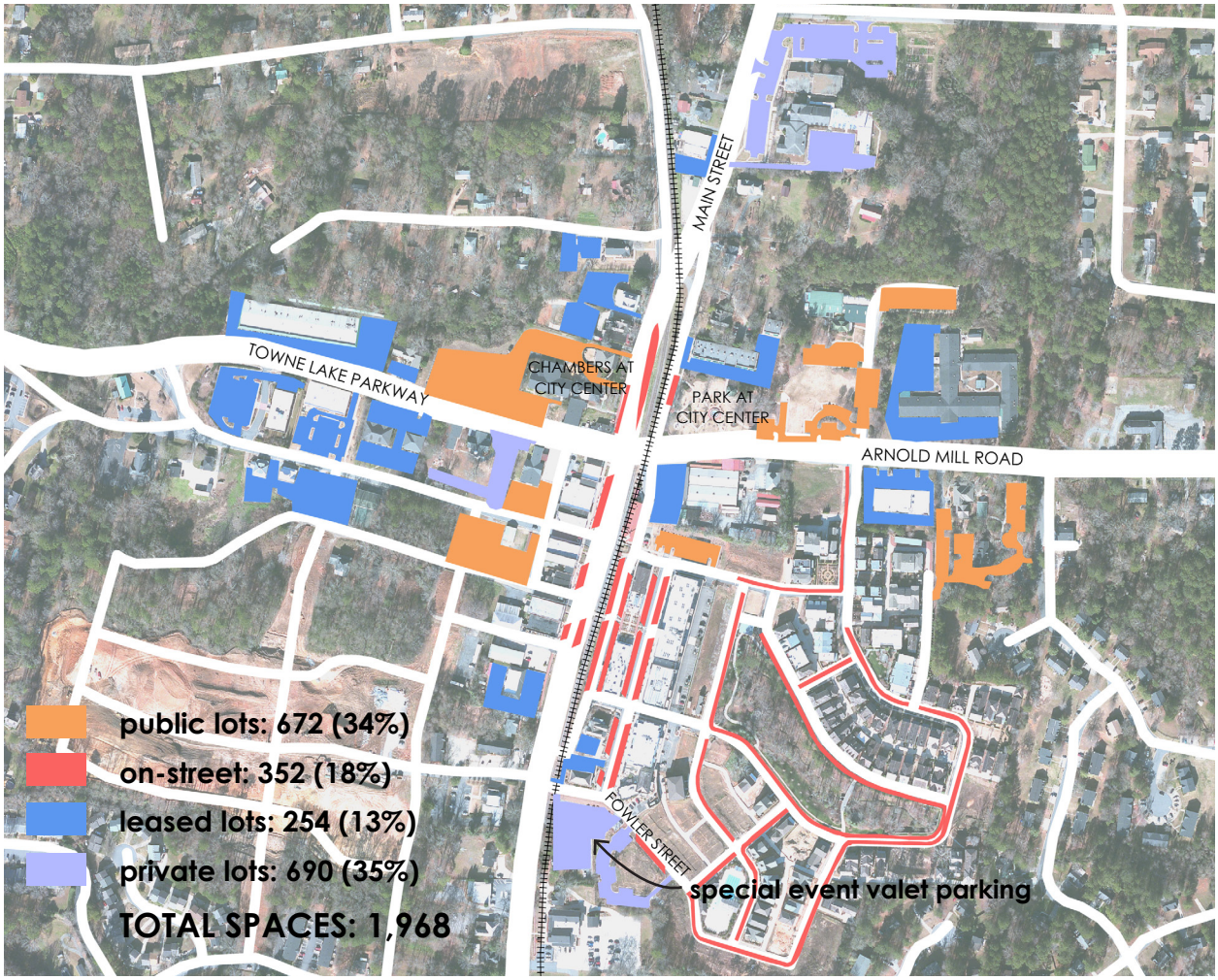


FIGURE 1: PARKING INVENTORY

PARKING SUPPLY AND UTILIZATION BY QUADRANT

Access to parking is limited by Main Street (and the parallel railroad tracks) and Towne Lake Parkway/Arnold Mill Road. These major roads and the railroad are barriers to pedestrian and vehicular crossing, so they delineate four quadrants - northeast, northwest, southwest, and southeast. People prefer to park in the same quadrant as the property they are planning to visit. Figure 2 shows the parking supply located in the four quadrants of downtown Woodstock, defined by the railroad tracks along the east side of Main Street, as well as Towne Lake Parkway/Arnold Mill Road. As this figure shows, the southeast quadrant has the most parking supply, with 620 spaces, followed by the northeast quadrant with 507 spaces, the northwest quadrant with 432 spaces and the southwest quadrant with 409 spaces.

In addition, this figure shows the parking lots directly serving the primary retail/restaurant areas in each quadrant (in the outlined regions) and the number of existing spaces per 1000 square feet in these lots. As this figure shows, the southeast and southwest quadrants have the fewest spaces per 1000 square feet of use.

However, the heavy restaurant use in the southeast quadrant results in undersupply of parking during the midday and evening. The ratio of 4.2 spaces per 1000 square feet is adequate for the retail uses, but is less than the 8 spaces per 1000 sf that would be effective for the high proportion of restaurant use. **Meeting this demand fully would require 220 additional spaces**. This level of demand is realized on weekend nights, when parking often utilizes many of the 140 spaces south of Fowler Street, as well as parking along surface streets east of the retail/restaurant area.

Figure 3 provides a summary of parking utilization. It indicates parking areas that are over-utilized and underutilized during typical weekdays, as well as those few lots that are underutilized during special events.

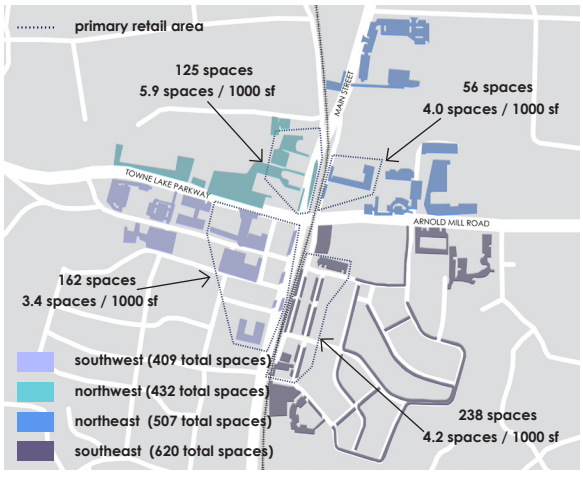


FIGURE 2: PARKING SPACES BY QUADRANT AND PRIMARY RETAIL AREAS

FIGURE 3: PARKING UTILIZATION

Northwest Quadrant:

- Parking supply exceeds demand on typical weekday
- Parking supply is inadequate during special events
- Difficulties with pedestrian crossing of Towne Lake Parkway

Southwest Quadrant:

- Parking supply exceeds demand on typical weekday
- Parking supply is inadequate during special events
- Difficulties with access and pedestrian crossing of Towne Lake Parkway
- Difficulties with pedestrian access to Main Street
- New streets provide opportunities for connectivity

