

# Transportation Planning Services Downtown Grand Forks Parking Study

Final Report

September, 2011



*Submitted to:*

The Grand Forks - East Grand Forks  
Metropolitan Planning Organization

*by:*

**Rich & Associates, Inc.**  
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# Introduction

## Overview

The Grand Forks–East Grand Forks Metropolitan Planning Origination (MPO) contracted with Rich and Associates to conduct a parking study in the Historic Grand Forks downtown area and the surrounding blocks. Rich and Associates prepared an inventory and review of the existing parking, how the parking is currently being used and collected information on the potential future changes to the downtown area. A number of issues were examined including bicycle parking, parking enforcement, current parking demand, development scenarios and future parking needs.

This study began with data collection, several stakeholder interviews and surveys. Data collected as background material was analyzed using methods that involve statistical analysis and survey feedback from user groups. The study drew on standards developed by the Institute of Transportation Engineers (ITE) and the Urban Land Institute (ULI), which were modified using the survey results from Grand Forks in order to suit the unique circumstances present in the study area. Additionally, Rich and Associates used information from our data base of similar communities throughout the country.

## Definitions

The following are definitions used for the analysis:

- **Parking Supply** – The number of parking spaces available for use by a specified group or groups of individuals (i.e. shoppers, employees, etc.).
- **Turnover** - Turnover is the number of vehicles that occupied a parking space in a particular period. For example, if a parking lot has 100 spaces and during the course of the day, 250 different vehicles occupied the lot, then the turnover is two and a half times (2.5).
- **Occupancy** - The number of vehicles observed in a specific lot or block face represented as a percentage of spaces occupied.
- **Occupancy Rate** – The percentage of all parking spaces with vehicles parked in them at a given time.
- **Circuit** - A circuit refers to the two-hour period between observances of any one particular parking space. For the turnover and occupancy study, a defined route was developed for each survey vehicle. One circuit of the route took approximately two hours to complete and each space was observed once during that circuit.
- **Block Face** - A number was assigned to each block within the study area. Each block is then referenced by its block number and by a letter (A, B, C or D). The letter refers to the cardinal face of the block; with (A) being the north face, (B) the east face, (C) the south face and (D) the west face. Therefore, a block designated as 1A would refer to the north face of block 1.
- **Modal Split** – Fractional split identifying what percentage of people travel by a certain transportation type (i.e. automobile, mass or public transit, walking, train, etc.).
- **Parking Demand** – The number of parking spaces generated by a single-purpose building, multi-purpose building, group of buildings or outdoor amenity.

- **Parking Need** – Represents the number of parkers who need to be accommodated in a given block after the use of alternative parking facilities is considered. Use is affected by price, location, accessibility and user restriction.
- **Parking Surplus** – The number of parking spaces within the study area boundaries that surpass the parking demand.
- **Parking Deficit** – The number of insufficient parking spaces within the study area based on the parking demand.

## Study Area

The study area, as determined by the MPO is illustrated in **Map 1**, located on **page 3**. The study area consists of roughly 27 blocks and included the two different parking assessment boundaries and surrounding blocks. Areas outside of the study boundaries were examined for parking supply opportunities and potential impacts on parking.





# DOWNTOWN GRAND FORKS PARKING STUDY

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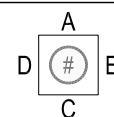


**BLOCK  
NUMBER**

## LEGEND:

— STUDY AREA

## BLOCK FACE KEY PLAN:



Sheet Title:

**STUDY  
AREA**

MAP Number:

**MAP 1**



# Data Collection & Results

## Overview Parking Supply

Field work for this study entailed a review of the land uses and parking within the study area. **Table A** summarizes the existing parking supply in the study area. There are approximately 4,086 parking spaces in the study area. Of these spaces, approximately 1,017 are on-street and 1,600 are off-street public spaces. There are approximately 1,461 private off-street spaces.

**Table B** on **page 5** is a detailed parking supply inventory listing types and time durations of parking by block and is followed by **Map 2** on **page 6**, which is a spatial view of the parking supply. In cases where parking spaces were not marked, the number of parking spaces was estimated. This occurred for both on and off-street parking.

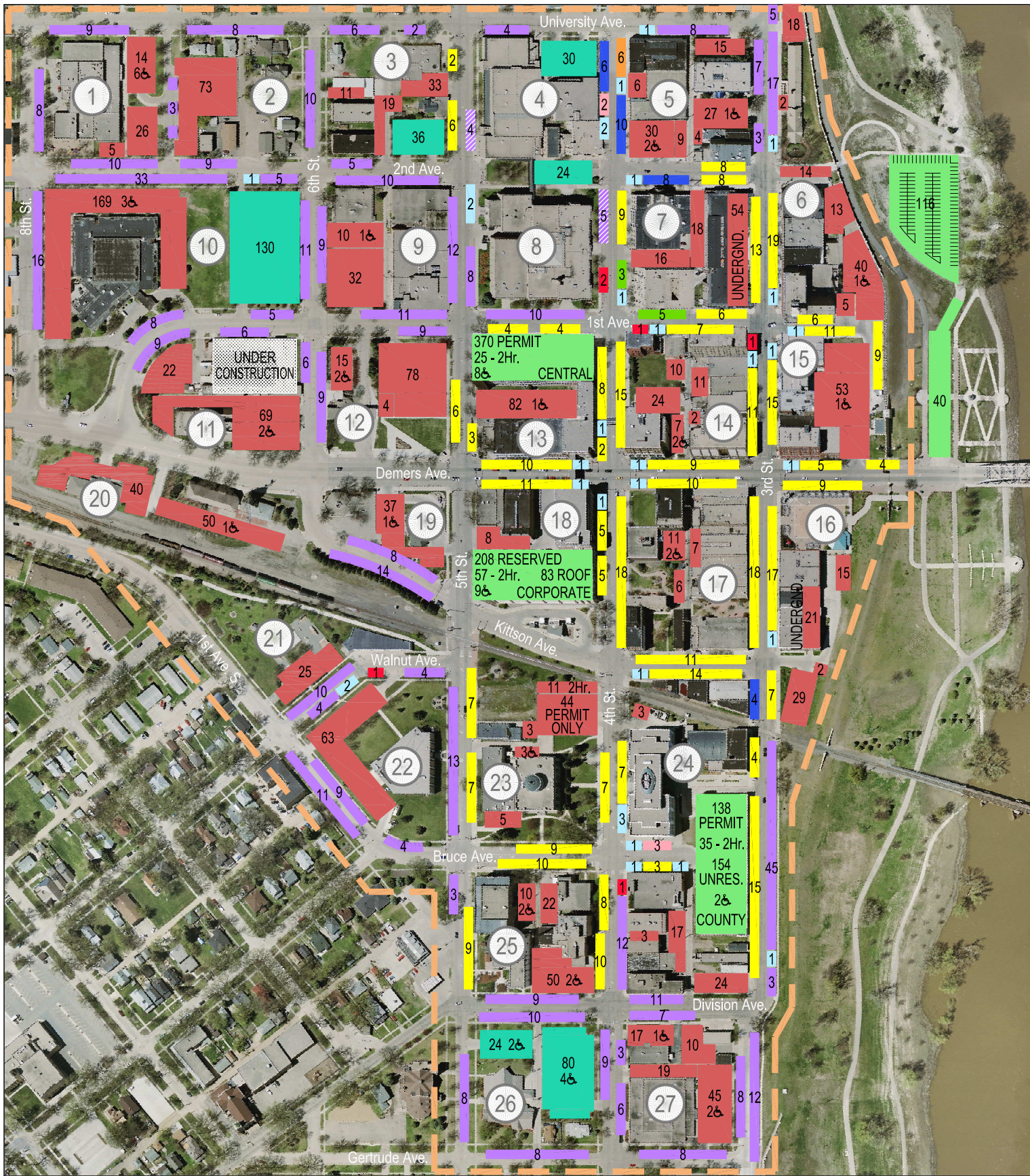
The City of Grand Forks manages and controls almost 65 percent of the parking in the study area. Based on Rich and Associates' experience and best practices, we have found that to successfully manage municipal parking in small to medium downtowns, it is especially important for the municipality to have control of at least 50 percent of the parking supply. This allows the municipality to effectively manage the parking in terms of allocation, shared use, reaction to changing demand, market pricing, and allows the parking to be enforced with greater efficiency. Grand Forks meets this benchmark, though much of the off street parking which is located in the parking ramps is reserved for a specific individual which does not allow shared use parking to occur.

**Table A**  
**Parking Supply Summary**

On-Street Parking Totals	1,017 (25%)
Public Off-Street Parking Totals	<u>1,600</u> (39%)
Public Parking Totals	2,617 (64%)
Private Parking Totals	<u>1,461</u> (36%)
<b>Total Parking in Study Area</b>	<b>4,086</b>

Table B																												
Parking Supply																												
Block >	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	
On-Street																												
15 Minute				2																				3				5
30 Minute				6	10		8																	4				28
1 Hour					6																							6
2 Hour			8		8	25	36	18				6	31	42	35	26	57	21					30	50	37	34		464
No Time Restrictions	27	30	13	4	18	22			38	73	15	18							22		10	45		71	12		44	462
Parking after 4pm				9				5																				14
Loading Zone								2					2									1		1				6
Barrier Free				2	2	2	2	2		1			2	3	3		1	2				2		8				32
Law Enforcement							8																					8
																												1,025
Off-Street																												
Public																												
2 Hour						9									9													18
Visitor/Unrestricted				4																								4
Parking Garage													403					357						336				1,096
Permit			36	49						130																104		319
Reserved				1																								1
Barrier Free																									6			6
																												1,444
Private																												
Private/Reserved	45	73	63		91	92	88		42		51	97	82	54	53	67	24	8	37	90	25	63	63	47	82		91	1,428
Barrier Free	6				3	1			1		2	2	1	2	1		2		1	1			3		4		3	33
																												1,461
Totals	78	103	120	77	138	151	142	27	81	204	68	123	519	103	101	93	84	388	60	91	35	111	96	520	135	144	138	3,930
*The 156 spaces in the Greenway have been removed from available public parking for this study																												
Source: Rich and Associates Spring 2011																												





