West 7th Street Parking Study
Final Report

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BIKO ASSOCIATES INCORPORATED
GREENWAY Transportation Planning

WEST 7TH STREET/
FORT ROAD FEDERATION

August 1, 2019

West 7th Street Parking Study

Final Report

Prepared for:
City of Saint Paul Department of Planning and Economic Development

Prepared by:
Biko Associates, Inc.
and
Greenway Transportation Planning, LLC

August 1, 2019

Acknowledgements

This parking study was commissioned by the City of Saint Paul to respond to concerns that residents and businesses have raised about parking along the West 7th Street corridor. The study process included outreach activities where residents and business owners/operators came together and collaborated to discuss their common and unique parking issues, share ideas and perspectives, develop alternative solutions to address the issues, and reach consensus around preferred solutions that will be mutually beneficial. It is the spirit of cooperation that made the study successful.

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Introduction

Purpose and Conduct of the Study

In response to concerns raised by residents and businesses along West 7th Street, the City of Saint Paul commissioned the **West 7th Street Parking Study** and contracted consultants from Biko Associates, Inc. and Greenway Transportation Planning, LLC to conduct outreach and analysis to understand the corridor's parking issues and recommend solutions.

The City identified the following study goals.

- Locate and quantify existing parking supplies within the district;
- Locate and quantify existing parking demand;
- Identify where and when conflicts between business parkers and residential parkers occur;
- Determine the positive and negative effects of the City's current parking regulations; and
- Recommend short-term and mid-term improvements to address identified issues, which will cover a range of solutions from revising current parking regulations, to better managing parking demand, to increasing the efficient use of the existing supply of parking, to increasing the supply of parking.[1]

In addition to the goals listed above, the City stressed that a critically important element of the parking study should be outreach both to residents and businesses. In response to this direction, the consultant team conducted one-on-one interviews and group interviews with stakeholders, administered an online survey to businesses, and facilitated two Community Meetings.

Background and Setting

Crux of West 7th Street's Parking Issues

Parking along West 7th Street and adjacent residential streets has long been recognized as an issue. Customers patronizing the businesses along West 7th Street expect to find convenient and accessible parking within reasonable proximity to their destinations, and, as observed, the parking spaces they seek are not always available at times of the day where they need them. As a result, they sometimes park along residential streets that border the business corridor. At the same time, residents expect that they will be able to park within reasonable proximity to their front doors, and, when parking spaces they perceive as "theirs" are occupied by non-residents, they complain.

Conflicts stemming from the parking characteristics of business patrons and residents are not uncommon. These conflicts have occurred and have been addressed in other areas of Saint Paul; for example, along Grand Avenue and Payne Avenue.

In the case of West 7th Street, several factors have come together since the 1960s to contribute to the conflicts that businesses and residents experience today.

[1] This study's focus was placed on short- and mid-term solutions. In 2022, just three years from now analysis of parking issues along West 7th Street will be analyzed in further detail as an element of the preliminary and final design studies for the Riverview Corridor.

1. Some of the commercial buildings were constructed before the 1960s. It was during the 1960s when a large number of American cities began to include parking requirements and standards in their zoning codes. Thus, there are buildings along the corridor that do not have off-street parking facilities attached to them. These businesses *(both historically and today)* rely on on-street parking to accommodate their customers. Because they were constructed prior to the codification of off-street parking requirements, these are "grandfathered" uses.

2. Business corridors experience 'highs and lows' in terms of their desirability and ability to capture markets. With suburbanization, which was at its height during the late 1950s and into the 1960s and 1970s, West 7th Street businesses lost market share to suburban businesses. As a result, the environment and character of West 7th Street changed from a corridor of businesses that provided neighborhood-oriented basic goods and services to a strip of businesses that served non-residents.

3. The behavior of some of the new business patrons was inappropriate and inconsistent with the values of residents. As a result, residents adjacent to West 7th Street petitioned the City to address business parking along the corridor. The City's response took two forms: i) the establishment of Permit Parking Areas in 1979 where, when strictly applied, residents can completely prevent non-resident parking along residential streets and ii) on-street parking regulations that are intended to ensure high rates of turnover for business parkers.

4. The 'lows' that West 7th Street businesses experienced as a result of suburbanization are now being overcome, as new investment has come to the corridor. Beginning at the Xcel Arena and proceeding to the southwest, it is obvious that the character of West 7th Street is changing with the development of neighborhood friendly business that serve both local and regional markets.

5. It is equally clear that the residential areas surrounding West 7th Street are also bouncing back, as residents are able to find housing within a range of affordable of price points that is within walking distance of downtown Saint Paul and services provided by the West 7th Street businesses.

West 7th Street has Changed, but Parking Policies and Regulations have not Kept Pace:

In recent years, as the businesses have become ever more successful and as more and more people are finding the area to be a safe and affordable place to call home, the conflicts between business and resident parking have intensified. Overriding concerns of the West 7th Street Parking Study were to: 1) examine parking needs in view of the new land use development patterns along the corridor and 2) determine how parking regulations developed and implemented in the past might be updated to better respond to new, emerging parking needs.

West 7th Street Study Area

The West 7th Street study area is illustrated on Figure 1 on the following page. As shown, the study area is bordered by I-35E to the northwest, St. Clair Avenue to the south, the Mississippi River to the east, and Kellogg Boulevard in the north.

Figure 1:
West 7th Street Parking Study
Study Area

Existing Conditions
(Land Use and Parking Supply)

Study Area Land Use

Required parking supply, per the City of Saint Paul Code of Ordinances, can be calculated based on two factors: 1) the type of land use and 2) the size of the land use. Thus land use along the corridor is of critical importance when considering parking needs, supply and demand.

The study area is approximately one mile long, and land uses are varied. Included are:

- Institutional (hospital, places of worship, and funeral home)
- Retail (shops where consumer goods are purchased)
- Restaurants, bars, lounges (a special category of retail)
- Auto-oriented (businesses that are related to automobile service and repair)
- Commercial (offices where professional and quasi-professional services can be purchased)
- Residential (single family homes, duplexes, apartments, condominiums, hotels, etc.)

The size (intensity) of these uses within the study area varies as well. Toward the northeastern end of the study area, the pattern of development is comparatively more intense where several uses can be tightly grouped on a block or within a single building. Moving toward the southwestern end of the study area, the uses are less intense with many businesses located in a single, free-standing building.

As shown to the right on a generalized land use map, a more intense development pattern is found northeast of Ramsey Street/Grand

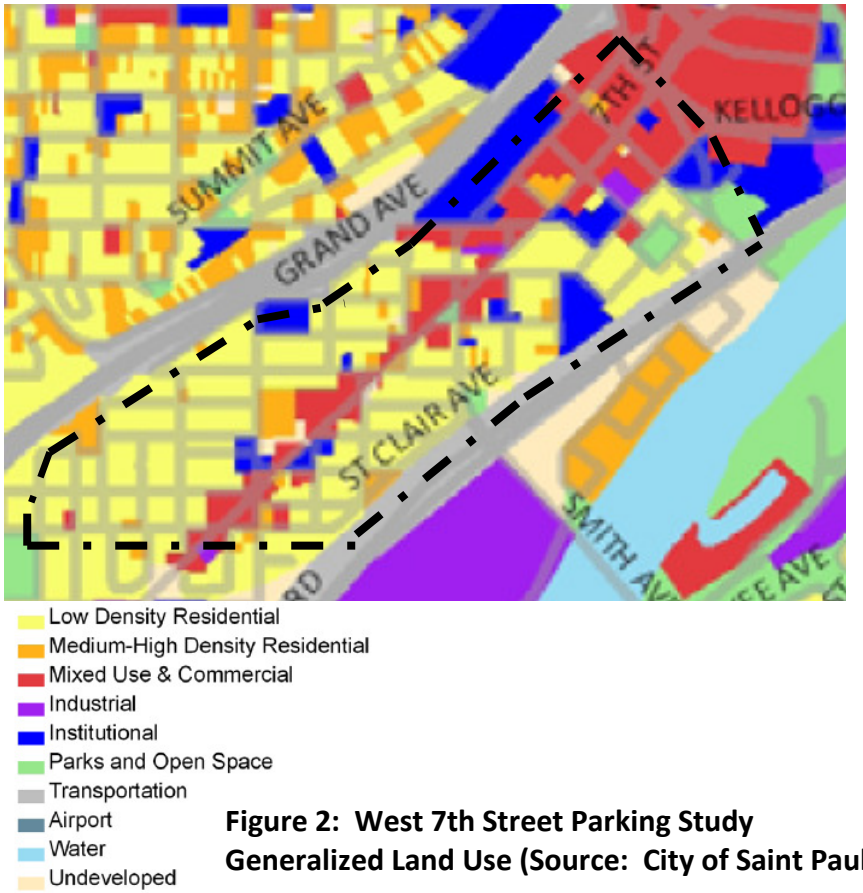


Figure 2: West 7th Street Parking Study Generalized Land Use (Source: City of Saint Paul)

Avenue. This pattern is evidenced by fewer commercial uses and the predominance of comparatively more intense residential uses on the

southwestern end of the study area. It should be noted that the prevalence of off-street, surface parking lots associated with buildings is higher in the less intense southwestern portion of the study area.

Competition for Available Parking Supply:
Increased competition between residents and business patrons for on-street parking has raised the following questions:

1) Is the parking supply for businesses adequate?

2) If the existing supply for businesses is adequate, is it being used efficiently?

3) If the existing supply for businesses is not adequate, what are reasonable measures for increasing supply?

4) What measures can be adopted to address resident and non-resident parking supply and demand? For example, do existing parking restrictions still meet their intended purposes?

Existing Parking Supply

The study area parking supply is located in on-street parking spaces and off-street surface lots and ramps. The approximate breakdown for these three supplies is:

- On-street parking spaces -- approximately 2,620
- Stalls in off-street surface lots -- approximately 1,100
- Stalls in off-street parking ramps:
  - United Hospital -- 2,928
  - Holiday Inn -- 285
  - Oxbo Apartments -- 220
  - Marriot Residence Inn -- 30

On-Street Parking Supply

On-street parking spaces within the study area are located along West 7th Street and adjacent residential streets that intersect and run parallel to West 7th Street.

Parking along many of the residential streets is regulated by both time of day and day of week, and there are three Permit Parking Areas where parking regulations have been developed to help ensure that business patrons will not occupy on-street parking spaces during periods of the day where resident parking demand is known to be high.

The three Permit Parking Areas are illustrated on the Figures 3 through 5 on pages 7 through 9. A brief description and history for each is provided in Table 1 on page 10.

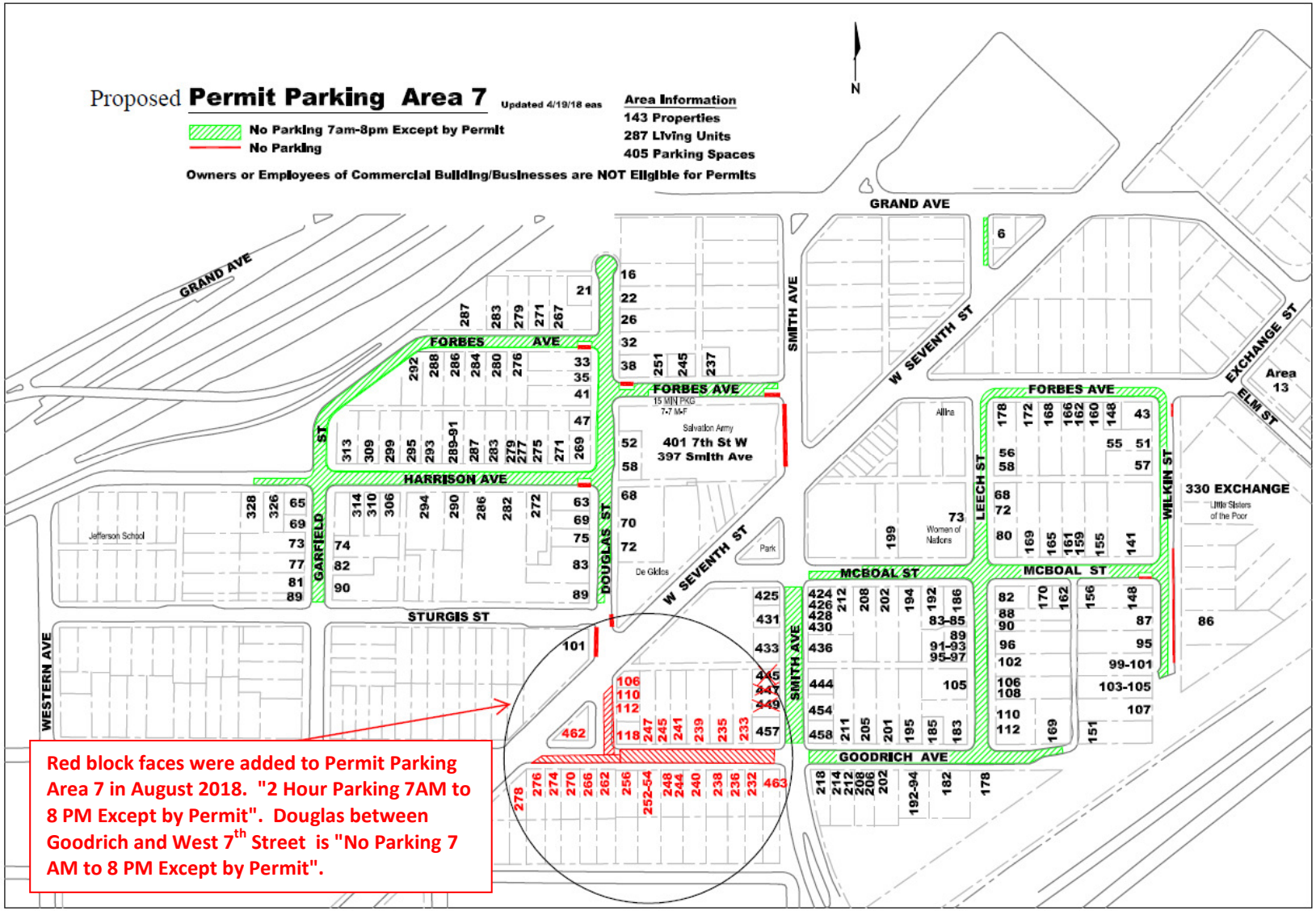


Figure 3:
West 7th Street Parking Study
Permit Parking Area 7

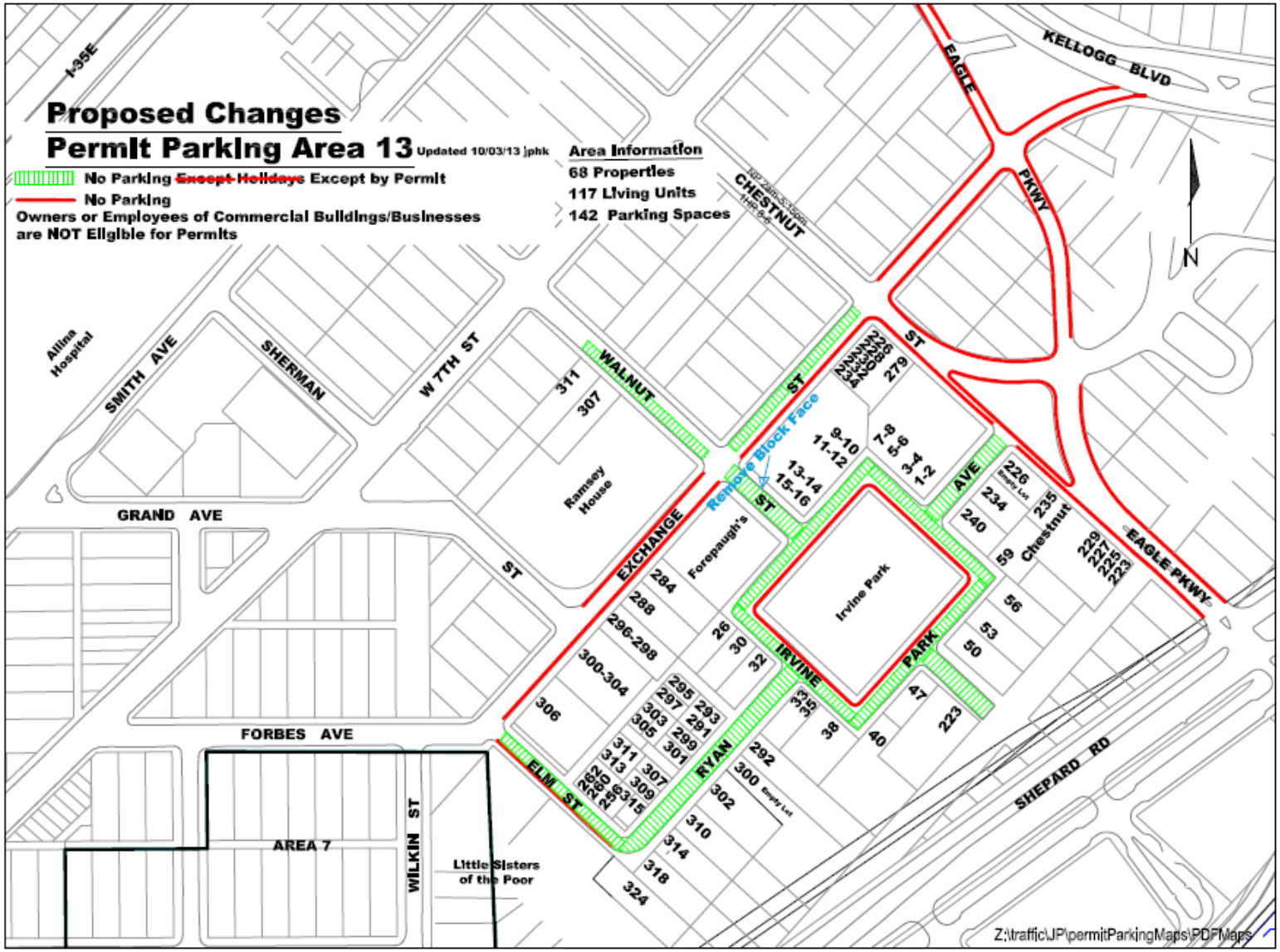


Figure 4:
West 7th Street Parking Study
Permit Parking Area 13

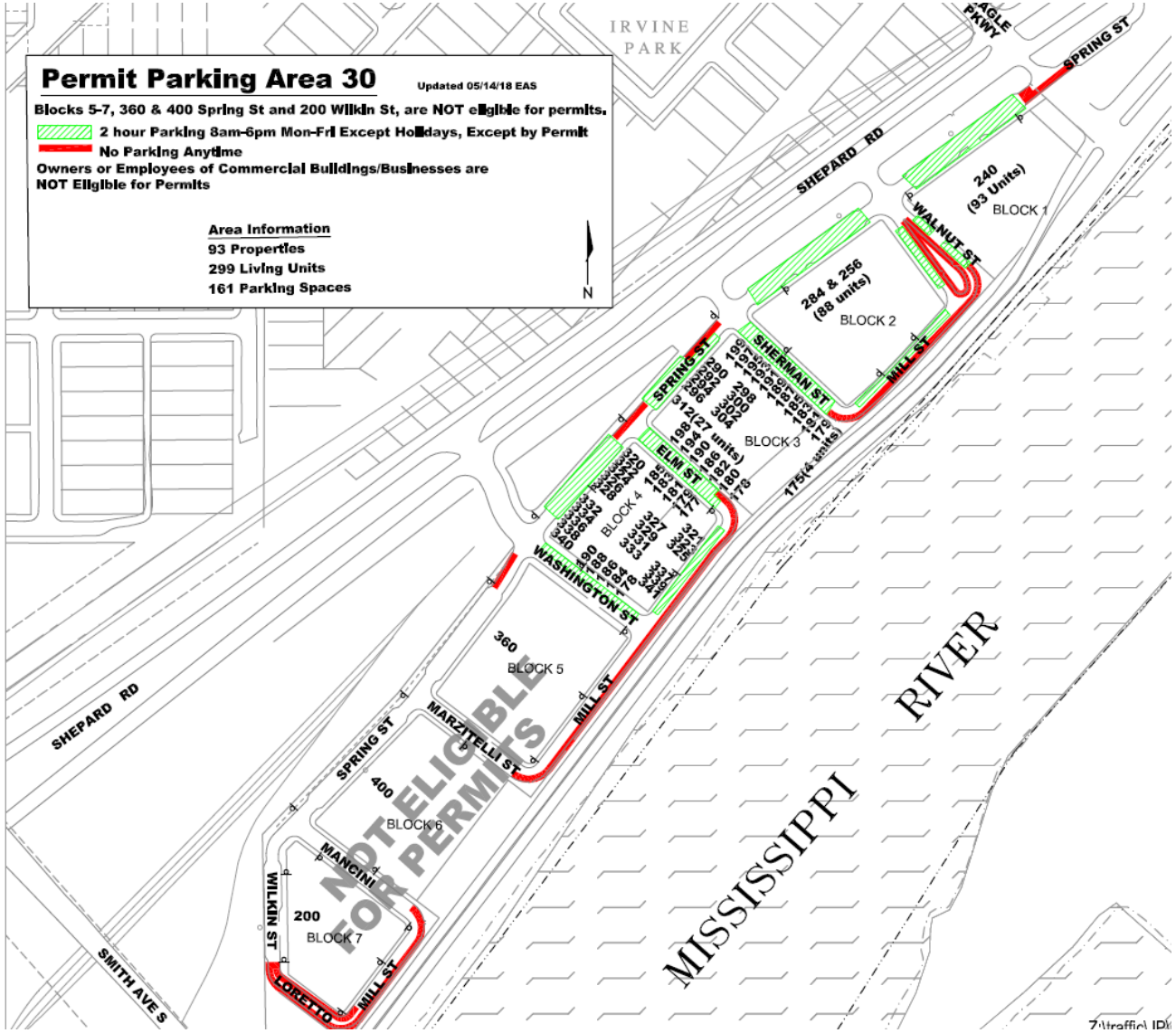


Figure 5:
West 7th Street Parking Study
Permit Parking Area 30

Table 1: Permit Parking Area Description			
Permit Area Number	History	Statistics*	Current Restriction
7	Established as "2-Hour Parking Except by Permit, 7am-7pm" in 1991 in response to lack of on-street parking to accommodate resident and non-resident parking generated by adjacent downtown institutions, offices and businesses. The area expanded and restrictions changed over the years in response to increased developments including United Hospital Campus expansion and the Xcel Center. Major change in 2007 with restriction expanded to current "No Parking, 7 AM-8 PM, Except by Permit" to address increased downtown commuter and evening and weekend event parking.	143 properties 287 living units 405 parking spaces 1.4 parking spaces/living unit	No Parking, 7am-8pm, Except by Permit

Table 1: Permit Parking Area Description			
Permit Area Number	History	Statistics*	Current Restriction

13	Established as "2 Hour Parking Except by Permit, 8am-8pm, Monday-Friday" in 1997 mainly in response to downtown commuter parking demand. Parking restrictions in this historic preserved area date back to 1957. The area expanded little over the years but significantly increased restriction to "No Parking, Except by Permit, Except Holidays" in 2000, coinciding with opening of Xcel Center and Science Museum.	68 properties 117 living units 142 parking spaces 1.2 parking spaces/living unit	No Parking, Except by Permit
30	Established as "2 Hour Parking 8 AM-6 PM, Monday-Friday Except Holidays Except by Permit" in 2010 mainly in response to downtown office parking demand. This is the newest resident permit parking area in the city and has not changed since introduction.	93 properties 299 living units 161 parking spaces 0.5 parking spaces/living unit	2 Hour Parking 8 AM-6 PM, Monday-Friday Except Holidays Except by Permit

Note: *Owners and employees of commercial buildings and businesses are NOT eligible for permits.