Northeast Quadrant:

- Parking supply exceeds demand on typical weekday
- Parking supply is inadequate during special events
- Difficulties with access and pedestrian crossing of Arnold Mill Road

Southeast Quadrant:

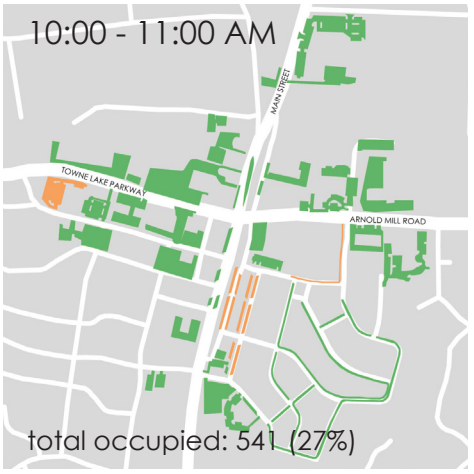
- Parking demand exceeds supply in high demand area (midday, evening, and events)
- Difficulties with access and pedestrian crossing of Arnold Mill Road
- Difficulties with access and crossing of Main Street at Noonday Street
- Additional parking capacity to south parking lot and east (on-street)

WEEKDAY AND WEEKEND PARKING

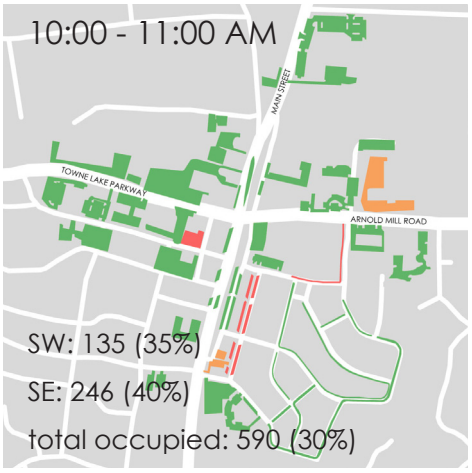
Parking occupancy was examined throughout the day for a typical Tuesday and Friday in July to determine the location of parking deficiencies and oversupply. The figures below (4-12) show the results of the parking occupancy assessment. At occupancy greater than 90%, significant recirculation occurs for location of available parking supply and driver frustration becomes high.

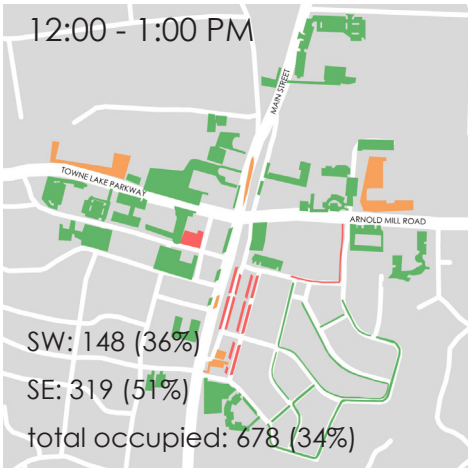
As the figures indicate, the highest Tuesday peak parking occupancy occurs in the southeast quadrant during midday, as people visit restaurants and shops in the area. During that time, the southeast quadrant is 55% occupied, and the total downtown parking is 38% occupied overall.

The highest parking occupancy on Friday also occurs during midday. During that time, the southeast quadrant is 51% occupied and the total downtown parking is 34% occupied overall. Activity reduces somewhat through the afternoon and is high again in the evening time period, with similar occupancy as in the noon peak period. The parking lot just west of Main Street and south of Towne Lake Parkway (southwest quadrant) experiences similar high occupancy during the midday and evening time periods.