<h2 style="text-align: center;">DOWNTOWN GRAND FORKS PARKING STUDY</h2> <p style="text-align: center;">GRAND FORKS, NORTH DAKOTA</p>	 <p><b>Parking Consultants Architects - Engineers Planners</b></p> <p>21677 Northwestern Hwy., Suite 208 Southfield, Michigan 48034 Tel: 248.353.5880 Fax: 248.353.3890 Lutz, Florida Tel: 813.945.9860 www.RichAssoc.com</p>	<p><b>LEGEND:</b></p> <table border="0"> <tr> <td>STUDY AREA</td> <td>BARRIER FREE</td> <td>CITY PERMIT</td> </tr> <tr> <td>ON STREET PARKING</td> <td>LOADING ZONE</td> <td>BARRIER FREE</td> </tr> <tr> <td>NO TIME LIMIT</td> <td>LAW ENFORCEMENT</td> <td></td> </tr> <tr> <td>2 HR. PUBLIC</td> <td>PK. AFTER 4pm</td> <td></td> </tr> <tr> <td>1 HR. PUBLIC</td> <td>OFF STREET PARKING</td> <td></td> </tr> <tr> <td>30 MIN. PUBLIC</td> <td>PUBLIC</td> <td></td> </tr> <tr> <td>15 MIN. PUBLIC</td> <td>PRIVATE</td> <td></td> </tr> </table>	STUDY AREA	BARRIER FREE	CITY PERMIT	ON STREET PARKING	LOADING ZONE	BARRIER FREE	NO TIME LIMIT	LAW ENFORCEMENT		2 HR. PUBLIC	PK. AFTER 4pm		1 HR. PUBLIC	OFF STREET PARKING		30 MIN. PUBLIC	PUBLIC		15 MIN. PUBLIC	PRIVATE		<p>Sheet Title:</p> <h2 style="text-align: center;">PARKING SUPPLY</h2> <p>MAP Number:</p> <h2 style="text-align: center;">MAP 2</h2> <p style="text-align: right;">Pg. 6</p>
			STUDY AREA	BARRIER FREE	CITY PERMIT																			
ON STREET PARKING	LOADING ZONE	BARRIER FREE																						
NO TIME LIMIT	LAW ENFORCEMENT																							
2 HR. PUBLIC	PK. AFTER 4pm																							
1 HR. PUBLIC	OFF STREET PARKING																							
30 MIN. PUBLIC	PUBLIC																							
15 MIN. PUBLIC	PRIVATE																							
 <p>05-13-11</p> <p style="text-align: center;"># BLOCK NUMBER</p>																								



## Turnover and Occupancy Study

A turnover and occupancy study of the public and private parking supply within the study area was completed Thursday, March 31, 2011 from 8:00 A.M. to 9:00 P.M. The turnover and occupancy study was an observation of on-street and off-street parking that included both the public and private off-street parking within the study area. Circuits were completed every two hours and each circuit was approximately two hours in length.

The number of parking spaces occupied was observed during each two-hour circuit for off-street parking and the on-street parking that had no time restrictions. Where there were short term on-street spaces (two hours or less), license plate numbers were recorded. Additionally, it was recorded if a vehicle received a ticket and when a vehicle was noted moving from one space to another (presumably to avoid a ticket for staying in one space over the posted time limit).

The study determined the turnover and identified how long specific vehicles remained parked in the same time restricted parking space. The turnover information also yields occupancy results for the parking area and therefore for each circuit a composite occupancy can be derived. Turnover is an indicator of how often a parking stall is being used by different vehicles throughout the course of the day.

Occupancy is an important aspect of parking because it helps us to understand the dynamic of how parking demand fluctuates throughout the day. Likewise, the occupancy can be used to illustrate how parking demand is impacted by events in the study area. Overall, the occupancy data is used by Rich and Associates to calibrate the parking demand model. The results for the occupancy counts are broken down into categories of on-street vs. off-street and public vs. private parking.

### Occupancy

A summary of the occupancy results can be found in **Table C**. The full occupancy results are found in **Appendix A**, and the Peak Occupancy is spatially represented on **Map 3** and **page 9**. The night time occupancy results are spatially represented on **Map 3.1** on **page 10**. The three graphs on **page 11** and **12** illustrate the observed occupancy throughout the day with the parking separated by on-street, off-street, public and private.

The observed occupancy and key points are:

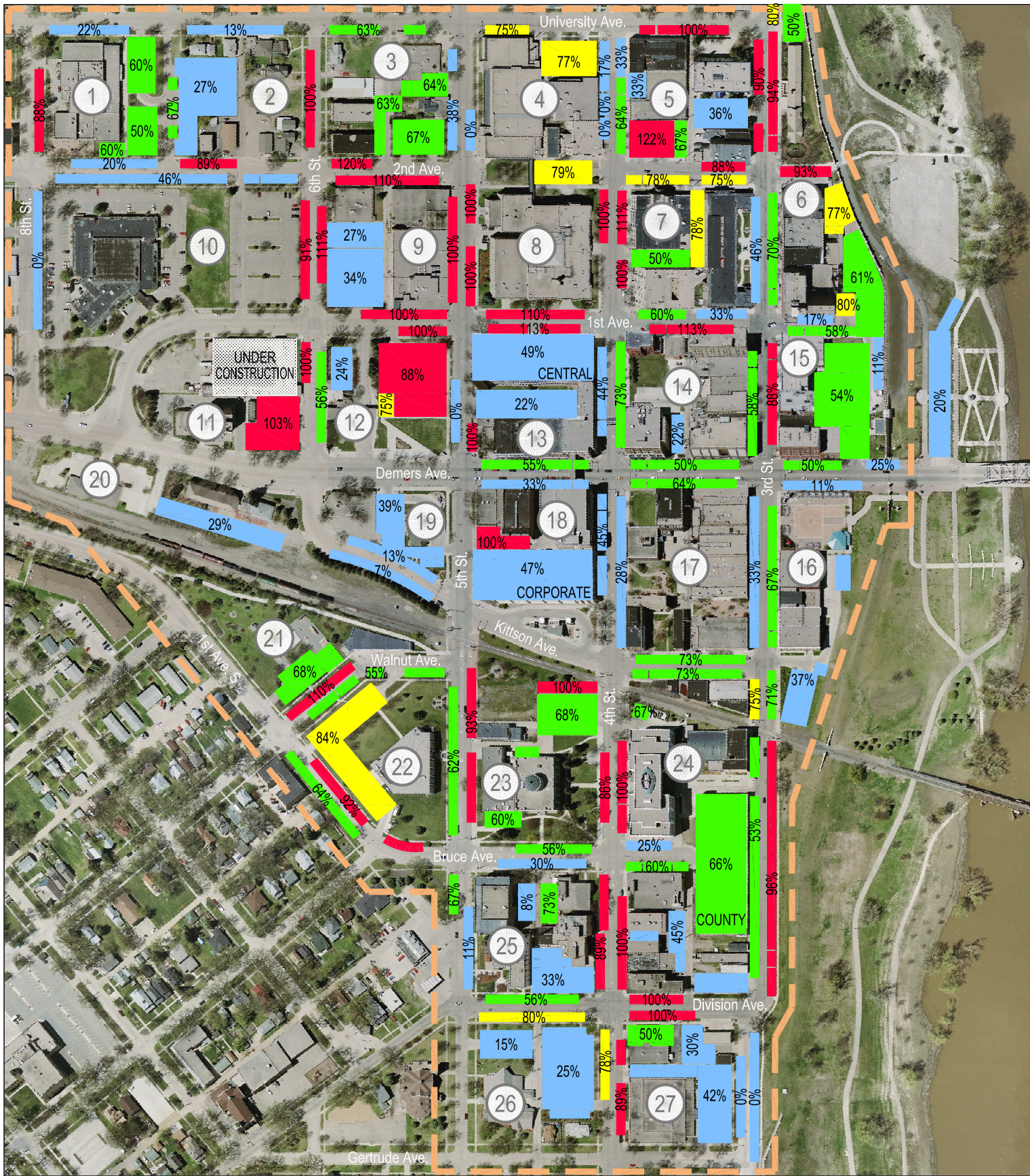
- There were 39 vehicles that had parked overnight on-street during our first circuit at 8:00 A.M. and 15 of those vehicles were still in the same space on the second circuit starting at 10:00 A.M. Based on the observations, we believe that these are residents that have parked on-street overnight.
- During the daytime, the peak occupancy for on and off-street parking occurred from 10:00 A.M. to noon (56 percent occupancy). A typical occupancy peak occurs from 12:00 P.M. to 2:00 P.M. ( 53 percent occupancy)
- After 4:00 P.M. the peak occupancy for on and off-street parking was 42 percent.
- There were several on-street block faces that were between 85 and 100 percent occupied. This pattern was slightly different from the daytime to nighttime. For the daytime, two hour on-street block faces with 85 to 100 percent occupancy included blocks 5, 8 9, 23 and 24. In


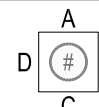
- the evening the blocks with 85 percent occupancy and higher were centered on blocks 6,7,14 and 17.
- o A point to consider regarding the parking supply and demand for parking is that motorists in general perceive off-street and on-street spaces with occupancies greater than 85 percent to be at capacity, depending on the overall capacity of the parking area. The greater the capacity, the less this perception is valid. When 85 percent occupancy occurs, motorists will begin to re-circulate to seek other parking, adding to downtown traffic congestion and the driver's perception that there is no parking available in the downtown.
  - o Because a large number of the parking spaces in the Central, Corporate and County parking ramps are reserved for specific permit parkers, these spaces are technically unavailable in the evenings and weekends. This eliminates the shared use concept where for example spaces that are used as employee spaces during the day can be used by residents or customers in the evening and at night. The lack of shared use exaggerates the perception that there is insufficient parking in the downtown.