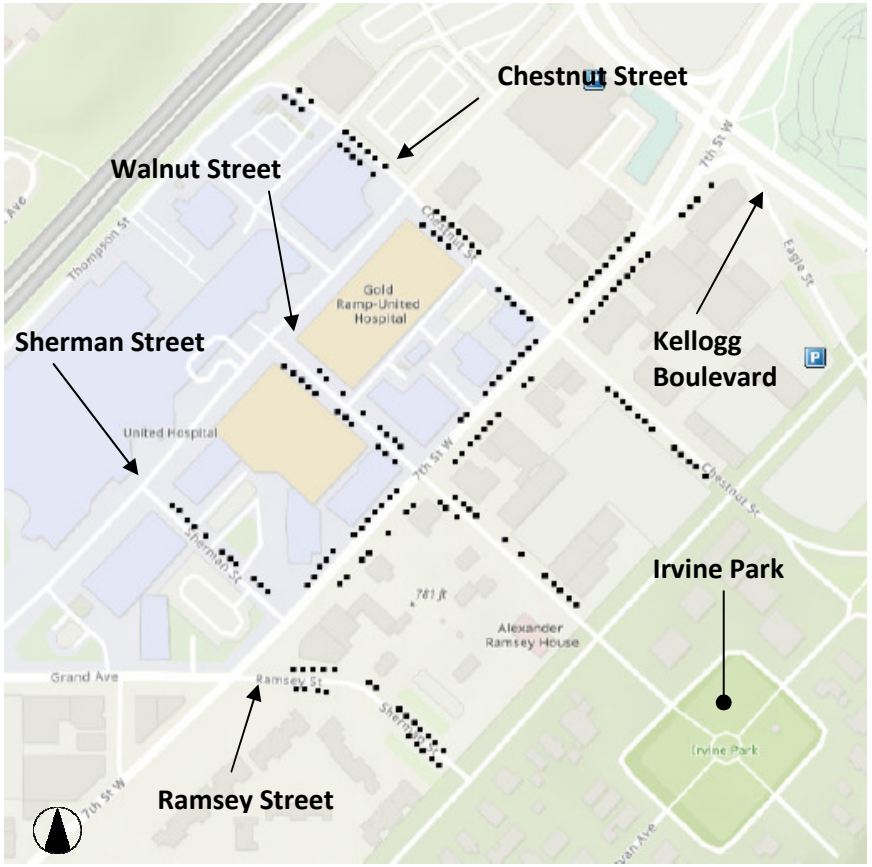
Metered On-Street Parking:

Parking meters have been installed along West 7th Street within the study area between Kellogg Boulevard and Sherman Street, as shown to the right. The purpose of metered parking is to encourage turn-over among business patrons along this segment of the study area where business development and activity are high.

The segment of West 7th Street that is southwest of Sheridan Street is not metered. By comparison, the intensity of business development and activity within this segment is lower than it is where parking meters have been installed, but business activities are growing with the recent addition of Bad Weather Brewing and Waldmann Brewery & Wurstery. Parking activity is regulated within this segment of the study area, particularly on the north side of the street, with signage that imposes time restrictions.

Figures 6 and 7 on the following two pages show the metered and non-metered segments of West 7th Street. Figure 6 shows the northeastern segment of West 7th Street, and Figure 7 shows the southwestern segment. Both Figures 6 and 7 also depict 16 categorizes of on-street parking regulations, which are listed below:

- 15 Minute Parking
- 30 Minute Parking
- 1 Hour Parking
- 2 Hour Parking
- No Parking
- No Parking Weekdays 7 AM to 9 AM
- No Parking Weekdays 4 PM to 6 PM
- No Parking Friday and Saturday 6 Pm to 12 PM
- No Overnight Parking on Monday
- No Overnight Parking on Tuesday
- No Overnight Parking on Thursday
- No Overnight Parking Anytime
- Handicapped Parking Only
- Loading and Valet Zone
- Parking Meters
- Permit Parking Area



Parking meter locations in the study area.
Source: City of Saint Paul Public Works Department

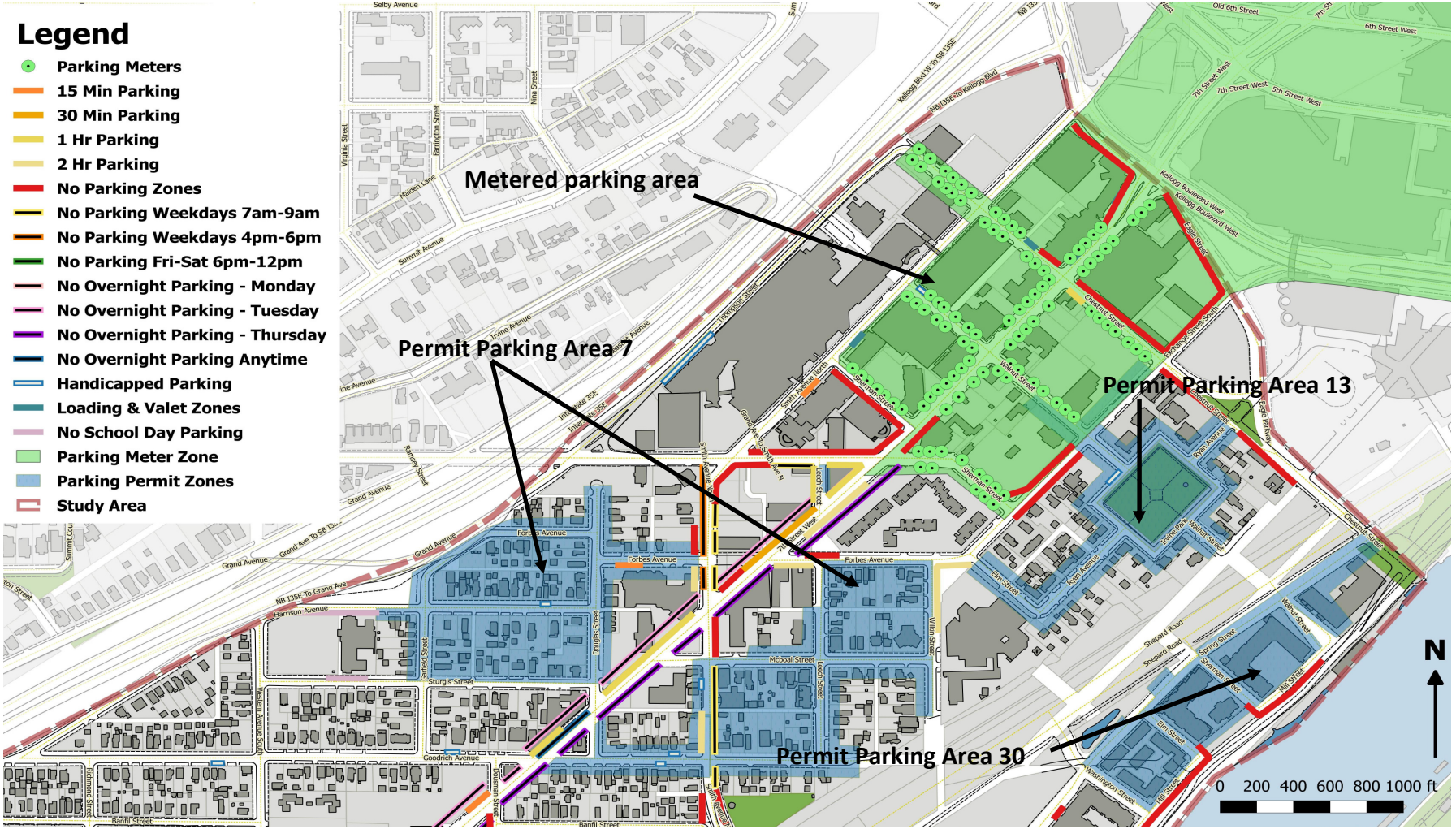


Figure 6:
West 7th Street Parking Study
Metered and Non-Metered Segments of West 7th Street and On-Street Parking Regulations
(Northeastern Segment of Study Area)

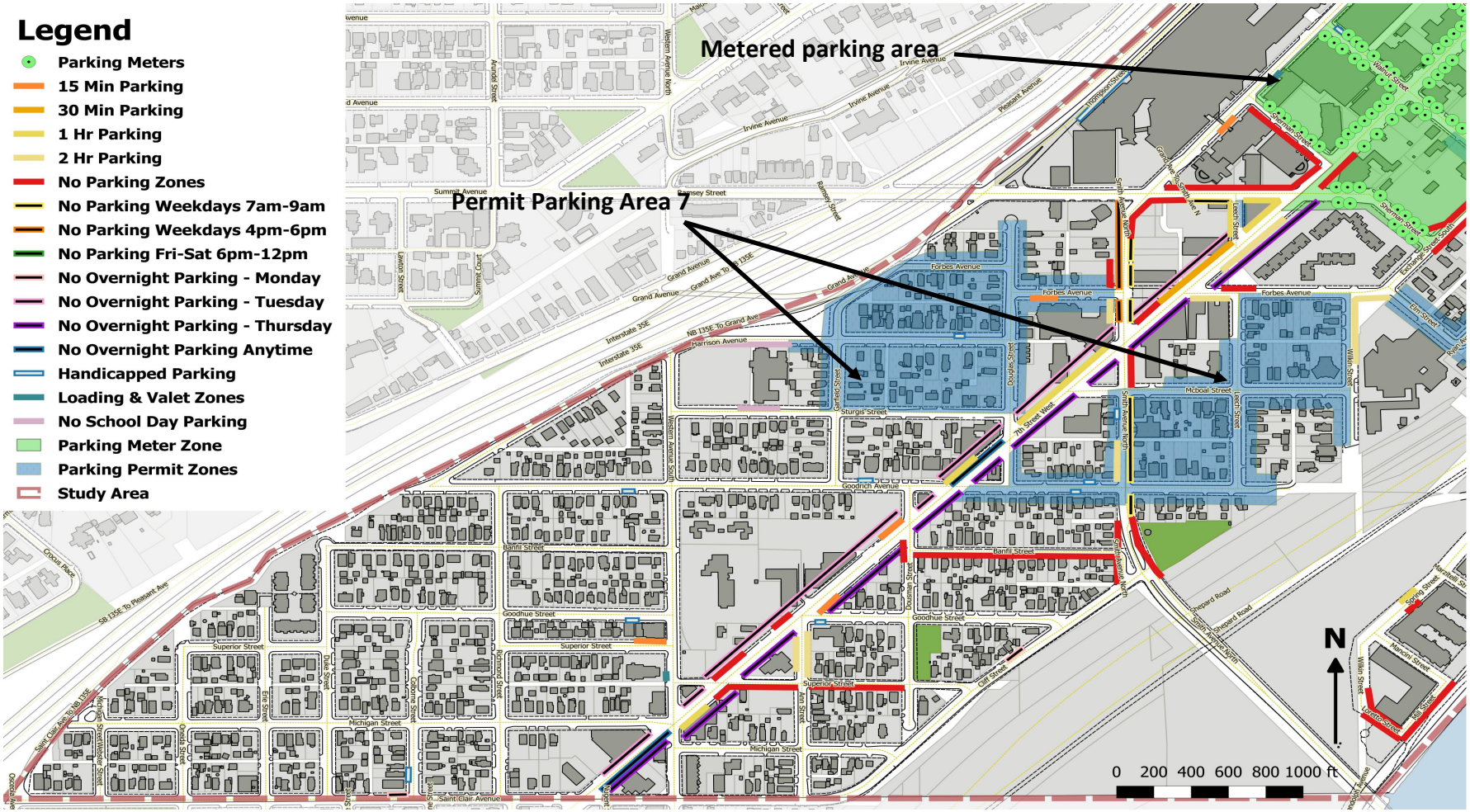


Figure 7:
West 7th Street Parking Study
Metered and Non-Metered Segments of West 7th Street and On-Street Parking Regulations
(Southwestern Segment of Study Area)

Off-Street Parking Supply

Off-Street Surface Lots:

The number of stalls in off-street surface lots is between 1,000 and 1,100. These are depicted on Figure 8 on the following page.

These lots are associated with a particular building. It was learned that while a surface lot may be associated with a particular building, customers patronizing a business in a different building are sometimes permitted, by the owner, to park in the lot. This, however, is not a common practice within the study area, and most of the surface parking lots provide parking exclusively for customers (and employees) in associated buildings.

Off-Street Parking Ramps:

There are four entities that own/operate parking ramps in the study area. These are United Hospital, which owns/operates four ramps; Holiday Inn; Oxbo Apartments; and Marriot Residence Inn. In total 3,463 stalls are located in study area ramps.

United Hospital Ramps

- Gold Ramp -- 975 stalls
- Blue Ramp -- 991 stalls
- Red Ramp -- 531 stalls
- Green Ramp -- 431 stalls

Visitor (public) parking is available at each of the United Hospital ramps although it is not widely advertised, and pricing for event parking can be as high as $30.

Holiday Inn Ramp

The Holiday Inn parking ramp has a total of 285 stalls. Most of these are not reserved and are filled on a first come/first serve basis. There is a block of stalls in the ramp that is reserved for monthly contract parkers, who are guaranteed stalls between 5 AM and 6 PM on weekdays. All stalls in the ramp, other than those reserved for monthly contract parkers, are available to the public. It was reported that 85 stalls are typically used by the public:

Oxbo Apartment Ramp

The ramp at the Oxbo Apartments includes a total of 220 parking stalls; 191 of which are currently reserved for tenants, who reside in 191 apartment units. Thus, it can be assumed that there is one car associated with each apartment unit. Oxbo leases nine of the remaining 29 stalls to a nearby retailer for his/her employees. Twenty (20) of the remaining 29 stalls are opened for tenants who may decide to park on-site in the future.

None of the parking stalls at Oxbo Apartments is available to the public.

Marriot Residence Inn

A small parking ramp was constructed for the Residence Inn. It has a total of 30 parking stalls; none of which is available to the public.

Figure 8:
West 7th Street Parking Study
Off-Street Surface Parking Lot Supply

Existing Parking Characteristics

Background

Parking demand (i.e., utilization) in the study area was determined through counts that were taken in January, April, and May 2019. Inclement weather, which would have resulted in aberrant data, accounted for the wide gap in time between the January and April counts.

Parking count data included:

- On-street and off-street parking occupancy counts on weekdays and Saturdays between 7:00 and 8:00 PM.
- On-street and off-street occupancy counts on days where events were held at the Xcel Arena and on non-event days. non-event days between 7:00 and 8:00 PM.
- The 7:00 to 8:00 PM period was selected because it was learned that residents and businesses alike felt that event parking was a major contributor to the conflicts between residential and business parking. It was learned that this period of time coincides with the time where many events begin and, therefore, where event parkers would be looking for an on-street parking space or an off-street parking stall.
- The occupancy counts included tallies of cars without permits observed to be parked along streets in Permit Parking Area 7. The tallies showed that less than 10 percent of the cars parked in Permit Parking Area 7 were without permits.
- On-street parking duration counts on weekday and weekend, event and non-event days

The study area was divided into two zones (Zones 1 and 2) to facilitate the deployment of counters who walked the study area. Figure 9 shows two locations within the study area where parking occupancy counts were taken. The two zones cover areas of the West 7th Street corridor where parking meters have not been installed. Figure 10 shows the total on-street parking supplies within Zones 1 and 2.

Figure 11 shows the locations of off-street, surface lots within Zones 1 and 2. As shown on Figure 11, the surface lots have been identified A through S. This identification scheme is keyed to Table 4 on page 25, which reports occupancy totals for the surface lots at 894 stalls.

The street segments where the on-street parking duration counts were taken are shown on Figure 12. These segments of West 7th Street were selected for the duration counts because they are within Permit Parking Area 7, as shown on Figure 13.

As shown on Figure 13, posted parking regulations along the street segments included in the duration counts: a) prohibit any parking or b) permit 30-minute, 1-hour, and 2-hour parking.

Included in the Appendix to this report are data supporting conclusions reached on parking demand within the study area.

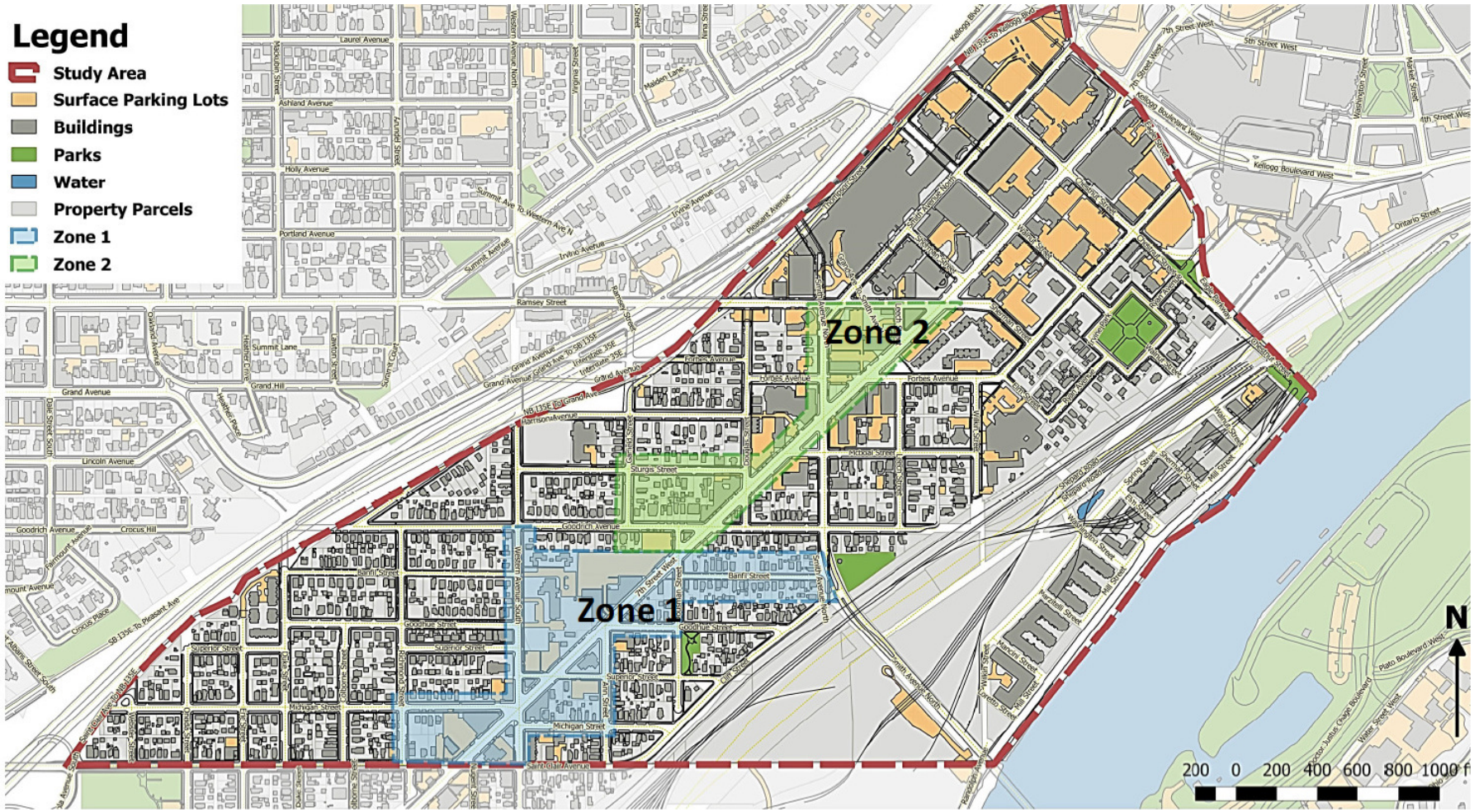


Figure 9:
West 7th Street Parking Study
On-Street Parking Occupancy Count Locations

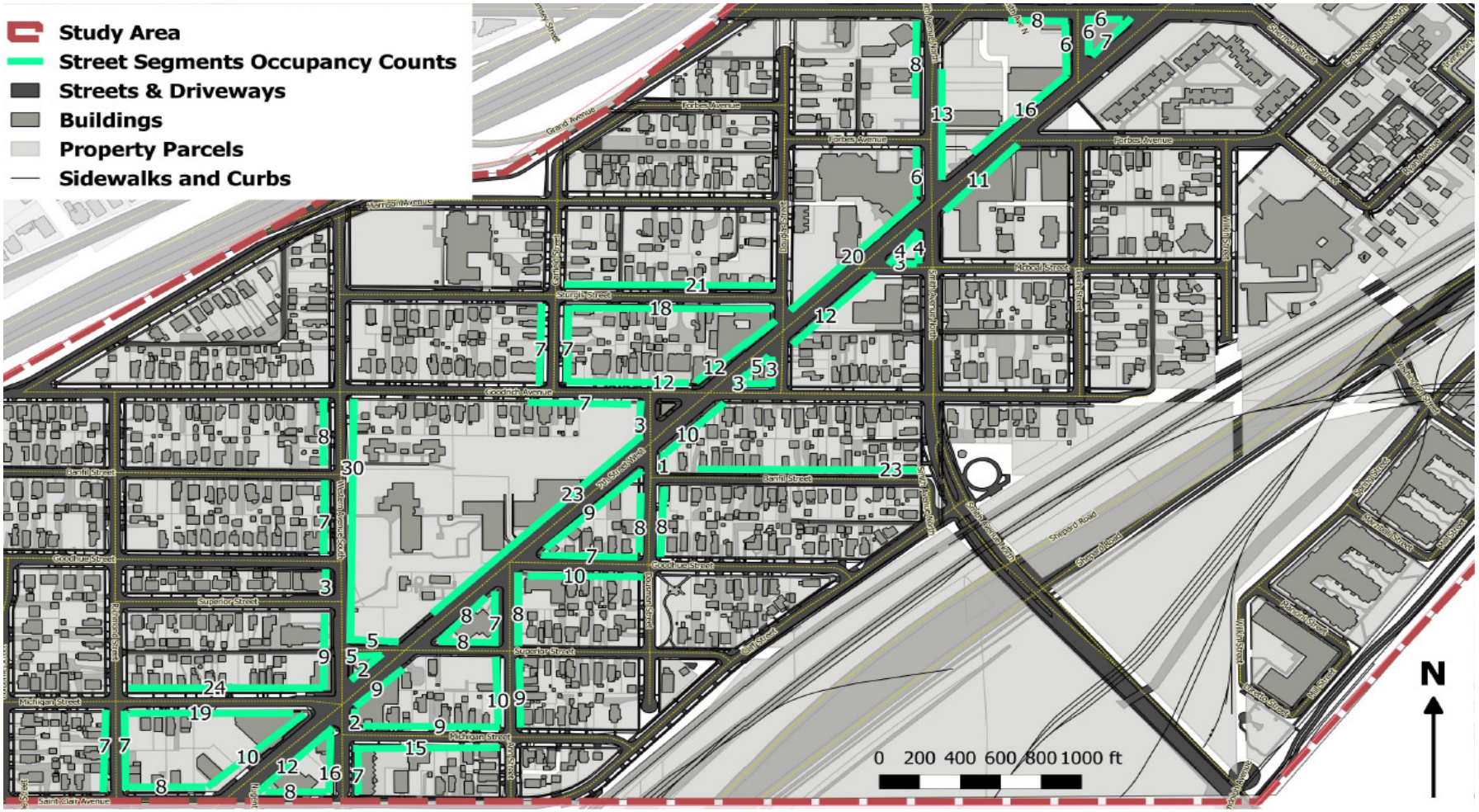


Figure 10:
West 7th Street Parking Study
Zone 1 and Zone 2 On-Street Parking Supplies