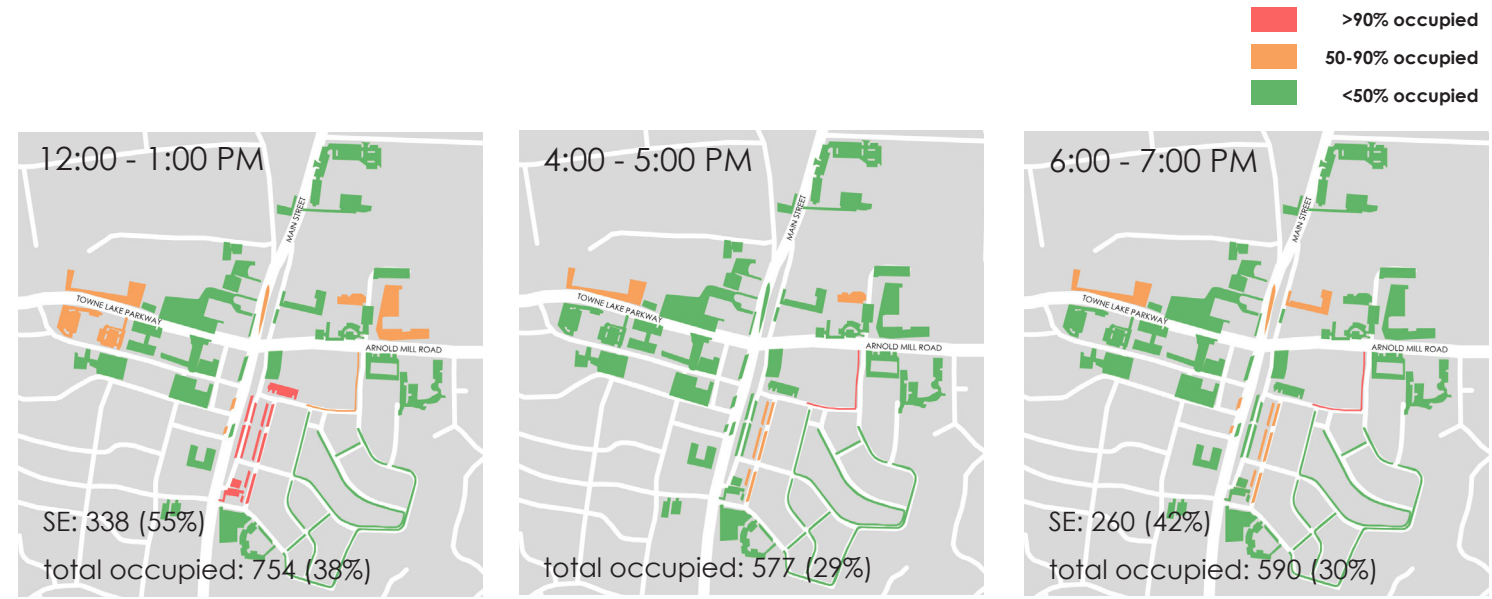


FIGURES 4-7: TYPICAL WEEKDAY, TUESD

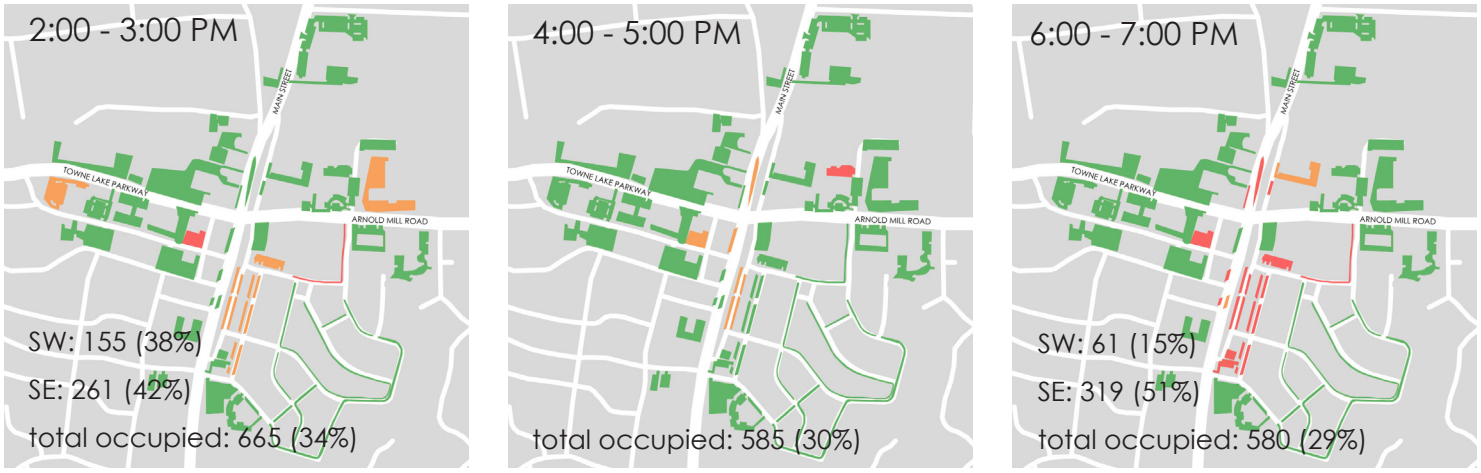




FIGURES 8-12: TYPICAL WEEKEND, FRIDAY 07/20/2012



DAY 07/10/2012

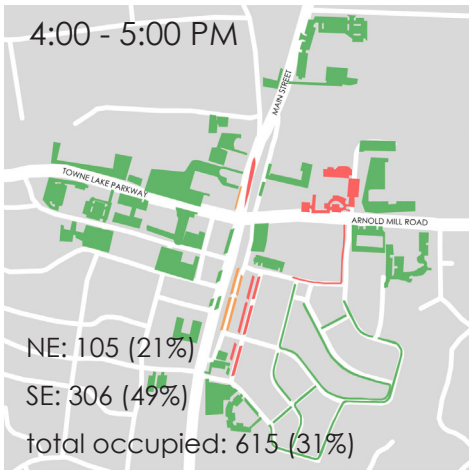


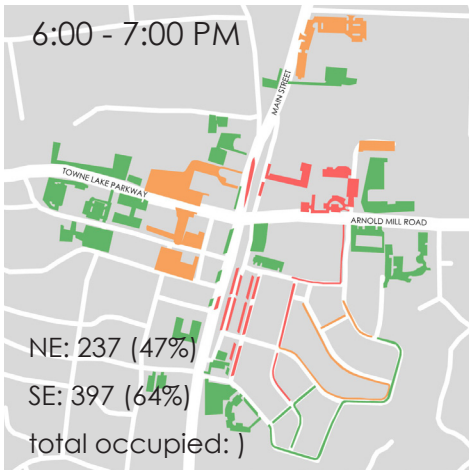
SPECIAL EVENTS

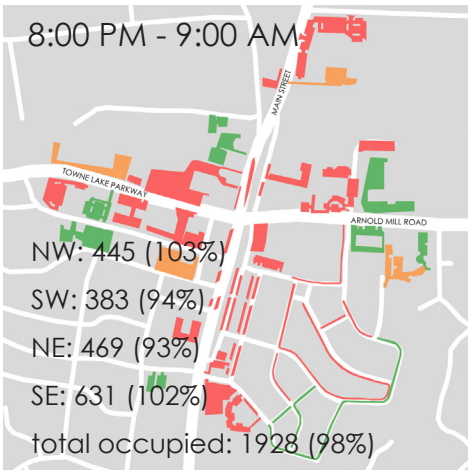
Parking occupancy was examined for afternoon and evening time periods during a First Friday event (August 3, 2012) and a saturday evening concert in the Park at City Center (July 14, 2012) to determine the location of parking deficiencies during special events. The following figures (13-18) show the results of the parking occupancy assessment. During special events, drivers are typically more willing to park in a lot that is not directly adjacent to their destination and walk to the event. The high occupancy experienced in the southeast quadrant during these periods has prompted business owners to operate a valet parking service, parking vehicles in surface parking lots just south of Fowler Street, which are underutilized during other times of day.

The First Friday event period begins with traffic building up in the southeast quadrant between 4 pm and 5 pm. This increasing traffic builds through the 6 PM hour, resulting in 68% occupancy in the southeast quadrant and 35% overall occupancy for the total downtown parking supply. The parking occupancy reaches a maximum between 8 and 9 pm. During that time, the southeast quadrant is 82% occupied and the total downtown parking is 43% occupied overall.

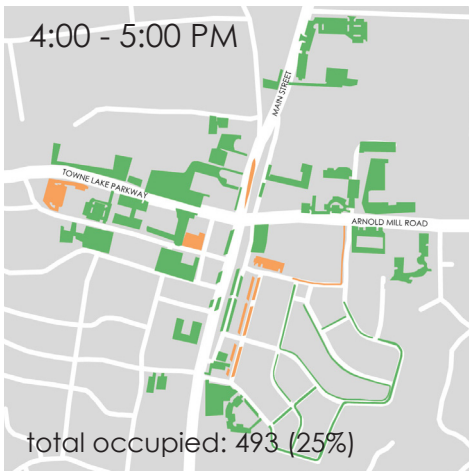
Parking resources are the most utilized during the saturday evening concert in the Park at City Center (Figures 16-18). Parking occupancy rises earlier in the day on these Saturdays. At 4 pm, the southeast quadrant is 49% occupied and the total downtown parking is 31% occupied overall. By 6 pm, the southeast quadrant occupancy increased to 67%. At the same hour, parking occupancy in the northeast quadrant was also significant at 47%. Downtown's total parking occupancy was 53%. Between 8 and 9 pm, the parking occupancy reaches its peak with a total downtown occupancy of 98% overall. This high occupancy is achieved by parking outside of designated parking spaces in many areas. This results in the following peak parking occupancy: southeast quadrant – 102%, southwest quadrant – 94%, northwest quadrant – 103%, northeast quadrant – 93%. These high occupancy rates result in significant circulation as people try to find available parking.