**Table C**  
**Occupancy, Thursday, March 31, 2011**

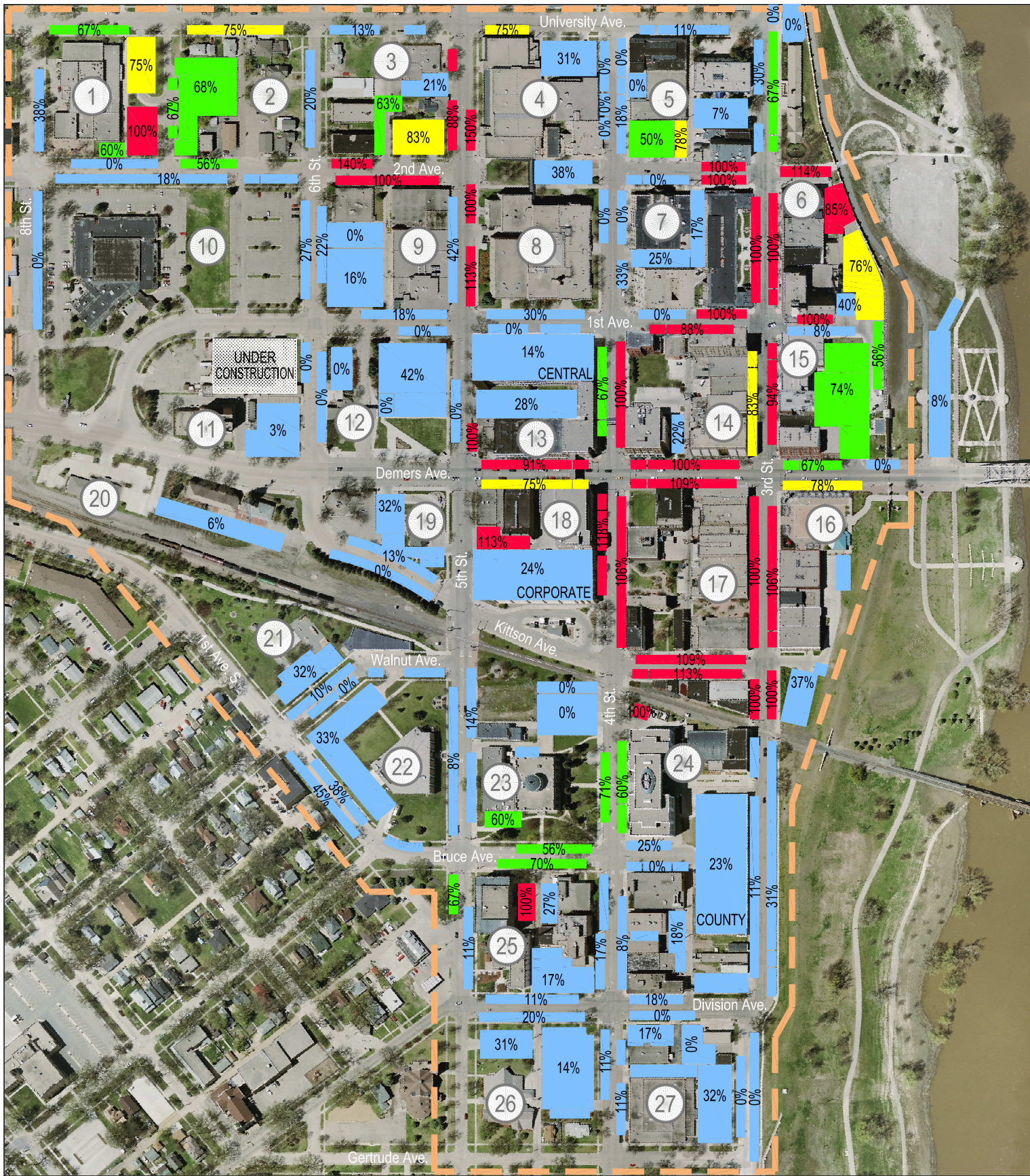
	# of Spaces observed	8:00am - 10:00am	% Occ.	10:00am - 12:00pm	% Occ.	12:00pm - 2:00pm	% Occ.	2:00pm - 4:00pm	% Occ.	4:00pm - 6:00pm	% Occ.	7:00pm - 9:00pm	% Occ.
Public On-Street Totals	969	598	62%	636	66%	609	63%	599	62%	554	57%	458	47%
Public Off-Street Totals	1345	686	51%	686	51%	608	45%	635	47%	398	30%	291	22%
<b>Public Combined Totals</b>	<b>2314</b>	<b>1284</b>	<b>55%</b>	<b>1322</b>	<b>57%</b>	<b>1217</b>	<b>53%</b>	<b>1234</b>	<b>53%</b>	<b>952</b>	<b>41%</b>	<b>749</b>	<b>32%</b>
Private Off-Street Totals	1226	646	53%	667	54%	656	54%	649	53%	524	43%	445	36%
<b>Overall Totals</b>	<b>3540</b>	<b>1930</b>	<b>55%</b>	<b>1989</b>	<b>56%</b>	<b>1873</b>	<b>53%</b>	<b>1883</b>	<b>53%</b>	<b>1476</b>	<b>42%</b>	<b>1194</b>	<b>34%</b>





<h2 style="text-align: center;">DOWNTOWN GRAND FORKS PARKING STUDY</h2> <p style="text-align: center;">GRAND FORKS, NORTH DAKOTA</p>	 <p><b>Parking Consultants Architects - Engineers Planners</b></p> <p>21677 Northwestern Hwy., Suite 208 Southfield, Michigan 48033 Tel: 248.353.5680 Fax: 248.353.3890 Lutz, Florida Tel: 813.945.9860 www.RichAssoc.com</p>	<p><b>LEGEND:</b></p> <p>— STUDY AREA</p> <p><b>PARKING</b></p> <ul style="list-style-type: none"> <li><span style="display: inline-block; width: 15px; height: 10px; background-color: red; border: 1px solid black;"></span> 85% through 100%</li> <li><span style="display: inline-block; width: 15px; height: 10px; background-color: yellow; border: 1px solid black;"></span> 75% through 84%</li> <li><span style="display: inline-block; width: 15px; height: 10px; background-color: green; border: 1px solid black;"></span> 50% through 74%</li> <li><span style="display: inline-block; width: 15px; height: 10px; background-color: blue; border: 1px solid black;"></span> 0 through 49%</li> </ul>	<p><b>BLOCK FACE KEY PLAN:</b></p> 	<p>Sheet Title:</p> <h2 style="text-align: center;">PEAK OCCUPANCY</h2> <p style="text-align: center;">March 31, 2011 10:00am - 12:00pm</p> <p>MAP Number:</p> <h2 style="text-align: center;">MAP 3</h2> <p style="text-align: right;">Pg. 9</p>
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# DOWNTOWN GRAND FORKS PARKING STUDY

GRAND FORKS, NORTH DAKOTA



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& ASSOCIATES**

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05-13-11



**BLOCK  
NUMBER**

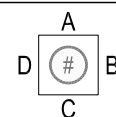
## LEGEND:

STUDY AREA

## PARKING

- 85% through 100%
- 75% through 84%
- 50% through 74%
- 0 through 49%

## BLOCK FACE KEY PLAN:



Sheet Title:

**EVENING  
OCCUPANCY**

March 31, 2011  
7:00pm - 9:00pm

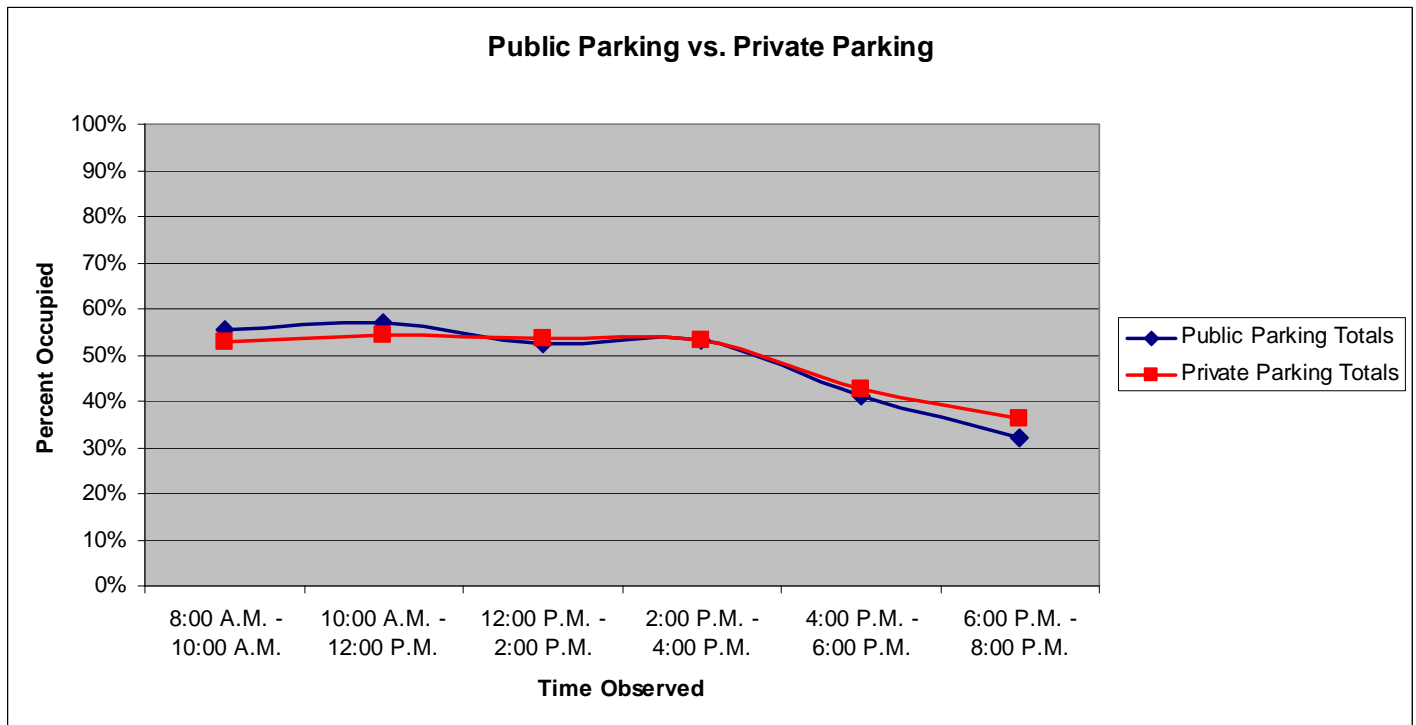
MAP Number:

**MAP 3.1**

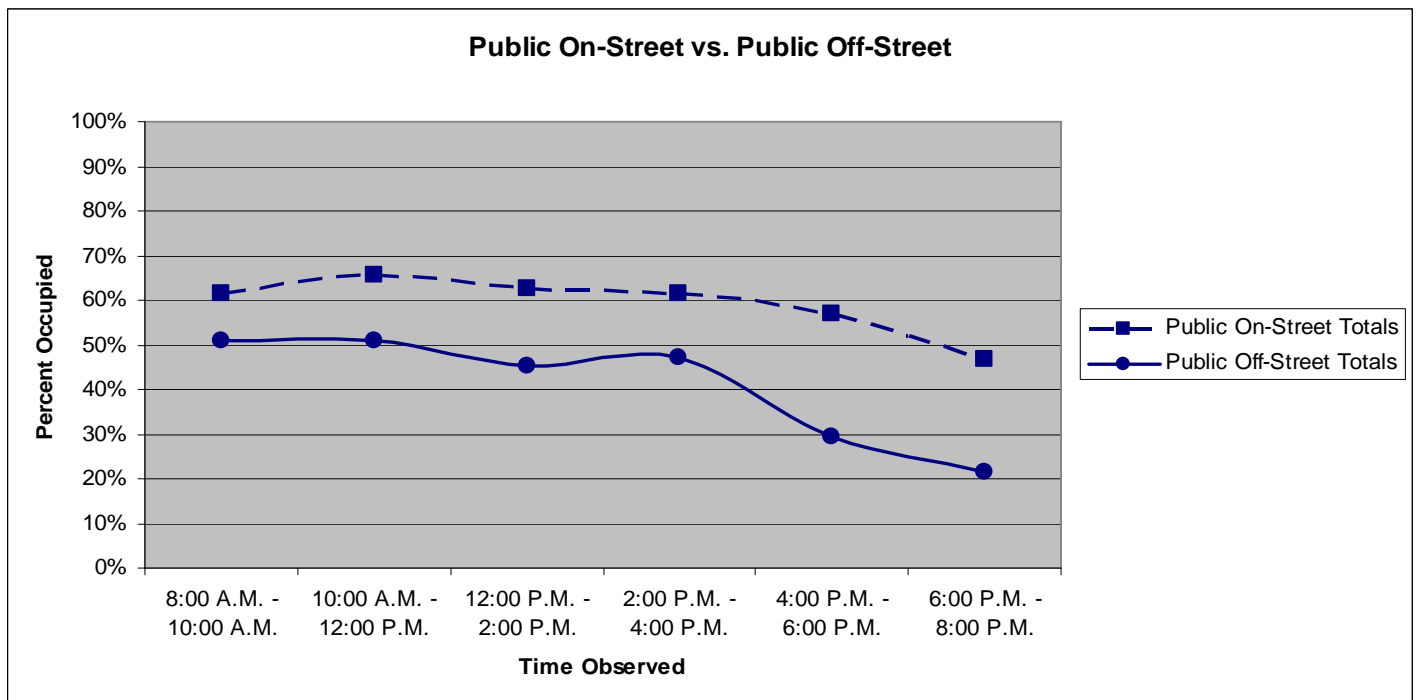
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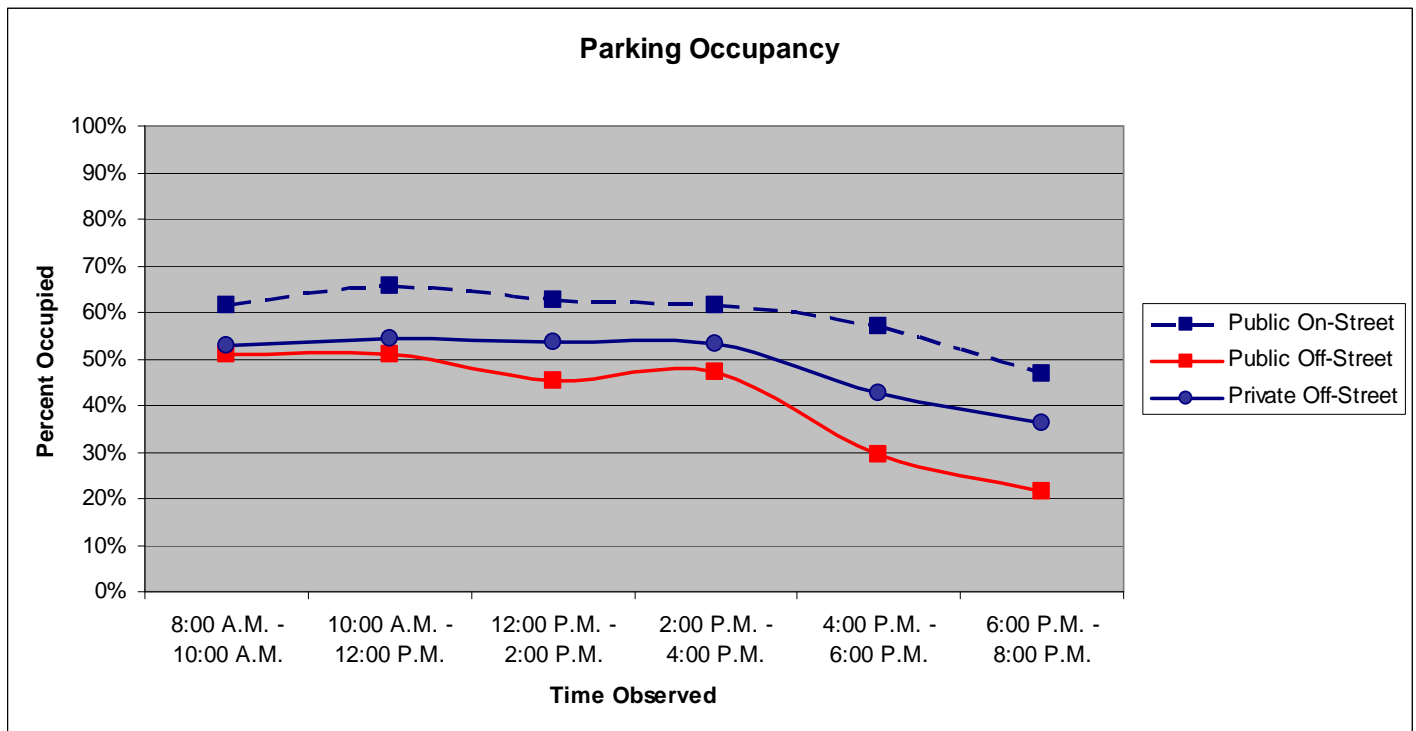
**Graph 1**



**Graph 2**



**Graph 3**



## Turnover

**Table D, Parking Turnover Summary** on the following page is a summary of the turnover findings for two hour on-street parking spaces. There were 1,419 vehicles observed parking in the two hour (and less) on-street parking spaces within the study area during the hours of 8:00 A.M. - 5:00 P.M. In the two hour spaces there were 1,176 (83 percent) vehicles observed remained less than two hours, 160 vehicles parked from two to four hours in the same parking space and 22 vehicles that remained in the same parking space for eight hours or more.

There were 243 (17 percent) vehicles during the turnover and occupancy analysis that stayed beyond the posted time limits. Vehicles that stayed beyond six hours (40 vehicles which is three percent of the observed vehicles) are most likely business owners or employees. The overall violation rate at two hour parking spaces was 17 percent. A best practice for an overtime violation rate is five to six percent. Clearly, the rate in Grand Forks is substantially higher. The recommendations included in this report offer strategies on how to encourage employees of the downtown to park in appropriate parking places.

While looking for parking tickets on vehicles, Rich and Associates noted only three vehicles parked at two hour spaces that received tickets. Additionally, it was observed that of the 40 vehicles parked at a two hour space over six hours, only one received a ticket. There were approximately five vehicles that appeared to move from one two hour space to another to avoid a ticket.

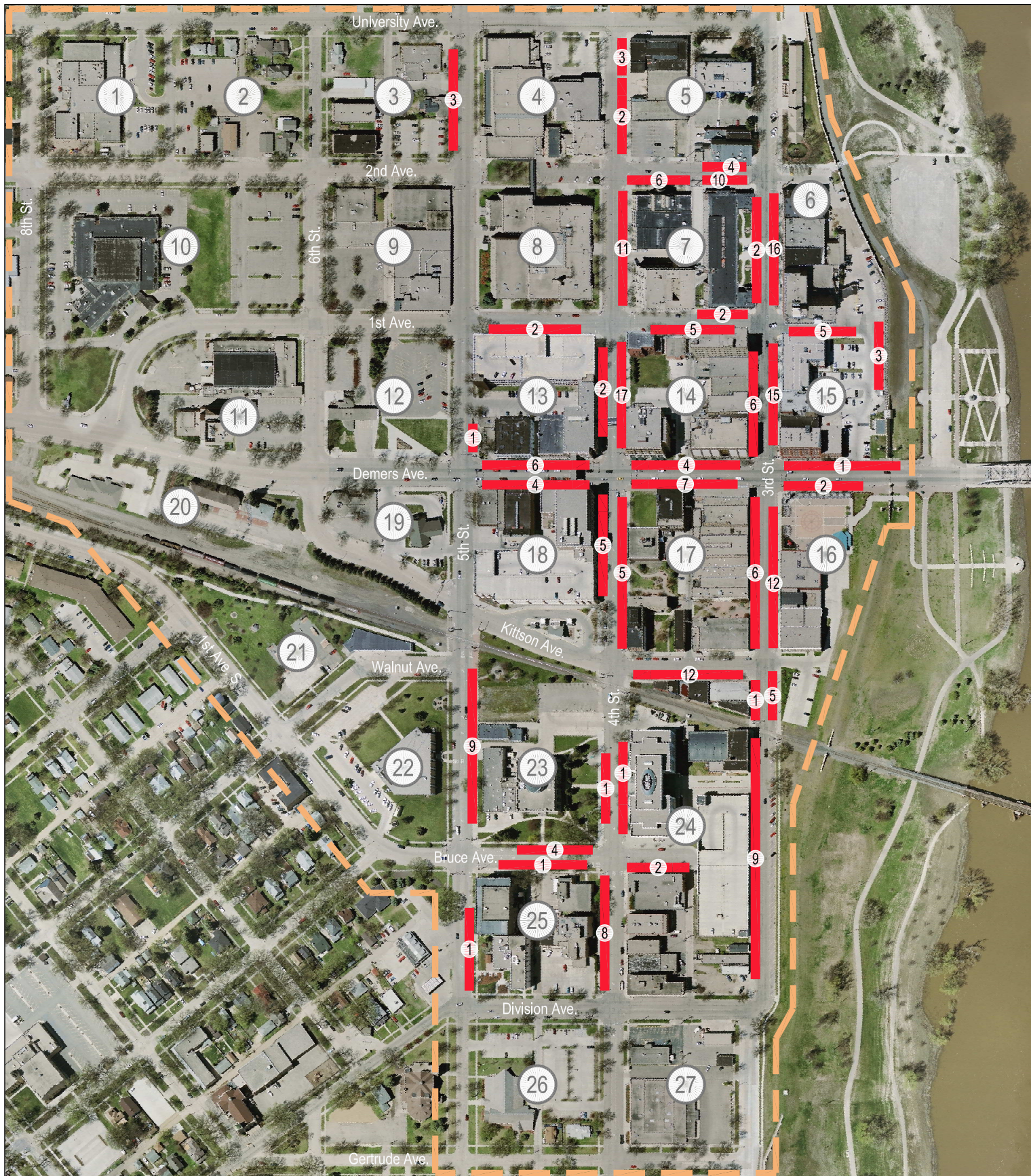
**Map 3.2** on **page 14** spatially displays where the violations occurred during the counts. As can be seen on the map, the greatest number of violations occurred on 3rd Street and around blocks 7, 14, 17, and 24.


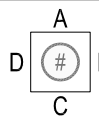

**Table D**  
**Parking Turnover Summary**

<b>Parking Turnover Summary (by type)</b>	<b>2 Hour or less Parking</b>
Vehicles that remained less than 2 hours	1,176 (83%)
Vehicles that remained between 2 and 4 hours	160 (11%)
Vehicles that remained between 4 and 6 hours	43 (3%)
Vehicles that remained between 6 and 8 hours	18 (1%)
Vehicles that remained between 8 and 10 hours	22 (2 %)
Total number of vehicles analyzed (8:00 A.M. - 5:00 P.M.) in 2 hour stalls	1,419
Total number of 2 hour stalls analyzed	490

*Source: Rich and Associates Field Observations, Thursday, March 31, 2011*





<h1> DOWNTOWN GRAND FORKS PARKING STUDY </h1> <p>GRAND FORKS, NORTH DAKOTA</p>	 <p><b>Parking Consultants Architects - Engineers Planners</b> 21st St. Northwest Hwy., Suite 208 Southfield, Michigan 48034 Tel: 248.353.5880 Fax: 248.353.3830 Lutz, Florida Tel: 813.945.9860 www.RichAssoc.com</p>	<p><b>LEGEND:</b></p> <p>— STUDY AREA</p> <p>ON STREET PARKING</p> <p>— PARKING VIOLATIONS</p> <p># NUMBER OF VIOLATIONS</p>	<p><b>BLOCK FACE KEY PLAN:</b></p> 	<p>Sheet Title:</p> <h1> TURNOVER VIOLATIONS </h1> <p>MAP Number:</p> <h1> MAP 3.2 </h1> <p>Pg. 14</p>
				 <p>05-13-11</p> <p># BLOCK NUMBER</p>



## Parking Demand Analysis

Projections were made to determine the current and future parking demands and the need for parking in the study area. The data collected and compiled by Rich and Associates to calculate the parking demand included:

- An inventory of the study area's on and off-street parking supplies.
- Turnover and occupancy study for public and private on and off-street parking areas.
- Block-by-block analysis of the square footage and land use of every building in the core study area. Rich and Associates used field notes regarding land use and the number of floors per building and obtained the gross floor area (GFA) of each building in the study area from Grand Forks Staff and the MPO.

