DOWNTOWN NORTHFIELD

EXISTING CONDITIONS ASSESSMENT AND SHARED PARKING ANALYSIS MEMORANDUM

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FEBRUARY 2023

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1.0 EXECUTIVE SUMMARY

This technical memorandum presents a review of existing parking and mobility policies and plans and an assessment of existing parking inventory and utilization in Downtown Northfield. This memorandum also presents a feasibility assessment for proposed mixed-use development projects to implement a shared parking program that leverages existing and proposed parking facilities in Downtown Northfield.

Existing Planning Context

CHS conducted a review of the existing planning context in Downtown Northfield, including the Comprehensive Plan for Northfield, Transportation Plan, Land Development Code (LDC), Climate Action Plan (CAP), Downtown Northfield Streetscape Framework, and previous Downtown Northfield parking studies.

- Previous parking studies found that parking in Downtown Northfield is generally available at all times with occupancy peaking at just 40 percent at 1PM on weekdays. However, the study identified imbalances between on-street and off-street parking facilities with on-street parking demand substantially higher than off-street demand. Even though parking was generally underutilized, including both public and private facilities, there were still portions of Downtown where parking demand is near or exceeding the effective parking supply. Parking demand is highest in the Downtown Historic District, including the blocks containing Archer House and the Northfield Library.

- The Comprehensive Plan, Transportation Plan, Downtown Northfield Streetscape Framework, and previous parking study all provide similar parking recommendations for Downtown Northfield, including adopting a shared parking ordinance to facilitate new development Downtown. These plans also outline the need and provide a framework for improving pedestrian access between Downtown and parking facilities, developing a wayfinding system, expanding and improving bicycle facilities to reduce automobile trips, and collaborating with community partners to expand mobility options Downtown (e.g., bikes, scooters, carsharing, etc.).

- The City of Northfield LDC eliminated parking minimums in the C1 Downtown Zoning District, and thus, the Project is not required to provide a minimum parking supply.

Existing Parking Conditions

CHS conducted a parking inventory and occupancy survey in December 2022 to assess peak parking periods on weekdays and weekends. Parking occupancy counts were conducted with two-hour intervals between observations.

- Under existing conditions, parking in Downtown Northfield is generally available with peak parking demand occurring on weekends with occupancy peaking at just 64 percent between noon and 1PM with 601 occupied spaces and a surplus of 340 spaces.

- However, parking demand is not evenly distributed across the study area with Downtown North experiencing impacted on-street parking conditions on weekends with 88 percent of on-street spaces occupied between 2PM and 3PM. However, off-street parking facilities in Downtown North

still have capacity with just 79 percent of off-street spaces occupied during the same period, indicating that users may not be aware of available off-street parking facilities and/or off-street facilities are located too far away from the user's destination.

- Parking is generally available at all times for all other Downtown subareas, including Downtown South and River West. However, the significant imbalance in parking demand between River West and the rest of Downtown indicates most users see the Cannon River and Highway 3 as major barriers and are unwilling to park in River West if their destination(s) are in Downtown North or Downtown South and/or they are unaware of the abundant parking availability in River West.

Existing plus Project Parking Conditions

CHS conducted a shared parking analysis for the Project, which includes four separate development sites across Downtown North and Downtown South. To determine the actual parking demand associated with occupied land uses in Downtown Northfield, CHS used the ULI shared parking model tool to develop a parking model that represents the existing study area. Using the occupied land use floor areas and observed parking occupancy in the study area, CHS modified the ULI shared parking model to match the observed parking demand Downtown. The modified ULI model was then used to estimate the Project's peak shared parking demand and assess the Project's impacts on the Downtown parking supply.

- Under existing plus project conditions, Downtown Northfield and each of its subareas would have adequate parking supply to accommodate peak parking demand.

- The Archer House development site on its own would generate a peak parking demand for up to 95 spaces at 7PM on weekends, which exceeds the 30-space parking garage in the basement and requiring the use of up to 65 nearby spaces in Downtown North (which currently has 175 available spaces at 7PM).

- The three development sites in Downtown South, including the Post Office redevelopment, hotel, and mixed-use residential development sites on their own would generate a peak parking demand for up to 131 spaces at 7PM on weekends, which can be accommodated by the proposed 150-space onsite parking garage.

- Under existing plus project conditions, Downtown North would generate peak parking demand for up to 295 spaces at noon on weekends, a net increase in demand for 47 spaces. The City would construct a new 120 space public parking garage at 304 Washington Street, resulting in a net increase of 72 spaces. Therefore, the peak parking demand for 295 spaces would occupy just 75 percent of the 395 spaces in Downtown North with a surplus of at least 100 spaces at all times.

- Under existing plus project conditions, Downtown South would generate peak parking demand for up to 402 spaces at 1PM on weekends, a net increase in demand for 85 spaces. The City would remove 47 on-street spaces and the Project would remove 48 off-street spaces and construct a 150-space onsite parking garage. Therefore, the peak parking demand for 402 spaces would occupy 82 percent of the 490 spaces in Downtown South with a surplus of at least 88 spaces at all times.

2.0 INTRODUCTION

The City of Northfield is experiencing development in the historic downtown area along the Cannon River which is anticipated to have significant impact on the downtown parking supply. The proposed development projects seek to deliver a mix of viable district parking strategies and mobility options to take significant steps toward realizing the Riverfront Enhancement Action Plan that builds upon goals from the 2008 Northfield Comprehensive Plan. Rather than react to individual project impacts on the overall parking supply, these developments provide an opportunity to consider parking and access in Downtown Northfield as a comprehensive system.

The City of Northfield has a unique and diverse population with approximately 20,729 full-time residents[1]. However, Northfield is also home to two colleges with over 5,000 students, including Carleton College (2,105 students) and St. Olaf College (3,179 students). As a result, approximately 30 percent of Northfield's population is between the ages of 18 and 24. Furthermore, Northfield has a highly educated population, in which 25 percent have an associate degree, 28 percent have a bachelor's degree, and 20 percent have a graduate or professional degree. These demographic factors have important implications regarding transportation, as Northfield has a high rate of residents who use active transportation (e.g., walk, bike, etc.) or other modes as their primary commute mode. **Figure 1** shows approximately 57 percent of Northfield residents drive (e.g., car, truck, van, carpool), 42 percent use active transportation or other modes, and less than one percent use public transit compared to the US average in which 84 percent drive, 11 percent use active transportation or other modes, and five percent use public transit.

Figure 1: Northfield Commute Mode Share

Mode	Northfield		US Average	
	#	%	#	%
Drive	6,171	57%	128,218,421	84%
Public Transit	70	<1%	6,940,571	5%
Walk/Bike/Other	4,523	42%	17,034,876	11%
Total Workers	**10,764**	**100%**	**152,193,868**	**100%**

Source: US Census Bureau, 2020: ACS 5-Year Estimate - B08141

Therefore, Northfield residents drive approximately 47 percent less and use active transportation and other modes approximately 74 percent more than the average American. Northfield households also own approximately 21 percent fewer vehicles than the national average, as Northfield residents have access to an average of 1.7 vehicles per household compared to the national average of 2.06 vehicles per household.

[1] Source: 2021 US Census estimate (https://www.census.gov/quickfacts/northfieldcityminnesota)

3.0 PROJECT UNDERSTANDING

3.1 PROJECT DESCRIPTION

The proposed developments in Downtown Northfield consist of at least four individual project sites (herein referred to as the "Project"), including the Archer House redevelopment project (212 Division Street), US Post Office redevelopment project (14 Bridge Square), a new mixed-use hotel project (116 5th Street), and a new mixed-use residential project (501 Water Street).

The Archer House redevelopment project (Archer House) is located in the Downtown Zoning District (C1-B) and would rebuild the historic Archer House River Inn building with up to 60 market-rate housing units, a 5,000 gross-square-foot (gsf) ground-level restaurant, and up to 5,000 gsf of ground-level retail (see **Figure 2**). The Archer House project would construct 30 onsite parking spaces in the basement.

Figure 2: Archer House Redevelopment Program

Land Use	Size	Unit
Market Rate Housing	60	units
Restaurant	5,000	gsf
Retail	5,000	gsf
Onsite Basement Parking	30	Spaces

The US Post Office redevelopment project (Post Office) is located in the Public Institutional Zoning District (PI-S) and would retrofit the historic Post Office building into a new distillery (6,000 gsf) and tasting room (4,000 gsf) for Loon Liquors, LLC (see **Figure 3**). The Post Office site would not construct onsite parking.