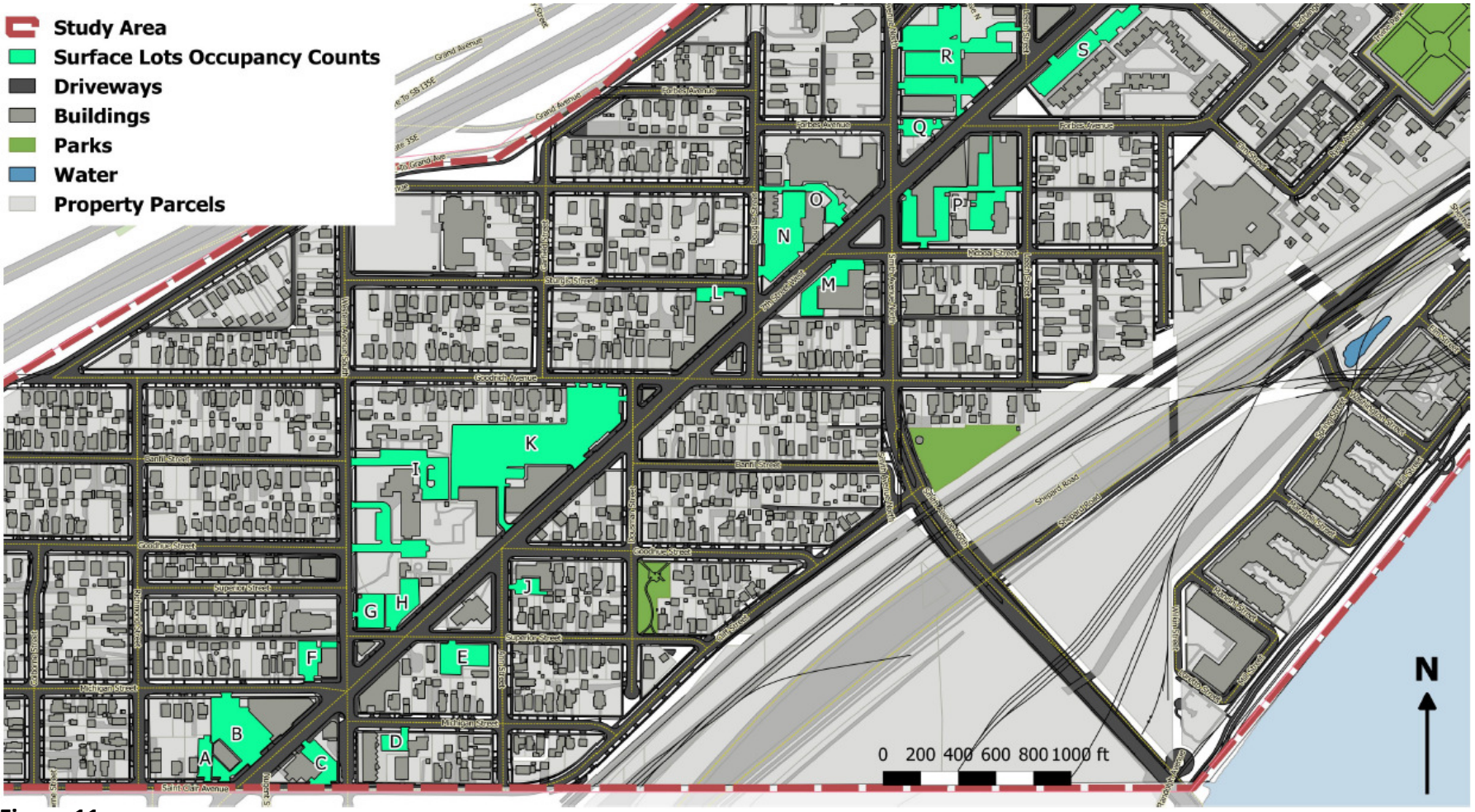


Figure 11:
West 7th Street Parking Study
Off-Street, Surface Parking Lot Locations (A through S)
in Zones 1 and 2

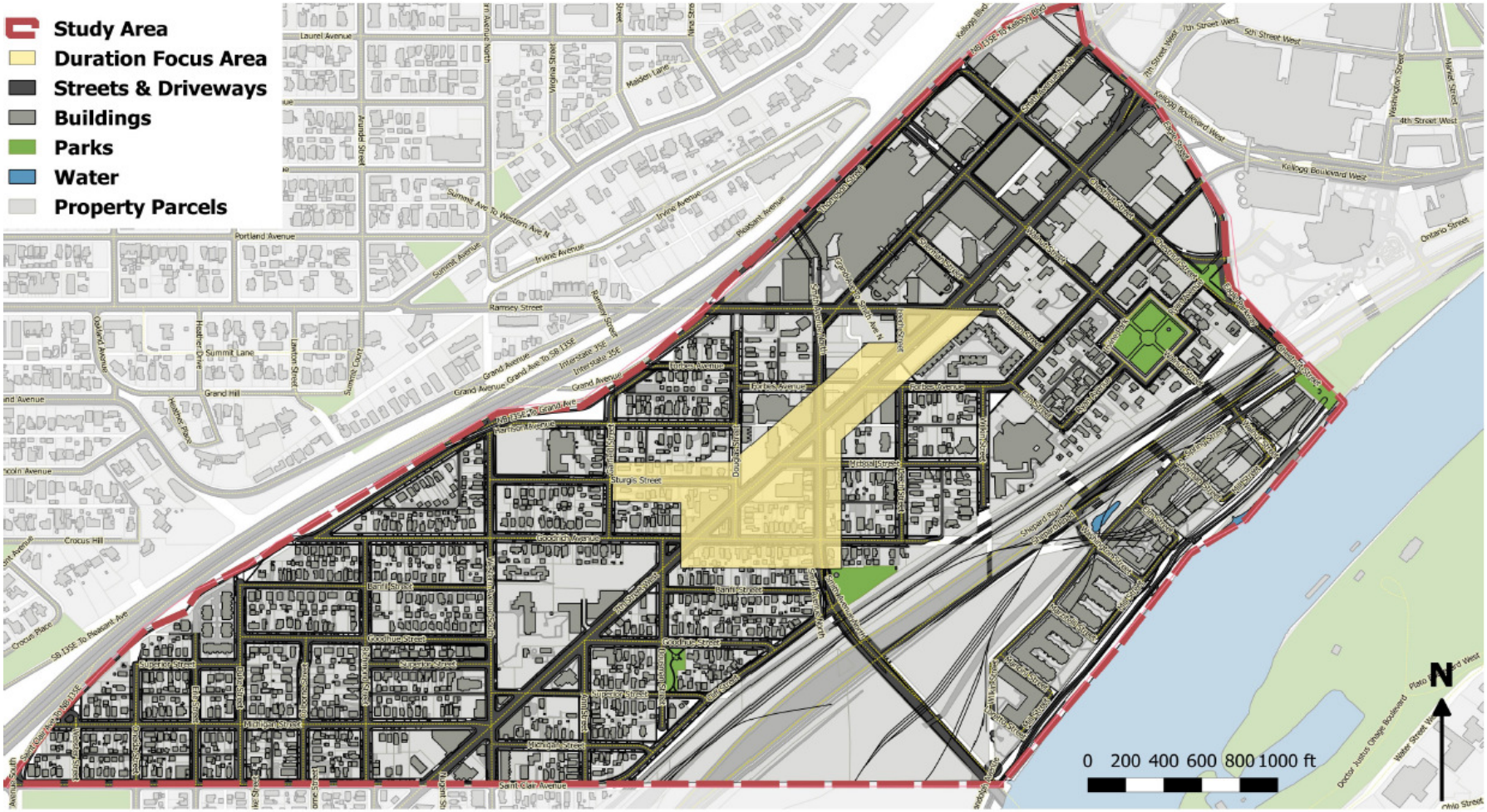


Figure 12:
West 7th Street Parking Study
On-Street Parking Duration Focus Area

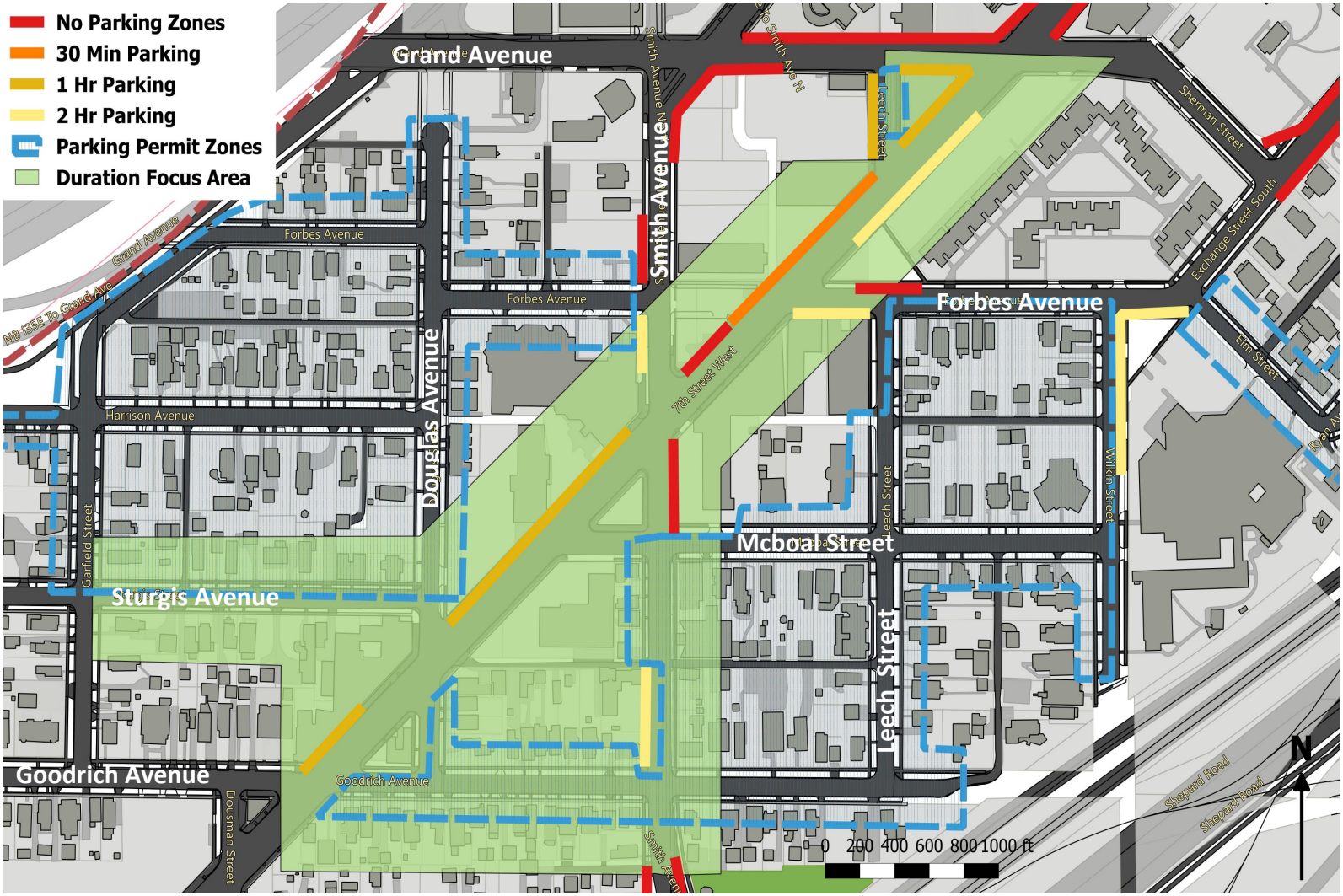


Figure 13:
West 7th Street Parking Study
On-Street Parking Duration Posted Regulations

On-Street Parking Demand Analysis (Event Nights versus Non-Event Nights)

On-street counts were taken, on event and non-event nights from 7:00-8:00 PM. The tables that follow detail findings from a comparison of available parking supply and parking occupancy (demand). Table 2 presents data on the total occupancy of street parking for both nights and shows the number of blocks where parking demand falls within specified occupancy ranges. The following ranges were used to group the percentages of occupied spaces in Table 2:

- 0 to 50 percent
- between 51 percent and 65 percent
- between 66 percent and 85 percent
- between 86 percent and 100 percent.

These ranges were selected to pinpoint where parking becomes noticeably difficult and scarce. With parking occupancy under 50 percent, the available supply is abundant, and parkers will be able to find a space without having to circulate and/or attempt parallel parking maneuvers. With parking between 51 and 65 percent, an ample number of parking spaces is still available, but there are so few that parallel parking is likely. At 66 to 85 percent, there are so few available spaces that parallel parking is necessary, and at higher than 85 percent, finding an available on-street parking space is nearly impossible

The on-street parking supply in the Zones 1 and 2 totals 610 spaces, as shown on Figure 12 and as detailed below in Table 2. Overall, on-street parking utilization varies only slightly between event and non-event nights; and both nights saw roughly 60 percent occupancy. In order to determine the exact impact of Xcel Energy Center events, it is helpful to break down the distribution of parking on both nights. Table 3 below shows how parking varies by street segment, categorized by utilization levels.

As shown in Tables 2 and 3, there is a difference of only 14 vehicles (4 percent) between event and non-event nights. However, a disproportionate number of these vehicles is concentrated on the street segments closest to capacity (86-100 percent). On the event night, these 143 parked vehicles are accommodated along 12 street segments (compared to 120 vehicles along 14 street segments for non-event nights), noticeably impacting parking supply at specific locations.

On-Street Parking Demand Summary

Data in Tables 2 and 3 indicate that the parking problems experienced on West 7th Street during events at the Xcel Energy Center are not generally caused by the volume of cars parking nearby for the event.

Instead, specific locations are disproportionately impacted by the (overall) modest increase in street parking occupancy. Further analysis will identify specific street segments most impacted by event parking.

TABLE 2
Utilization of On-Street Parking on Event and Non-Event Nights, by Occupancy and Percent Occupied

	Capacity	Event Occupancy	Event Occupancy(%)	Non-Event Occupancy	Non-Event Occupancy(%)
TOTAL	**610**	364	60%	350	57%

Source: Biko Associates, Inc., 4/21/2019

TABLE 3
Number of Occupied Blocks in Zones 1 and 2 by Percentage of On-Street Parking Spaces Utilized

Percent Utilized	Event (7:00-8:00PM)	Number of Occupied Parking Spaces (Event Night)	Non-Event (7:00-8:00PM)	Number of Occupied Parking Spaces (Non-Event)
Up to 50% Full	28	78	30	80
Between 51% and 65% Full	7	61	7	48
Between 66% and 85% Full	16	82	12	102
Between 86% and 100% Full	12	143	14	120
Total Number of Blocks	**63**	**364**	**63**	**350**

Source: Biko Associates, Inc., 4/21/2019

Off-Street Parking Demand Analysis (Event Nights versus Non-Event Nights)

The tables that follow detail the comparison of parking supply and parking demand in surface parking lots. As shown on Figure 11 and detailed in Table 4, the surface lots have been identified as A through S. Table 4 details parking supply compared to parking occupancy for each surface lot on event and non-event nights. As shown in Table 4, the total supply in the surface parking lots is 894 stalls.

Figure 11 and Table 4 show that there is significant off-street parking supply within Zones 1 and 2 (894 stalls). The average lot capacity is 47 stalls, with the smallest lot having five stalls and the largest having 231. In contrast to on-street parking, there was greater utilization of off-street parking on the non-event nights (61 percent), than on the event nights (39 percent). This indicates that off-street parking is generally not impacted by event parking, which is consistent with private ownership of parking lots. Only lots D, E, J, P, and S had higher utilization on event nights than the non-event nights. Lots D and S serve residences a significant distance from the Xcel Arena. Lots E and J serve a funeral home and a church, while Lot P is used by an auto body shop to park cars awaiting work. None of these uses are likely to be affected by attendance at a hockey game; so their higher occupancy on event nights was probably unrelated to the event.

It is also notable that some of the largest lots (K, N, R) in the parking Zones 1 and 2 reached high occupancies on non-event nights. This indicates strong parking demand generation from their dedicated users, at least during the 7:00-8:00 hour where data were collected.

TABLE 4
Utilization of Off-Street Parking on Event and Non-Event Nights, by Occupancy and Percent Occupied

Lot	Capacity	Event Occupancy	Event Occupancy (%)	Non-Event Occupancy	Non-Event Occupancy(%)	Event Availability	Event Availability (%)	Non-Event Availability	Non-Event Availability (%)
A	**15**	0	0%	4	27%	*15*	*100%*	*11*	*73%*
B	**63**	10	16%	25	40%	*53*	*84%*	*38*	*60%*
C	**21**	0	0%	0	0%	*21*	*100%*	*21*	*100%*
D	**15**	8	53%	7	47%	*7*	*47%*	*8*	*53%*
E	**31**	7	23%	2	6%	*24*	*77%*	*29*	*94%*
F	**23**	15	65%	18	78%	*8*	*35%*	*5*	*22%*
G	**25**	0	0%	5	20%	*25*	*100%*	*20*	*80%*
H	**35**	6	17%	13	37%	*29*	*83%*	*22*	*63%*
I	**45**	3	7%	14	31%	*42*	*93%*	*31*	*69%*
J	**17**	11	65%	3	18%	*6*	*35%*	*14*	*82%*
K	**231**	110	48%	231	100%	*121*	*52%*	*0*	*0%*
L	**5**	2	40%	2	40%	*3*	*60%*	*3*	*60%*
M	**25**	23	92%	24	96%	*2*	*8%*	*1*	*4%*
N	**75**	61	81%	67	89%	*14*	*19%*	*8*	*11%*
O	**8**	0	0%	0	0%	*8*	*100%*	*8*	*100%*
P	**42**	12	29%	9	21%	*30*	*71%*	*33*	*79%*
Q	**21**	2	10%	12	57%	*19*	*90%*	*9*	*43%*
R	**125**	67	54%	55	44%	*58*	*46%*	*70*	*56%*
S	**72**	15	21%	12	17%	*57*	*79%*	*60*	*83%*
TOTAL	**894**	**352**	**39%**	**503**	**56%**	***542***	***61%***	***391***	***44%***

Source: Biko Associates, Inc., 4/21/2019

Off-Street Parking Demand Summary

The off-street parking data indicated that parking demand in the surface lots in the southwestern two-thirds of the West 7th Street corridor is not significantly linked to events at the Xcel Arena. Instead, these parking lots did experience significant parking occupancy that is related to demand generated by local businesses. Any opportunity to use unutilized capacity to improve parking availability should be considered as an approach to reducing demand for on-street parking, if the owners of the surface lots are willing to open their lots to public parking.

On-Street Parking Duration Analysis (Event Nights versus Non-Event Nights)

Parking duration counts were taken in the parking duration focus area shown on Figure 12. In order to determine the impact of Xcel Arena on parking turnover, counts were taken on event and non-event nights from 5:00-9:00 PM. Tables 5 and 6 detail the findings.

TABLE 5
Turnover of On-Street Parking, Event Night

	5:00-6:00PM	6:00-7:00PM	7:00-8:00PM	8:00-9:00PM
Unoccupied	90	65	41	37
Occupied or occupied by new car	162	62	61	41
Occupied by same car	0	125	150	174

Source: Biko Associates, Inc., April 21, 2019

TABLE 6
Turnover of On-Street Parking Spaces, Non-Event Night

	5:00-6:00PM	6:00-7:00PM	7:00-8:00PM	8:00-9:00PM
Unoccupied	138	135	136	133
Occupied or occupied by new car	114	42	41	27
Occupied by same car	0	75	74	92

Source: Biko Associates, Inc., April 21, 2019

Parking Duration Analysis

There are 252 on-street parking spaces along the streets that were included in the parking duration counts. Tables 5 and 6 show that significantly more parking spaces were utilized on the event night than the non-event night, with anywhere from 64 to 85 percent of the spaces occupied during the former, and roughly one-half of spaces occupied during the latter.

Another significant distinction for event night parking is the greater number of spaces where the same car was parked for more than one hour. Analysis showed that about 60 percent of the spaces (152 of the 252 spaces) was occupied by a car that was parked for more than one hour between 5 and 9 PM. By contrast, the non-event night averaged 32 percent of spaces (about 81 spaces) for the same category.

It was observed that on both event and non-event nights, there was an increase in long-term parking between the first and second time periods (5 to 7 PM), and a drop-off in new parkers between the 7 and 8 PM and again between 8 and 9 PM. While the number of unoccupied spaces remained stable through all four times on the non-event night, the unoccupied stalls dropped steadily throughout the event night, in concert with the increase in long-term parking.

Parking Duration Summary

The event night data show greater utilization of parking within the parking duration focus area than the non-event night. The preliminary analysis of these data indicated that long-term event-related parking can create a spillover effect on the on-street parking supply. Further analysis of the data on a street-by-street basis is needed to determine exactly where this might be the case, and how existing regulations impact this phenomenon.

Community Input

Process

A critically important element of the parking study was outreach to stakeholders (both businesses and residents). Two approaches to initially involve stakeholders were implemented: 1) stakeholder interviews and 2) an electronic business survey administered to members of the West 7th Street Business Association. Stakeholder interviews were conducted with 35 residents and businesses that have previously been in contact with the Fort Road Federation regarding parking issues. These stakeholders were grouped geographically and by interest (i.e., resident or business).

The purposes of the interviews were to:

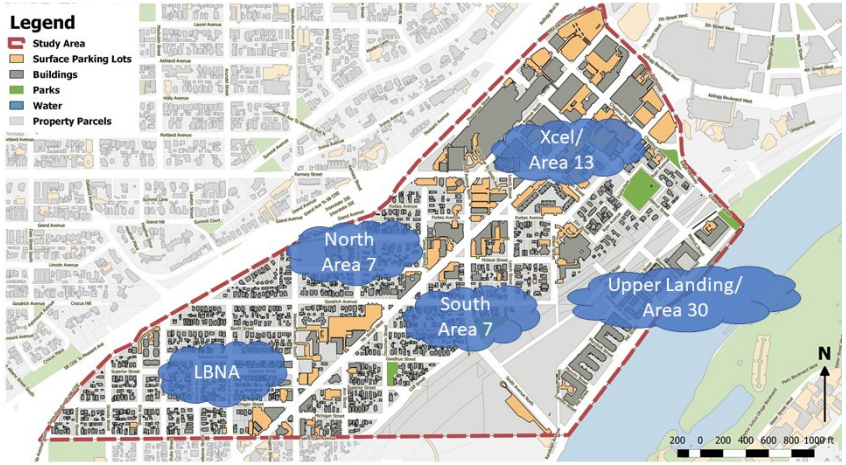
1. Learn, first-hand about parking problems; when and where they occur, the severity of the problems, and the impact they have on neighborhood livability and business vitality
2. Collect information that would further inform data gathering.

Interviews were conducted in a small group format at various locations within the study area and by phone between December 19, 2018 and January 10, 2019. Eight small group and two phone interviews were conducted.