The parking demand analysis is a two step process to determine the number of parking spaces needed. The first step is to run a mathematical model of parking demand based on the buildings gross floor area and land use. The mathematical model multiplies a parking demand generation ratio specific to a certain land use by the floor area of the building to derive the number of spaces needed. While most parking requirements are based on the gross floor area of a particular development and the actual generation ratio is tied to the land use type. There are some land uses that the generation ratio is based on different units such as dwelling units or bedrooms, students, rooms etc.

The second step is to use field observations to calibrate the mathematical model and help to establish projected parking spaces needed. In this case, the turnover and occupancy study results were used to calibrate the model.

Rich and Associates reviewed proposed and potential developments with the MPO, City Staff, and stakeholders. Developments were discussed, though all developments are speculative at this point. Future parking demand was accounted for by the assumption of vacant space being reoccupied at a rate of 40 percent in five years and 80 percent in ten years.

As pointed out previously, motorists generally perceive on and off-street parking areas with occupancies greater than 85 percent to be at capacity, depending on the overall capacity of the parking area. Therefore, the parking supply should generally exceed the parking demand by 10 to 15 percent to account for this.

**Table E** on the following page demonstrates the parking generation ratios for each land use established for Grand Forks versus national averages from the Institute of Transportation Engineers (ITE). ITE parking generation ratios are based on nationally conducted surveys and in some cases the survey sample size is small. In general, the ITE parking generation ratios are assumed to be higher than required in a downtown setting where shared use and linked trips help to address the peak parking needed for various uses at different times of the day and a lower parking generation ratio.

**Table E: Parking Generation Ratios Comparison**

<b>Parking Ratios</b> <i>(Parking stalls per 1,000 gross square feet unless otherwise noted)</i>	City of Grand Forks Code of Ordinances (1)	Institute of Transportation Engineers (ITE) (2)	Established for Grand Forks (day) (3)
Office/Banks	10 + 1/500 sf (floor area)	2.79	2.85
Professional Offices	3.33	4.00	2.85
Medical Office	5.00	3.53	4.00
Retail	7.00	3.97	2.00
Retail/Secondhand, Used and Thrift	3.50	3.97	2.00
Retail/Furniture, Appliance and Floor covering stores	2.00	2.10	2.00
Mixed Use	N/A	N/A	3.15
Automobile Service Stations	4 spaces + 2/service stall	3.6	2.75
Service/Beauty and Barber shops	5.00	N/A	2.75
Service/Travel agencies, Floral shops and Photography studios	5.00	N/A	2.75
Grocery (Specialty Retail )	N/A	N/A	3.76
High School	1/employee + 1/5 students	0.31	0.31
Restaurant/Bar	1/175 for the 1st 3,150 + 1/350 for the next 3,150+ 1/525 for the next 3,150+1/700 over 9,450	10.01	5.00
Hotel – (per unit)	1/room or suite	1.01/room	1.00/room
Residential – (per unit)	1/each 2 units	1.20/unit	1.00/unit
Residential for elderly	1/each 3 units	0.50/per unit	0.50/per unit
Boarding and lodging / Dormitory	1/each 2 persons	N/A	1/each 2 persons
Community / Fraternal and Lodge buildings	0.50	0.43	0.63
Mortuary and Funeral parlors	2.00	N/A	2.00
Fitness center	2.00	3.55	1.80
Church Synagogues and Temples	2.00	0.27	0.20
Theater (per seat)	1/12 seats	0.26/seat	0.15/seat
Bowling alley (per lane)	2/per lane	3.78/per lane	2/per lane
Government	10 spaces + 1/500 sf (floor area)	3.83	2.50
Manufacturing/Printers and Newspapers	0.75	1.18	0.75
Warehouse	0.50	0.49 / boarding	0.20

(1) Source: City of Grand Forks Code of Ordinance, Part 1- City Code, Chapter XIV – Grand Forks Central Business District, Article 2.-Parking

(2) Source: Institute of Transportation Engineers Parking Generation Manual, 3<sup>rd</sup> ed., 2004

(3) Source: Rich and Associates Fieldwork & Surveys, Fall 2010



Rich and Associates recommends that the city use the ratios Rich and Associates developed for the City of Grand Forks study found in **Table E** as a guideline for determining parking needs for various development proposals. These ratios are designed around a peak daytime need. All retail uses were combined into one parking generation ratio due to their similarity in creating parking demand. Additionally restaurant and bar were combined as well as all service uses due to the same reasoning. The parking demand that is calculated using these ratios is consistent with the observed parking occupancy from the study completed on Thursday, March 31, 2011.

The assumptions used for the parking demand calculations are:

**Assumption 1:** The parking demand per block was dependent on the gross floor area (or other units for residential, schools etc.) contained in the block. Parking demand computed for one block was not affected by the amount of gross floor area available on surrounding blocks. Therefore, a block with surplus parking supply is not used to offset shortfalls on adjacent blocks.

**Assumption 2:** The parking demand calculations were derived under the assumption that currently occupied properties would remain occupied at existing or higher than existing levels into the future.

**Assumption 3:** Parking demand is not affected by parking availability, use, location and price.

The gross floor area of individual buildings was collected and then sorted by land use categories. The gross floor area is reflected in Table F. In general, the different land uses for each block are multiplied by the appropriate parking generation ratio of parking spaces required per 1,000 square feet except for land uses such as residential and the school. The resulting number of parking spaces demanded is deducted from the available parking supply on each block and a surplus or deficit in parking for each block is then calculated. A summary of the parking demand is found in **Table F, Parking Demand Matrix** on **page 19** and is represented spatially in the Parking Surplus/Deficit **Map 4** on **page 20**.

*The following are issues that are considered when developing the number of parking spaces needed:*

- Building size, purpose and special use conditions,
- *Socioeconomic characteristics of the downtown populations and visitors of the downtown.*
- Alternative modes of transportation, which includes availability, use, attractiveness and policy impacts.
- Proportion of the downtown trips that are multiple-use or linked.
- Vehicle traffic.
- Cost of parking.

The parking generation ratios developed for each land use reflect the peak daytime conditions. In the current daytime situation there is an overall surplus within the study area of 722 parking spaces. During the turnover and occupancy analysis, there were several blocks where the some or most of the on and off-street parking was 100 percent occupied during the day. The overall results of the calculations reflect the overall findings of the occupancy study.

We have projected that the overall surplus reduces from 722 spaces currently to 558 spaces in five years with the following assumptions. This is shown on **Map 4.1, page 21**.

- Block 10 in the future five year scenario includes 53 residential units and 7,340 sf. of mixed use retail (development needs 77 parking spaces).
- Re-occupancy of 40 percent (27,353 sf.) of vacant space using the mixed use parking generation ratio.
- In the ten year projection the surplus is reduced to 472 spaces based on the potential re-occupancy of an additional 40 percent (27,353 sf.) of vacant space using the mixed use parking generation ratio. This is shown on **Map 4.2, page 22**.

The Parking Demand Matrix (**Table F**) used in this analysis will be provided to Grand Forks to use as a tool in helping to determine the amount of parking needed for each new development. The Excel spreadsheet should be updated with any changes in land use or square footage to keep current with current and future parking needs or to run models for the impacts of possible developments on parking supply.

## Parking Demand Summary

While the results of the analysis show that there is an overall parking surplus in the study area, there are blocks with calculated deficits. These blocks are 4, 7, 8, 14, 15, 17, 22 and 23. The larger deficits are centered around 3<sup>rd</sup> Street (blocks 7, 14, 15 and 17) and blocks 4 and 8 which are Central High School and City Hall. For the most part, these deficits are confirmed by the turnover and occupancy parking study.

In general, the calculated parking deficits on these blocks are satisfied by parking (both on-street and off-street) in adjacent blocks. An exception is Central High School that needs designated parking for staff and students and should pursue finding additional parking. Overall, there are a sufficient number of parking spaces to accommodate the current demand for parking. However, the current situation requires employees to park further away and walk a few blocks.

If the City completes the recommendations provided in this report, there should continue to be sufficient parking supply in the future. The reality of the current parking needs and the perception of available parking will both be addressed with the recommendations in The Parking Recommendations.

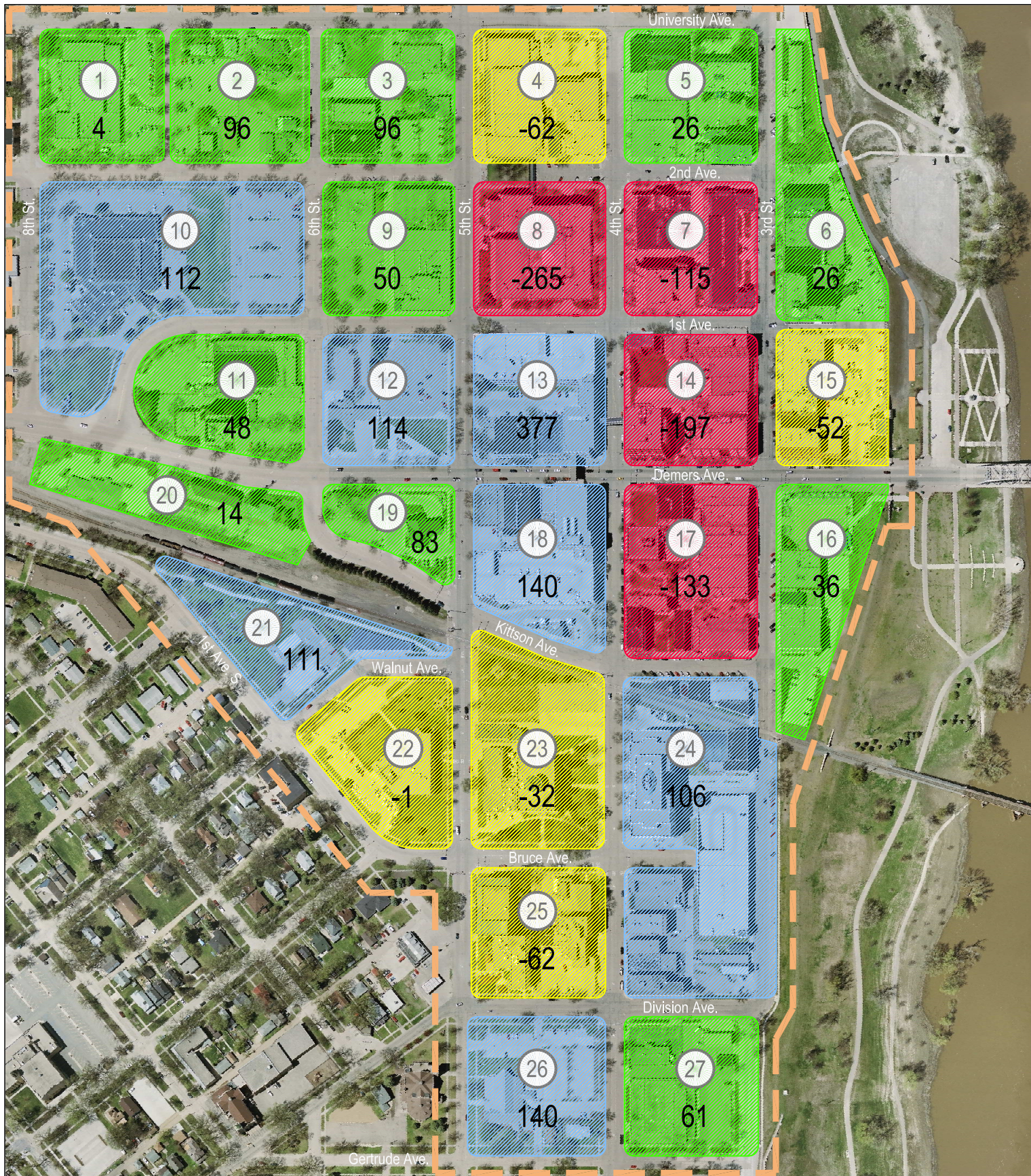
**Table F**  
**Parking Demand Surplus/Deficit Matrix**