Figure 3: Archer House Redevelopment Program

Land Use	Size	Unit
Distillery	8,000	gsf
Tasting Room	4,000	gsf

The new mixed-use hotel project (Hotel) at the northeast corner of the 5th and Water streets intersection is in the Downtown Zoning District (C1-B). The Hotel project would demolish the existing buildings and surface parking lots at 112 5th Street, 116 5th Street, and 411 Water Street and construct a new 85 room hotel with ground-level lounge/bar (2,000 gsf), restaurant (3,000 gsf), coffee shop (1,500 gsf), and retail (2,600 gsf) (see **Figure 4**). The Hotel site would not construct onsite parking, resulting in a net reduction of 22 off-street parking spaces.

Figure 4: Mixed-Use Hotel Development Program

Land Use	Size	Unit
Hotel	85	rooms
Lounge/Bar	2,000	gsf
Restaurant	3,000	gsf
Coffee Shop	1,500	gsf
General Retail	2,600	gsf

The new mixed-use residential project at the southeast corner of the 5th and Water streets intersection is located in the Downtown Zoning District (C1-B). The mixed-use residential project would demolish the existing buildings and surface parking lot at 501 Water Street and construct a new 150 space parking garage and liner building consisting of 18 housing units (including eight market-rate and 10 affordable units) with ground-level liquor store (13,000 gsf), accounting offices (3,500 gsf), florist (2,500 gsf), and retail (2,600 gsf) (see **Table 5**). The new 150 space parking garage would replace 26 off-street private parking spaces for a net increase of 124 spaces.

Figure 5: Mixed-Use Residential Development Program

Land Use	Size	Unit
Liquor Store	13,000	gsf
Accountant	3,500	gsf
Florist	2,500	gsf
General Retail	2,600	gsf
Market Rate Housing	8	units
Affordable Housing	10	units
Parking Garage	150	spaces

Table 6 presents the total development program for all Project land uses proposed in Downtown Northfield.

Figure 6: Total Project Development Program

Land Use	Size	Unit
General Retail	12,700	gsf
Liquor Store	13,000	gsf
Restaurant	8,000	gsf
Coffee Shop	1,500	gsf
Hotel	85	rooms
Lounge/Bar	2,000	gsf
Distillery (Tasting Room)[1]	4,000	gsf
Residential	78	units
Office (Accountant)	3,500	gsf

Notes:

1. The distillery land use includes the tasting room floor area only, as the production area is not expected to generate additional parking demand.

3.2 Associated City of Northfield Projects

In conjunction with the Project, the City of Northfield is considering public projects that would further modify the parking supply in Downtown Northfield. The City would remove 47 on-street parking spaces along Water Street between 5th Street and Bridge Square to construct a new riverfront park and 2.5-mile riverwalk pedestrian and bike trail as part of the *Riverfront Enhancement Action Plan*. The City would also construct a new 120 space public parking garage at 304 Washington Street, across Division Street from the Archer House project, replacing the existing 48 space public surface parking lot for a net increase of 72 off-street spaces.

As discussed above, the Project would remove 7 off-street spaces at 116 5th Street (Hotel site), 15 off-street spaces at 411 Water Street (Hotel site), and 26 off-street spaces at 501 Water Street (mixed-use residential site) and would construct 30 new off-street spaces at 212 Division Street (Archer House site) and a new 150 space publicly accessible parking garage at 501 Water Street (mixed-use residential site) for a net increase of 132 off-street spaces. Overall, the Project in conjunction with City projects would remove 143 existing parking spaces, including 96 off-street and 47 on-street spaces and construct three new parking garages with a total of 300 off-street spaces. **Figure 7** shows the Project in conjunction with City projects would result in a net increase of 157 parking spaces in Downtown Northfield, including an increase of 204 off-street spaces and removal of 47 on-street spaces.

Figure 7: Change in Downtown Northfield Parking Supplies

Parking Facility Location	Parking Removal			New Parking			Net Change		
	Off-Street	On-Street	Total	Off-Street	On-Street	Total	Off-Street	On-Street	Total
304 Washington Street *(Public Lot)*	(48)	0	(48)	120	0	120	72	0	72
212 Division Street *(Archer House site)*	0	0	0	30	0	30	30	0	30
116 5th Street *(Hotel site)*	(7)	0	(7)	0	0	0	(7)	0	(7)
411 Water Street *(Hotel site)*	(15)	0	(15)	0	0	0	(15)	0	(15)
Water Street between 5th St. & Bridge Sq. *(City Park and Riverwalk)*	0	(47)	(47)	0	0	0	0	(47)	(47)
501 Water Street *(Mixed-Use Residential site)*	(26)	0	(26)	150	0	150	124	0	124
Total	**(96)**	**(47)**	**(143)**	**300**	**0**	**300**	**204**	**(47)**	**157**

4.0 Existing Planning Context

This section provides a summary of existing City of Northfield plans, studies, and policies that establish a framework of parking standards, practices, and requirements throughout the city and within Downtown.

4.1 Comprehensive Plan for Northfield

The City of Northfield adopted the Comprehensive Plan for Northfield (Comprehensive Plan) on November 17, 2008, which was an update to the previous 2001 comprehensive plan. Chapter 7 (Transportation) of the Comprehensive Plan establishes key objectives and strategies for the transportation system in Northfield. It is noted that in the event there is a conflict between the Comprehensive Plan and the 2008 Comprehensive Transportation Plan Update, the more specific document will guide. The goal of the Comprehensive Plan is to facilitate the movement of people, goods, and services within and through the city on a safe, convenient, coordinated and fiscally responsible network of routes using a variety of transportation modes. The

Comprehensive Plan includes several principals and policies related to parking in the study area. Specific strategies relating to parking policies are listed below:

- **Community Identity 5.3** - Modify the overlying zoning districts at targeted gateways to create a defined streetscape with building fronts oriented to the street and parking to the rear of the structure.
- **Community Identity 7.2** - Cooperate with the local colleges to minimize negative impacts of parking and traffic on Northfield neighborhoods.
- **Land Use Principal 7(b**) - Neighborhood-serving commercial will not be designed to be single-use and auto-oriented with parking in front of buildings disconnected from the streetscape. Neighborhood-serving commercial buildings will reflect the form and character of the neighborhood vernacular or historical context of the community.
- **Land Use 2.3** - Adopt a shared parking ordinance to facilitate new development in the downtown.
- **Land Use 3.5** - Facilitate redevelopment of uses that doe no fit the development pattern downtown (i.e., single-story uses surrounded by parking), but which with better design could increase density and provide more commercial, office, or housing opportunities.
- **Land Use 9.3** - Require site design principals that encourage the use of public transit (i.e., on-street sidewalks and trails, parking lots at side or rear of buildings, sidewalk connections from the street to the building entrances).
- **Environmental Resources 10.2** - Develop land use policies to manage and reduce urban heat island effects, including promoting shading of streets and parking lots with more trees.
- **Community Facilities 2.1**- Expansion of community facilities should be closely monitored so that facilities do not negatively impact (with excessive parking, traffic, noise) the character of a neighborhood. New facilities should reflect, whenever possible, the character of the existing neighborhood.
- **Economic Development 3.3** – Development design along the Cannon River should incorporate the following concepts:
    - A distinctive pattern of architectural and urban design elements that includes many of the design concepts that have been developed from the Downtown Streetscape Framework Plan
    - Link existing pedestrian improvements, including walks and trails, with similar improvements that are required as infill and redevelopment/intensification occurs along the corridor
    - A development pattern that emphasizes pedestrian scale, minimizes building setbacks, ensures the public's health and safety by protecting the floodplain, and discourages large parking areas in front of buildings

4.2 City of Northfield Comprehensive Transportation Plan Update (2008)

The City of Northfield adopted the Comprehensive Transportation Plan Update (Transportation Plan) on November 17, 2008. This plan update incorporates previous planning efforts relating to transportation, including the 2025 Rice County Transportation Plan (2006), Dakota County 2025 Transportation Plan (2004), the Greater Northfield Greenway System Action Plan (2007), and the Northwest Northfield Highway Corridor Study (2008). The Transportation Plan provides an evaluation of existing and future transportation needs and provides a framework for decision-making regarding infrastructure improvements to achieve safety, accessibility, mobility, and performance of the existing and future transportation system.