Resident group interviews were held on:

- December 19, 2018 – Southside (Area 7) Residents at Bad Weather Brewing
- December 20, 2018 – Little Bohemia Neighborhood Association (Area 7) Residents at Fort Road Federation Office
- December 21, 2018 – Xcel (Area 13) Residents by phone
- December 28, 2018 – Northside (Area 7) Residents at Blodgett Residence (Sturgis Street)
- January 0, 2019 – Upper Landing Residents (Area 30) at Upper Landing Master Association Meeting

Further comments were also received by email and phone from two other Area 7 residents. Major parking related themes are summarized below, grouped by permit parking area and interest.



Stakeholder group locations within the study area.

Resident Interview Findings

Permit Parking Area 7 Residents

- The area has become a regional destination for dining, drinking….. popular pre- and post- Xcel event destination.**
- Non-resident parking impact is greatest during events; Wednesday through Saturday in the evenings and during weekends at brunch time.**
- Impact is greatest on residential streets along the southern edge of Area 7 and adjoining 7th Street; i.e., Sturgis Street and Goodrich Avenue. There are no current perceived widespread resident and non-resident parking conflicts south of Goodrich Avenue.
- Impact includes traffic circulating for free parking, speeding, and improper parking close to driveways and street corners.**
- Lack of parking violation enforcement.**
- Current permit only parking areas, which is the only way to effectively provide adequate resident on-on-street parking.**
- The new "2-hr 7am to 8pm, Except by Permit" parking restriction along Goodrich Avenue (between Smith Avenue and 7th Street W) is an experimental compromise to serve both local business and resident parking needs.
- Parking solutions should address both resident and business needs.
- There are opportunities for shared parking arrangements for off-street lots that have different peak use times. Some businesses and groups already do this.
- Off street resident parking in the area is limited because of small lots and limited alley access.
- This is an opportunity to reconfigure short streets next to small triangle blocks along 7th Street to accommodate more parking.
- There are unnecessary short-term parking restrictions along 7th Street and parking restrictions on unused driveways.

Permit Parking Area 13 Residents

- Shared notes marked with ** above.
- Existing parking restriction preserves the neighborhood's historic and park like setting.
- There should be greater promotion of ramp parking use in downtown.
- Improved pedestrian connections to off street parking lots and ramps needed to encourage their use.

Example of Permit Parking Area signage along Garfield Street.

Permit Parking Area 30 (Upper Landing) Residents

- Current permit only parking areas effectively provide adequate resident on-street parking.
- Residents accept increased non-resident parking during Xcel and large City House events.

Non-permit area (Sturgis Street)with high day-time parking occupancy.

- The rerouting of dog park traffic from Randolph Avenue to Spring Street during the Smith Avenue Bridge reconstruction resulted in parking shortage but this is anticipated to go away after bridge construction detour.
- No changes to current on-street parking regime are necessary.

It should be noted that not all contacted residents were available for the interviews but were advised that further feedback will be collected as part of the open house events.

Business Interview Findings

Business representatives interviewed included:

- December 19, 2018 – Café Astoria at Café Astoria
- December 19, 2018 – Cossetta (by phone)
- December 20, 2018 – Bad Weather Brewing, Waldmann Brewery, West 7th Business Association at Bad Weather Brewing
- December 20, 2018 – Day by Day Café, Claddagh Coffee, St Vincent de Paul Thrift Store, Alliant REH LLP at Day by Day Cafe

It should be noted that not all contacted businesses were available for the interviews but were advised that further feedback will be collected as part of the open house events.

Permit Parking Area 7 (and areas south) Businesses

- Successful businesses add to the vitality of the neighborhood. In particular, the conversion of derelict buildings into popular destinations.***
- The shortage of on-street parking negatively affects business.***
- On-street parking is a shared resource for both local businesses and residents.
- Customers find parking restrictions confusing and not well signed.
- Disputes between residents and customers have a magnified impact on customer experience.
- There are opportunities for shared parking arrangements for off-street lots that have different peak use times.***
- Off-street parking provision is in accordance with city's code requirements.
- Service staff cannot afford to pay for parking, and therefore rely on free on-street parking.***
- Late night staff needs safe access to parking.

- These is an opportunity to reconfigure short streets next to small triangle blocks along 7th Street W to accommodate more parking.

Example of time-restricted, on-street parking.
1-Hourparking on West 7th Street, which is too short for restaurant customer parking.

Xcel Area Business

- Common business feedback marked with ***above.
- City's initiative to reduce car parking requirements is making parking shortage worse.
- Resident business parking permit program is not business friendly.

United Hospital Interview

In addition to the above resident and business interviews, the parking manager for the United Hospital Campus was interviewed on January 9, 2019. Key themes from the interview include:

- Visitor parking is available at Gold Ramp (975), Blue Ramp (991), Red Ramp (531), Green Ramp (431) and small lots adjacent to the Ritchie Medical Plaza, Nasseff Center (Lot H) and Fort Road Medical Building(not owned by United).
- Staff parking is available at Chestnut Lot E (415) and the ground floor of blue and gold ramps.
- The campus leases Chestnut Lot F (175), Walnut Lot G (130) from Moe Sharif (Burger Moe/Downtowner) from 7am to 5pm for additional staff parking.
- Campus parking demand is greatest on Tuesday, Wednesday and Thursday from 10-11 AM. During these times the lot and ramp spare capacities are under 10 percent and all employee lots are full.
- The campus leases out the following entities;
  - Radisson Residences lease 40 spaces on Green Ramp for valet parking (5 PM to 8 AM)
  - The Parlour leases the Ritchie Medical Plaza lot after 5pm for valet parking
- In addition, all visitor parking are open to public parking although not clearly signed. Clearly designated public parking are:
  - Fort Road Medical Building Lot has $4 flat rate after 3pm and weekends and open for event parking.
  - Lot E (415), Lot H (71) and Gold Ramp (up to 300 spaces) are open to event parking, depending event size.
- Campus is open to other sharing requests but want to limit public use during busy times (Tuesday to Thursday, 10 AM to 4 PM) and resident parking.
- Employees pay for their own parking and hospital determines the costs.

- Campus is not inclined to build more parking in anticipation of Riverview Corridor transit project.

Electronic Business Survey

An electronic survey was administered to businesses comprising the membership of the West 7th Street Business Association (W7BA). The survey questions were developed by the Biko Associates consultant team and were reviewed by City staff and representatives from the West 7th Street/Fort Road Federation and W7BA. The survey was emailed to businesses by theW7BA.

Business Survey Responses

The survey results have been categorized into four topic areas: Business Characteristics, Parking Supply Characteristics, Employee use of Parking, and Customer use of Parking. Within each, the most salient and interesting points are marked in bold.

Business Characteristics -- Questions 1- 7:

- Respondent Info
  - Survey was sent to the mailing list of the **West 7th Street Business Association**
  - 5 of 14 responses were from businesses along West 7th Street but outside of the Study Area (south of Saint Clair Avenue), but **have been included in the data** due to low **response rate & similar characteristics** to businesses within the study area.
  - Storefront business (Restaurant, Retail Sales & Services, Other) comprised 64% of respondents. The remainder, (36%) are businesses without storefront characteristics (Office, Meeting Hall, Other).
- Characteristics of Business Spaces
  - Slightly less than 50% of respondents had under 2,000 square feet of space, with another 50% distributed evenly between 2,000-15,000 square feet. **Only one respondent had more than 15,000** square feet of space.
  - 2/5 of respondents had overall capacities less than 100 and 101-250, respectively. The remaining 5th had a capacity between 250-400. **Average overall capacity was 172.**
  - 2/5 of respondents had seating capacities less than 50 and 101-200, respectively. The remaining 5th had seating capacities between 51-100. **Average seating capacity was 92.**
- Peak hours/days by business type (These provide a glimpse of shared parking opportunities):
  - Offices: **1 to 4pm weekdays**.
  - Breweries, reception halls, and some restaurants: **Saturdays 6-10pm**.
  - Retail, some restaurants/cafes: **11am-4pm, Friday-Sunday**.
- Business Duration: Majority patrons spend under 2 hours at a business along West 7th Street. Also need for some longer-term parking in the study area.
  - 30 mins-1.5hrs: **65% (all business types)**
  - 1.5-3hrs: **13% (Restaurant and Retail uses)**
  - 4 hours or more**: 22% (Office, Reception Hall, Apartment building)**

Parking Conditions and Desires -- *Questions 9, 10, 11, 17, 18, 21, 22, 23, & 24:*

- Dedicated lots
  - **57%** of respondents **have off-street parking** dedicated to their business, and **43% do not.**
  - Anywhere from 1-147 stalls, most commonly less than 5 or between 11-20 or 21-50. **(Average of 31)**
  - Respondents **with no parking desired 20 or fewer stalls** dedicated to their business

- Those **with a parking lot desired more than 20 stalls** to meet the needs of their business, estimating that they need a parking supply that was on **average 960%** of the **current supply** in their lot.

- Shared parking agreements
  - Slightly less than **25 percent** of respondents **already have a shared parking agreement** for employees or customers
  - Nearly all respondents with lots cited *ensuring there is an adequate supply of stalls for my own business* as the reason for opposition to shared parking in their own lots
  - Some respondents also cited *legal responsibilities* and *insurance coverage* as deterrents
  - 1 respondent is **open to a shared parking agreement using their lot**, but is worried about:
    - Legal responsibilities
    - Ensuring there is an adequate supply of stalls for my own business needs
    - City regulations and requirements
    - Determining the costs of sharing and the allocation of costs

Employee Parking -- *Questions 8, 12, 13, 14, & 20:*

- Employee #s
  - Average of **7 employees**
  - Most have < 5 employees on site even at peak hours, including mostly **retail and offices**.
  - Respondents with the **most employees on-site** were **restaurants and breweries.**
- Travel mode
  - **84% Drive**
  - **16% travel to work by other means** (8% Bus, 7% Bike, 2% works from home, 1% walks)
- Parking
  - 53% Park on street, 47% off-street
  - Significant majority **find parking within 2 blocks**, walk **at most three**
  - more parking stalls are reserved for customers than employees, but 35% park in businesses' lot, and **businesses with small lots** (10 or fewer stalls) **reserve most or all for employees.**

Customer Parking -- *Questions 15, 16, & 19:*

- All respondents found that their customers had **some difficulty parking, even if rarely**.
- A **greater number** of parking stalls were **reserved for customers** than employees, if a distinction was made.
- Responses support notion of parking lots and street parking filling up at peak hours, leading to cars circulating neighborhoods looking for parking among unclear signage. Most common reasons for difficulty parking:
  - Inadequate number of spaces in the parking lot or ramp where they attempt to park
  - Parking spaces are too far from the business
  - Finding a parking space requires driving around on neighborhood streets until one opens up
  - The time it takes to find a parking space is too great
  - Signage is either absent or inadequate, and it is not clear if parking is permitted or not

Big Ideas and Supporting Conceptual Strategies

Overview

This parking study does not recommend one approach or a single course of action to address parking issues experienced along the West 7th Street corridor. Instead the report presents strategies that should be considered by City of Saint Paul officials and agencies for implementation..

The strategies presented in this report comprise a number of low cost, quick fix approaches that should be implemented in concert. It is believed that their collective implementation will provide: 1) immediate relief from current parking problems and 2) adequate parking capacity for both businesses and residents up until the time the planned modern streetcar is implemented in the Riverview Corridor. As that time new approaches and strategies will need to be developed that specifically respond to the potential elimination of on-street parking along some segments of West 7th Street.

The parking strategies presented for West 7th Street can be grouped into seven **Big Ideas** that should be reviewed to determine their implementation feasibility after consideration of any potential impacts and the benefits that would result compared to costs.

The seven **Big Ideas** are listed below.

1. Increase utilization of existing off-street parking supplies in privately owned parking ramps near the Xcel Arena.
2. Increase the supply of on-street parking within the study area
3. Improve the parking turnover rate
4. Refine Permit Parking areas and revise time restrictions
5. Improve parking regulation enforcement
6. Encourage shared parking
7. Establish a Parking Improvement District

Each of the **Big Ideas** is supported by **Conceptual Parking Strategies**, which are described in detail in this section of the final report. Also included in the descriptions are comments received from stakeholders (residents and businesses) at a Community Meeting where the Big Ideas and the Conceptual Parking Strategies were presented for review and comment..

BIG IDEA 1

Big Idea 1:
Increase utilization of existing off-street parking supplies at eastern edge of study area

Concept 1-1:
Gauge the willingness of owners of existing off-street parking facilities that currently permit public parking in discussions to adjust downward event day parking pricing.

1-1 Comment Summary

There was agreement that ramps owned by the Holiday Inn and the hospitals could be used more effectively on event nights and, thus, help reduce the number of parkers in residential neighborhoods along the study area. It was recognized that both the Holiday Inn and hospital are privately owned and would be within their right to price parking as they see fit. Some comment groups suggested that incentives such as tax breaks may be used to entice them to reduce pricing for event parking.

Big Idea 1 Rationale

Utilization of Public Parking Facilities

Of the 4,563 off-street stalls, 1,795 are available to public parkers. These are:

- United Hospital Gold Ramp on Smith Avenue between Walnut and Chestnut Streets -- 975 stalls
- United Hospital E Lot at the intersection of Smith Avenue and Kellogg Street -- 415 stalls
- United Hospital H Lot on Chestnut Street between Thompson Street and Smith Avenue -- 75 stalls
- Fort Road Medical Center Lot on Sherman Street between Smith Avenue and West 7th Street --45 stalls
- Holiday Inn Ramp at the intersection of Kellogg and West 7th Streets -- 285 stalls

The map on the previous page shows the locations of these parking facilities. The walk time between the westernmost facility and the Xcel Arena is no more than 10 minutes.

United Hospital Ramps:

It was learned that most hospital-related parking activities occur on Tuesdays, Wednesdays, and Thursdays during the morning and early afternoon, between 10 AM and 2 PM. It is not unusual for parking demand to reach 90 percent during these times. Afterward, however, the availability of the parking supply increases and, by late afternoon and into the evening, public parkers would be welcomed.

Holiday Inn Ramp:

The Holiday Inn parking ramp has a total of 285 stalls. There is a block of stalls in the ramp that is reserved for monthly contract parkers, who are guaranteed stalls between 5 AM and 6 PM on weekdays. All stalls in the ramp, other than those reserved for monthly contract parkers, are available for public parking.

None of the owners of these parking facilities widely publicizes the availability of the ramps for use by the public, and it was learned through interviews conducted for this parking study that the volume of public parkers is low, and many stalls remain unoccupied, even when events are held at the Xcel Arena. Based on observations and information provided by residents and business owners, people attending events at the Xcel Arena park in residential neighborhoods (at no cost) and walk several blocks to the arena, rather than utilize United Hospital and Holiday Inn parking supplies. It is assumed that there are two reasons for this behavior.

1. They are not aware of the availability of the United Hospital and Holiday Inn ramps
2. They are aware but would rather walk than pay.

Pricing and Parking Utilization:

Pricing for these parking facilities is low during the daytime, ranging between $4 per hour and $8 to $10 per day. Pricing for event parking increases, however, and can be as low as $10 and as high as $25 and $30, depending on the type and size of the event.

Parking pricing is appropriate virtually anywhere parking is congested. Experts recommend setting prices to maintain 85-90 percent occupancy rates; this is called performance-based or responsive pricing.[2] If implemented with good user information (website postings, signs, maps, and brochures that indicate parking location and price), motorists can choose between more convenient parking in existing ramps and surface lots or free on-street parking several blocks away.

It is suspected that if the event day pricing were lowered, more people would take advantage of the available supply in the existing ramps and surface lots. Resulting benefits would include:

[2] *Parking and the City*, Shoup, Donald; Routledge, Taylor & Francis Group, 2018, page 236.

- Occupancies in the ramps and surface lots that approach 85 to 90 percent
- Increased revenues for the owners of the ramps and surface lots
- Fewer people parking in residential areas of the corridor

It is reasonable to expect that the owners of the ramps and surface lots would want to participate in a study of associated costs and benefits before committing to such an approach. Such a study would include consideration of the price elasticity of parking demand.

Studies have shown that price decreases, by themselves, do not always lead to increased parking occupancy.[3] Other factors must also be in play and contribute to an overall parking strategy for a given district. In the case of the West 7th Street study area, one of the other factors would be a simultaneous tightening on the supply (decreased availability) of free, on-street parking.

[3] *Parking and the City*, Shoup, Donald; Routledge, Taylor & Francis Group, 2018, pages 349-350.

BIG IDEA 2

Big Idea2:
Increase the supply of on-street parking

Concept 2-1:
Close driveway openings where they are no longer serving parking lots and allow legal, on-street parking.

2-1 Comment Summary

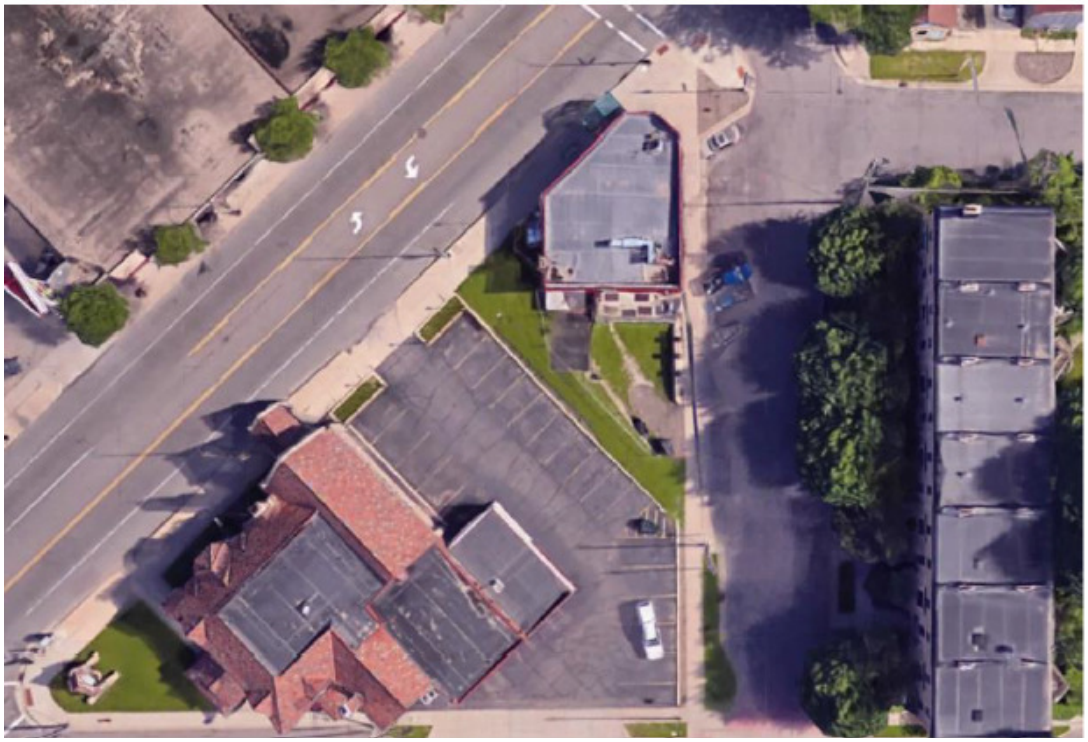
Meeting attendees supported the idea of removing "phantom" curb cuts to allow legal parallel parking. They also mentioned the need to stripe parallel parking spaces to help ensure that parallel parkers only take up a single car length of street space, rather than straddling two potential spaces.

BIG IDEA 2

Concept 2-2:
Conduct studies to determine the feasibility, impacts, costs, and benefits of converting one of the streets surrounding the study area's triangles to a parking street where angle parking bays can be constructed.

2-2 Comment Summary

Commenters indicated support for exploring this idea. Realizing that in many cases the number of on-street parking stalls gained through this approach may only be marginal, commenters felt that the additional benefit of overall enhanced appearance and increased safety for traffic, cyclists, and pedestrians should be given a high weight. Commenters still had reservations about the potential cost of this concept and the number of parking stalls gained for those costs.



Existing parking street on one leg of the West 7th Street/St. Clair Avenue/Western Avenue triangle.

Big Idea 2 Rationale

On-Street Parking in the Study Area:

The inventory of parking supply in the study area showed that there are approximately 2,260 on-street parking spaces in the study area. Some of these are along West 7th Street and, based on location and the signage that regulates their use, are provided for businesses. Others, located on the streets that surround and intersect West 7th Street, are intended for residential use. Problems have arisen because the supply of business-oriented, on-street parking spaces is short, and business patrons park along nearby residential streets and, thus, prevent residents from parking in front of or near their homes.

The short supply of on-street parking spaces for businesses is due to two factors.

Factor 1: Many of the storefront buildings housing businesses along West 7th Street were constructed before current zoning ordinances requiring off-street parking were enacted. Thus, these "grandfathered" buildings lack off-street parking supplies and have 100 percent reliance on on-street parking.

Factor 2: Second, the on-street spaces that are provided are not regulated properly to ensure that there is sufficient turnover. If they were regulated properly, either with time-restrictive signage or parking meters, there would be higher turnover rates, and more parkers would be able use them, and, in a sense, supply would be increased without building any additional parking spaces.

Eliminate Phantom Driveways:

The first approach is to work with the owners of "phantom" driveways that at some time in the past provided access to parking lots. Now, with the driveway no longer in use, these driveways (at approximately 25 feet in width) are taking space that could be used for on-street parking.

Develop Parking Streets along the Corridor:

The second approach involves the development of parking street segments along one of the three legs of triangles that are formed as a result of West 7th Street's diagonal intersections with north/south and east/west streets. As illustrated on the previous page, this approach has already been implemented within the study area at the triangle formed by West 7th Street/St. Clair Avenue/Western Avenue.

Analysis showed that there are eight potential locations within the study area where this approach may be feasible. (A map depicting these locations can be found in the Appendix.) Further study, however, would be needed as each triangular configuration is different, and the feasibility of implementation would need to be measured against:

- Traffic impacts resulting from the closure of a street segment
- Impacts to utilities that may be located in the affected streets
- Impacts to adjacent pedestrian ways
- Impacts to adjacent private property
- Construction costs
- The number of on-street parking spaces that can be created

At the conceptual level, the number of on-street spaces that can be created is comparatively small; with most implementation layouts resulting in five to six additional parking spaces. It should be mentioned, however, that there are traffic safety and operational benefits that could be realized by entirely closing one of the streets forming the triangles, even if the closed streets were not converted to parking streets. These benefits would stem from the elimination of duplicative left-turn movements to and from West 7th Street where the spacing between consecutive intersections is short. This would result in improved safety for pedestrians, cyclists, and traffic.

This conceptual strategy also presents opportunities for greening the corridor and will contribute to place-making and the beautification and appearance of the street.