A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W
Block	Office	Medical Office	Retail	Mixed Use	Service	Grocery	School (per student)	Restaurant	Hotel (per unit)	Residential (per unit)	Community	Fitness Club	Church	Theater (per seat)	Government	Warehouse	Vacant	Demand (current)	Parking Supply	Surplus/ Deficit (current)	Surplus/ Deficit (5 years)	Surplus/ Deficit (10 years)
Daytime	2.85	4.00	2.00	3.15	2.75	3.76	0.31	5.00	0.88	1.00	0.63	1.80	0.20	0.15	2.20	0.20	3.15					
1	0	0	0	0	0	0	0	0	0	0	0	41,099	0	0	0	0	0	74	78	4	4	4
2	0	0	0	0	0	0	0	0	0	0	10,500	0	0	0	0	0	0	7	103	96	96	96
3	6,700	0	1,250	0	0	0	0	0	0	2	0	0	0	0	0	0	0	24	120	96	96	96
4	0	0	0	0	0	0	0	0	0	0	0	0	0	100	56,523	0	0	139	77	-62	-62	-62
5	12,405	0	3,738	0	19,592	0	0	2,300	0	4	0	0	0	0	0	1,190	0	112	138	26	26	26
6	12,790	0	0	0	5,000	0	0	12,000	0	15	0	0	0	0	0	0	0	125	151	26	26	26
7	79,098	0	2,400	0	0	0	0	0	0	27	0	0	0	0	0	0	0	257	142	-115	-115	-115
8	0	0	0	0	0	0	941	0	0	0	0	0	0	0	0	0	0	292	27	-265	-265	-265
9	0	0	0	0	0	0	0	0	0	0	0	0	0	0	7,206	77,252	19,405	31	81	50	25	1
10*	0	0	0	0	0	0	0	0	104	0	0	0	0	0	0	0	0	92	204	112	35	35
11	7,000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	7,393	20	68	48	39	29
12	0	0	0	0	3,162	0	0	0	0	0	0	0	0	0	0	0	0	9	123	114	114	114
13	36,045	0	0	0	4,320	0	0	5,500	0	0	0	0	0	0	0	0	0	142	519	377	377	377
14	58,511	0	4,225	0	0	0	0	16,500	0	42	0	0	0	0	0	0	35,500	300	103	-197	-241	-286
15	25,000	0	0	0	0	3,000	0	7,197	0	34	0	0	3,112	0	0	0	0	153	101	-52	-52	-52
16	9,700	0	0	0	3,000	0	0	0	0	21	0	0	0	0	0	0	0	57	93	36	36	36
17	6,378	698	20,595	0	7,900	0	0	15,802	0	54	0	0	0	0	0	0	0	217	84	-133	-133	-133
18	65,148	0	0	0	0	0	0	0	0	0	0	0	0	416	0	0	0	248	388	140	140	140
19	2,775	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	8	91	83	83	83
20	7,300	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	6,085	21	35	14	7	-1
21	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	111	111	111	111
22	0	0	0	0	0	0	0	0	0	0	0	0	0	0	50,736	0	0	112	111	-1	-1	-1
23	3,458	0	0	0	0	0	0	0	0	0	0	0	0	0	53,615	0	0	128	96	-32	-32	-32
24	18,480	0	6,514	0	9,000	0	0	0	0	25	0	0	0	0	135,908	0	0	414	520	106	106	106
25	0	0	0	55,221	0	0	0	0	0	0	37,000	0	0	0	0	0	0	197	135	-62	-62	-62
26	0	0	0	0	0	0	0	0	0	1	0	0	17,001	0	0	0	0	4	144	140	140	140
27	25,832	0	0	0	984	0	0	0	0	0	0	0	0	0	0	1,906	0	77	138	61	61	61
TOTALS	376,620	698	38,722	55,221	52,958	3,000	941	59,299	104	225	47,500	41,099	20,113	516	303,988	80,348	68,383	3,259 (stalls)	3,981 (stalls)	722 (stalls)	558 (stalls)	472 (stalls)

\*Block 10 the future five scenario includes 53 residential units and 7340 sf of mixed use retail (development needs 77 parking spaces)

\*\*the 156 spaces in the Greenway have been removed from the public parking inventory for this parking study





# DOWNTOWN GRAND FORKS PARKING STUDY

GRAND FORKS, NORTH DAKOTA



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& ASSOCIATES**

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05-13-11



**BLOCK  
NUMBER**

## LEGEND:

— STUDY AREA

## PARKING

- 100 +
- 99 through -1
- 0 through 99
- +100

Sheet Title:

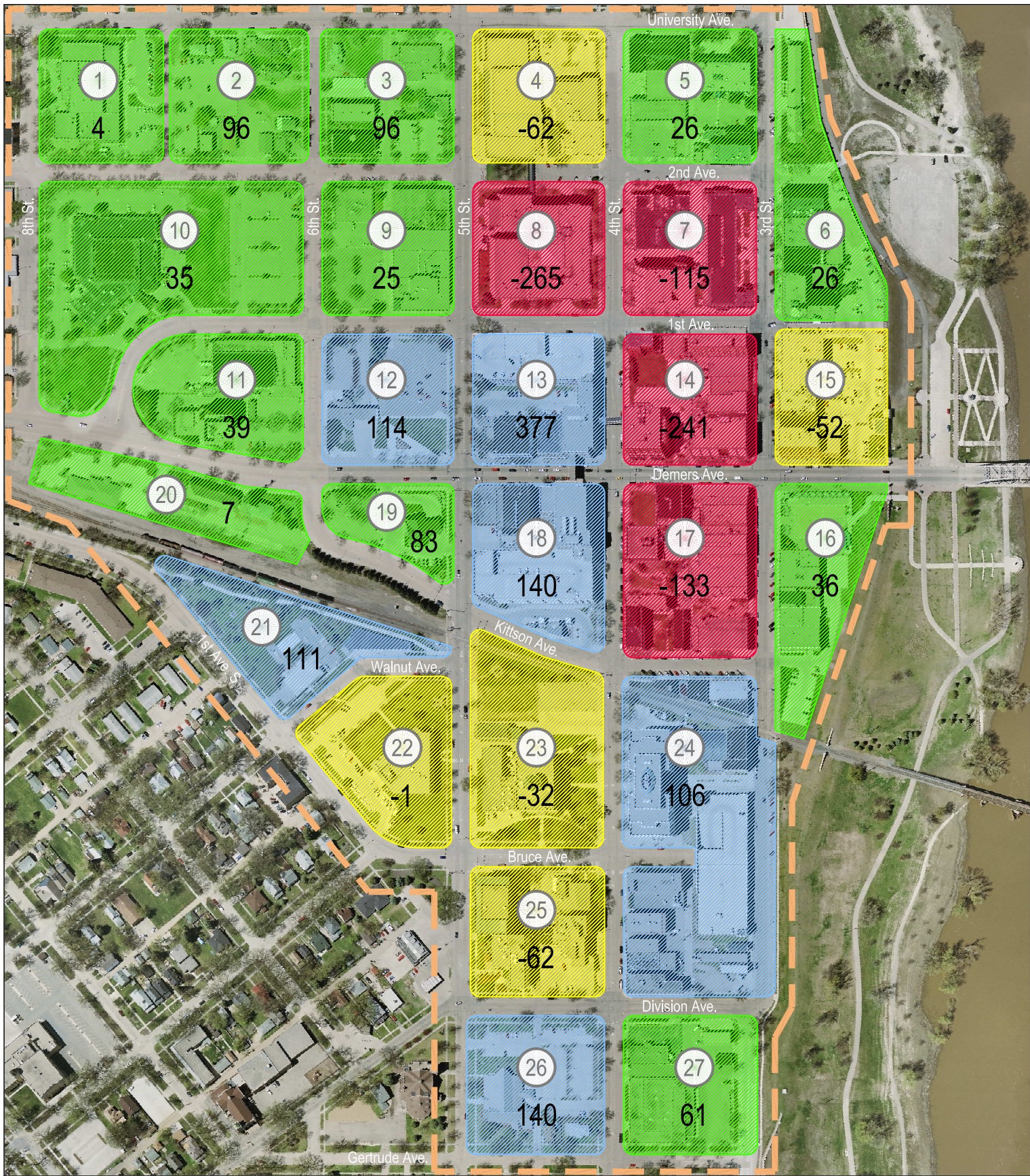
**PARKING  
SURPLUS / DEFICIT  
(CURRENT)**




MAP Number:

**MAP 4**

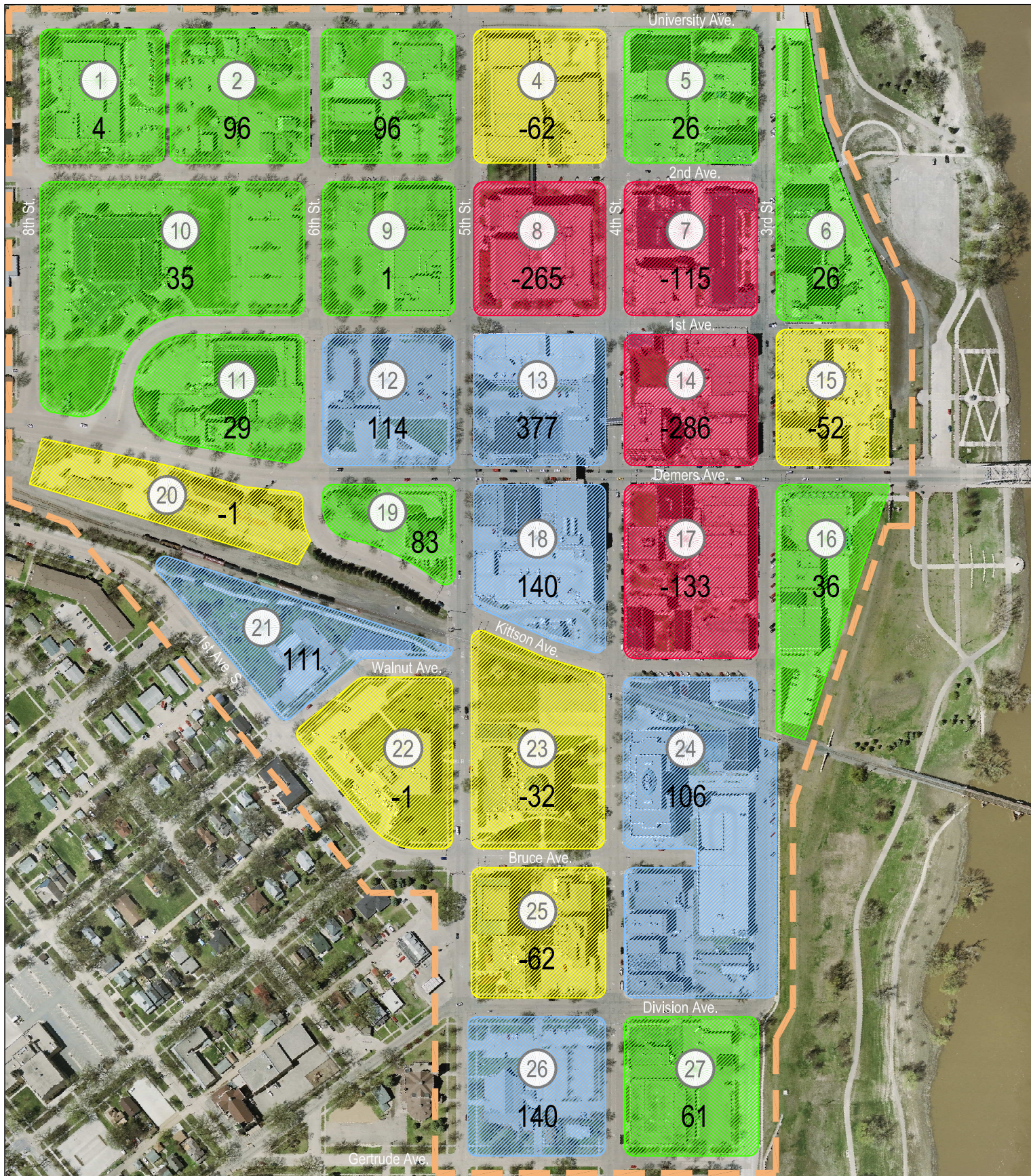
Pg. 20





<h2 style="text-align: center;">DOWNTOWN GRAND FORKS PARKING STUDY</h2> <p style="text-align: center;">GRAND FORKS, NORTH DAKOTA</p>	 <p><b>Parking Consultants Architects / Engineers Planners</b></p> <p>24677 Northwood Hwy., Suite 208 Southfield, Michigan 48034 Tel: 248.353.5080 Fax: 248.353.3850 Lutz, Florida Tel: 813.945.9860 www.RichAssoc.com</p>	<p><b>LEGEND:</b></p> <p>— STUDY AREA</p> <p><b>PARKING</b></p> <ul style="list-style-type: none"> <li><span style="display: inline-block; width: 15px; height: 15px; background-color: red; border: 1px solid black;"></span> -100 +</li> <li><span style="display: inline-block; width: 15px; height: 15px; background-color: yellow; border: 1px solid black;"></span> -99 through -1</li> <li><span style="display: inline-block; width: 15px; height: 15px; background-color: green; border: 1px solid black;"></span> 0 through 99</li> <li><span style="display: inline-block; width: 15px; height: 15px; background-color: blue; border: 1px solid black;"></span> +100</li> </ul>	<p>Sheet Title:</p> <h2 style="text-align: center;">PARKING SURPLUS / DEFICIT (5 YR. SCENARIO)</h2> <p>MAP Number:</p> <h2 style="text-align: center;">MAP 4.1</h2> <p style="text-align: right;">Pg. 21</p>
			 <p>05-13-11</p>  <p>BLOCK NUMBER</p>





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05-13-11



**BLOCK  
NUMBER**

## LEGEND:

STUDY AREA

## PARKING

- 100 +
- 99 through -1
- 0 through 99
- +100

Sheet Title:

**PARKING  
SURPLUS / DEFICIT  
(10 YR. SCENARIO)**

MAP Number:

**MAP 4.2**

Pg. 22



## Public Input

The Downtown Parking Steering Committee and the Downtown Parking Technical Committee met on March 16, 2011. These Committees were charged with providing input and feedback at the initiation of the project and to aid Rich and Associates in collecting data and information for the study. Later, the Steering Committees aided by the Grand Forks MPO and Grand Forks City Staff provided feedback and guidance with the recommendations formulated by Rich and Associates. Below is a listing of the members that made up the Parking Advisory Group.

### **Steering Committee:**

Grand Forks City Council

Dana Sande, Also member of Planning Commission

Grand Forks Planning Commission

Doug Christensen, also member of City Council and MPO Board

Grand Forks School District

Bill Hutchison, also member of Planning Commission

Downtown Stakeholders

Jon Bonzer, downtown resident and owner of Bonzer's

Josh Gilliland, owner of Gilly's Bar and Grill, Level 10 and O'Really's

Bob Caulfield, Caulfield Studio

Bob Cowger, former YWCA building

### **Staff Assisting the Committee**

Rich and Associates –Rick Rich, Annaka Norris, Robert Wicke

Earl Haugen, MPO

Pete Haga, Mayor's Office

Greg Hoover, Urban Development

Ryan Brooks, Planning

Jane Williams, Engineering

Sgt. Jason Dvorak, Police

Emily Fossen, Finance

Barry Wilfahrt, Chamber of Commerce

The next phase of public input involved a Public Forum Thursday, March 17, 2011 from 3:00 P.M. – 7:00 P.M. hosted by the MPO and held in the Herald Community Room. Several one on one interviews conducted during the Public Forum provided Rich and Associates with individual perspective on parking issues in Grand Forks.

The final method employed for gaining input from the community included surveys. The surveys were distributed through the MPO. There were three surveys developed; the first was a business operator survey, the second was an employee survey and the third was a parking user survey.

The parking surveys collected were:

*Business Operator: 52 Responded*

*Employee: 140 Responded*

*Parking User Survey: 37 Responded*

The surveys included a series of questions pertaining to how individuals traveled downtown, where they parked, how many businesses they visited, and how long they stayed. These questions along with business specific questions on size of business area, number of employees, hours of operation and number of customers helped Rich and Associates develop the parking generation ratios.

Additional questions provided an opportunity for participants to offer an opinion on various aspects of parking in Grand Forks. Questions ranged from parking enforcement to overall parking adequacy. Results of the opinion based questions are located in the Appendices B, C, and D.



# Parking Recommendations

## Introduction

While aimed primarily at increasing the efficiency of the parking system, the recommendations in this section are a set of tools developed for Grand Forks to use in managing the parking system. The recommendations are intended to enhance the existing supply of parking through policy, operational, management, and allocation changes. The recommendations are comprehensive and provide a holistic approach to improving parking in the downtown today as well as planning for future growth. Some of these recommendations can be implemented with little or no cost to the city, while some will take significant budgeting and time to complete.

Grand Forks will be given the demand matrix chart (Table F) to maintain and manage the parking surplus and deficit in the downtown. This Excel spread sheet can be updated with new development, re-occupancy of vacant space and changes to the parking inventory. The chart allows Grand Forks to understand the impacts of potential developments and the allocation of parking and durations while meeting the parking needs in the downtown.

A parking system is not just about parking vehicles, it also involves the walkability of a downtown, signage, parking enforcement, lighting along with the marketing of parking to owners, employees and customers. The utilization of parking lots and parking ramps can depend on any or all of these factors and the overall conditions of the parking areas. Fundamentally, these issues can be a negative or positive impact on a parking system and therefore downtown economics in general.

The overall parking allocation plan is to promote the use of the parking ramps in the downtown to customer/visitor parking as well as employee parking. This will change the perception that the parking ramps are for employees only. This will also help change the perception that there is not any parking in the downtown.

To accomplish this, a number the recommendations contained in this section need to be implemented such as pedestrian improvements, signage, marketing and lighting. All recommendations contained within this section will aid Grand Forks in creating an efficient parking system when used as a package of system wide improvements. With a system approach, Grand Forks will be best prepared to address parking related issues and handle current and future developments.

## Pedestrian Enhancements

Pedestrian movement is an important aspect of parking and it is necessary to plan for changing modes of travel such as when a vehicle parks and the driver and passengers begin to walk. It is extremely difficult to get people to park beyond the front door of a destination; if there are any concerns regarding safety, if the walking experience is not pleasant, or they do not have a good idea how to find their destination once they have parked. Lighting and landscaping can greatly change the perception of safety in lots and along sidewalks.

## 1. Alleys

Issues regarding the safety of alleys in the downtown were brought up during the Public Forum. Some of the alleys in the downtown are used as walkways from parking areas to businesses and could use improvements. In order to make the alleys that are used as pedestrian walkways more user friendly, consider lighting them and using murals and art to brighten the alleys and create a more enjoyable walking area. If the alleys were made one-way there may be a potential to include a clearly marked pedestrian walkway on one side. In areas where the alleys are not used for deliveries consider converting the alleys to pedestrian walkways.

The pictures below show areas of concern and an example of how an alley can become more pedestrian friendly. Specifically the alley on block 13 that leads from the Central Parking Ramp to Demers Avenue could use additional lighting. The pedestrian exit from this ramp leads into a private lot that is partially blocked by dumpsters. The dumpsters should be relocated to encourage pedestrian movement from the parking ramp to the businesses along Demers Avenue.

Responsibility: MPO, City of Grand Forks, business owners.

Cost: To be determined based on level of improvements required.



*The picture on the left is the pedestrian walkway from the Central Parking Ramp that leads to the alley in the picture on the right that leads to Demers Avenue.*



*Example of how an alley can be transformed into an inviting pedestrian walkway.*

## 2. Lighting

The lighting in the Central Parking Ramp has been recently upgraded and is enhanced by the painted ceiling. Lighting in this parking ramp during the day and evening is acceptable. Lighting is an issue in the Corporate Parking Ramp however. This was identified in a study that was completed for the city in 2008. A recommendation of the 2008 report was to replace the lighting and our understanding is that the city is planning to do this.

Consideration should be given to providing enhanced lighting along the solid walls in the southeast corners of the Corporate Parking Ramp. These walls are located adjacent to the main vertical transportation cores and will enhance the perception of security. Also, if the entire lighting system is being addressed, the city may want to have the lights circuited so that the exterior rows of lights turn off during the day with the internal rows on. This makes use of ambient lighting from the outside during the day.

The city needs to regularly check the parking ramps lighting conditions to repair any cracked lenses on the fixtures and replace burned out bulbs. Lighting should be a priority in the ramps. This will help change perceptions of parkers that feel the ramps are unsafe.

Responsibility: City of Grand Forks

Cost: Currently being addressed, N/A.