The Transportation Plan highlights Northfield's unique transportation conditions compared to other Minnesota cities, including Northfield's significant active transportation mode share with approximately 42 percent residents using active transportation modes (walk, bike, other) to complete their commutes. The Transportation Plan established a set a goals and policies to guide implementation and day to day transportation related decision making. The Transportation Plan establishes numerous goals and policies intended to improve transportation mode choice by improving non-motorized and mass transit infrastructure.

The Transportation Plan established typical street types that set the context of the cross-sectional view of particular roadways and intended to be used for several roadway classifications. The established street types include Parkways, Drives, Avenues, Roads, Streets, and Main Streets. The functional classes include Minor Arterials, Major Collectors, Minor Collectors, and Local Streets.

The type of on-street parking should be carefully considered and depend on the specific function and width of the street, adjacent land uses, traffic volumes, as well as existing and anticipated traffic operations. Where on-street parallel parking is considered, a minimum 8-foot area outside of the travel is required. Parking should also be restricted within 30 to 50 feet of all intersections. In the case of commercial, office, and government projects, the city may require development to support existing and future transit service by requiring any automobile parking be located in rear or side yards.

4.3 City of Northfield Land Development Code

The City of Northfield's Land Development Code (LDC) is intended to carryout the policies of the Comprehensive Plan by regulating the land uses and structures within the city. Chapter 2.1 defines the Downtown District (C1) and its intended purpose to sustain the historic central business district, make Highway 3 an integral part of Downtown, provide design transitions to surrounding zoning districts, enhance the beauty of the Cannon River, and increase downtown viability and prosperity. The C1 district aims to provide compact, pedestrian friendly, active mix of land uses including business, hospitality, offices and services, housing, arts and culture, government, and public gathering spaces.

Chapter 3.6 of the LDC established off-street parking, loading, and mobility requirements. Chapter 3.6.4(A) allows on-street parking spaces in non-residential zoning districts to be counted towards off-street parking spaces requirements.

It should be noted that, Chapter 3.6.5 established the minimum required and maximum allowed parking spaces by zoning district, and specifically ***does not require*** a minimum parking supply nor does it set a maximum parking supply for any land uses in the ***C1 Zoning District (Downtown)***; except for property west of Highway 3 (requires minimum 50 percent of standards A1/B1) or south of 6th Street (requires minimum 30 percent of standards A1/B1).

4.4 NORTHFIELD CLIMATE ACTION PLAN

The City of Northfield Climate Action Plan (CAP) was adopted November 5, 2019, with the goal to shift the City of Northfield to 100 percent carbon-free electricity by 2030 and 100 percent carbon free by 2040. The CAP lays out path forward to support both the community's ongoing efforts and new initiatives that mitigate the cause of and adapt to the impacts of climate change. Approximately 12 percent of Northfields greenhouse gas (GHG) emissions come from the transportation sector. The CAP recommends a number of ideas to pay for climate work, including charging parking fees. The following transportation policies were recommended in the CAP:

- **Policy and Planning 4.1** – Adopt a policy for market-based pricing for parking in commercial areas and dedicate funds to go towards transportation [infrastructure] for biking, walking, and public transit system.
- **Policy and Planning 4.2** - Work with Hiawatha land transit and other partners to explore a subsidized bus pass program and/or simplify the payment method to increase ridership on the existing transit system.
- **Policy and Planning 4.4** -Collaborate with community partners, particularly St. Olaf and Carleton, to explore bike, scooter, carsharing or other mobility options; ensure motorized options are electric and accessible to all residents.
- **Policy and Planning 4.5** - Continue to implement the current bike/ped plan to improve access and safety of bike and pedestrian infrastructure.
- **Policy and Planning 4.6** - Provide adequate public charging spaces that can accommodate multiple charging ports for additional mobility options; connect to solar energy systems when possible.
- **Policy and Planning 4.7** – Partner with local businesses to catalyze EV charging infrastructure.
- **Policy and Planning 4.8** – Engage landowners and surrounding communities to implement the Greater Northfield Area Greenway System.
- **Innovation and Demonstration 2.1** – Partner with businesses to catalyze public EV charging.
- **Innovation and Demonstration 2.2** – Update and strengthen the comprehensive plan and Land Use Development Code to increase residential density within City limits through infill best practices, such as the elimination of minimum parking requirements.

4.5 Riverfront Enhancement Action Plan

The Riverfront Enhancement Action Plan is a framework to guide improvements along the river and future design of park spaces. It is intended to create enthusiasm and identify actions necessary to further enhance Northfield's riverfront parks into an exciting regional experience. The action plan identifies the following projects in the study area:

- Ames and Bridge Square parks are early priorities for park improvements, including constructing parallel parking and ADA drop-off area on northbound Highway 3, new bike lanes on the 5th Street bridge, and new pedestrian walkways. This plan also recommends closing Water Street between Bridge Square and the Downtown Riverwalk to activate the space with food trucks and other sponsored activities/attractions.
- Downtown Riverwalk would create a universally accessible, highly visible, signature destination loop walkway/trail that connects both sides of the Cannon River with the Downtown Business District, enhance riverfront parks, and connect to local and regional trail system and other city amenities and attractions. Segments of the Riverwalk have already been completed, and thus, this plan focuses on action that maintain and enhance existing segments and complete missing segments through public-private partnerships.
- Ames Mill Dam Project is still in the early stages of planning to explore a range of concepts for reusing or replacing the Ames Mill Dam at the southwest corner of the Water Street bridge and Cannon River. Design solutions will need to connect and integrate with broader uses of the river corridor, maintain or enhance natural systems and ecological health, and fit into the existing context of the Cannon River Watershed.
- A Wayfinding plan and design approach including signs and maps to help orient visitors and increase trail use.

4.6 City of Northfield Supply/Demand and Alternatives Analysis

The City of Northfield Supply/Demand and Alternative Analysis (Downtown Parking Study) report was completed in August 2001. The Downtown Parking Study conducted parking occupancy counts on Wednesday, May 10, 2001, between 8:00 AM and 4:00 PM. The occupancy counts found that downtown parking occupancy peaks between noon and 1:00 PM on a typical weekday at just over 40 percent, indicating the existing parking supply in the study area is adequate to meet demand for spaces. The occupancy study also looked at the differences between public and private parking facility utilization.

The analysis discovered an unusual trend with private parking supplies comprising 70 percent of the total supply, but occupancy in private facilities peaks at just 32 percent. Inversely, public parking facilities comprise just 30 percent of the total supply, but utilization peaks at 61 percent. This is likely the result of most public parking spaces being on-street facilities that are typically located closer to major destinations in Downtown Northfield than most private facilities. Given the public supply is a smaller portion of the total supply, it will always demonstrate a higher utilization rate comparatively. Furthermore, many of the private facilities are dedicated to residential users and thus, likely to be underutilized during weekdays while those users are away from home.

Although the analysis found that overall parking facilities are underutilized, including both public and private facilities, there were still portions of Downtown where parking demand is near or exceeding the effective parking supply. The blocks that are near or exceeding their respective effective parking supplies are contiguous and densely developed in the Downtown Historic District (DH-O), including the blocks containing Archer House, the Northfield Library, the First National Bank, and the McClaughry Building. Whereas blocks located outside of the DH-O district typically have a substantial parking surplus.

The Downtown Parking Study also assessed the potential impacts of future development and found that Northfield would continue to have adequate parking facilities to accommodate future peak parking demand. However, on a block-by-block basis there would continue to be blocks that exceed their effective parking supply, primarily in the DH-O district or adjacent. As a result, the study recommended two potential courses of action, including to develop new parking supply to meet deficits on a block-by-block basis (e.g., expanding existing surface lots, introducing vertical parking structures, introducing demand management strategies, etc.) or to develop parking solutions through the addition of new parking facilities placed strategically to address deficits on two or more blocks.

The Downtown Parking Study noted that there is ample parking to meet existing and future parking demand, assuming users are willing to walk up to four blocks between their parking space and destination. However, this is an unrealistic assumption for a community of Northfield's size and composition. Therefore, the plan recommends addressing parking needs to provide adequate effective parking supply that allows users to park within two blocks of their destination.