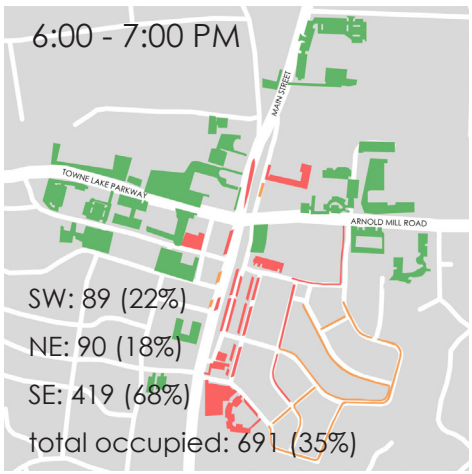


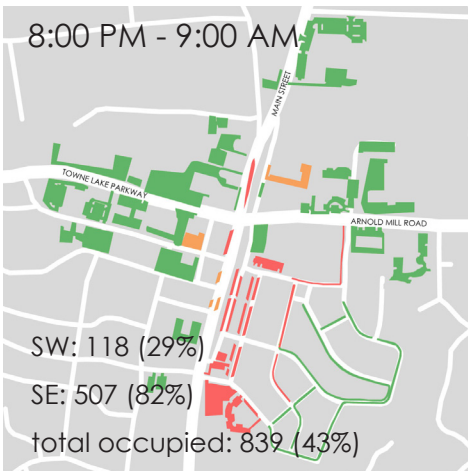




FIGURES 13-15: SPECIAL EVENT SATURDAY 07/14/2012







FIGURES 16-18: FIRST FRIDAY 08/03/2012

CIRCULATION

Figure 19 illustrates parking circulation patterns in downtown Woodstock for a typical weekday. Many of the vehicles entering downtown are circulating through the area in search of parking. The typical pattern has drivers entering East Main Street from Arnold Mill Road, traveling south to Fowler Street then north on Chambers Street. Drivers that reach this point without finding parking are likely to turn east on Wheeler Street and park in the residential areas or travel back to Arnold Mill Road. Egress from the southeast quadrant is difficult during many times of day, as the intersections are not signalized. This results in backups and delay for traffic exiting the quadrant from Fowler Street onto Main Street and from Hubbard Road onto Arnold Mill Road. Access to parking in the southwest quadrant from drivers approaching from the north and east is difficult due to a restricted left turn from Towne Lake Parkway southbound onto Wall Street, as this is the only connection to the south that is close to Main Street. A lack of sufficient signage to designate parking areas and provide pedestrian and vehicular wayfinding contributes to difficulties in locating convenient parking.

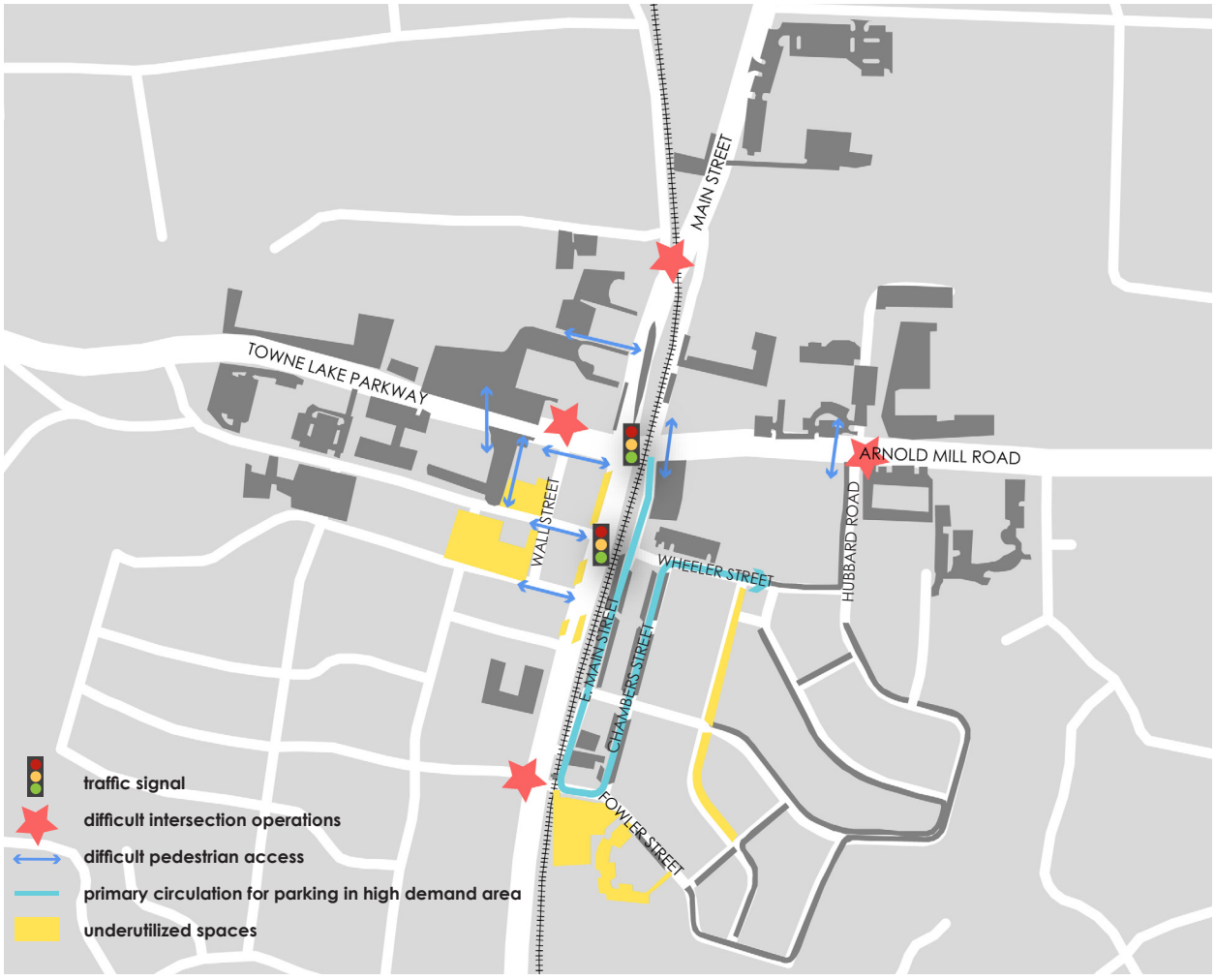


FIGURE 19: CIRCULATION

FUTURE DEMAND

There are three major factors that will increase demand for parking in downtown Woodstock.

First, Woodstock's government is planning to relocate a portion of its services to the northwest quadrant of downtown. Their offices will hold an estimated 100-130 employees. The surface parking lots in this area currently have 200 spaces. They are less than 25% occupied during a typical weekday, leaving 150 spaces available to accommodate the government services parking demand.

Second, the Elm Street Cultural Arts Center will relocate the Elm Street Theater from its current location at City Center to the new Elm Street Cultural Arts Village. The theater will accommodate 500 guests with the potential for expansion to 1000 seats. Peak use will generate demand for additional parking of 165 spaces initially with growth in demand to 330 spaces.

Third, the area south of Fowler Street and east of Main Street is planned for additional commercial development. Those plans were put on hold in recent years, resulting in an available lot (140 spaces) which is currently used for overflow parking on weekends (with valet parking during high use periods). Development of this site would increase parking demand, as well as eliminating these spaces from the parking supply.