BIG IDEA 3

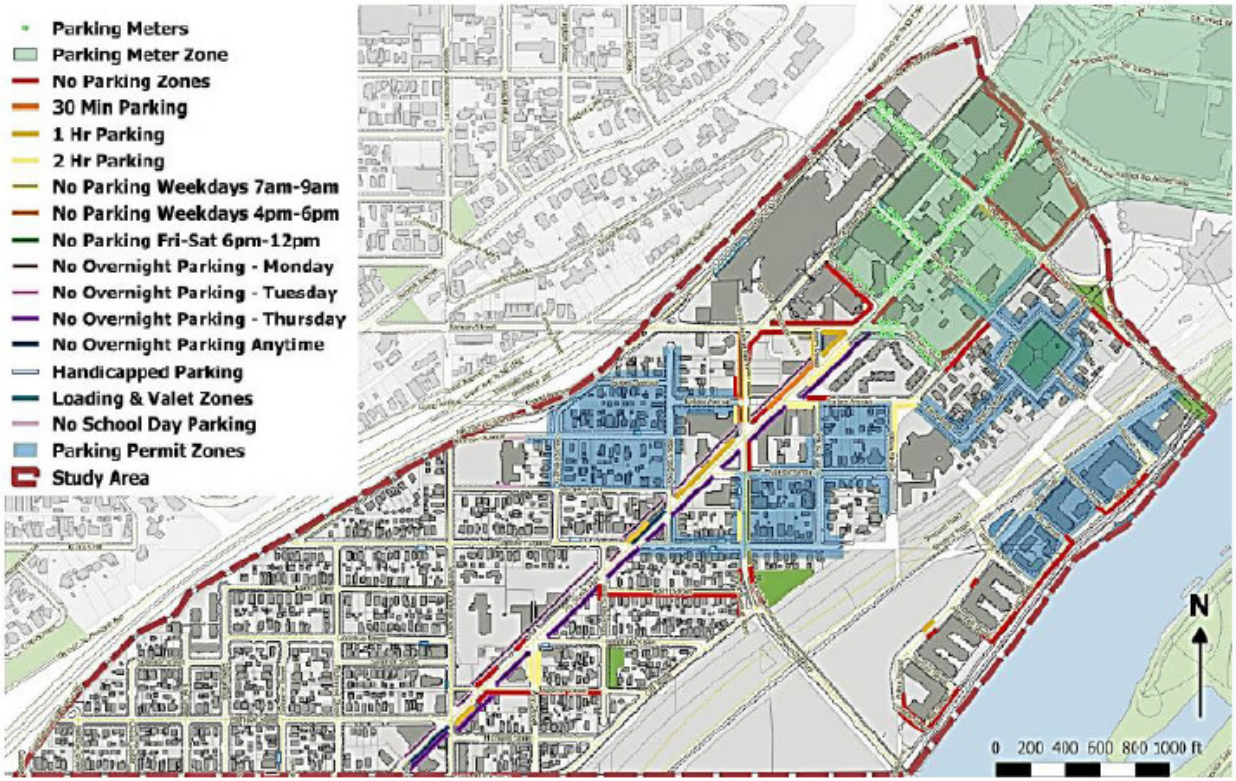
Big Idea 3:
Improve the parking turnover rate

Concept 3-1:

Standardize posted time restrictions for on-street parking on West 7th Street between Goodrich and St. Clair Avenues

3-1 Comment Summary

Community members agreed that getting rid of 'sign litter' and standardizing parking regulations along West 7th (for ease of use) would help improve the turnover rate. There were different opinions about what the standardized time should be, with most people concluding that 2 hour limits would serve the needs of businesses between Goodrich and St. Clair.



BIG IDEA 3

Concept 3-2:
Install parking meters on West 7th Street between Sherman Street and Goodrich Avenue. Meters should also be installed for one block along Grand Avenue and Leech Street on the north side of West 7th Street and for one block along McBoal Street on the south side.

3-2 Comment Summary

The concept of extending metered parking further down West 7th Street was broadly approved by community members. However, there different opinions on how far meters should extend down the corridor. Different comment groups expressed a desire to extend meters further than Goodrich Avenue (all the way to St Clair Avenue) or only partway to Goodrich (Smith Avenue). It was also proposed that demand-based variable rates could be used to account for changing conditions along the West 7th Street corridor. Some concern was expressed about the abuse of time limits of meters via the meter app, as well as extending metered areas to include residential streets.

Big Idea 3 Rationale

Update and Standardize Regulatory Signage along Non-Metered Segments of West 7th Street:

Southwest of Goodrich Avenue and continuing to the end of the study area at St. Clair Avenue, the character of West 7th Street changes to one where the predominant land uses are institutional, free-standing commercial, and multi-family and single family residential. Relative to parking, the most outstanding characteristic of this segment of the study area is the availability of off-street parking. The institutions, commercial, and multi-family residential buildings have parking lots, and the single family homes have access to garages via driveways.

Time restrictions currently posted in this segment of West 7th Street are:

- 1-hour parking
- 2-hour parking
- No overnight parking on Tuesday
- No overnight parking on Thursday

If any change or improvement were to be made in this segment of West 7th Street, it would be to standardize the existing time restrictions. It is recommended that, unless there is a compelling and justifiable rationale for the differing time restrictions posted in this area, they should be standardized. Standardization would serve to eliminate confusion and provide parkers with a predictable situation.

Parking Meter Installation:

The segment of West 7th Street between Sherman Street and Goodrich Avenue is occupied by institutional, residential, and commercial/retail uses. The commercial/retail uses include popular businesses that generate significant parking demand. Parking for some of the commercial/retail, institutional, and residential uses is provided in surface lots. Parking for other the commercial/retail uses in this segment of West 7th Street is provided in on-street parking stalls where parking is free. The posted parking regulations in this area include the following restrictions:

- 2-hour parking
- 1-hour parking
- 30-minute parking
- Loading and valet zone
- No parking
- No parking overnight on Thursday

It is recommended that parking meters should be installed within this segment of West 7th Street, because the commercial/retail land uses generate high parking demand. It was observed that customers who patronize these businesses have difficulty finding an on-street parking space and often circulate several times before finding an opened space. It is commonly accepted that parking meters provide an impetus to turnover parking stalls so that more customers can use the available parking capacity.

The pricing that is established for parking in this area is a concern. Efficient (and even high) pricing for metered, on-street parking spaces is important since these tend to be the most visible and convenient spaces. If on-street parking is free or inexpensive, motorists will cruise around looking for an available space rather than pay for off-street parking. This behavior results in parking and traffic congestion and inefficient utilization of off-street facilities.

Donald Shoup, in *Parking and the City*, urges cities to balance on-street and off-street parking in accordance with parking demand. For example, he encourages cities to raise prices for on-street meters for those who want convenient parking in front of businesses, but lower prices at ramps for penny pinchers willing to walk.

BIG IDEA 4

Big Idea 4:
Refine Permit Parking Areas

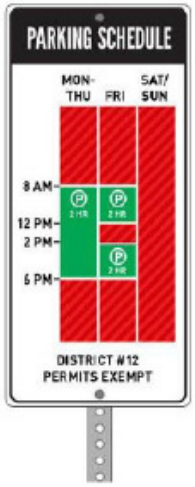
Concept 4-1:
Improve signage in the Permit Parking Areas.

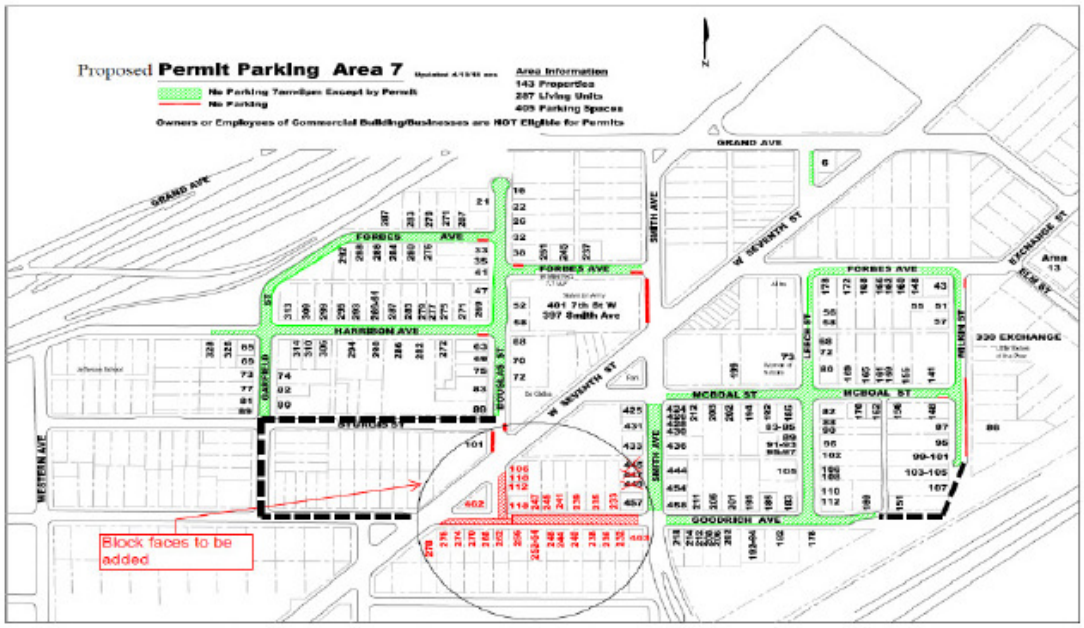
Concept 4-2:
Expand Permit Parking Area 7 to include all residential blocks from Forbes Avenue to Goodrich Avenue, between Garfield and Wilkin Streets.

4-1, 4-2 Comment Summary

The proposal for improved signage was well-received across all comment groups, with the larger and lower signs favored in addition to the redesign. Standardized permit parking rules were also desired by the meeting attendees.

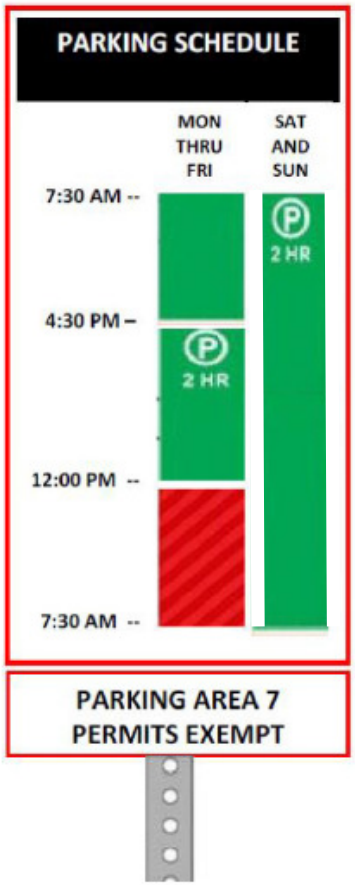
All signage must be enforceable and compliant with all applicable regulations. New signage would have to be developed in coordination with the Police Department, the Traffic Violations Bureau, and the City Attorney's Office.





BIG IDEA 4

Concept 4-3:
Revise time restrictions in Permit Parking Area 7 to achieve stated purpose; to ensure that residents are able to park in proximity to their homes.



4-3 Comment Summary

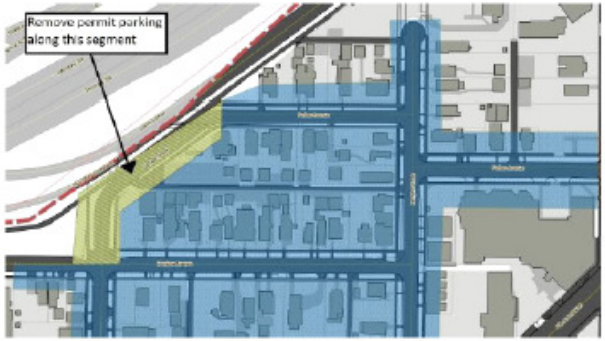
Attendees acknowledged that there needs to be a sharing of the parking burden on neighborhood streets, so blocks just outside permit areas do not accommodate a disproportionate amount of visitor parking. A majority of the groups indicated that the current 'all or nothing' regulations create these parking hotspots. There was some disagreement over the proposed regulations to address this issue. Some residents believed that the 7:30 AM - 4:30 PM timeframe should be shifted to 8:00 AM – 8:00 PM. Others expressed support for making all Permit Parking Areas 2-hour parking at certain times. Some attendees also stated their belief that allowing public parking in permit areas (meaning open street parking during the day, and 2-hour parking during the evening) is crucial to balancing the other concepts, and should be a precondition for any expansion of permit areas.

Study Area Parking Restrictions

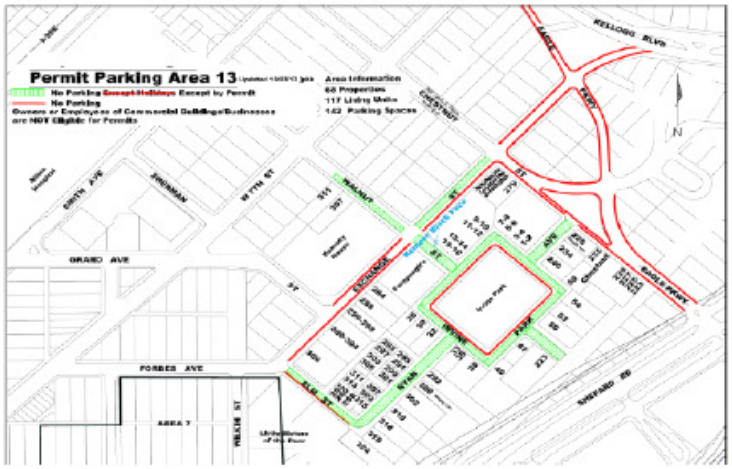
Parking Area	AM	PM
	1 2 3 4 5 6 7 8 9 10 11 12	1 2 3 4 5 6 7 8 9 10 11 12
Area 7	No Parking 7am to 8pm (except part Goodrich Ave , 2-hr)	
	Pros: Easy to enforce	Cons: Restricts day-time business visitors parking'
Area 13	No Parking	
	Pros: Easy to enforce	Cons: Restricts business visitor parking

BIG IDEA 4

Concept 4-4:
Remove the Permit Parking restriction from Garfield Street between Forbes and Harrison Avenues.



Concept 4-5:
Change the restrictions in Permit Parking Area 13 to ensure that there can be public access to a public park.



4-4 Comment Summary

Community members either expressed support for this concept or did not comment.

4-5 Comment Summary

Most comment groups wrote extensively on the topic of parking and the permit area around Irvine Park. Attendees were generally in agreement with the notion that "The public park should be accessible to all". Two groups did not see current parking inaccessibility to the park as a problem and expressed concerns about parkers from downtown and events. Attendees raised some concerns about the feasibility and desirability of changing Permit Area 13 regulations to allow visitor parking on one side. It was pointed out that parking around the edge of the park could impede emergency vehicle access due to the width of the streets and their unusual layout. These comment groups suggested that instead of changing the Permit Area regulations, meters could be extended along Walnut Street (from where they currently end at Exchange Street) to Irvine Park to provide public parking access.

Off-street parking that is available to Irvine Park residences.

Big Idea 4 Rationale

Improve the User-Friendliness of Regulatory Signage:
Some participants in the interviews and attendees at the Community Meeting commented that the signage currently posted in the study area is not clear. A review of signage options was conducted, and it was learned that cities in California are developing new, more user-friendly signage to regulated parking. Any number of models can be found, but generally the new models user fewer words and, instead, describe the regulations with colors (red and green) and times. Examples are shown on the previous pages.

Expand the Geographic Scope of Permit Parking Area 7:
Many of the community members in the interviews and attending the Community Meeting, commented that there is a "squeeze phenomenon" that occurs in blocks that are adjacent to Permit Parking Areas. This occurs when parkers without permits decide to park just one block outside a Permit Parking Area where there are no restrictions. The result is that residents in the Permit Parking Area are free of non-permit holders, but residents just one block over are not. Residents in Permit Parking Area 7 were the most vocal about this occurrence.

In order to eliminate this issue, consideration should be given to expanding Permit Parking Area 7 to include all residential blocks from Forbes Avenue to Goodrich Avenue, between Garfield and Wilkin Streets.

Revise Restrictions in Permit Parking Area 7:
As currently posted, the regulations prohibit non-permit holders from parking in Permit Parking Area 7 between 7 AM and 8 PM, allowing non-permit holders to park for 2-hour spans of time between 8 PM at night to 7 AM on the following morning. These time restrictions only serve to prevent non-permit holders to park during a time of day where most residents are not at home, while allowing them to park during times where most residents are at home and already parked for the evening.

The proposed concept is to test the acceptance of alternative regulations that would permit non-permit holders to: a) park in Permit Parking Area 7, without any restrictions, while most residents are away from home and b) allow non-permit holders to park for 2-hour periods during those times where residents are at home. It was suggested that these times might be:

- Park without restrictions or limits between 7:30 AM and 4:30 PM
- Park for 2 hours only between 4:30 PM and Midnight
- No parking between Midnight and 7:30 AM
- 2-hour parking only on Saturday and Sunday

Exact time restrictions could be adjusted to meet the needs of residents and businesses while adhering to the major goals of: a) *allowing non-permit holders to park without restrictions during periods of the day where the residents' parking demand is low and b) only allowing 2-hour parking during times where resident parking demand is high.*

Remove Garfield Street from Permit Parking Area 7:
There are no residential uses along this street, between Forbes and Harrison Avenues. Thus, parking restrictions are not necessary.

Modify Restrictions in Permit Parking Area 13:
The restrictions that govern parking in Permit Parking Area 13 are of concern for two reasons:

- Irvine Park, the area affected by the regulations, features a public park where, presumably, the public is free to access and enjoy.
- The regulations prohibit non-permit holders from parking in proximity to the park at any time and on any day.

When the City initiated its Permit Parking program in 1979, the expressed purpose for doing so was to ensure that residents adjacent to uses that generate high parking demand would be able to park in

proximity to their homes. It was not initiated to convert public streets to private streets. Excerpt from the ordinance state:

> "The Residential Permit Parking program is designed to address parking problems in residential areas that are adjacent to intense non-residential uses that do not provide adequate off-street parking. For example, this may be in response to employees in a nearby business district or students attending a college that rely on an area's on-street parking supply to meet their parking needs. These cases may result in the on-street parking supply being heavily utilized, while limiting the on-street parking supply for residents and their visitors. This can also pose parking constraints for other residential uses, such as in-home medical care and service vehicles (e.g., maintenance and home improvement services)."

Field surveys showed that all but three residences surrounding Irvine Park have access to off-street parking, and in response it was suggested that regulations for this area should be revised to allow non-permit holders to park for 2-hour periods of time. Residents surrounding the park vehemently objected to this proposal and suggested an alternative to install parking meters along Walnut Street, between Exchange Street and Irvine Park and designate these "pay-to-park" spaces for public use..

BIG IDEA 5

Big Idea 5:
Improve parking regulation enforcement

Concept 5-1:
Enhance enforcement activities within the study area; both in Permit Parking Areas 7 and 13 and along West 7th Street.

Initiate a pilot program to slowly test the License Plate Recognition (LPR) system's capabilities while addressing issues with the transfer of digitize data.

Benefits of LPR System:

- Enforcement routes can be completed faster and more frequently
- Every vehicle can be checked for compliance
- Multiple permits can be enforced at once
- Repeat violators can be identified and caught on daily patrols
- Automation would remove the potential for human error
- Customers would take notice and begin to comply with rules, as a mounting number of fines accumulates."

5-1 Comment Summary

Community members stated their approval of efforts to streamline the parking enforcement process and use new technologies.

Big Idea 5 Rationale

Enhance Parking Regulation Enforcement:

Analysis showed that parking regulation enforcement in the study area has not been effective. Reasons for this are:

- Large geographic scope of the study area
- Inadequate number of Police Department personnel
- Inefficient violation reporting procedure
- Recent restrictions placed on enforcement requirements by the court system
- Lack of use of already available License Plate Recognition (LPR) computer system

Enforcement is a critical element. Without a robust enforcement program none of the suggested concepts will be effective, and parkers will simply weigh the chances of being cited for a parking violation and paying the fine ($40) against the cost of paying for a parking stall in one of the ramps, e.g.

The Police Department already owns an LPR computer system but has not used it for operations other than identifying stolen vehicles. It is proposed that the Department should begin a pilot program where the LPR system is used for parking violations, i.e., to identify vehicles (by license plate) that have parked for more than two hours in Permit Parking Areas.

BIG IDEA 6

Big Idea 6:
Expand use of existing, privately owned surface parking lots

Concept 6-1:
Engage the owners of parking lots in discussions about the benefits of shared parking and encourage them to take advantage of the City's public parking program.

Shared parking arrangements are generally underpinned by a formal, shared parking agreement, which:

- **Establishes the times in which the lot may be used by additional users (to ensure use of the lot by the owner during his/her peak demand periods)**
- **Defines who will be permitted to use the shared parking lot**
- **Establishes any fees that will be charged by the owner of the lot and any financial responsibility that will be assumed by other parties**
- **Indemnifies participating parties to protect their financial interests.**

6-1 Comment Summary

Shared parking in existing lots or ramps was recognized as a worthwhile solution to parking issues, but some concerns were expressed about the likelihood of convincing lot owners to pursue shared parking agreements.

BIG IDEA 6

Concept 6-2:

Open existing, privately owned parking lots to public parking and receive financial and material assistance from the City. Forgivable loans are available to parking lot owners for upgrading and ensuring the lot meets City standards.

6-2 Comment Summary

Attendees broadly expressed support for this concept without any suggested changes.

Big Idea 6 Rationale

As documented, there are over 1,000 parking stalls in surface lots throughout the study area. Typically these are not shared and are only used by patrons and employees of the businesses associated with the parking lots. The corridor's parking issues would be well on their way to being solved if there were a comprehensive approach to using privately owned surface parking lots for public parking.

Shared Parking:

Shared parking is an approach to providing off-street parking where adjacent (or nearby) property owners share their parking lots and reduce the number of parking spaces that each would provide on an individual basis. Shared parking arrangements work best where properties are within close proximity and participating businesses have different parking characteristics. For example, a shared parking arrangement with high potential for success would occur where a church shares its parking lot with retail businesses. The church's demand would peak on Sunday morning, a time where retail businesses would have no parking demand.

Shared parking arrangements are generally underpinned by a formal, shared parking agreement, which:

- Establishes the times in which the lot may be used by additional users (to ensure use of the lot by the owner during his/her peak demand periods)
- Defines who will be permitted to use the shared parking lot
- Establishes any fees that will be charged by the owner of the lot and any financial responsibility that will be assumed by other parties
- Indemnification clauses to protect the interests of participating parties.

It was learned through the business survey that was administered for the parking study that shared parking arrangements have not been vigorously pursued in the study area, and those that have been established are not formal agreements. Survey respondents expressed great concerns about formal shared parking agreements. Some of their concerns are:

- Ensuring there is an adequate supply of stalls for my own business (the most commonly cited concern)
- Legal responsibilities
- Insurance coverage
- City regulations and requirements

Despite these concerns, the City of Saint Paul is supportive of shared parking and included a policy addressing shared parking in the 2040 Comprehensive Plan.

> "Policy LU-13: Support strategies, as context and technology allow, to improve off-street parking efficiency, **such as shared parking agreements**, district ramps, car sharing, electric vehicle charging and reduced parking minimums."

The City does support those who are interested in pursuing shared parking arrangements and will provide assistance to help property owners overcome perceived obstacles.

Utilize Privately Owned Lots for Public Parking:

The City provides assistance to the owners of parking lots who are willing to open their lots to public parking. Through this program, the City will provide financial assistance (forgivable loans) to property owners for bringing their parking lot up to code (striping, landscaping, lighting, etc.) in exchange for a commitment to allow the public to park.

BIG IDEA 7

Big Idea 7:

Establish a Parking Improvement District (PID) through a Special Services District (SSD) in order to organize and fund improvements for the West 7th Street corridor.