4.7 Downtown Northfield Streetscape Framework Plan

The City of Northfield adopted the Downtown Northfield Streetscape Framework Plan in May 2006. This plan provides a framework and implementation strategy for the Downtown Northfield streetscape project, including descriptions of the streetscape goals and objectives, descriptions of selected streetscape elements, cost estimates, and recommended implementation strategy. One of the Downtown Northfield streetscape design principals is to integrate the need to move traffic with safety and the aesthetic needs of the streetscape. To achieve this principle, the plan recommends creating a Downtown parking strategy to balance on-street, surface lot, and shared parking opportunities. Other parking related design principles include:

- Create pedestrian friendly linkages between all areas within a five-minute walk of the Downtown to minimize vehicle trips and encourage walking.
- Utilize elements such as trees, lighting, and other street furniture in appropriate areas to create a sense of human scale and improve the aesthetics of parking facilities.
- Reinforce and improve pedestrian linkages between Downtown, public parking lots, riverfront, and adjacent residential areas via streetscape enhancements and wayfinding.
- Improve appearance of private development by buffering parking and storage areas with landscaping, decorative railings, garden walls, or liner buildings.

5.0 Downtown Northfield Parking Performance Analyses

This section presents an evaluation of existing conditions parking system performance in Downtown Northfield, including on- and off-street parking supply inventory and occupancy surveys, and existing land use inventory and actual parking demand analysis.

5.1 Parking Inventory and Occupancy Surveys

The parking surveys were conducted on Thursday, October 6 and Saturday, October 8, 2022, between 8 AM and 9 PM to assess peak parking periods on weekdays and weekends. Parking occupancy counts were conducted on these days with two-hour intervals between observations. It is noted that a street festival is held on a weekly basis during the fall that temporarily removes six on-street parking spaces on weekends between 8AM and 1PM.

Existing Conditions Study Area Parking Survey Results

Overall parking inventory and occupancy for Downtown Northfield was assessed to determine the peak day and hour of parking occupancy in the study area. **Figure 8** presents a summary of the total weekday parking survey results and **Figure 9** presents a summary of the total weekend parking survey results. Parking in the study area is generally available on both weekdays and weekends, with total parking occupancy in the study area peaking at 64 percent on weekends between noon and 1PM. Parking occupancy on weekdays peaks at just 58 percent between noon and 1PM, which is approximately 10 percent lower than the weekend peak.

Figure 8: Existing Conditions Study Area Parking Survey Results Summary - Weekday

Time	Off-Street			On-Street			Total		
	Occupancy	Supply	% Occupied	Occupancy	Supply	% Occupied	Occupancy	Supply	% Occupied
8-9am	172	523	***33%***	113	424	***27%***	285	947	**30%**
10-11am	248	523	***47%***	233	424	***55%***	481	947	**51%**
12-1pm	293	523	***56%***	254	424	***60%***	547	947	**58%**
2-3pm	263	523	***50%***	256	424	***60%***	519	947	**55%**
4-5pm	228	523	***44%***	230	424	***54%***	458	947	**48%**
6-7pm	193	523	***37%***	229	424	***54%***	422	947	**45%**
8-9pm	188	523	***36%***	176	424	***42%***	364	947	**38%**

Source: CHS Consulting Group, 2023, collected Thursday, October 6, 2022.

As shown in **Figure 8**, overall parking in Downtown Northfield is generally available on weekdays with occupancy peaking at just 58 percent between noon and 1PM with 547 occupied spaces, including 293 off-street (56 percent) and 254 on-street (60 percent) spaces. Therefore, on weekdays there are at least 374 available spaces at any one time, including 170 on-street and 230 off-street spaces.

Figure 9: Existing Conditions Study Area Parking Survey Results Summary – Weekend

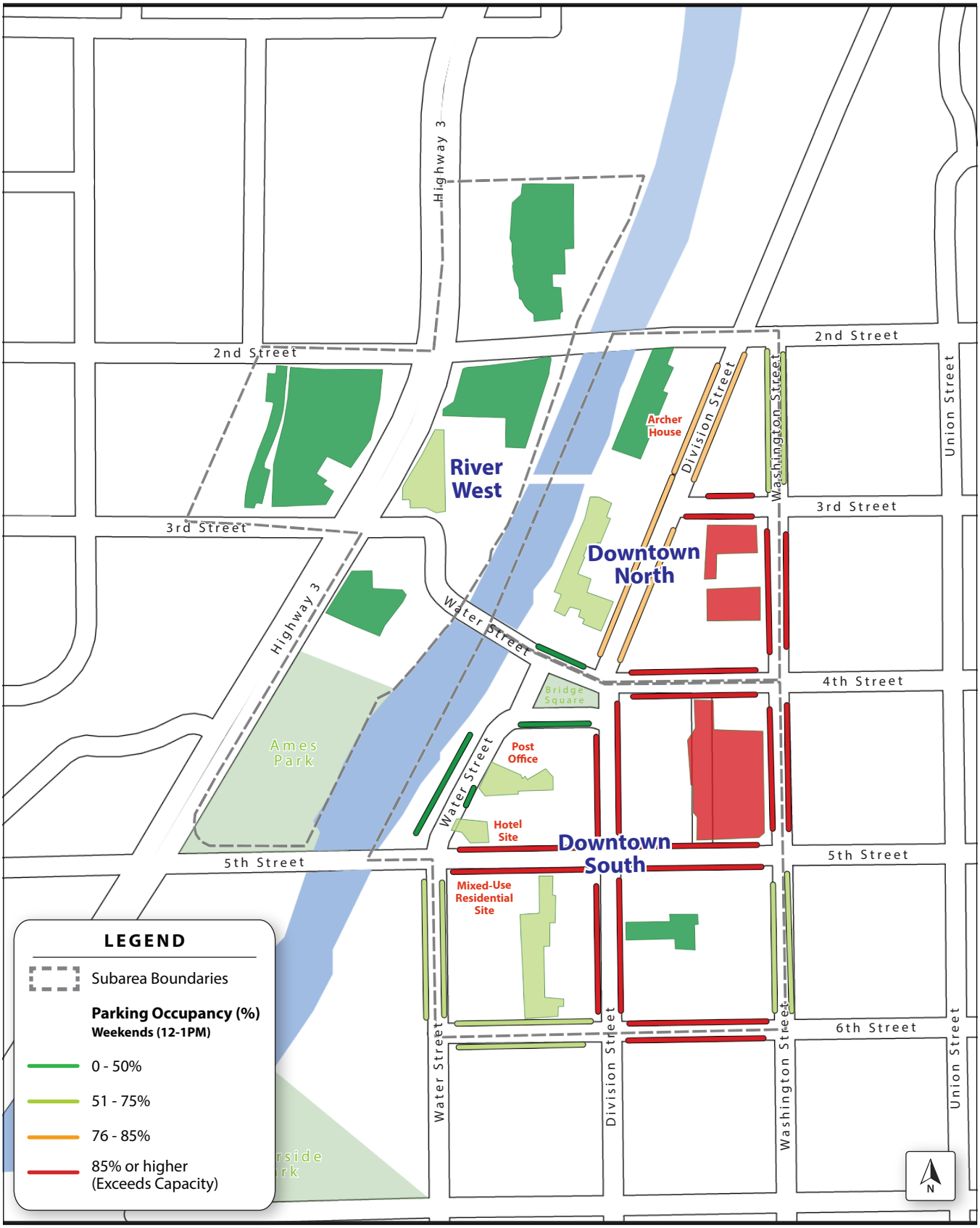
Time	Off-Street			On-Street			Total		
	Occupancy	Supply	% Occupied	Occupancy	Supply	% Occupied	Occupancy	Supply	% Occupied
8-9am	135	523	***26%***	109	418	***26%***	244	941	**26%**
10-11am	216	523	***41%***	301	418	***72%***	517	941	**55%**
12-1pm	257	523	***49%***	344	418	***82%***	601	941	**64%**
2-3pm	246	523	***47%***	340	424	***80%***	586	947	**62%**
4-5pm	200	523	***38%***	291	424	***69%***	491	947	**52%**
6-7pm	203	523	***39%***	217	424	***51%***	420	947	**44%**
8-9pm	140	523	***27%***	177	424	***42%***	317	947	**33%**

Source: CHS Consulting Group, 2023, collected Saturday, October 8, 2022.