PLANNED SUPPLY

The planned expansion to Towne Lake Parkway/ Arnold Mill Road includes on-street parking between Mill Street and Sandy Circle. Overall, the improvements will provide 114 parking spots, 24 in the northwest quadrant, 35 in the northeast, 17 in the southwest, and 38 in the southeast. The Woodstock West development will also create 345 on-street spaces in the southwest quadrant (see Figure 20).

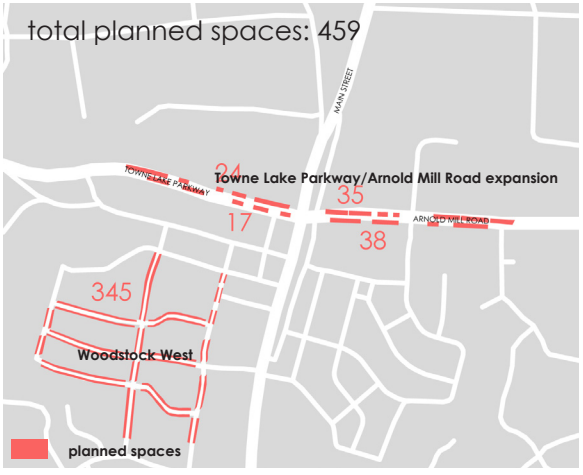


FIGURE 20: PLANNED SUPPLY

CONCLUSIONS

The parking observations and occupancy review indicate that there is adequate supply of parking overall in the downtown area. However, there are areas which experience high parking occupancy, resulting in increased traffic circulation while users locate a parking space. This circulation results in additional stress on key intersections, more vehicle-pedestrian conflicts, and delay to people using downtown businesses.

The primary areas of high parking occupancy during a typical weekday/weekend include:

- The southeast quadrant adjacent the retail/restaurant along East Main Street and Chambers Street
- The southwest quadrant along Wall Street just south of Towne Lake Parkway
- The northeast quadrant adjacent to the retail/restaurant area along East Main Street north of Arnold Mill Road

ALTERNATIVE PARKING STRATEGIES

Woodstock's parking needs can be addressed best through a multi-faceted approach. Through a combination of adding parking supply, improving parking management, designing parking capacity into future development, and improving traffic circulation to provide better access to the parking that is available, the City of Woodstock can ensure that its parking needs are met in the future without sacrificing the pedestrian-friendly, vibrant character its residents want.

USER BEHAVIOR

Fulfilling Woodstock's parking needs will either require people to walk further distances to access parking outside their destinations or the city to add parking supply in areas of high demand. The current lack of available spaces and congestion in areas of high parking demand already causes people to park further from their destination than desired. Other techniques to get people to voluntarily park further from their desired destination include:

- Pricing: Install parking meters to encourage turnover and price closer parking (this option is addressed futher in the section on parking management).
- Ease of access: Increase the attractiveness and ease of access for parking located outside areas of high demand.
- User Experience: Provide a pedestrian experience for walking from peripheral parking areas that makes this walk an attractive part of the trip. For this to be effective, the user experience must go beyond adequate, safe, and attractive sidewalk to provide a walk that is an integral part of the downtown experience.

PARKING SUPPLY

One way to alleviate a parking shortage is increase the supply by adding more parking spaces. Woodstock could do this in several ways: Adding on-street parking to new or existing streets, as Woodstock is already doing in Woodstock West and the Towne Lake Parkway/Arnold Mill Road improvements; acquiring or leasing undeveloped land and creating surface parking; or building structured parking to serve the area.

There are opportunities within each quadrant to add to the parking supply. Figure 20 shows potential areas for consideration along with potential locations for vehicular access to the parking supply. These are discussed below and summarized in Table 2. It is important to note that overall parking occupancy in downtown Woodstock during a typical weekday or weekend is less than 40% of spaces occupied, although the southeast quadrant experiences significant periods of high occupancy. As previously shown, parking occupancy is much higher during special events. However, the addition of permanent parking supply to address special events is not typically cost effective. Increased parking supply, if implemented, should be located to directly address this deficiency in the southeast quadrant or address future demand.

Location	Quad.	Users Directly Served			Property Ownership	Current Use	Potential Future Use	Relative Cost Per Space	Current Spaces / Total with New
		Weekday/ Weekend	Special Event	Future					
1) S of Arnold Mill Rd.* and E of East Main St.	SE	X	X	X	Private	Ace Hardware	Parking deck with some ground floor retail	$$	150+
2)Surface parking area S of Fowler Street*	SE	X		X	Private	Parking Lot	Parking deck with redevelopment to serve new use with additional public parking	$	140/260
3) Parking lot W of Wall St. between Elm and Mill Streets	SW	X		X	Public	Parking Lot	Small parking deck with two-level access	$$$	60/100
4) Parking at relocated theater site	SW	X	X	X	Public	None	Parking deck adjacent to site	$$	0/120
5) Parking W of new theater site	SW		X		Public	None	Parking deck for theater and special events (too far for typical weekday/ weekend use)	$	0/150+
6) Surface lot N of Towne Lake Pkwy and W of Chambers at City Center*	NW	X	X	X	Public and Private	Parking Lot/ Vacant	Parking deck for government services and public use	$	167/300+
7) Area N of Woodstock Aquatic Center	NE		X		Public and Private	Vacant/ Residential	Parking lot/deck for special events	$$	45/150+
8) Area under park on NE corner of Arnold Mill at E. Main St.	NE	X	X	X	Public and Private	Park	Small parking deck under reconstructed park	$$$	0/120

* the three locations recommended for additional future parking supply

TABLE 2: COMPARISION OF POTENTIAL LOCATIONS FOR PARKING

SOUTHEAST QUADRANT

This quadrant currently experiences high parking occupancy, resulting in frequent congestion and recirculation of vehicles looking for available spaces. As noted earlier, the high concentration of restaurants means that the quadrant is deficient 220 spaces. Surface parking has already been maximized on the site. Some potential locations for structured parking in this quadrant include the surface parking area south of Fowler Street. This is privately owned and planned for future development. Construction of a parking structure in this area in conjunction with further development could address current deficiencies while providing parking for additional demand. Another potential location is south of Arnold Mill Road and east of East Main Street. This area contains privately owned property currently occupied by Ace Hardware and other uses. A parking lot in this area in conjunction with potential redevelopment would locate parking supply near the busy Main Street at Arnold Mill Road intersection. This parking could serve needs of the southeast quadrant, as well as other portions of the Main Street corridor. Its proximity to the Park at City Center will facilitate its use for special events parking.

SOUTHWEST QUADRANT

The site of the gravel parking lot west of Wall Street between Elm Street and Mill Street could provide an opportunity for future structured parking that is close to the Main Street corridor. The grade slopes down from Main Street to the west and Towne Lake Parkway to the south. Construction of a parking structure could be accompanied by revision to the slope of the connecting streets to provide pedestrian travel that is at the same level as Main Street and Towne Lake Parkway.