A district parking strategy, including development of an off-street parking facility, should be considered if:

1. **Short- and medium-term strategies fail to address parking concerns and/or**
2. **Riverview Corridor transit improvements affect business parking supplies.**

Concept 7-1: Privately funded district parking

Concept 7-2: Publically funded district parking

Concept 7-3: District parking is funded through public/private partnership

7-1 Comment Summary

In the case of overwhelming parking issues at some point in the future, there is support for some sort of Parking Improvement District to address them. Some attendees stated that they don't believe new major parking infrastructure is a good investment.

Big Idea 7 Rationale

Big Idea 7, implementing a district parking strategy (e.g., Parking Improvement District (PID) or Parking Benefit District (PBD)) is the only suggested remedy that is appropriate for the long-term. The previous six Big Ideas are for consideration as short- and mid-term fixes.

What is a Parking Improvement District?:

Parking districts can be organized by authorities ranging from municipalities and development authorities to private business improvement districts. A Parking Benefit District (PBD) is a way of organizing paid parking in a business district to provide local improvements, oftentimes through a Business Improvement District (BID).[4] Revenues from parking may be used for local improvements that enhance the streetscape and built environment, such as planting street trees, adding benches or upgrading street lighting. Using parking to fund local improvements through a PBD can help encourage the positive involvement of local stakeholders who might otherwise see parking costs as a deterrent to customers.

A Business District Parking facility is an off-street parking facility that is provided for businesses within a geographic area, where customers of businesses in the district can park, either for free or for a charge. If the City of Saint Paul does not see fit to build, own, and operate a Business District Parking facility within the study area, the responsibility to develop and operate such a facility could rest with study area businesses.

How would a Parking Benefit District be Developed?:

Constructing a parking facility (underground garage, surface lot, or ramp) is an expensive proposition. Estimates put construction costs at $35,000 for each underground parking stall, $5,000 to $10,000 for each stall in a surface lot, and $27,000 for each stall in an above ground ramp. These estimates do not include site acquisition and preparation costs.

With costs at such a high level, the businesses would have to work cooperatively to build a surface lot or ramp that serves the study area. State of Minnesota statutes enable municipal governments to permit the development of Special Services Districts (SSDs), which operate as non-profit organizations made up of businesses within a defined geographic area to provide services that are not ordinarily provided throughout the city from general fund revenues. Special services authorized in some city ordinances have included street and sidewalk cleaning, snow and ice removal, lighting, signage, marketing and promotion, landscaping, security, and parking facilities.

Property owners within an SSD pay for the increased level of services through service charges. The charges must be proportionate to the costs of the services and may be collected through the property tax collection system or through other means if so provided by the ordinance. If the service charge is based on net tax capacity, exempt property is exempt from the service charge. Service charges are not included in calculating levies for purposes of any other law related to levies. The fees may be used to pay off general obligation bonds issued by the city for the capital improvements made in the service district under the ordinance.

Another possibility that would require city involvement, but reduce costs involved, is coming to an arrangement with owners of existing lots, similar to a shared parking agreement. This would be an agreement where the owner of a private lot allows public parking at specific times, and, in return, the City would contribute toward maintenance of the lot. Current examples of this exist on Grand and Summit Avenues.

[4] *Parking and the City*, Shoup, Donald; Routledge, Taylor & Francis Group, 2018, page 416. *(In Minnesota BIDs are referred to as Special Services Districts).*

Big Idea Summary Matrices

The Big Idea and supporting Conceptual Strategies discussed above (pages 31 to 52) are outlined in the matrices that follow. Of particular concern are the following criteria against which the Big Ideas and concepts should be evaluated.

- Opportunities and benefits
- Constraints and costs
- Community support, as gauged by responses and opinions expressed at the second of two Community Meetings
- Next steps:
    - When action should be taken?
    - What the action might be?
    - Who will play a lead role in any follow-up studies and/or actions?

Big Idea	Conceptual Strategy	Opportunities Benefits	Constraints Costs	Community Support	Next Steps		
					What	When	Lead Agency
1) Increase utilization of existing off-street parking supplies	1-1) Discuss parking strategy (advertising and pricing) with United Hospital and Holiday Inn.	More efficient utilization of existing off-street parking for events at the Xcel Energy Center	Hospital and Holiday Inn receptivity due to current constraints on financing and pricing that may bear on parking policies.	High	Hold discussions internally to prepare talking points and discuss potential concessions to offer in exchange for participation. Begin discussions with Hospital and Holiday Inn	3rd Q/2019 4th Q/2019	2nd Ward CM, PED and Port Authority 2nd Ward CM, PED and Port Authority
2) Increase the supply of on-street parking	2-1) Close "phantom" driveways.	Additional 1.25 on-street parking spaces per occurrence	Willingness of private property owners to participate. Costs to be borne by private property owner.	High	Hold internal discussions to prepare talking points and potential public/private cooperation.	3rd Q/2019	2nd Ward CM, PED, and PW
	2-2) Study conversion of triangles to parking streets.	Increased on-street parking supply and enhanced safety (traffic, bikes, peds), corridor beautification, and place making. It is suspected that there would be overall improvements in traffic safety and operations due to the elimination of duplicative left-turn movements within short spans of West 7th Street.	Unknowns: Discrete, location-specific traffic impacts due to closure of an intersection and consequent traffic diversions to the next available intersection where left-turns to/from West 7th Street could be accomplished. Potential construction impacts to utilities and sidewalks. Construction costs compared to increased supply of on-street parking. Should consider Riverview Corridor impacts. Funding would need to be secured for engineering work to develop plans for candidate locations.	High	Internal discussions on implementation issues. Establish critieria to identify potential locations for the conversions.	4th Q/2019	2nd Ward CM, City Council, PED, and others before PW would become involved.

Big Idea	Conceptual Strategy	Opportunities Benefits	Constraints Costs	Community Support	Next Steps		
					What	When	Lead Agency
3) Improve parking turnover rate	3-1) Update and standardize posted time restrictions between Goodrich and St. Clair.	Uniform signage will eliminate confusion for users. New times for parking should be 2-hour with exceptions for Loading/Unloading and 30-minute parking, at property owner's request.	Costs associated with signage replacement.	High	Internal discussions to develop plans for installing new regulatory signage. Install new signage in spring 2020.	To be determined	PW, 2nd Ward CM, West 7th Business Association, and West 7th/Fort Road Federation
	3-2) Install parking meters between Sherman and Goodrich.	Turnover will be improved.	Costs associated with meter installation. Installation of meters would result in costs for maintenance.	Highly moderate to High	Internal discussions and analysis to quantify the actual improvements to turnover as measured against the cost of installation.	To be determined	PW, 2nd Ward CM, City Council, West 7th Business Association, and West 7th/Fort Road Federation
4) Refine Permit Parking Areas	4-1) Improve signage in the Permit Parking Areas	Signage will be easier to interpret.	Costs associated with designing and installing new signage.	High	Internal discussions to develop plans for designing and installing new regulatory signage.	To be determined	PW, 2nd Ward CM, West 7th Business Association, and West 7th/Fort Road Federation
	4-2) Expand Permit Parking Area 7	Eliminate the "squeeze" phenomenon in Permit Oparking Area 7	Costs associated with installing signage on blocks included in the expansion.	High	Internal discussions to develop and implement communications with affected residents and businesses and develop a plan for signage installation.	To be determined	PW, 2nd Ward CM, West 7th Business Association, and West 7th/Fort Road Federation

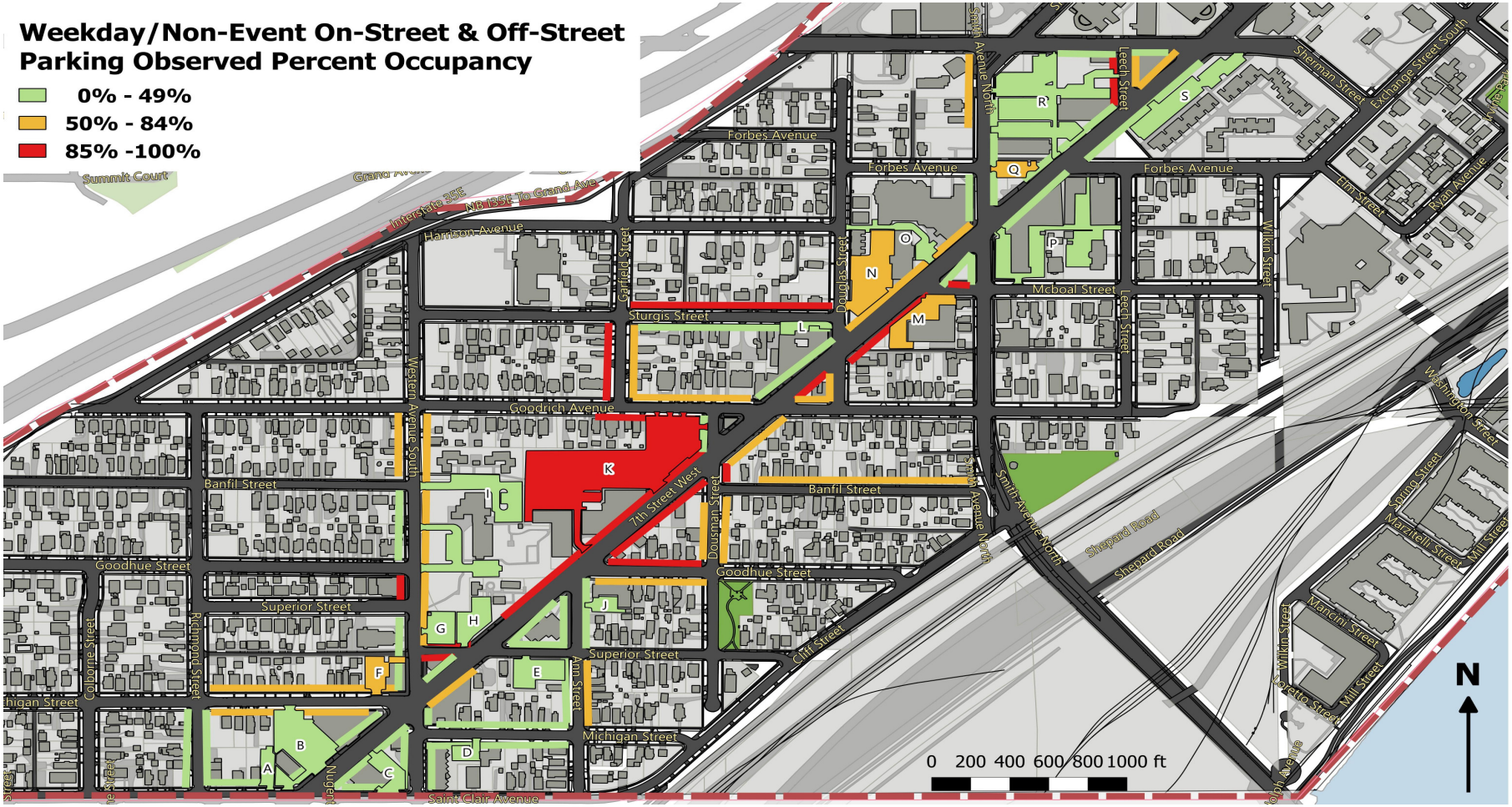
Big Idea	Conceptual Strategy	Opportunities Benefits	Constraints Costs	Community Support	Next Steps		
					What	When	Lead Agency
4) Refine Permit Parking Areas	4-3) Revise time restrictions in Permit Parking Area 7	Increases supply of on-street parking for non-permit holders when residents' parking demand is comparatively low.	Costs associated with designing and installing new signage.	High	Internal discussions to develop and implement communications with residents in Permit Parking Area 7 on potential changes in time restrictions.	To be determined	PW, 2nd Ward CM, West 7th Business Association, and West 7th/Fort Road Federation
	4-4) Remove Permit Parking restrictions on Garfield Street between Forbes and Harrison Avenues.	Increases the supply of non-permit parking spaces.	Costs of removing existing signage.	High	Internal discussions to determine the timing for removing restrictions on Thompson Street.	To be determined	PW
	4-5) Revise Permit Parking Area 13	Allows the public to park in proximity to Irvine Park.	Either costs associated with new development of new signage or installation of meters.	Low moderate to Moderate	Engage residents in discussions about their parking restrictions. Set goals to resolve issue by 2nd Q/2020	To be determined	PW, 2nd Ward CM, West 7th Business Association, and West 7th/Fort Road Federation
5) Improve parking regulation enforcement in the Permit Parking Areas and along West 7th Street	5-1) Initiate a pilot program to slowly implement and test the effectiveness of the LPR system	Enforcement of parking regulations will result in fewer violations over time.	Understaffed enforcement division of the Police Department. Nature of policing the study area and need to run through the study area every two hours in order to identify violators.	High	Develop a pilot program for implementation during 1st Q/2020.	4th Q/2019	Police Department, 2nd Ward CM, West 7th Business Association and West 7th/Fort Road Federation.

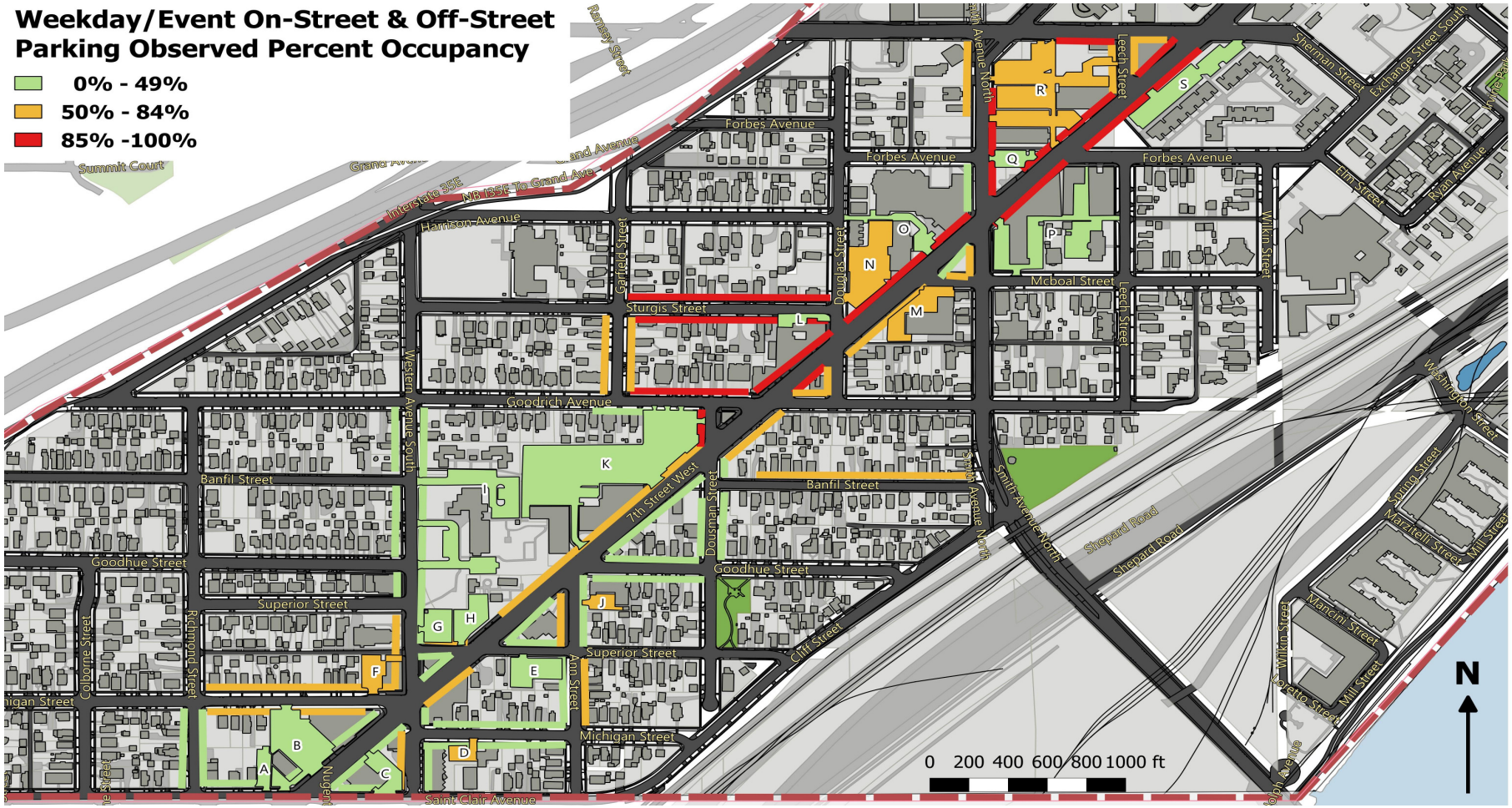
Big Idea	Conceptual Strategy	Opportunities Benefits	Constraints Costs	Community Support	Next Steps		
					What	When	Lead Agency
6) Expand use of privately owned parking lots for public parking	6-1) Encourage private parking lot owners to share their parking lots.	Efficient utilization of off-street parking supply.	Property owners' lack of familiarity with shared parking.	High	Develop a communications program to inform property owners on shared parking and provide assistance with the development of shared parking agreements.	4th Q/2019	PED, 2nd Ward CM, West 7th Business Association, and West 7th/Fort Road Federation.
	6-2) Encourage private parking lot owners to participate in the City's program to allow public parking in private parking lots.	Efficient utilization of off-street parking supply.	Property owners' lack of familiarity with the city's program.	High	Develop a communications program to inform property owners on shared parking and provide assistance with forgivable loans for parking lot upgrades.	4th Q/2019	PED, 2nd Ward CM, West 7th Business Association, and West 7th/Fort Road Federation.

Big Idea	Conceptual Strategy	Opportunities Benefits	Constraints Costs	Community Support	Next Steps		
					What	When	Lead Agency
7) Develop and implement district parking strategies	7-1) Develop privately funded district parking	Provision of off-street parking supply in the event above strategies fail to yield results and/or the impacts of the Riverview Corridor transit improvements reduce on-street parking.	Businesses along West 7th Street will need to formally organize an improvement district. Determining the most optimal location for the district parking facility. Costs associated with implementing (designing and constructing) a district facility are very high.	Low	Ensure that parking concerns are addressed in future Riverview Corridor planning and design.	Should be considered when studies for the Riverview Corridor resume.	PED, 2nd Ward CM, West 7th Business Association, and West 7th/Fort Road Federation.
	7-2) Develop publically funded district parking	Same as above	Location decisions would be the same as above. Costs would be borne by the public sector. West 7th businesses would not have to formally organize.	Low	Same as above.	Same as above.	Same as above.
	7-3) Develop district parking through a public/ private partnership	Same as above	Same as 7-1, but costs would be borne by both the private and public sectors.	Low	Same as above.	Same as above.	Same as above.