As shown in **Figure 9**, overall parking in Downtown Northfield is generally available on weekends with occupancy peaking at just 64 percent between noon and 1PM with 601 occupied spaces, including 257 off-street (49 percent) and 344 on-street (82 percent) spaces. Therefore, on weekends there are at least 340 available spaces at any one time, including 74 on-street and 266 off-street spaces. However, on weekends on-street parking is approaching effective capacity (85 percent occupancy for on-street parking) while off-street facilities remain underutilized at just 49 percent occupancy during the peak parking period, which indicates that users may not be aware of available off-street parking facilities and/or off-street facilities are located too far away from the user's destination. **Figure 10** presents a map of peak parking occupancy on weekends.

Existing Conditions Parking Survey Results by Subarea

To better assess existing parking conditions in the study area, parking survey results were grouped into three subareas: Downtown North, Downtown South, and River West (see **Figure 10**). Downtown North includes portions of Downtown Northfield south of 2nd Street, west of Washington Street, north of 4th Street, and east of the Cannon River. Downtown South includes portions of Downtown Northfield south of 4th Street, west of Washington Street, north of 6th Street, and east of Water Street. River West includes portions of Downtown Northfield south of 2nd Street, west of the Cannon River, east of Highway 3, and north of Ames Park; River West also includes the hotel at 114 2nd Street and the block containing the Northfield Transit Station (204 3rd Street) bounded by 2nd Street to the north, Highway 3 to the east, 3rd Street to the south, and the railroad right-of-way to the west.



Downtown Northfield Parking Study Memorandum

Consulting Group

Figure 10
Parking Subareas and Peak Parking Occupancy Map

Downtown North

Figure 11 presents the summary of parking survey results for the Downtown North Subarea for both weekdays and weekend days. There are 293 total parking spaces in Downtown North, including 182 on-street and 111 off-street spaces. Parking in Downtown North is constrained compared to the overall study area with parking occupancy peaking at 85 percent on weekends between 2PM and 3PM. Parking occupancy on weekdays peaks at just 64 percent between 2PM and 3PM, which is approximately 33 percent lower than the weekend peak.

Figure 11: Existing Conditions Parking Survey Results Summary - Downtown North

Parking Type	Time	Weekday			Weekend		
		Occupancy	Supply	% Occupied	Occupancy	Supply	% Occupied
Off-Street	*8-9am*	*46*	*111*	*41%*	*40*	*111*	*36%*
	10-11am	*70*	*111*	*63%*	*55*	*111*	*50%*
	12-1pm	*73*	*111*	*66%*	*73*	*111*	*66%*
	2-3pm	*79*	*111*	*71%*	*88*	*111*	*79%*
	4-5pm	*70*	*111*	*63%*	*56*	*111*	*50%*
	6-7pm	*38*	*111*	*34%*	*41*	*111*	*37%*
	8-9pm	*33*	*111*	*30%*	*31*	*111*	*28%*
On-Street	*8-9am*	*38*	*182*	*21%*	*41*	*176*	*23%*
	10-11am	*106*	*182*	*58%*	*145*	*176*	*82%*
	12-1pm	*104*	*182*	*57%*	*153*	*176*	*87%*
	2-3pm	*108*	*182*	*59%*	*160*	*182*	*88%*
	4-5pm	*95*	*182*	*52%*	*110*	*182*	*60%*
	6-7pm	*80*	*182*	*44%*	*71*	*182*	*39%*
	8-9pm	*65*	*182*	*36%*	*47*	*182*	*26%*
Downtown North Total	**8-9am**	84	293	**29%**	81	287	**28%**
	10-11am	176	293	**60%**	200	287	**70%**
	12-1pm	177	293	**60%**	226	287	**79%**
	2-3pm	187	293	**64%**	248	293	**85%**
	4-5pm	165	293	**56%**	166	293	**57%**
	6-7pm	118	293	**40%**	112	293	**38%**
	8-9pm	98	293	**33%**	78	293	**27%**

Source: CHS Consulting Group, 2023, collected Thursday, October 6, and Saturday, October 8, 2022.

As shown in **Figure 11**, parking in Downtown North is generally available on weekdays with occupancy peaking at just 64 percent between 2PM and 3PM with 187 occupied spaces, including 79 off-street (71 percent) and 108 on-street (59 percent) spaces. Therefore, on weekdays there are always at least 106 available spaces, including 32 off-street and 74 on-street spaces.

However, parking in Downtown North is constrained on weekends with occupancy peaking at 85 percent between 2PM and 3PM with 248 occupied spaces, including 88 off-street (79 percent) and 160 on-street (88 percent) spaces. Therefore, on weekends there are only 45 available spaces, including 23 off-street and 22 on-street spaces. On-street parking exceeds the effective capacity (85 percent for on-street parking), during

the weekend peak period indicating that people may have difficulty finding an available space near their destination and require them to "cruise" to find the nearest available space. There is some capacity for existing off-street parking facilities to accommodate parking demand in Downtown North, but even the off-street facilities are approaching their effective capacity (90 percent for off-street parking) during the weekend peak parking period. However, the imbalance between on- and off-street parking occupancy indicates that users may not be aware of available off-street parking facilities and/or off-street facilities are located too far away from the user's destination.

Downtown South

Figure 12 presents the summary of parking survey results for the Downtown South Subarea for both weekdays and weekend days. There are 435 total parking spaces in Downtown South, including 193 off-street and 242 on-street spaces. Parking in Downtown South is generally available at all times with occupancy peaking at just 73 percent on weekends between noon and 1PM. Parking occupancy on weekdays peaks at just 61 percent between noon and 1PM, which is approximately 19 percent lower than the weekend peak.

Figure 12: Existing Conditions Parking Survey Results Summary - Downtown South

Parking Type	Time	Weekday			Weekend		
		Occupancy	Supply	% Occupied	Occupancy	Supply	% Occupied
Off-Street	*8-9am*	*69*	*193*	*36%*	*60*	*193*	*31%*
	10-11am	*98*	*193*	*51%*	*111*	*193*	*58%*
	12-1pm	*116*	*193*	*60%*	*126*	*193*	*65%*
	2-3pm	*113*	*193*	*59%*	*111*	*193*	*58%*
	4-5pm	*95*	*193*	*49%*	*101*	*193*	*52%*
	6-7pm	*94*	*193*	*49%*	*100*	*193*	*52%*
	8-9pm	*89*	*193*	*46%*	*77*	*193*	*40%*
On-Street	*8-9am*	*75*	*242*	*31%*	*68*	*242*	*28%*
	10-11am	*127*	*242*	*52%*	*156*	*242*	*64%*
	12-1pm	*150*	*242*	*62%*	*191*	*242*	*79%*
	2-3pm	*148*	*242*	*61%*	*180*	*242*	*74%*
	4-5pm	*135*	*242*	*56%*	*181*	*242*	*75%*
	6-7pm	*149*	*242*	*62%*	*146*	*242*	*60%*
	8-9pm	*111*	*242*	*46%*	*130*	*242*	*54%*
Downtown South Total	**8-9am**	144	435	**33%**	128	435	**29%**
	10-11am	225	435	**52%**	267	435	**61%**
	12-1pm	266	435	**61%**	317	435	**73%**
	2-3pm	261	435	**60%**	291	435	**67%**
	4-5pm	230	435	**53%**	282	435	**65%**
	6-7pm	243	435	**56%**	246	435	**57%**
	8-9pm	200	435	**46%**	207	435	**48%**

Source: CHS Consulting Group, 2023, collected Thursday, October 6, and Saturday, October 8, 2022.

As shown in **Figure 12**, parking is generally available on weekdays with occupancy peaking at just 61 percent between noon and 1PM with 266 occupied spaces, including 116 off-street (60 percent) and 150 on-street (62 percent) spaces. Therefore, there are always at least 169 available spaces in Downtown South on weekdays, including 77 on-street and 92 on-street spaces. During weekdays, on- and off-street parking occupancy is fairly balanced, indicating weekday users are generally aware of off-street parking facilities in Downtown South.

Parking is generally available on weekend days with occupancy peaking at just 73 percent between noon and 1PM with 317 occupied spaces, including 126 off-street (65 percent) and 191 on-street (79 percent) spaces. Therefore, there are always at least 118 available spaces in Downtown South on weekend days, including 67 off-street and 51 on-street spaces. During weekend days, on- and off-street parking occupancy is imbalanced, indicating that weekend users may not be aware of available off-street parking facilities and/or off-street facilities are located too far away from the user's destination.