NORTHWEST QUADRANT

This quadrant currently has an oversupply of parking located in a large surface lot north of Towne Lake Parkway and west of the Wall Street intersection. The grade slopes down from Towne Lake Parkway to the north, so a parking structure could provide multiple levels to the west extending below the grade of Towne Lake Parkway. This quadrant does not directly serve special events or areas of current deficiency, so a parking structure in this quadrant would serve future demand in conjunction with redevelopment. Additional expansion of the surface parking area may also be possible north of the current parking lot.

NORTHEAST QUADRANT

This quadrant experiences parking deficiencies only during special events. During those times, parking in this quadrant is at a premium, even filling the Chattahoochee Technical College Parking lots on the north end of the quadrant. Undeveloped property exists north of the Woodstock Aquatic Center that could allow expansion of surface parking or creation of future structured parking. However, this area has a significant grade change between the Aquatic Center and Chattahoochee Tech. This could allow creation of a parking structure that is accessed from Chattahoochee Tech at the top level and from the park at the bottom level. This quadrant does not directly serve areas of current deficiency, so a parking structure in this quadrant would be best suited to serve special events, park traffic, and future demand in conjunction with redevelopment. Additional expansion of the surface parking area may also be possible north of the current Aquatic Center parking lot.

FIGURE 21: LOCATIONS CONSIDERED FOR ADDITIONAL SUPPLY

PARKING MANAGEMENT

Parking management strategies address the way people use the available parking spaces rather than the quantity of parking available. This strategy focuses on efficient use of existing parking to maximize its utilization. Five parking management strategies were examined within the context of downtown Woodstock. They are discussed below, and their potential effectiveness is summarized in Table 3. Key areas for targeted implementation of parking management strategies are shown in Figure 21.

Strategy	Mechanisms					Applicability to Woodstock
	Add Supply	Reduce Demand	Encourage Turnover	Maximize Underused Lots	Reduce Auto Circulation	
Shared Parking	X			X	X	Current parking allows shared use with future development
Remote Parking with Shuttle	X	X		X	X	Special Events
Metered Parking		X	X	X	X	High Demand Areas - SE quadrant and Main Street
Employee Parking Management				X		High Demand Areas - SE quadrant
Driver Information and Navigation				X	X	Throughout Downtown

TABLE 3: CHARACTERISTICS OF PARKING MANAGEMENT STRATEGIES

SHARED PARKING

Shared parking can be effective when buildings in close proximity have parking needs at different times. For instance, a school that has a full parking lot during the week might share parking with a shopping center that needs the parking on weekends. Much of the parking in downtown Woodstock is open to a variety of users. Locations considered for additional shared parking are indicated below. These locations do not provide significant additional parking resources in key areas of deficiency.

- Elm Street Theater: The planned Elm Street Theater, which will introduce a high demand for parking during evenings and weekends (165 spaces for a 500-seat theater, with future demand for 330 spaces with a 1000-seat theater), can share parking with two weekday parking demands: the parking for offices in the southwest quadrant (147 spaces) and the parking for the government services in the

northwest quadrant (surface and street parking at first, but structured parking as the area develops). Shared parking in this area will accomodated up to 100 spaces with the existing surface parking lots. The theater can also take advantage of the approximately 40 available spaces in the southwest quadrant. Shared parking and full utilization of available spaces in the southwest quadrant could accommodate all of the short term needs and over 85% of the longer term needs for Elm Street Theater parking. The additional 15% (approximately 50 spaces) would need to be accommodated via future expansion of parking supply or by construction of spaces in conjunction with the Theater site. At a minimum, parking for handicapped patrons should be provided at the theater site.

- Nursing home north of Arnold Mill Road, east of Hubbard Road: This location has lower occupancy in the evening, when special event traffic places demands on this area of downtown. However, the need for quiet evening activity in proximity to the nursing home means that shared parking with evening events is not practical.

- Chattahoochee Technical College: This location has lower occupancy at times when special event traffic places demands on this area of downtown. However, these lots are currently heavily used during saturday evening concerts in the Park at City Center. The remote location of these lots relative to the core downtown businesses makes this location ineffective for use during a typical weekday or weekend, but the location could provide parking supply for the evening events at the Elm Street Cultural Arts Center to be located just to the south.

- Businesses between Towne Lake Parkway and Mill Street west of Main Street: Businesses in this area have low occupancy in the evening. They are frequently used for parking during special events. However their location is a few blocks west of Main Street, significantly reducing their attractiveness to potential users during a typical weekday or weekend.

- Ace Hardware Store south of Arnold Mill Road at East Main Street: This location has lower occupancy than businesses in the surrounding areas of the southeast

CASE STUDY: NAPERVILLE, IL

The city of Naperville has implemented a public-private funding structue to create shared parking downtown. Downtown property owners can develop with little or no onsite parking if they pay towards shared parking.

A parking guidance system posts the number of spaces available at parking deck entrances and on the city's website.

Naperville's Downtown Plan Implementation Committee records parking supply and occupancy data, through which it calculates a parking gerneration rate: approximately 2 vehicles per 1,000 gross square feet. Using this number, the city provides for downtown's increased parking needs.

quadrant. The parking lot is clearly marked to indicate its use for customers of Ace Hardware only. This limitation of use is appropriate, as the type of business conducted requires customers to carry heavy items and equipment to and from the store. Shared use of this parking during the heavy midday and early evening time periods is not recommended.

REMOTE PARKING WITH SHUTTLE SERVICE

Remote parking provides parking supply at a location further from the core downtown area and requires users to walk or use a shuttle service to access downtown. This system requires an additional step for planning and travel to the downtown area. The downtown Woodstock retail and restaurant businesses would be likely to have difficulty competing with surrounding areas if shuttling is required on a typical weekday or weekend. However, shuttle service with remote parking may be appropriate during special events.

METERED PARKING

Parking in high demand areas of downtown Woodstock is difficult to find during the midday and evening peak demand times of day. However, if a user finds a space, they may park there for several hours or all day, if desired. Metering and imposing time limits are solutions that can maintain the availability of parking spaces throughout the day by ensuring that certain spaces are only used for short visits. By placing meters on parking near key retail areas (see Figure 22), the city encourages people who plan on staying longer to park farther, for free. As a result, spaces closest to desirable locations turn over frequently. In areas where parking occupancy is high, implementation of parking meters will cause these spaces to turnover several times per day. In addition, long term parkers will face an inconvenience, as well as a cost, if they choose to feed the meter several times per day. Implementation of parking meters will result in increased parking supply near businesses and increased utilization of parking lots located further from businesses in free parking areas.

FIGURE 22: TARGET AREAS FOR PARKING METERS

In order to test the effectiveness of parking meters before committing to them throughout high demand areas, the city should consider installing only a few to begin with. Installing 10% of the potential meters will allow Woodstock to observe their effects before deciding whether or not to continue the meter program.