Appendices

Average Weekday Parking Occupancy




Weekday/Event On-Street & Off-Street
Parking Observed Percent Occupancy
0% - 49%
50% - 84%
85% -100%
Summit Court
Interstate 35E
NB I35E To Grand Ave
Harrison Avenue
Forbes Avenue
Forbes Avenue
Forbes Avenue
Garfield Street
Douglas Street
Sturgis Street
Mcboal Street
Leech Street
Leech Street
Wilkin Street
Elm Street
Ryan Avenue
Sherman Street
Exchange Street South
Western Avenue South
Goodrich Avenue
Banfil Street
Banfil Street
7th Street West
Dousman Street
Goodhue Street
Goodhue Street
Superior Street
Superior Street
Ann Street
Michigan Street
Saint Clair Avenue
Colborne Street
Richmond Street
Cliff Street
Smith Avenue North
Smith Avenue North
Shepard Road
Shepard Road
Washington Street
Spring Street
Marzitelli Street
Mill Street
Mandini Street
Wilkin Street
Mill Street
A
B
C
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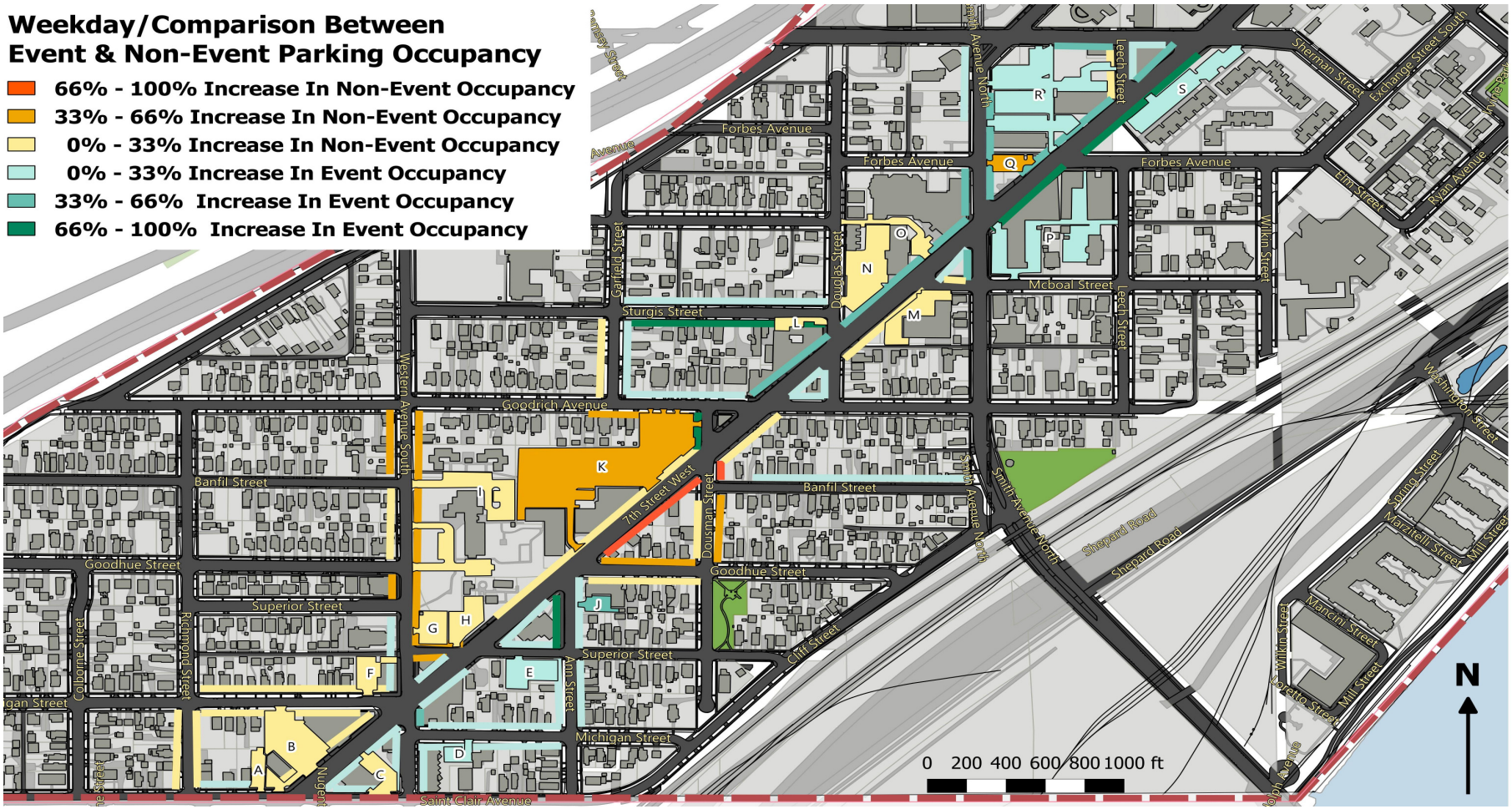
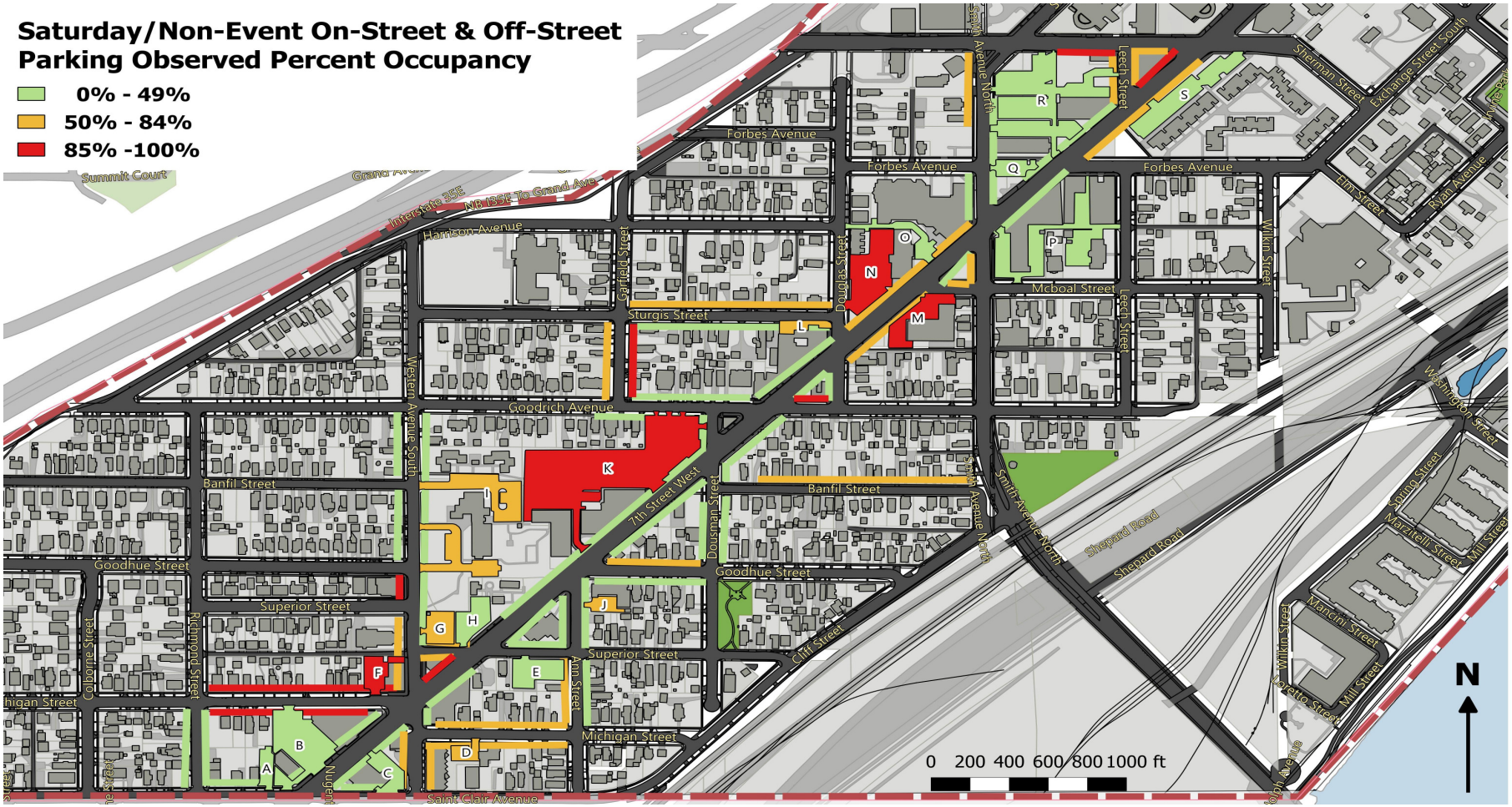
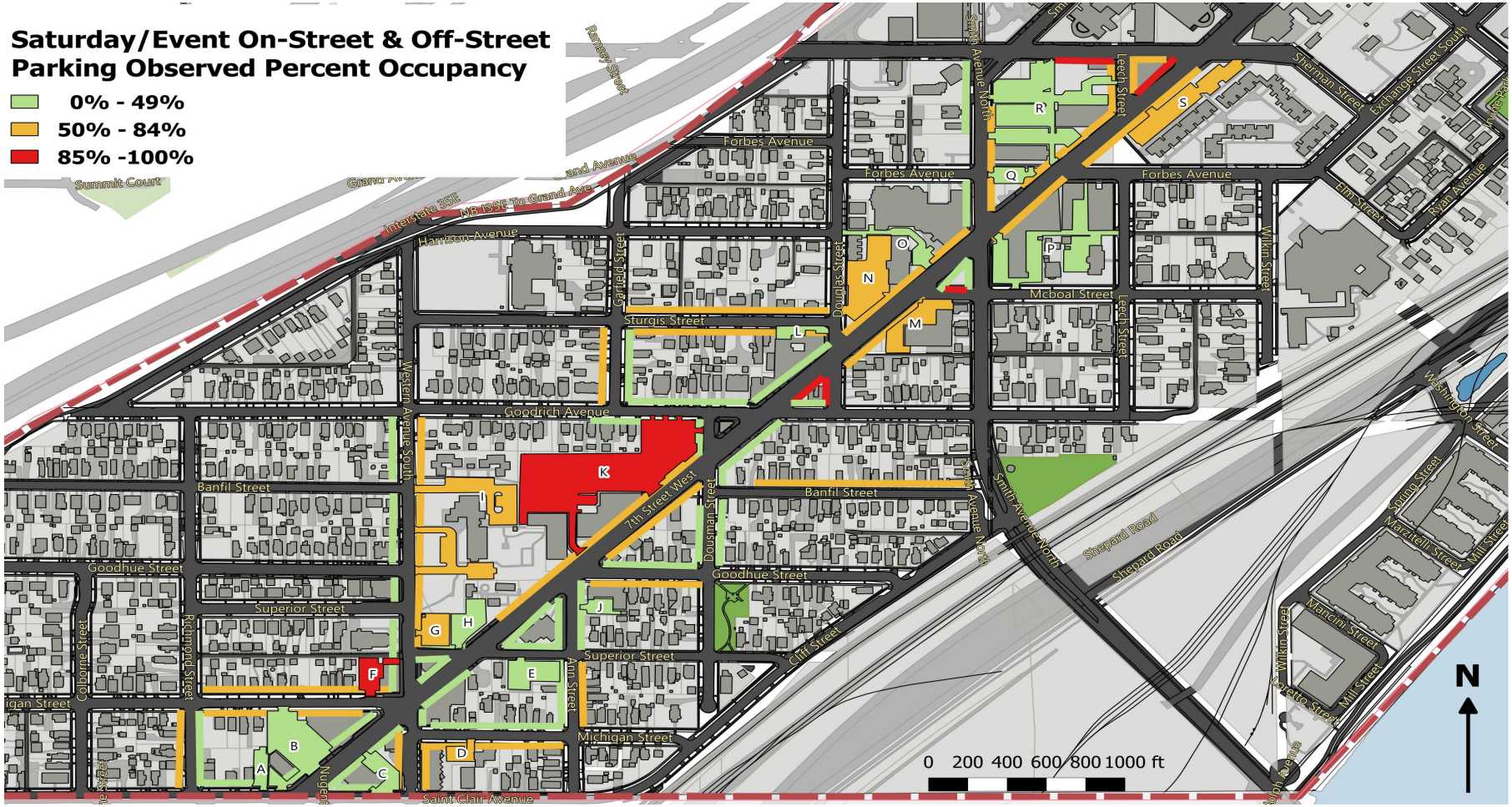
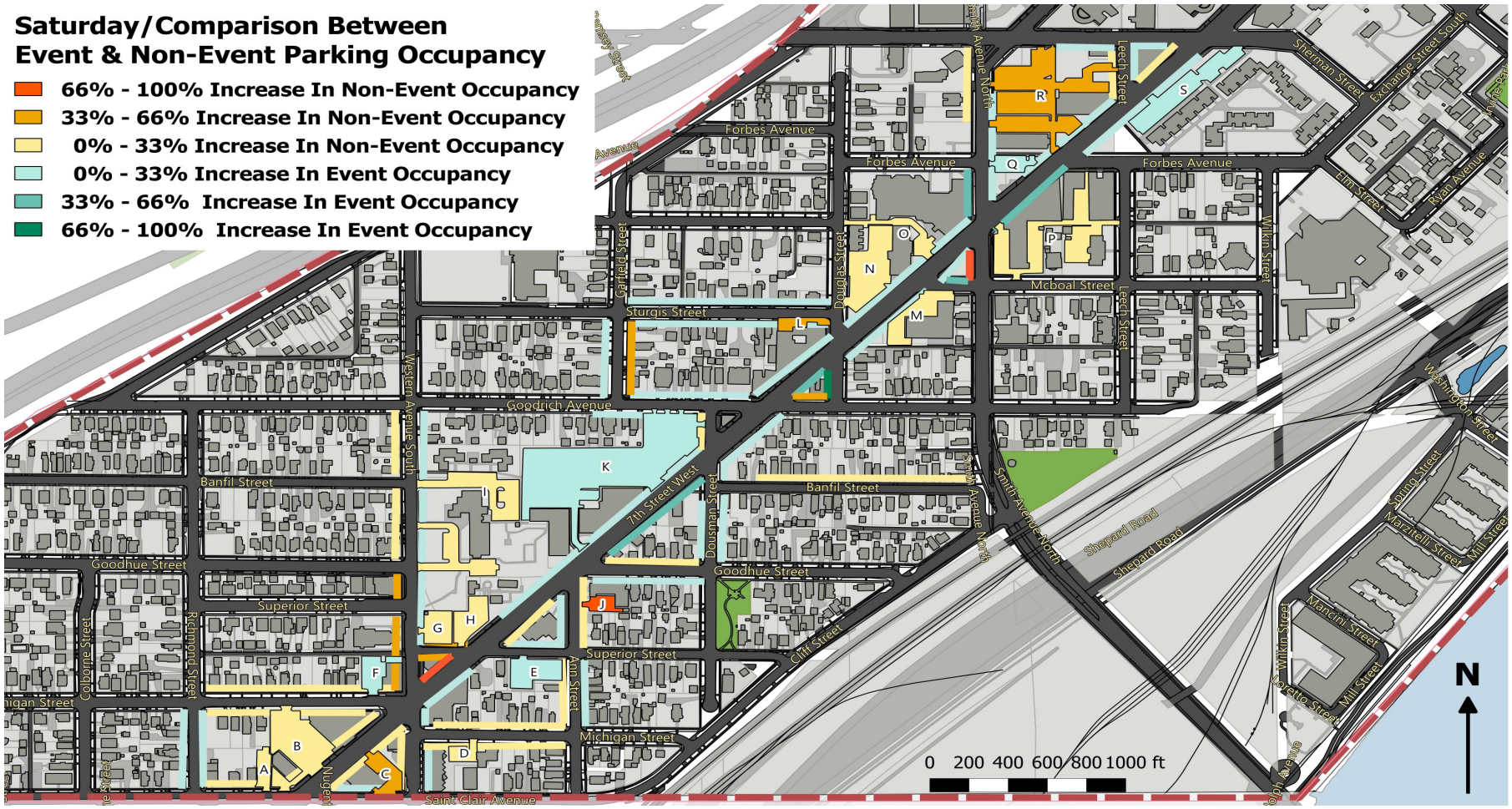

Weekday/Comparison Between
Event & Non-Event Parking Occupancy
66% - 100% Increase In Non-Event Occupancy
33% - 66% Increase In Non-Event Occupancy
0% - 33% Increase In Non-Event Occupancy
0% - 33% Increase In Event Occupancy
33% - 66% Increase In Event Occupancy
66% - 100% Increase In Event Occupancy
Forbes Avenue
Sturgis Street
Mcboal Street
Goodrich Avenue
Banfil Street
Goodhue Street
Superior Street
Michigan Street
Saint Clair Avenue
Western Avenue South
Garfield Street
Douglas Street
Leech Street
Sherman Street
Exchange Street South
Elm Street
Wilkin Street
Wyan Avenue
Westminster Street
Spring Street
Marzitelli Street
Mill Street
Manchi Street
Sparetto Street
Shepard Road
Smith Avenue North
7th Street West
Dodson Street
Ann Street
Cliff Street
Richmond Street
Colborne Street
Nuggett
A
B
C
D
E
F
G
H
I
J
K
L
M
N
O
P
Q
R
S
0 200 400 600 800 1000 ft
N

Average Saturday Parking Occupancy




Saturday/Event On-Street & Off-Street
Parking Observed Percent Occupancy
0% - 49%
50% - 84%
85% -100%
Summit Court
Ramsey Street
Interstate 35E
NB I35E To Grand Ave
Harrison Avenue
Forbes Avenue
Forbes Avenue
Forbes Avenue
Garfield Street
Lake Place Drive
Sturgis Street
Mcboal Street
Leech Street
Leech Street
Sherman Street
Exchange Street South
Elm Street
Ryan Avenue
Wilkin Street
Goodrich Avenue
Western Avenue South
Banfil Street
Banfil Street
7th Street West
Grand Street
Smith Avenue North
Smith Avenue North
Shepard Road
Shepard Road
Goodhue Street
Goodhue Street
Superior Street
Superior Street
Cliff Street
Ann Street
Michigan Street
Saint Clair Avenue
Colborne Street
Raymond Street
Spring Street
Marzitelli Street
Mill Street
Mancini Street
Mill Street
Wisconsin Street
A
B
C
D
E
F
G
H
I
J
K
L
M
N
O
P
Q
R
S
0 200 400 600 800 1000 ft
N


Saturday/Comparison Between
Event & Non-Event Parking Occupancy
66% - 100% Increase In Non-Event Occupancy
33% - 66% Increase In Non-Event Occupancy
0% - 33% Increase In Non-Event Occupancy
0% - 33% Increase In Event Occupancy
33% - 66% Increase In Event Occupancy
66% - 100% Increase In Event Occupancy
Forbes Avenue
Forbes Avenue
Forbes Avenue
Mcboal Street
Sturgis Street
Goodrich Avenue
Banfil Street
Banfil Street
Goodhue Street
Goodhue Street
Superior Street
Superior Street
Michigan Street
Saint Clair Avenue
Garfield Street
Douglas Street
Western Avenue South
7th Street West
Dousman Street
Ann Street
Cliff Street
Leech Street
Leech Street
Smith Avenue North
Smith Avenue North
Shepard Road
Shepard Road
Sherman Street
Exchange Street South
Ryan Avenue
Elm Street
Wilkin Street
Washington Street
Spring Street
Marzitelli Street
Mill Street
Manchi Street
Mill Street
Loretto Street
Richmond Street
Osborne Street
Nugent
A
B
C
D
E
F
G
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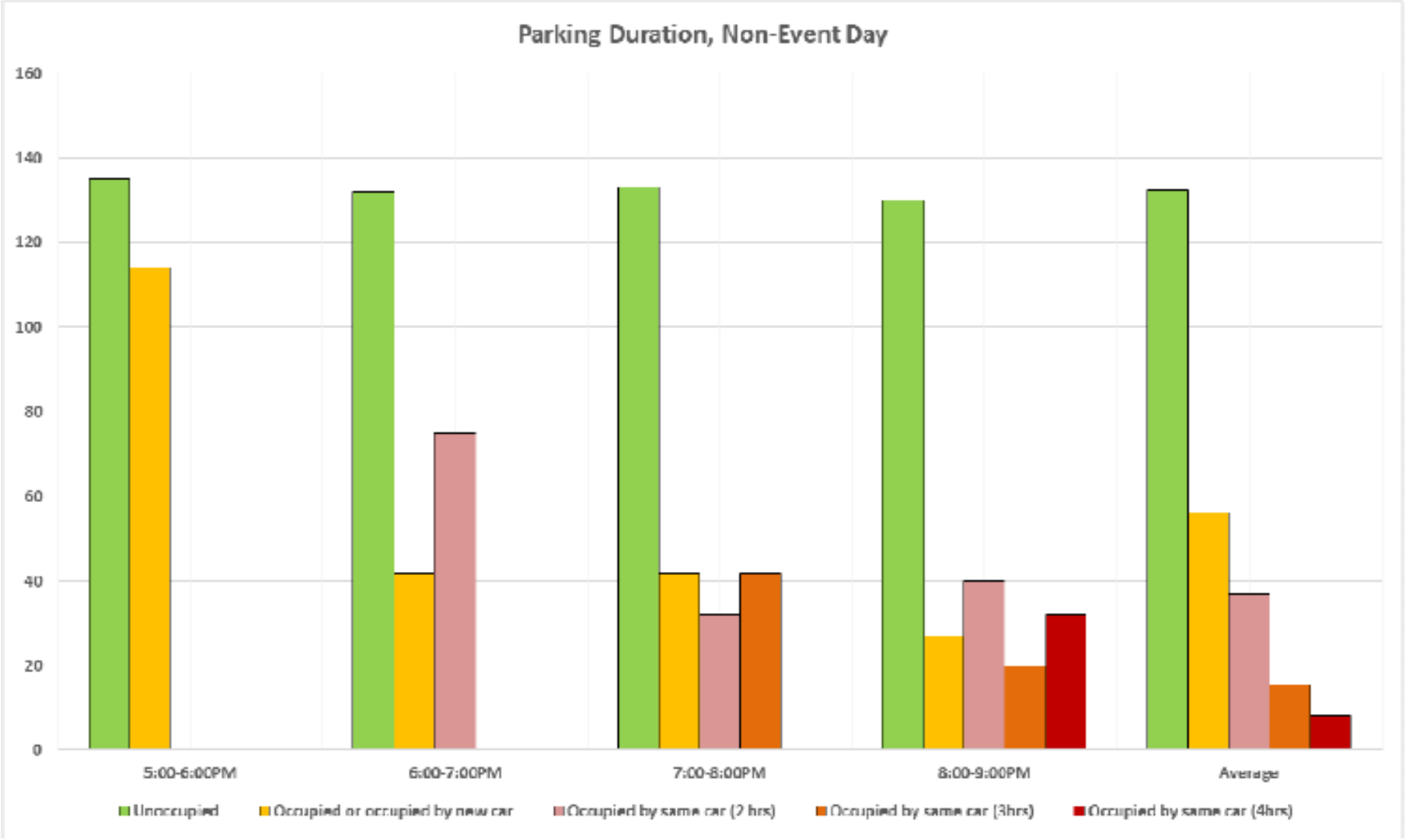
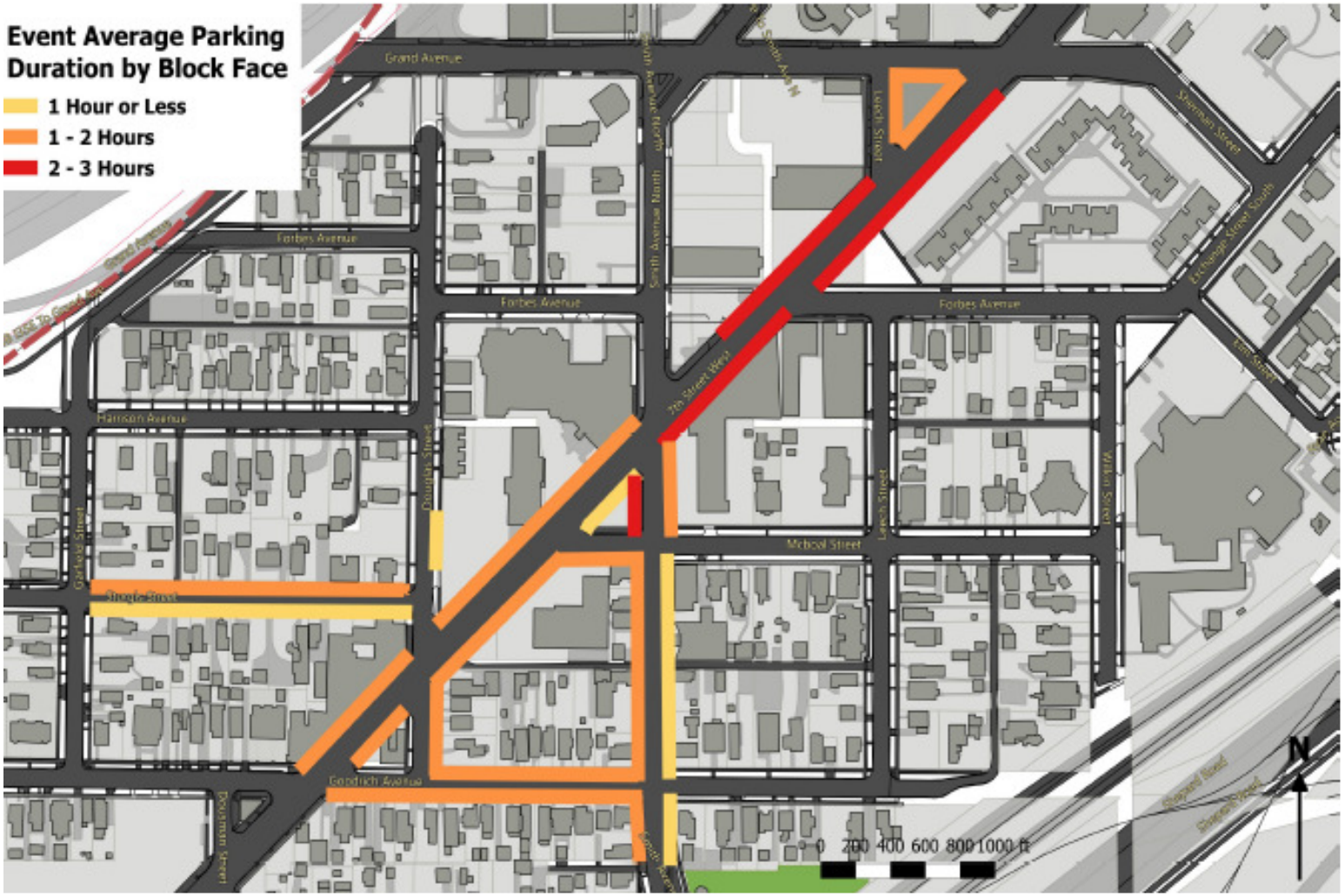
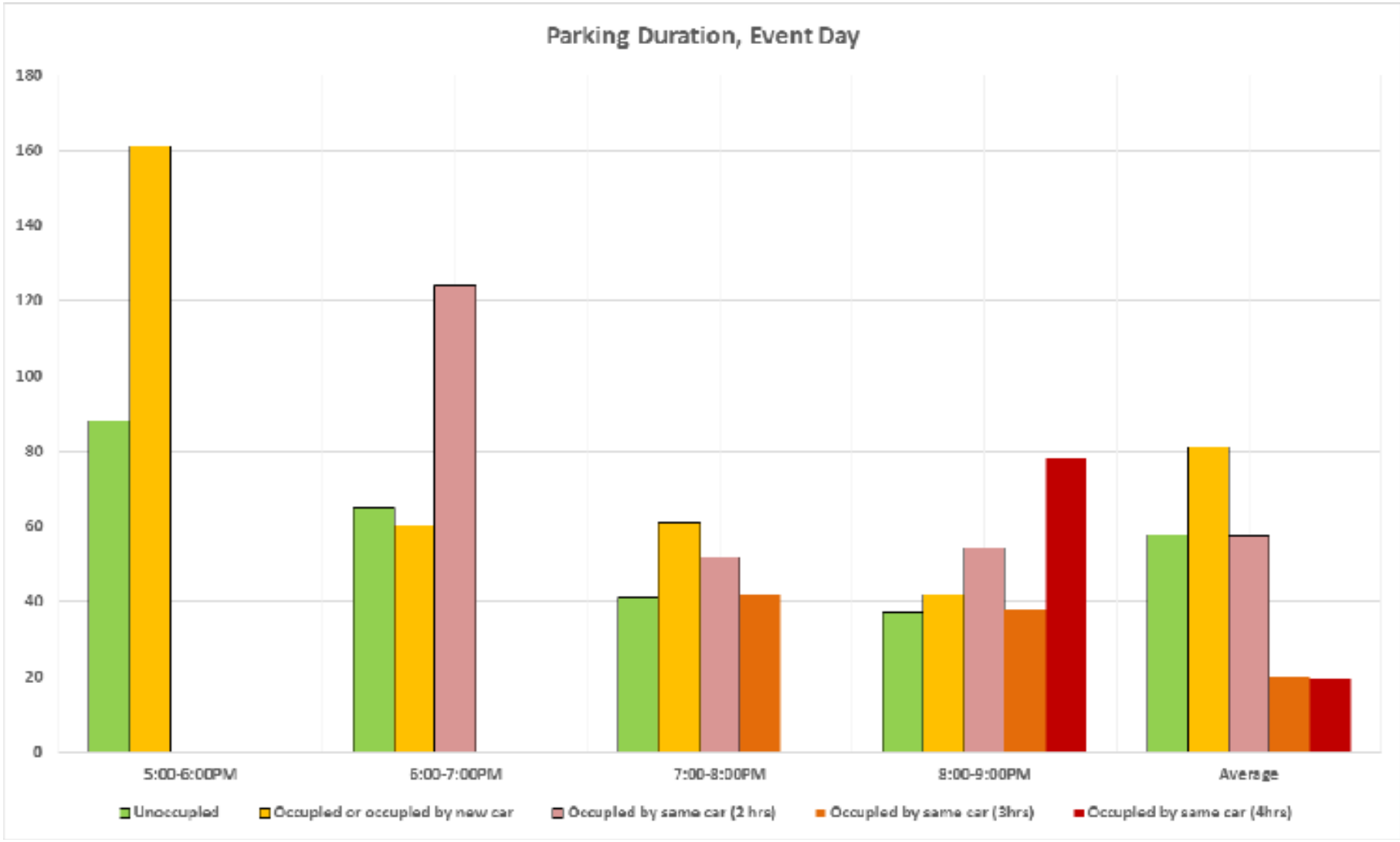
M
N
O
P
Q
R
S
0 200 400 600 800 1000 ft
N