River West

Figure 13 presents the summary of parking survey results for the River West Subarea for both weekdays and weekend days. There are 219 off-street parking spaces in the River West subarea. No on-street parking inventory or supply counts were conducted for River West. Parking in River West is generally available at all times with occupancy peaking at just 47 percent on weekdays between noon and 1PM with 104 occupied spaces. Therefore, there are always at least 115 available off-street parking spaces in River West. Parking occupancy on weekend days peaks at just 28 percent between 6PM and 7PM with 62 occupied spaces, which is approximately 68 percent lower than the weekday peak. The imbalance in parking occupancy and supply between River West and the two subareas east of the Cannon River indicates most users see the river as a major barrier and are unwilling to park in River West if their destination(s) are in Downtown North or Downtown South and/or they are unaware of the abundant parking availability in River West.

Figure 13: Existing Conditions Parking Survey Results Summary - River West

Parking Type	Time	Weekday			Weekend		
		Occupancy	Supply	% Occupied	Occupancy	Supply	% Occupied
Off-Street	***8-9am***	*57*	*219*	***26%***	*35*	*219*	***16%***
	10-11am	*80*	*219*	***37%***	*50*	*219*	***23%***
	12-1pm	*104*	*219*	***47%***	*58*	*219*	***26%***
	2-3pm	*71*	*219*	***32%***	*47*	*219*	***21%***
	4-5pm	*63*	*219*	***29%***	*43*	*219*	***20%***
	6-7pm	*61*	*219*	***28%***	*62*	*219*	***28%***
	8-9pm	*66*	*219*	***30%***	*32*	*219*	***15%***

Source: CHS Consulting Group, 2023, collected Thursday, October 6, and Saturday, October 8, 2022.

5.2 Existing Land Use Inventory and Parking Demand Analysis

This section presents an inventory of existing land uses and associated parking demand analysis results for Downtown Northfield.

Existing Land Use Inventory

To assess the existing land uses in the study area, the City of Northfield provided CHS with the latest inventory existing land uses for the entire City by address, including the associated business name(s), land use type(s), gross building floor area, and residential unit count. Using Geographic Information System (GIS) software tools, CHS linked the associated land use inventory data to their physical location to screen out land uses outside of the study area and group remaining land use data by Downtown Northfield subarea (Downtown North, Downtown South, and River West). CHS reviewed the remaining data by subarea and categorized the existing businesses and residences by their general land use type (e.g., retail, office, residential, etc.). Most land uses were verified using Google Maps/Streetview or other available resources to determine if the business or residence data was accurate and/or still occupied during the parking inventory and occupancy surveys completed in December 2022. **Figure 14** presents the resulting inventory of land uses for each subarea by land use type.

Figure 14: Existing Conditions Downtown Northfield Land Use Inventory Results by Subarea

Land Use	Downtown North		Downtown South		River West		Total Study Area	
	GSF	Units	GSF	Units	GSF	Units	GSF	Units
Retail	48,807		126,648		13,787		189,242	0
Restaurant	10,387		22,273		11,122		43,782	0
Coffee Shop	3,894		3,825		0		7,719	0
Bars / Lounges	0		6,781		1168		7,949	0
Health Club	3,806		0		0		3,806	0
Event Center	7,260		6,636		12,667		26,563	0
Residential	-	36	-	167	-	20	-	203
Office	66,983		80,050		18,518		165,551	0
Church	0		2,473		0		2,473	0
Library	11,950		0		0		11,950	0
Medical Office	2,192		0		0		2,192	0
Bank	23,068		3,825		3,414		30,307	0
Total	**178,347**	**36**	**252,511**	**167**	**60,676**	**20**	**491,534**	**203**

Source: City of Northfield, 2023; CHS Consulting Group, 2023.

As shown in **Figure 14**, there is a total of 491,534 gsf of occupied land uses and 203 residential units in the study area. Downtown South has the highest proportion of occupied land uses (51 percent) followed by Downtown North (36 percent) and River West (12 percent). Similarly, most of the existing residential units (82 percent) are located in Downtown South followed by Downtown North (18 percent) and River West (10 percent). It should be noted that Imminent Brewing operates a brewery and tasting room in Downtown South, which was categorized under the Bars / Lounges land use.

Actual Parking Demand Analysis (Shared Parking Assessment)

To determine the actual parking demand associated with the occupied land uses identified in the previous section, CHS used the Urban Land Institute (ULI) shared parking model tool to develop a parking model that represents the existing study area. Using the existing occupied land use floor areas and associated observed parking occupancies in the study area, CHS modified the standard ULI shared parking model to represent the observed shared parking demand in Downtown Northfield. For consistency, CHS adjusted the weekday and weekend day demand rates in proportion with observed occupancy for each. **Figure 15** presents the modified ULI shared parking model results for weekdays and weekends, matching the observed peak parking occupancy for the study area.

Figure 15: Existing Conditions Downtown Northfield Shared Parking Model Results

Land Use	Quantity	Unit	Weekday Peak (12-1PM)			Weekend Peak (12-1PM)		
			Rate[1]	Unit[2]	Demand	Rate[1]	Unit[2]	Demand
Retail	189,242	gsf	0.90	per ksf	170	1.15	per ksf	185
Employee			0.21	per ksf	40	0.28	per ksf	53
Restaurant	43,782	gsf	2.14	per ksf	86	3.51	per ksf	139
Employee			0.36	per ksf	16	0.60	per ksf	26
Coffee Shop	7,719	gsf	3.00	per ksf	6	6.00	per ksf	18
Employee			0.53	per ksf	1	1.06	per ksf	4
Bars / Lounges	7,949	gsf	4.90	per ksf	32	7.38	per ksf	22
Employee			0.40	per ksf	3	1.00	per ksf	3
Health Club	3,806	gsf	1.86	per ksf	4	2.24	per ksf	4
Employee			0.11	per ksf	0	0.10	per ksf	0
Event Center	26,563	gsf	0.28	per ksf	4	0.33	per ksf	5
Employee			0.03	per ksf	1	0.03	per ksf	1
Office	165,551	gsf	0.08	per ksf	6	0.01	per ksf	2
Employee			0.93	per ksf	138	0.15	per ksf	23
Church	2,473	gsf	0.00	per ksf	0	5.03	per ksf	11
Employee			0.00	per ksf	0	0.39	per ksf	1
Library	11,950	gsf	1.15	per ksf	6	1.60	per ksf	17
Employee			0.05	per ksf	1	0.08	per ksf	1
Medical/Dental Office	2,192	gsf	0.64	per ksf	1	0.37	per ksf	0
Employee			0.32	per ksf	1	0.19	per ksf	0
Bank	30,307	gsf	0.98	per ksf	15	1.99	per ksf	54
Employee			0.52	per ksf	16	1.06	per ksf	32
				Customer	***330***		***Customer***	***457***
				Employee	***217***		***Employee***	***144***
				Total	**547**		**Total**	**601**

Notes:

1. Rate represents the base parking demand rate per unit without time of day and/or month of year adjustments for both customers and employees.
2. ksf = 1,000 square feet

As shown in **Figure 15**, the largest generators of parking demand in the study on weekdays are retail (38 percent), Office (26 percent), and Restaurant (19 percent) land uses and on weekends are retail (40 percent), Restaurant (27 percent) land uses. While the resulting parking demand rates for weekdays and weekends are generally lower than the average ITE rates for each land use type, the adjusted rates still fall within ITE's

observed range of parking occupancy for each associated land use. Given the demographics of Northfield discussed in Section 1.0, it is expected that Northfield's parking demand rates would be substantially lower than the national average represented by ITE's average parking demand rates.

Additionally, for the purposes of this study, residential land uses were excluded from the shared parking model, as residential land uses typically have private reserved off-street parking that was not observed during the December 2022 parking survey. Therefore, market-rate housing parking demand rates are based on the unadjusted average ITE rates for land use code 221 (Mid-rise Multifamily Housing) in a general urban/suburban setting with no nearby rail transit, which is 1.31 spaces per unit; and affordable housing parking demand rates are based on the unadjusted average ITE rate for land use code 223 (Affordable Housing – Income Limited) in a general urban/suburban setting with no nearby rail transit, which is 0.99 spaces per unit.

6.0 Project Parking Analysis

This section presents an assessment of the Project's parking program, including project parking requirements, expected project parking demand, and existing plus project conditions shared parking model analyses.