EMPLOYEE PARKING MANAGEMENT

Parking in prime parking spaces for several hours by employees and shop owners is common in all downtown areas. Management of employee parking is important to provide spaces for customers and visitors to downtown. Implementation of parking meters provides a direct means for managing employee parking. Other methods typically rely on self enforcement by business owners. Self enforcement is difficult, because it

is not always apparent where employees park, and parking enforcement is not a typical business function. The businesses in the southeast quadrant have implemented an employee parking management program, restricting employee use of parking along East Main Street and Chambers Street. However, employers report that these restrictions are difficult to enforce. Other cities have had success with implementation of an employee sticker program. This program requires employees to place a sticker on their car and to park in a remote parking area. Violators can be identified by their sticker number and their employer assessed a fee for violation. Potential areas for employee parking include the surface parking lot in the northwest quadrant and the surface parking lot south of Fowler Street in the southeast quadrant.

DRIVER INFORMATION AND NAVIGATION

Drivers tend to seek parking closest to their destination and then to explore other areas when a convenient space cannot be found. In areas where high parking occupancy is recurring, drivers are more likely to park in a lower occupancy lot during known periods of high demand. Three elements are critical to encourage use of lower occupancy lots:

- Parking lots and their access points must be identified clearly to allow drivers to make a decision on whether to use the alternative lots. Large, clear, and uniform signs convey that the city is serious about the use of the lot as a viable substitute for parking at the user's destination. Figure 23 shows locations suggested for implementation of parking signage and vehicular wayfinding.
- Parking lots must provide a perception of safety and security. If lots are not near the intended destination, they must be well lit, clean, and well marked. The surrounding buildings should be well maintained and attractive. Parking in an alley or behind a building can provide a stark contrast to on-street parking at the front of a business. These factors could be affecting utilization of the gravel parking lot along Wall Street between Elm Street and Mill Street.
- The pedestrian connection from the parking lot to the desired destination must be direct, well maintained, and attractive. Narrow and missing sidewalks along Towne Lake Parkway west of Main Street decrease the attractiveness of the lot on the north side of the street for access to Main

FIGURE 23: WAYFINDING SIGNAGE

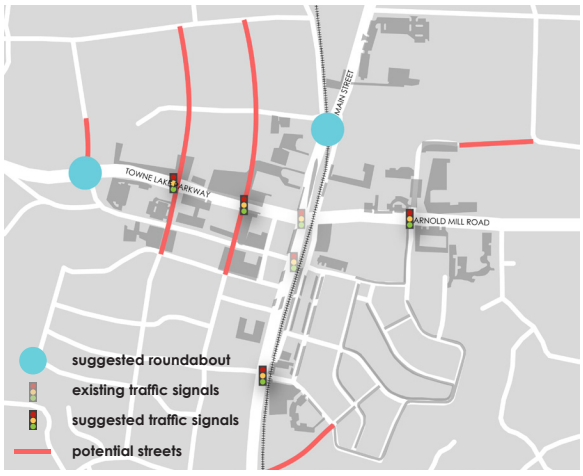


FIGURE 24: POTENTIAL FUTURE ACCESS AND CONNECTIVITY

Street. This large lot is significantly underutilized except during special events. Implementation of the planned roadway and sidewalk improvements along Towne Lake Parkway and Arnold Mill Road is likely to make this lot more effective in serving businesses along the Main Street corridor.

Providing information on the location of parking supply is a first step in achieving a more balanced parking utilization. Another step that is being used by some communities provides information on the status of high demand areas. Dynamic signs can be implemented to provide information on the number of available parking spaces or to indicate that a lot is full. These automated systems are used most frequently with parking garages or other areas with a limited number of entry and exit points that are free from interference from pedestrians or weather conditions. The number of vehicles in and out are counted at these locations and information regarding parking availability (number of available spaces) is provided to drivers on the street. In the case of downtown Woodstock, these devices could indicate when parking lots in high demand areas are full, allowing users to choose other parking options before getting caught in heavy circulating traffic. A disadvantage to this approach is that some potential patrons may decide to travel to another destination once they see signs indicating a full lot, rather than choosing a less convenient lot.

FUTURE DEVELOPMENT

As Woodstock's downtown develops, the city will need a strategy to make sure parking availability keeps pace with occupancy. One conventional way of managing parking is to require property owners to build parking on their own lot to serve the uses that will occupy their lots. While this approach is simple to manage and effective in maintaining supply, it also encourages an excess of surface parking, which discourages density, a cohesive urban fabric, environmentally responsible development, and the pedestrian-friendly character of downtown. In order to facilitate a walkable street network, keeping surface parking ratios to levels below 3.0 spaces per 1000 square feet is suggested. Development of more expensive structured parking is needed to accommodate demand and limit the downtown space used for surface parking. Funding and constructing structured parking can be complex. It is often not feasible for a single developer to build a parking structure to satisfy the needs of an individual development in a single structure. In this case, a shared parking structure can accommodate multiple users in more cost effective manner. Like Naperville, IL (see case study above), the city can encourage developers to forego building their required number of parking spots and instead pay an in-lieu fee that goes into a shared parking fund. Woodstock can consider both an annual fee, which would help with long-term operating costs, or an upfront fee, which could help build capital funds more quickly.

Woodstock has been progressive in applying urban design standards, streetscape, and on-street parking requirements to new development throughout the city. Accommodating parking for new and redeveloping commercial properties in a manner that enhances walkability and provides design flexibility is recommended in conjunction with implementation of the city's LCI.

TRAFFIC CIRCULATION FOR ACCESS TO PARKING

No matter which of the above strategies are implemented by the city, alleviating the difficulties in traffic circulation for parking access will increase the efficiency of the parking that exists now and those spaces that will be created in the future.

Connectivity is the key to effective traffic circulation in a downtown area. Figure 24 shows some potential roadway connections to be considered in the LCI study process. These connections provide multiple travel paths for local movement, dispersing traffic rather than concentrating it at a few key intersections. In addition, further development of a street grid can enhance walkability by providing additional signalized pedestrian crossings at appropriate locations.

The areas of high parking demand in the southeast quadrant of dDowntown Woodstock are limited in their ability to access the roadway network. The internal street network in the mixed use development area provides a well defined street grid. However this grid has a limited number of access points onto Arnold Mill Road and Main Street. Ingress and egress at the intersections of Arnold Mill Road at Hubbard Road and Main Street at Fowler Street are difficult, with drivers experiencing significant delay during peak hours. In addition, these two intersections are key locations for signalized pedestrian crossings of these main roads. Short-term consideration of traffic signalization with pedestrian crossings is recommended at those two intersections. In addition, implementation of connecting streets with signalized intersections for vehicle and pedestrian movements is recommended in several other areas of downtown (see Figure 24). Many of these connections would be performed in conjunction with redevelopment of surrounding land.

RECOMMENDATIONS

The steps that the city of Woodstock can take fall into three categories: immediate, or within 6 months; short-term, or within 5 years; and long-term, or as development occurs.

The immediate strategies the city should implement have less to do with construction and more to do with management and agreements. They are as follows:

IMMEDIATE IMPLEMENTATION: MANAGE PARKING SUPPLY AND PLAN FOR FUTURE PARKING NEEDS

1) PARKING METERS IN HIGH USE AREAS

The city should install parking meters in the following high use areas to promote turnover of prime parking spaces:

- East Main Street from Arnold Mill Road south to Fowler Street
- Main Street between Mill Street and Rope Mill Road
- Chambers Street

2) EMPLOYEE PARKING STICKER PROGRAM

Each employee in the southeast quadrant could be assigned a sticker that they must display on their car. They would be required to park in designated remote parking areas. The surface parking lot north of Towne Lake Parkway behind the Chambers at City Center is recommended for use in the near term. As additional parking supply is added in the southeast quadrant, employees could use remote spaces in the southeast quadrant.