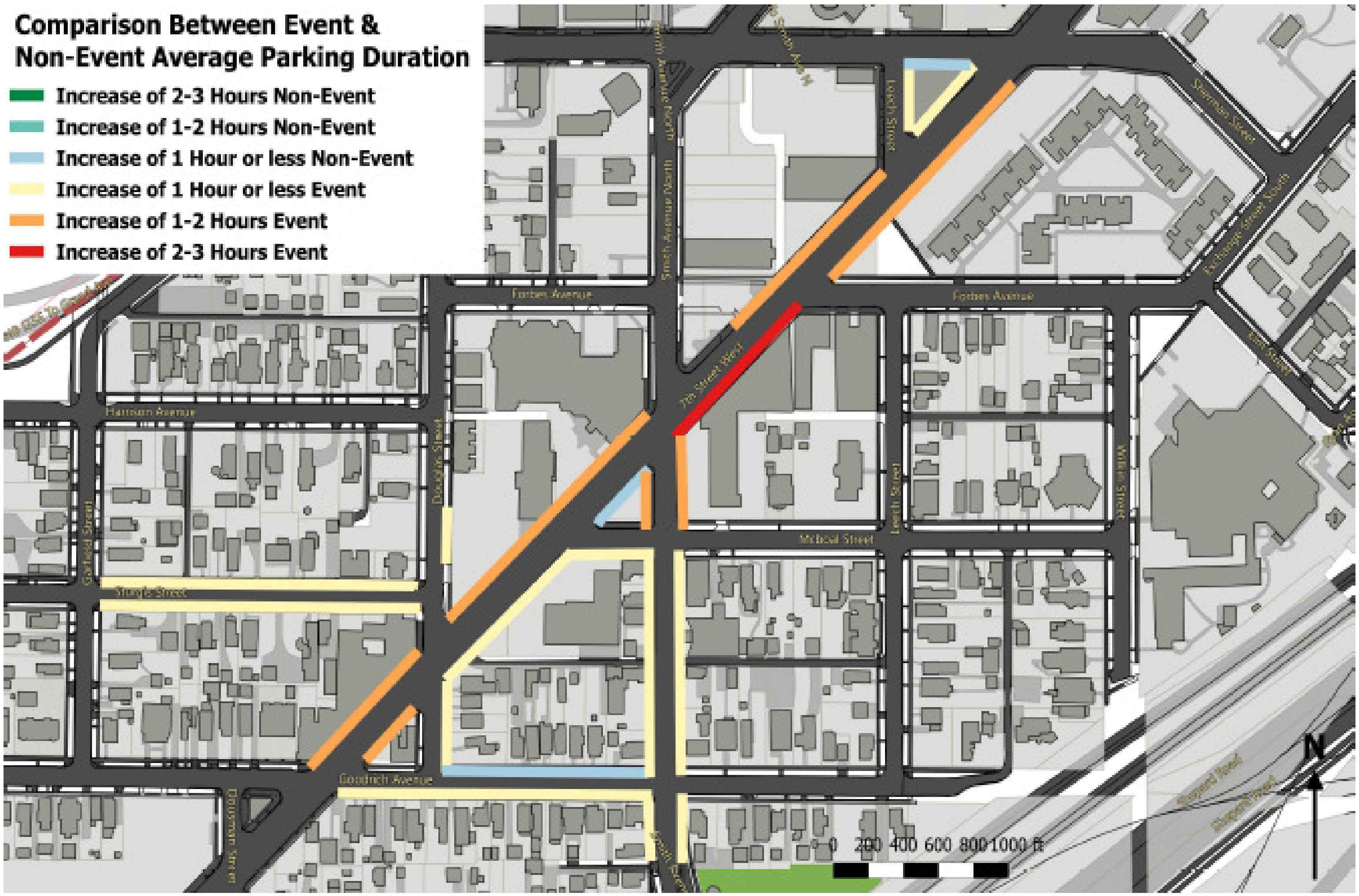
Non-Event Day Average Parking Duration


Parking Duration, Non-Event Day
160
140
120
100
80
60
40
20
0
5:00-6:00PM
6:00-7:00PM
7:00-8:00PM
8:00-9:00PM
Average
Unoccupied
Occupied or occupied by new car
Occupied by same car (2 hrs)
Occupied by same car (3hrs)
Occupied by same car (4hrs)

Event Day Average Parking Duration



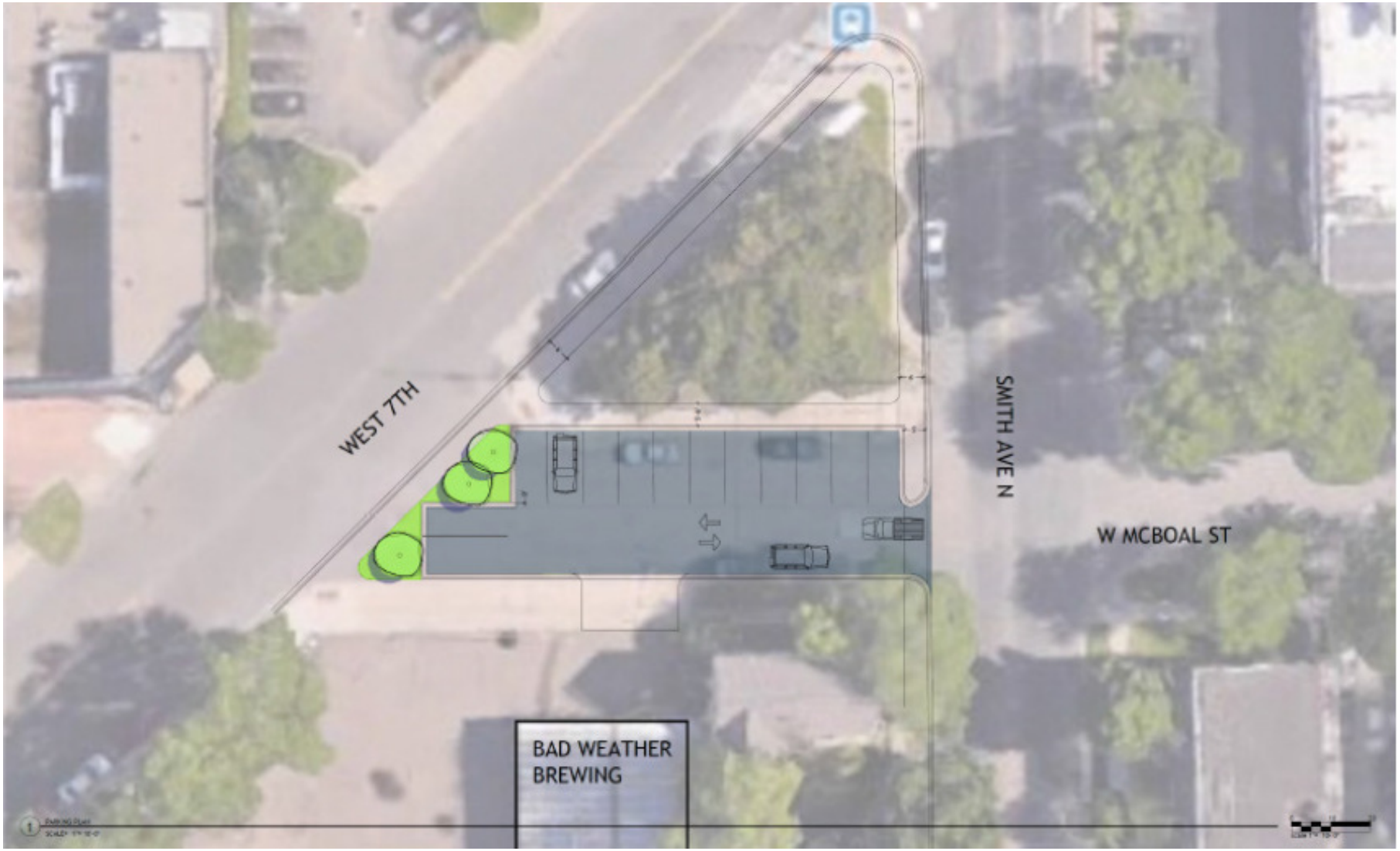

Parking Duration, Event Day
180
160
140
120
100
80
60
40
20
0
5:00-6:00PM
6:00-7:00PM
7:00-8:00PM
8:00-9:00PM
Average
Unoccupied
Occupied or occupied by new car
Occupied by same car (2 hrs)
Occupied by same car (3hrs)
Occupied by same car (4hrs)



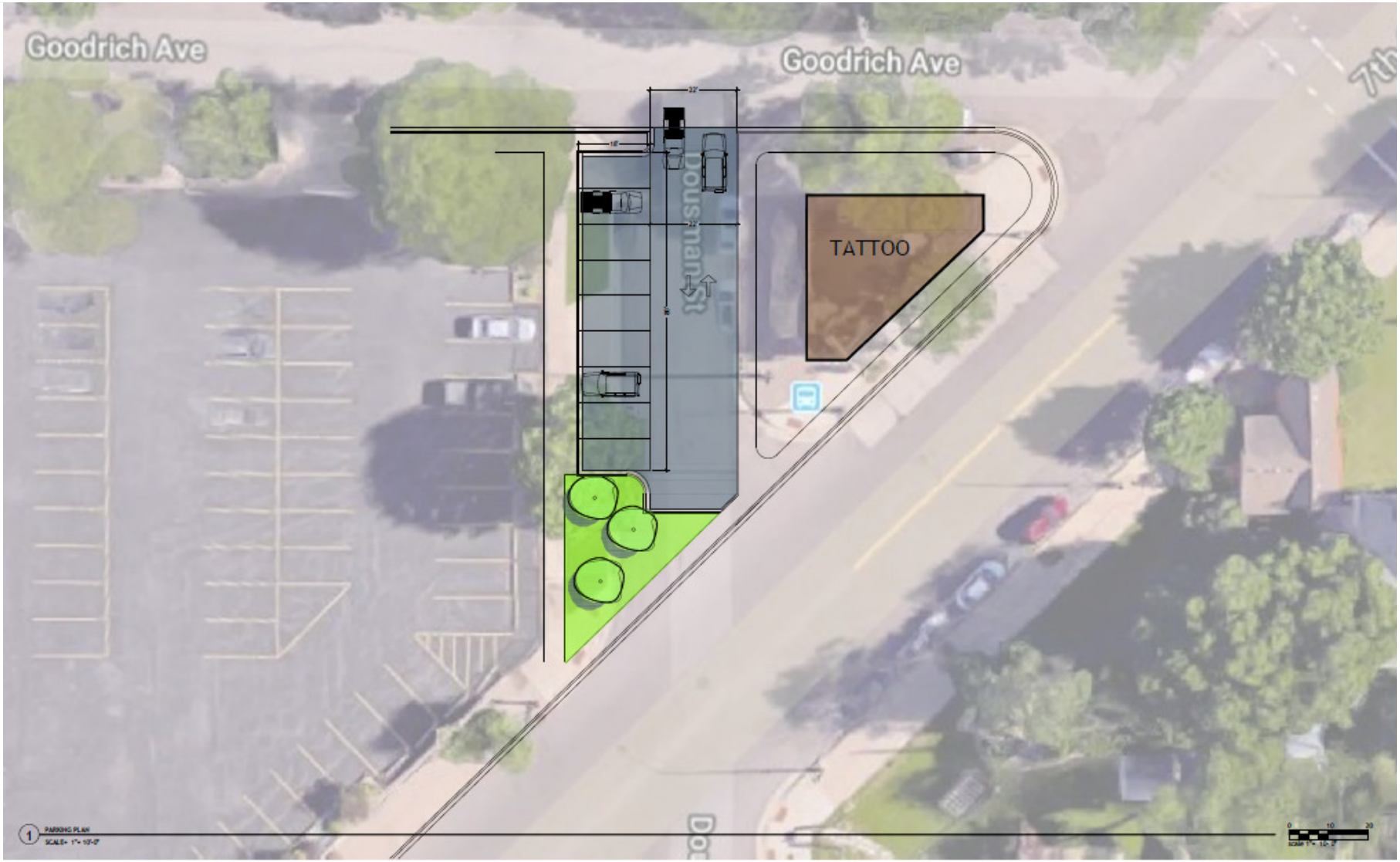
Comparison Between Event &
Non-Event Average Parking Duration
Increase of 2-3 Hours Non-Event
Increase of 1-2 Hours Non-Event
Increase of 1 Hour or less Non-Event
Increase of 1 Hour or less Event
Increase of 1-2 Hours Event
Increase of 2-3 Hours Event
Forbes Avenue
Forbes Avenue
7th Street West
Harrison Avenue
Sturgis Street
Goodrich Avenue
Douglas Street
Garfield Street
Leech Street
Smith Avenue North
Exchange Street South
0 200 400 600 800 1000 ft
N

Conceptual Treatments for West 7th Street Parking Triangles

Eight Locations in the Study Area where Conceptual Treatments could Possibly be Implemented



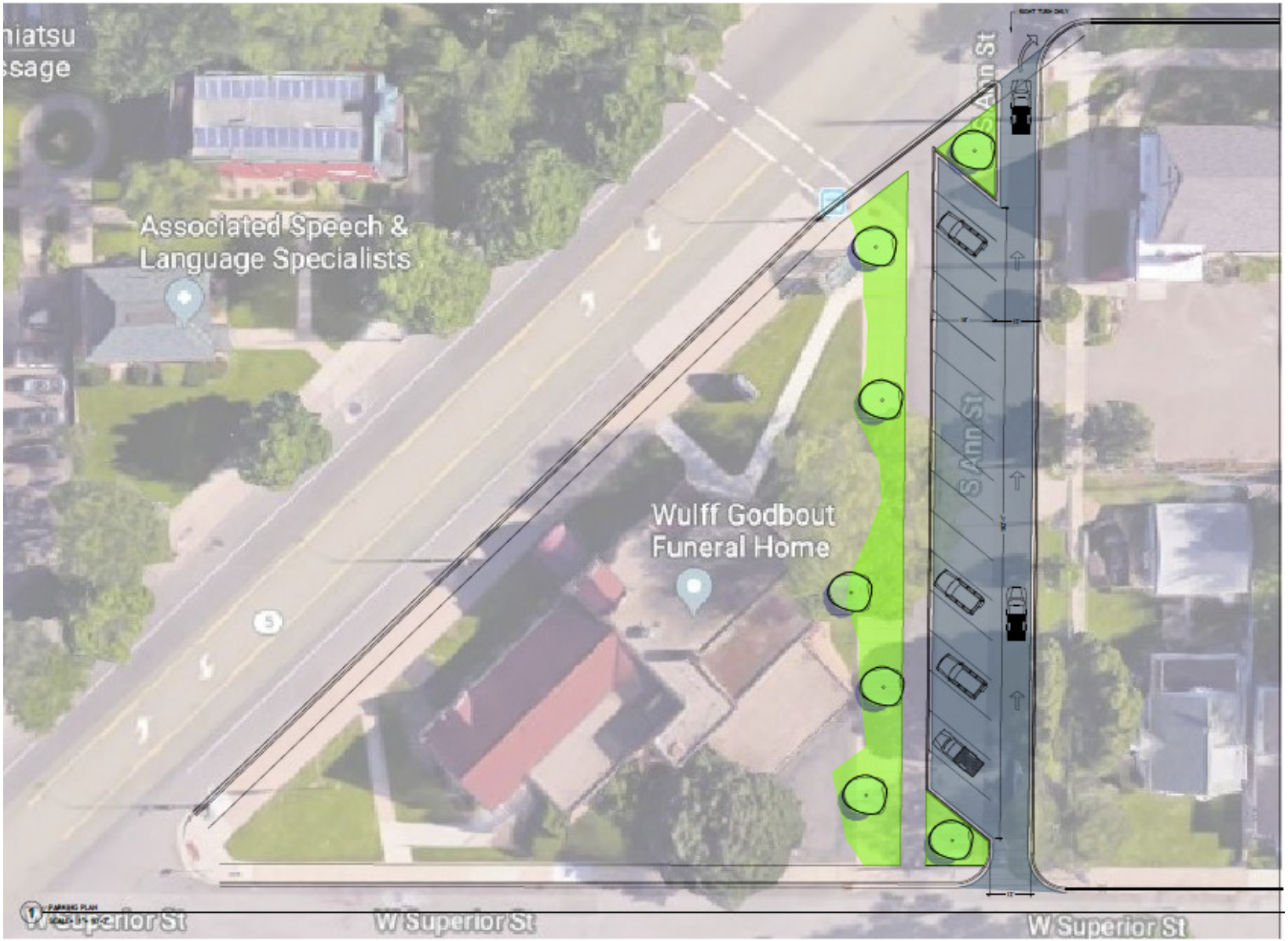
Bad Weather Brewing Concept
Smith Avenue/West 7th Street
Net gain of six stalls



Goodrich Avenue/Dousman/West 7th Street
Option A: Hammerhead Turn Around with Two-Way Drive Aisle
Net gain of nine stalls

Goodrich Avenue/Dousman/West 7th Street
Option B: Right-Turn Only with One-Way Drive Aisle
Net gain of seven stalls

Western/Superior/West 7th Street
Net gain of three stalls



South Ann Street/Superior Street/West 7th Street
Net gain of four stalls

Comments from the Community Meeting Participants on the Big Ideas and Conceptual Strategies

Concept	Group 1	Group 2	Group 3	Group 4	Group 5
1-1	*Good Idea – Pie in the Sky. How to incentivize private owners for Public Benefit? Still skewed towards the bigger players?*	*Use the ramps that exist. Do not ignore these resources. Over 1000 stalls in the hospital ramps.*	*Yes!*	*Close-in, good option- rserve space for hospital visitors, staff, specific floors etc.*	*Great Idea- suggest better directions/signage. Tax break for revenue?*
2-1	*Awesome & easy*	*Convert unused curb cuts to parking.*	*Yes!*	*Great! Put up signs asking people to pull up- taking 2 spaces wastes a space.*	*No Brainer!*
2-2	*Good Idea! Would this also increase safety? If so, good.*	*How many spaces are made available by using this strategy? Mark parking spaces to maximize the number of stalls that can fit in the available space.*	*Yes!*	*Explore*	*Good, but consider adjacent owners. Good safety issue.*
3-1	*Getting rid of sign litter is good!*		*Yes!*	*Good consistency*	*Makes sense.*
3-2	*Good idea – how do you prevent extended parking? App easily allows you to plug meter remotely. Meters are Ugly! Not in Residential Areas.*	*No objections. Meter parking the length of the route with variable rates depending upon demand for use. Expand the use of meters and standardize permitting. Some do not want meters in residential areas.*	*Yes, meters down to St. Clair*	*More discussion*	*Proposed metering should stop at Smith Ave. Bad for Coffee Shops & Yoga Studios.*

Concept	Group 1	Group 2	Group 3	Group 4	Group 5
4-1,4-2	*(Business Perspective) If 2 hours is expanded to permit areas, then the one block with 2-hour won't be squeezed. This shares the parking burden with everyone, not just the one block.*	*Standardize Permit Parking City-Wide. However, recognize that areas are different. Yes to improved signage.*	*Yes!*	*Yes to improved signeage. Expand area-consider 2hr + Permit parking*	*Yes!*
4-3	*On the right track, better than all or nothing.*	*Mixed Reviews.*	*Area 7 Residents need to share their opinions.*	*Larger &lower signs- but think all day – 8-8 – too many are not 8-5 workers. 2 hour or permit parking. Have both meter and permit parking.*	*This is key to balance the package of proposals. We can't expand Permit-only areas without allowing this accommodation to non-resident interests.*
4-4	*Yes.*		*Yes!*	*Great Idea!*	*No Comment.*

Concept	Group 1	Group 2	Group 3	Group 4	Group 5
4-5	*Public access to the park is not an issue. The framing is completely different than the rest of the study. Parking on Walnut between Exchange and Irvine Park is ok & Supported by neighbors. We reamin concerned about downtown and event parking and abuses. Also the only national, state, and local history involved in this discussion!*	*The public park should be accessible to all.*	*Open up Walnut from West 7th to the park for metered parking & visitors. No! This is the green historic place. Keep the permit, one-sided parking around the square, expand public parking around the square. Saftey Issue-large emergency vehicles need to turn corners on the half block. Don't try to solve parking issue son the backs for residents. Use parking lots, ramps, commercial districts for parking.*	*Good idea.*	*Open it up, Free the Park!*
5-1	*Yes Yes Yes*			*Newer technology- agree. Please – Not complaint only enforcement.*	*Yes!*
6-1	*Great idea, will it happen?*	*Do not invest in major parking infrastructure. New developments must provide parking. Developments become unaffordable when parking costs are mandated.*	*Yes, definitely. Use parking lots & ramps designed for parking.*	*Worth Pursuing*	*Yes!*
6-2	*Yes!*		*Yes!*	*Agree.*	*Yes!*
7-1	*Thumbs up!*		*Yes, if needed.*	*Agree.*	*?*