6.1 Project Parking Requirements

The City of Northfield Code of Ordinances (City Code) establishes parking requirements and standards, incorporating the principals and policy recommendations from the plans, studies, and policies summarized in Section 4.0. As previously discussed, Chapter 3.6.5 of the LDC does not require a minimum parking supply nor establish an allowed parking maximum for any land uses in the C1 Downtown Zoning District, unless located west Highway 3 or south of 6th Street. All of the Project's development sites are located within the C1 Downtown Zoning District, are north of 6th Street, and east of Highway 3, and thus, are not required to provide any accessory parking.

6.2 Project Parking Demand

To assess the Project's expected parking demand, CHS used the adjusted ULI parking model developed for Downtown Northfield to input the Project's proposed land use program. To assess the localized parking impacts related to each of the Project's development sites, Project land uses programs were grouped based on their subarea location as follows:

- **Downtown North**
  - Archer House Redevelopment Project
    - Market Rate Housing: 60 units
    - Restaurant: 5,000 gsf
    - General Retail: 5,000 gsf
- **Downtown South**
  - Post Office Redevelopment Project
    - Distillery: 6,000 gsf
    - Tasting Room: 4,000 gsf

- Hotel Project
  - Hotel: 85 rooms
  - Lounge / Bar: 2,000 gsf
  - Restaurant: 3,000 gsf
  - Coffee Shop: 1,500 gsf
  - General Retail: 2,600 gsf
  - Public Parking Garage: 150 spaces
- Mixed-Use Residential Project
  - Market Rate Housing: 8 units
  - Affordable Housing: 10 units
  - Liquor Store: 13,000 gsf
  - Office (accountant): 3,500 gsf
  - General Retail (florist): 2,500 gsf

Figure 16 shows the resulting shared peak parking demand for the Archer House redevelopment project located in Downtown North and **Figure 17** shows the resulting shared peak parking demand for the Post Office redevelopment, Hotel, and mixed-use residential projects in Downtown South.

Figure 16: Project Shared Parking Analysis Results – Downtown North Site

Land Use	Quantity	Unit	Weekday Peak (7PM)			Weekend Peak (7PM)		
			Rate[1]	Unit[2]	Demand	Rate[1]	Unit[2]	Demand
Retail	5,000	gsf	0.90	per ksf	4	1.15	per ksf	5
Employee			0.21	per ksf	1	0.28	per ksf	1
Restaurant	5,000	gsf	2.14	per ksf	9	3.51	per ksf	10
Employee			0.36	per ksf	2	0.60	per ksf	3
Market Rate Housing	60	units	1.19	unit	69	1.19	unit	69
Guest			0.12	unit	7	0.12	unit	7
				Customer	***82***		***Customer***	***84***
				Employee	***10***		***Employee***	***11***
				Total	**92**		**Total**	**95**

Notes:

1. Rate represents the base parking demand rate per unit without time of day and/or month of year adjustments for both customers and employees.
2. ksf = 1,000 square feet

As shown in **Figure 16**, the Archer House redevelopment project alone would generate peak parking demand for up to 95 spaces at 7PM on weekends. On weekdays, the Archer House project would generate peak parking demand for up to 92 spaces at 7PM. The Archer House project's peak parking demand is primarily driven by the residential component, which generates 80 percent of the peak parking demand at 7PM, as most residents are home during the evening. However, the peak parking demand for 95 spaces would exceed the onsite parking supply of 30 spaces in the basement of the Archer House building, requiring the use of 65 nearby spaces in Downtown North which has at least 175 existing available spaces at 7PM on weekdays or weekend days.

Figure 17: Project Shared Parking Analysis Results – Downtown South Sites

Land Use	Quantity	Unit	Weekday Peak (12PM)			Weekend Peak (7PM)		
			Rate[1]	Unit[2]	Demand	Rate[1]	Unit[2]	Demand
Retail	7,700	gsf	0.90	per ksf	4	1.15	per ksf	4
Employee			0.21	per ksf	2	0.28	per ksf	1
Restaurant	3,000	gsf	2.14	per ksf	6	3.51	per ksf	6
Employee			0.36	per ksf	1	0.60	per ksf	2
Coffee Shop	1,500	gsf	3.00	per ksf	2	6.00	per ksf	0
Employee			0.53	per ksf	1	1.06	per ksf	0
Hotel	85	Rooms	0.58	per room	32	0.58	per room	42
Employee			0.25	per room	14	0.25	per room	8
Bars / Lounges	6,000	gsf	4.90	per ksf	15	7.38	per ksf	43
Employee			0.40	per ksf	2	1.00	per ksf	4
Office	3,500	gsf	0.08	per ksf	0	0.01	per ksf	0
Employee			0.93	per ksf	3	0.15	per ksf	0
Market Rate Housing	8	units	1.19	unit	6	1.19	unit	10
Guest			0.12	unit	0	0.12	unit	1
Affordable Housing	10	units	0.91	unit	0	1.19	unit	9
Guest			0.08	unit	3	0.12	unit	1
				Customer	***72***		***Customer***	***97***
				Employee	***36***		***Employee***	***34***
				Total	**108**		**Total**	**131**

Notes:

1. Rate represents the base parking demand rate per unit without time of day and/or month of year adjustments for both customers and employees.
2. ksf = 1,000 square feet

As shown in **Figure 17**, the Project's Downtown South sites would generate peak parking demand for up to 131 spaces at 7PM on weekends. On weekdays, the Downtown South sites would generate peak parking demand for up to 108 spaces at Noon. Parking demand generated by the Project's Downtown South sites is primarily driven by the Hotel land use, which generates 38 percent of the peak parking demand at 7PM on weekends and 43 percent of peak parking demand at noon on weekdays. Furthermore, the peak parking demand for up to 131 spaces would be accommodated by the 150-space onsite parking garage with a surplus of at least 19 spaces.

6.3 Existing plus Project Conditions Shared Parking Analysis

To assess the feasibility of existing plus project conditions shared parking demand in Downtown Northfield, the Project's proposed land use programs were added to existing shared parking models for both Downtown North and Downtown South subareas. **Figure 18** shows the resulting existing plus project conditions shared parking demand for Downtown North and **Figure 19** shows the resulting existing plus project conditions shared parking demand for Downtown South.

Figure 18: Existing plus Project Conditions Shared Parking Analysis Results - Downtown North

Land Use	Quantity	Unit	Weekday Peak (12PM)			Weekend Peak (12PM)		
			Rate[1]	Unit[2]	Demand	Rate[1]	Unit[2]	Demand
Retail	53,807	gsf	0.90	per ksf	26	1.15	per ksf	43
Employee			0.21	per ksf	9	0.28	per ksf	14
Restaurant	15,387	gsf	2.14	per ksf	25	3.51	per ksf	54
Employee			0.36	per ksf	6	0.60	per ksf	9
Coffee Shop	3,894	gsf	3.00	per ksf	7	6.00	per ksf	14
Employee			0.53	per ksf	2	1.06	per ksf	3
Health Club	3,806	gsf	1.86	per ksf	4	2.24	per ksf	4
Employee			0.11	per ksf	0	0.10	per ksf	0
Event Center	7,260	gsf	0.28	per ksf	1	0.33	per ksf	1
Employee			0.03	per ksf	0	0.03	per ksf	0
Office	66,983	gsf	0.08	per ksf	5	0.01	per ksf	1
Employee			0.93	per ksf	62	0.15	per ksf	10
Market Rate Housing	60	units	1.19	unit	53	1.19	per ksf	50
Guest			0.12	unit	1	0.12	per ksf	1
Library	11,950	gsf	1.15	per ksf	14	1.60	per ksf	19
Employee			0.05	per ksf	1	0.08	per ksf	1
Medical/Dental Office	2,192	gsf	0.64	per ksf	1	0.37	per ksf	1
Employee			0.32	per ksf	1	0.19	per ksf	0
Bank	23,068	gsf	0.98	per ksf	23	1.99	per ksf	46
Employee			0.52	per ksf	12	1.06	per ksf	24
				Customer	***159***		***Customer***	***233***
				Employee	***94***		***Employee***	***62***
				Total	**253**		**Total**	**295**

Notes:

1. Rate represents the base parking demand rate per unit without time of day and/or month of year adjustments for both customers and employees.
2. ksf = 1,000 square feet

As shown in **Figure 18**, under existing plus project conditions, Downtown North would generate peak parking demand for up to 295 spaces at noon on weekends, a net increase in peak demand for 47 spaces compared to existing conditions. The peak hour on weekends also shifted from 2PM to noon. As discussed in Section 3.2, the City would construct a new 120 space public parking garage at 304 Washington Street, replacing a 48 space public surface parking lot for a net increase of 72 spaces. The Project would also provide 30 onsite spaces in the basement of the Archer House building. Therefore, under near-term future conditions the total parking supply for Downtown North would increase from 293 spaces to 395 spaces, including 182 on-street and 213 off-street spaces. As a result, under near-term conditions the peak parking demand for 295 spaces would occupy 75 percent of the 395 spaces in Downtown North with a surplus of at least 100 spaces at all times.