3) CONTINUE USE OF PARKING LOT SOUTH OF FOWLER STREET

The city should continue to lease the surface parking lot south of Fowler Street to provide parking for the southeast quadrant.

4) NEGOTIATE LONG-TERM PARKING SUPPLY SOUTH OF FOWLER STREET

The city should begin discussions with the property owner of vacant property south of Fowler Street (current location of the 140 space parking lot) regarding long term parking in the Southeast quadrant. This could include city purchase or long term lease of the lot for surface parking and a future parking structure or provisions for construction of parking supply for general use in conjunction with construction of parking supply for new development.

5) PROVIDE UNIFORM SIGNAGE FOR PARKING FACILITIES

Parking lots are currently labeled with a "P" and use a variety of sign sizes. The standard "P" designation should be located inside a frame that is developed by the city as part of their wayfinding signage program. The signage for parking lots should include signs to designate each lot along with smaller signs with arrows to indicate a nearby parking lot from the main roads.

6) SECURE SHARED PARKING AGREEMENTS FOR USE BY THE ELM STREET THEATER

Parking for theater use can be operated on a shared use basis with nearby office development, located between Towne Lake Parkway and Mill Street east of the intersection of these roads. Three office developments are present in this area with a total of 147 spaces that could be used by theater-goers.

7) ARRANGE FOR SHUTTLE FOR SPECIAL EVENTS

Use shuttle to remote parking to provide access during first Friday and Special Events (such as Saturday night concert series). Consider use of parcel at corner of Main Street and SR 92 as remote parking lot. Use this experience to strengthen relationship of this area to downtown for future redevelopment.

8) PROVIDE DESIGNATED TOUR BUS PARKING AREA FOR USE WITH OPENING OF OUTLET MALL

Designate tour bus parking area in northwest quadrant surface parking lot to facilitate access from Rope Mill Road and Towne Lake Parkway. This location will provide a walk down the new streetscape with view of the train, allow a right turn to walk along the downtown shops, then crossing of Main Street to access the new development and restaurants in the southeast quadrant. Develop maps for distribution to tour operators that indicate the location for bus parking walking maps they can print for distribution to users. Consider location of a kiosk within the outlet Mall area and at the bus parking area to inform, orient, and welcome visitors.

SHORT TERM IMPLEMENTATION

1) DEVELOP AND IMPLEMENT PROVISIONS FOR IN-LIEU FEE FOR PARKING

As the downtown area continues to redevelop, the amount of land devoted to surface parking should be carefully considered. Maintaining surface parking ratios less than 3.0 spaces per 1000 square feet can provide the proximity of uses needed to maintain a walkable environment. In order to pool resources for construction

of structured parking and facilitate redevelopment of smaller parcels, implementation of a program to allow payment of an in-lieu fee for parking is recommended. This program could be combined with revenue from parking meters and other sources to provide parking structures or peripheral lots to accommodate parking needs while maintaining walkability goals.

2) PROVIDE ADDITIONAL SIGNALIZED ACCESS

Ingress and egress from the busy southeast quadrant is difficult, particularly during high traffic periods, such as afternoon rush hour. In addition, there are limited crossing opportunities for people wishing to walk across Main Street and Arnold Mill Road. In order to facilitate vehicular access and pedestrian crossings, installation of traffic signals with pedestrian crossings is recommended at the intersection of Main Street at Fowler Street and Arnold Mill Road at Hubbard Street/Park Access.

3) CREATE THE ELM STREET PROMENADE TO ENCOURAGE USE OF PARKING IN SOUTHWEST QUADRANT

The Elm Street promenade will connect the Elm Street Cultural Arts Center, historic Main Street shops and new commercial area in the southeast quadrant of downtown via a pedestrian route. This will also connect to the planned trail network west of downtown. This promenade will be a key element to encourage use of under-utilized parking in the southwest quadrant.

4) IMPLEMENT KIOSKS FOR USE BY TOUR BUS OPERATORS AND OTHER VISITOR

Implement a kiosk within the outlet mall area, at the tour bus parking area, and at the visitors' center to inform, orient, and welcome visitors. Provide maps to include key features of downtown including the Park at City Center, the Elm Street Cultural Arts Center, the Elm Street Promenade, and the existing/planned trail network. Plan for an additional kiosk at the redevelopment node on the northwest corner of SR 92 at Main Street.

5) PROVIDE ADDITIONAL PARKING SUPPLY IN SOUTHEAST QUADRANT

Coordinate additional parking supply in the vacant property south of Fowler Street (current location of the 140 space parking lot).

6) PROVIDE TRAIL CONNECTION FROM THE PARK AT CITY CENTER TO COLLEGE PARKING LOT FOR SPECIAL EVENT ACCESS

Provide a trail section to connect the Chattahoochee Technical College parking area to the Park at City Center.

7) NEGOTIATE LONG-TERM PARKING SUPPLY AT CORNER OF ARNOLD MILL ROAD AND EAST MAIN STREET

The city should discuss options for use of the Ace Hardware site so that future development can provide parking supply and supportive mixed-use development. A parking structure in this area would have retail shops or other businesses fronting on East Main Street and Arnold Mill Road, with parking for the development and additional parking for general city use on the interior. This space is ideally located to serve a variety of parking demand for typical weekday/weekend use and special events.

LONG-TERM STRATEGIES

1) PROVIDE ADDITIONAL PARKING SUPPLY IN NORTHWEST QUADRANT

As redevelopment of the northwest quadrant occurs, transformation of the surface parking lot north of Towne Lake Parkway behind Chamber at City Center to provide structured parking is recommended. This would also allow use of prime property along Towne Lake Parkway and the planned grid streets for multiuse development oriented to the downtown street network.

2) PROVIDE ADDITIONAL CENTRALLY LOCATED PARKING SUPPLY

As redevelopment of the area along Arnold Mill Road at East Main Street (Ace Hardware Site) occurs, implementation of a central parking structure is recommended. This parking structure would accommodate parking needs for redevelopment of the site, as well as general supply to serve the southeast and southwest quadrants. In addition, this parking structure would be ideally located to accommodate parking for special events in the Park at City Center or other areas within downtown.

3) EVALUATE THE NEED FOR METERED PARKING IN OTHER AREAS OF DOWNTOWN

As additional redevelopment occurs in the northwest and southwest quadrants of downtown, additional metered parking should be considered as an integral part of adding parking supply in structured parking facilities. This metered parking will encourage turnover of high value parking spaces.

4) EVALUATE THE NEED FOR ADDITIONAL SIGNALIZED ACCESS

As additional redevelopment occurs in the northwest and southwest quadrants of downtown and the grid network is further developed, examination of the need for additional signalized crossings of Towne Lake Parkway should be considered.


CHEVROLET