Figure 19: Existing plus Project Conditions Shared Parking Analysis Results - Downtown South

Land Use	Quantity	Unit	Weekday Peak (12PM)			Weekend Peak (1PM)		
			Rate[1]	Unit[2]	Demand	Rate[1]	Unit[2]	Demand
Retail	189,242	gsf	0.90	per ksf	109	1.15	per ksf	147
Employee			0.21	per ksf	28	0.28	per ksf	38
Restaurant	43,782	gsf	2.14	per ksf	54	3.51	per ksf	71
Employee			0.36	per ksf	9	0.60	per ksf	15
Coffee Shop	7,719	gsf	3.00	per ksf	6	6.00	per ksf	10
Employee			0.53	per ksf	2	1.06	per ksf	2
Bars / Lounges	7,949	gsf	4.90	per ksf	63	7.38	per ksf	47
Employee			0.40	per ksf	5	1.00	per ksf	6
Event Center	26,563	gsf	0.28	per ksf	1	0.33	per ksf	1
Employee			0.03	per ksf	0	0.03	per ksf	0
Hotel		rooms	0.58	per ksf	16	0.58	per ksf	16
Employee			0.16	per ksf	14	0.16	per ksf	14
Market Rate Housing	8	units	1.19	unit	7	1.19	per ksf	7
Guest			0.12	unit	0	0.12	per ksf	0
Affordable Housing	10	units	0.91	unit	6	0.91	per ksf	6
Guest			0.08	unit	0	0.08	per ksf	0
Office	165,551	gsf	0.08	per ksf	1	0.01	per ksf	1
Employee			0.93	per ksf	70	0.15	per ksf	10
Church	2,473	gsf	0.00	per ksf	0	5.03	per ksf	10
Employee			0.00	per ksf	0	0.39	per ksf	1
Bank	30,307	gsf	0.98	per ksf	2	1.99	per ksf	0
Employee			0.52	per ksf	2	1.06	per ksf	0
				Customer	***265***		***Customer***	***316***
				Employee	***130***		***Employee***	***86***
				Total	**395**		**Total**	**402**

Notes:

1. Rate represents the base parking demand rate per unit without time of day and/or month of year adjustments for both customers and employees.
2. ksf = 1,000 square feet

As shown in **Figure 19**, under existing plus project conditions, Downtown South would generate peak parking demand for up to 402 spaces at 1PM on weekends, a net increase in peak demand for 85 spaces compared to existing conditions. The peak hour on weekdays and weekend days remained unchanged from existing conditions. As discussed in Section 3.2, the city would remove 47 on-street parking spaces along Water Street in Downtown South for the riverwalk trail. The Project would also remove three surface parking lots with a total of 48 spaces and construct a new 150 space parking garage for a net increase of 102 spaces. Therefore, under near-term future conditions the total parking supply in Downtown South would increase from 435 spaces to 490 spaces, including 195 on-street and 295 off-street spaces. As a result, under near-term conditions the peak parking demand for 402 spaces would occupy 82 percent of the 490 spaces in Downtown South with a surplus of at least 88 spaces at all times.

7.0 SUMMARY OF KEY FINDINGS

Existing Planning Context

CHS conducted a review of the existing planning context in Downtown Northfield, including the Comprehensive Plan for Northfield, Transportation Plan, Land Development Code (LDC), Climate Action Plan (CAP), Downtown Northfield Streetscape Framework, and previous Downtown Northfield parking studies.

- Previous parking studies found that parking in Downtown Northfield is generally available at all times with occupancy peaking at just 40 percent at 1PM on weekdays. However, the study identified imbalances between on-street and off-street parking facilities with on-street parking demand being substantially higher than off-street demand. Even though parking was generally underutilized, including both public and private facilities, there were still portions of Downtown where parking demand is near or exceeding the effective parking supply. Parking demand is highest in the Downtown Historic District, including the blocks containing Archer House and the Northfield Library.
- The Comprehensive Plan, Transportation Plan, Downtown Northfield Streetscape Framework, and previous parking study all provide similar parking recommendations for Downtown Northfield, including adopting a shared parking ordinance to facilitate new development Downtown. These plans also outline the need and provide a framework for improving pedestrian access between Downtown and parking facilities, developing a wayfinding system, expanding and improving bicycle facilities to reduce automobile trips, and collaborating with community partners to expand mobility options Downtown (e.g., bikes, scooters, carsharing, etc.).
- The City of Northfield LDC eliminated parking minimums in the C1 Downtown Zoning District, and thus, the Project is not required to provide a minimum parking supply.

Existing Parking Conditions

CHS conducted a parking inventory and occupancy survey in December 2022 to assess peak parking periods on weekdays and weekends. Parking occupancy counts were conducted with two-hour intervals between observations.

- Under existing conditions, parking in Downtown Northfield is generally available with peak parking demand occurring on weekends with occupancy peaking at just 64 percent between noon and 1PM with 601 occupied spaces and a surplus of 340 spaces.
- However, parking demand is not evenly distributed across the study area with Downtown North experiencing impacted on-street parking conditions on weekends with 88 percent of on-street spaces occupied between 2PM and 3PM. However, off-street parking facilities in Downtown North still have capacity with just 79 percent of off-street spaces occupied during the same period, indicating that users may not be aware of available off-street parking facilities and/or off-street facilities are located too far away from the user's destination.
- Parking is generally available at all times for all other Downtown subareas, including Downtown South and River West. However, the significant imbalance in parking demand between River West and the rest of Downtown indicates most users see the Cannon River and Highway 3 as major

barriers and are unwilling to park in River West if their destination(s) are in Downtown North or Downtown South and/or they are unaware of the abundant parking availability in River West.

Existing plus Project Parking Conditions

CHS conducted a shared parking analysis for the Project, which includes four separate development sites across Downtown North and Downtown South. To determine the actual parking demand associated with occupied land uses in Downtown Northfield, CHS used the ULI shared parking model tool to develop a parking model that represents the existing study area. Using the occupied land use floor areas and observed parking occupancy in the study area, CHS modified the ULI shared parking model to match the observed parking demand Downtown. The modified ULI model was then used to estimate the Project's peak shared parking demand and assess the Project's impacts on the Downtown parking supply.

- Under existing plus project conditions, Downtown Northfield and each of its subareas would have adequate parking supply to accommodate peak parking demand.
- The Archer House development site on its own would generate a peak parking demand for up to 95 spaces at 7PM on weekends, which exceeds the 30-space parking garage in the basement and requires the use of up to 65 nearby spaces in Downtown North (which currently has 175 available spaces at 7PM).
- The three development sites in Downtown South, including the Post Office redevelopment, hotel, and mixed-use residential development sites on their own would generate a peak parking demand for up to 131 spaces at 7PM on weekends, which can be accommodated by the 150 space onsite parking garage.
- Under existing plus project conditions, Downtown North would generate peak parking demand for up to 295 spaces at noon on weekends, a net increase in demand of 47 spaces. The City would construct a new 120 space public parking garage at 304 Washington Street, resulting in a net increase of 72 spaces. Therefore, the peak parking demand for 295 spaces would occupy just 75 percent of the 395 spaces in Downtown North with a surplus of at least 100 spaces at all times.
- Under existing plus project conditions, Downtown South would generate peak parking demand for up to 402 spaces at 1PM on weekends, a net increase in demand for 85 spaces. The City would remove 47 on-street spaces and the Project would remove 48 off-street spaces and construct a 150-space onsite parking garage. Therefore, the peak parking demand for 402 spaces would occupy 82 percent of the 490 spaces in Downtown South with a surplus of at least 88 spaces at all times.

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