## 3. Encourage Bicycle Ridership

Having a safe and secure place to store a bicycle is paramount to successfully promoting the use of bicycles for downtown employees who would otherwise commute using a motor vehicle. The city has several bicycle racks located throughout the downtown and there are is currently a plan to add approximately six new racks along with converting an on-street parking space into a bicycle parking space that could possible hold up to 12 bicycles (as of the date of this report they have installed a new on-street bicycle rack on N. 3<sup>rd</sup> Street). Signs would help bicycle riders know where to properly park. Lockers and shelters will also benefit employees of the downtown providing a secure place to store a bicycle out of inclement weather.

The MPO uses a bike map to promote the Bikeway and bicycle racks located in Grand Forks and East Grand Forks. Consider crating a marketing program to promote bicycle use as an alternative to driving, using the existing biking trails to the downtown and work toward becoming a "Bicycle Friendly" City through League of American Bicyclists.

- A.** There are several bicycle racks located in the downtown, **Map 5** on **page 30** is a detailed map of the current locations for bicycle racks in the downtown. Promote bicycle ridership in the downtown and market with a map of the bicycle parking locations (see parking flyer pg. 39-40).
  - 1.** Continue to use the 2011 Bike Map produced by the Grand Forks – East Grand Forks MPO. Consider adding a magnified insert of the downtown that details bicycle rack locations.

- B.** Follow the guidelines listed below for bicycle racks in the downtown. Not all bike racks are effective.

**Guidelines on Bicycle Racks (*Bicycle Parking Guidelines, first edition 2002*):**

- Racks should allow bike frame to make contact at two points.
- Should allow for more than one bike per rack.
- Needs to allow for popular “U” shape lock.
- Racks should be placed where they will not impede upon pedestrian traffic, though need to be readily identifiable.
- Should be clearly signed with a bicycle parking sign.



*Ineffective bike rack located in the Corporate Parking Ramp*



*Effective bike rack located on street*

- C.** As bicycle ridership increases, consider adding bicycle lockers near businesses known to have bicycle commuters.



*Bicycle locker*

- D.** Create a marketing program to promote bicycle use as an alternative to driving.
- 1.** Host a special event to promote bicycle ridership in a city wide effort to use alternative modes of transportation. This will in turn cut down on the number of parking spaces needed.
  - 2.** Work with the University of North Dakota (UND) in promoting bicycle ridership.

### **Marketing Bicycle Ridership**

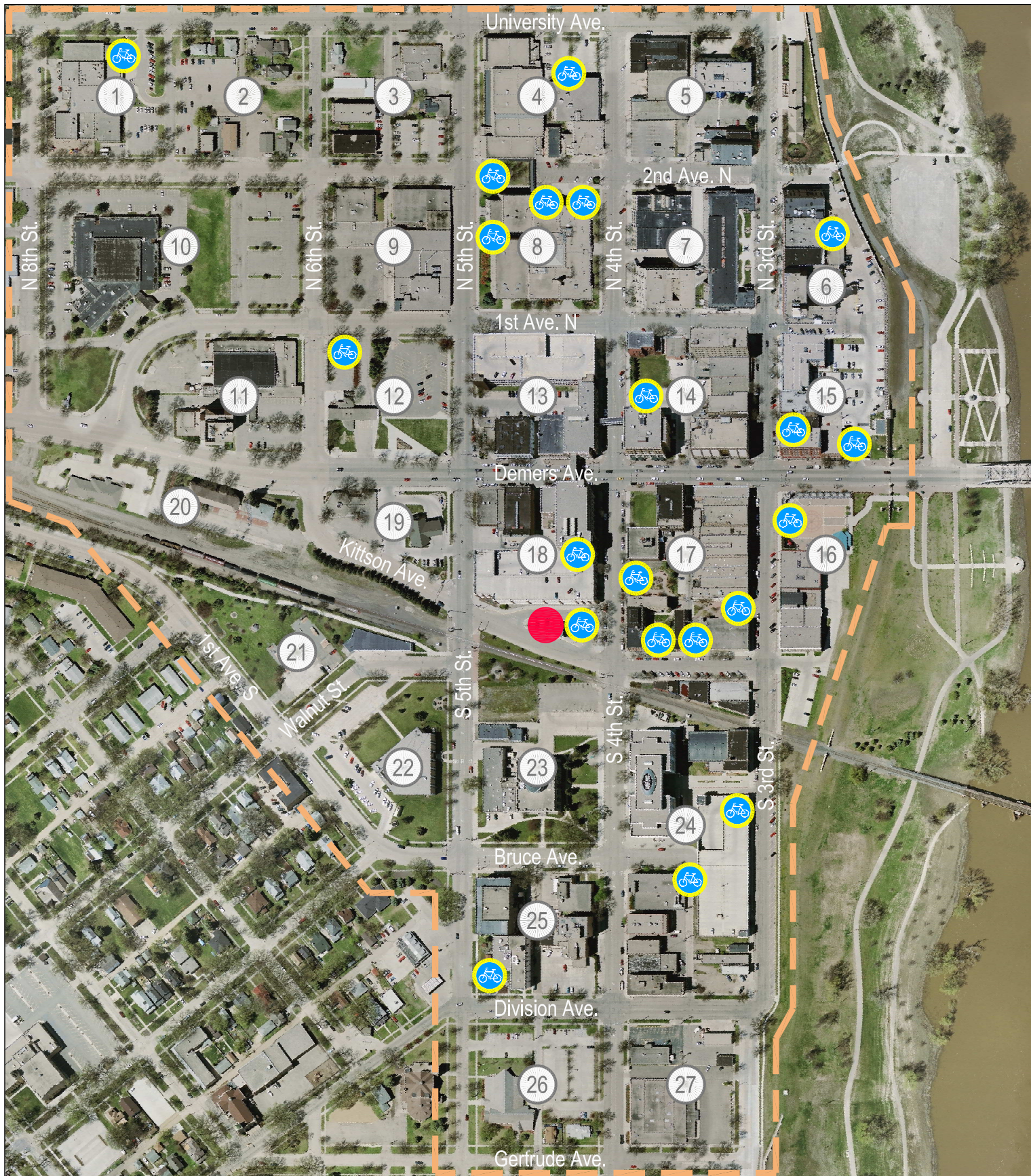
- Federal law provides tax incentives to bike to work which are explained by The League of American Cyclists, <http://www.bikeleague.org/news/100708faq.php>.
- There are several communities throughout the U.S. that participate in National "Ride Your Bike to Work Day/Month" in May. Information can be found through the League of American Bicyclists [www.bikeleague.org](http://www.bikeleague.org).
- Source of possible grant funding through Bikes Belong Coalition, <http://bikesbelong.org>
- Pedestrian and Bicycling Information center is a helpful link that offers advice on funding and marketing bicycling in downtowns. <http://www.bicyclinginfo.org>







*"Communities that are bicycle-friendly are seen as places with a high quality of life. This often translates into increased property values, business growth and increased tourism. Bicycle-friendly communities are places where people feel safe and comfortable riding their bikes for fun, fitness, and transportation. With more people bicycling, communities experience reduced traffic demands, improved air quality and greater physical fitness" [www.bicyclefriendlycommunity.org](http://www.bicyclefriendlycommunity.org)*

Responsibility: MPO, City of Grand Forks

Cost: Bicycle racks \$150-300 per rack, lockers \$2,500-5,000 per locker and \$3,000-10,000 per shelter. Marketing is covered under **Recommendation 6**. The cost to convert a parking space into a bicycle parking space is to be determined.





<h1> DOWNTOWN GRAND FORKS PARKING STUDY </h1> <p>GRAND FORKS, NORTH DAKOTA</p>	<div>  <div> <b>Parking Consultants Architects - Engineers Planners</b>  21st St. Northwest Hwy., Suite 208  Southfield, Michigan 48034  Tel: 248.353.5880  Fax: 248.353.3830  Lutz, Florida  Tel: 813.945.9860  www.RichAssoc.com </div> </div> <div>  <div> 05-13-11 </div> </div> <div>  <div> BLOCK NUMBER </div> </div>	<p><b>LEGEND:</b></p> <ul style="list-style-type: none"> <li> STUDY AREA</li> <li> BIKE RACK LOCATION</li> <li> TRANSIT STATION</li> </ul>	<p>Sheet Title:</p> <h1>BIKE RACK LOCATIONS</h1> <p>MAP Number:</p> <h1>MAP 5</h1> <p>Pg. 30</p>
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#### **4. Encourage Transit Ridership with Cities Area Transit (CAT)**

CAT offers bus service to both the Grand Forks and East Grand Forks area as well as UND and Northland Community College Monday through Saturday. There are 13 routes throughout the area with nine of the routes going in and out of the downtown. These nine routes all have stops at the Metro Transit Center located on Kittson between South 5<sup>th</sup> Street and South. 4<sup>th</sup> Street centrally located in the downtown.

UND and Northland Community College students ride free when they show their student ID (CAT Prowler Card). With current gas prices there is a potential for increased ridership which could mean a decrease in the number of parking spaces needed in the downtown. A marketing program directed at college students and commuters could also potentially help the amount of traffic and number of vehicles parked on-street in the downtown.

The CAT website offers detailed information on hours of services and routes. The site also offers information marketing bicycle ridership and how to use the racks along with the certification program to use the bicycle racks.

- A.** Develop a plan with CAT, the University and Northland Community College to further promote the free CAT Prowler Card.
  - 1.** Use local media sources, T.V. news, radio spots, and articles in the Grand Forks Herald, university papers and websites.
  - 2.** Hold a special event focused on increasing bus ridership such as take the bus to work day.
- B.** Most of the busses have bicycle racks to help encourage both bicycle and bus ridership. This should be well promoted and works with bicycle marketing in **Recommendation 2**.
  - 1.** Work with CAT to further promote the certification process that enables riders to use the bike racks on the bus. It should be well publicized that training needs to occur before a rider can use the bicycle racks as not to discourage first time riders.
  - 2.** Continue to promote the 2011 Bike Map produced by the MPO. This brochure provides information on the bike and bus program.
  - 3.** Consider adding bicycle storage lockers at the transit center on Kittson Avenue to encourage bus ridership. The lockers could be located outside behind the station or in the parking ramp for additional coverage from the elements. The bicycle lockers could eventually be rented out for a minimal fee.
- C.** There are tax benefits available to both the employee and employer for riding transit, walking or cycling to work as mentioned in marketing bicycle ridership. The IRS has a guide to commuter tax benefits: <http://www.irs.gov/publications/p15b/index.html>.

Responsibility: City of Grand Forks, MPO, CAT, UND and Northland Community College.

Cost: Marketing is covered under **Recommendation 6**.

## 5. Signage:

Signage recommendations cover not only parking signs but also wayfinding signs once a driver and passengers make the switch from driving to walking. In general, there are issues with signage in Grand Forks and they are as follows.

- From a driver's perspective, the parking ramps are difficult to identify as available for public parking. Any signage on the building are mounted flush to the building.
- In the case of the Central Parking Ramp, there are signs that seem to indicate that the parking is only available for Social Security visitor parking.
- There are no signs that identify the name of the parking ramps and it is difficult to tell who can park in the ramps. The signs are mounted flat on the building face and there are no signs that project perpendicularly from the parking structure that can be viewed from the driver's perspective.
- There is minimal signage within the parking ramps that identify parking floors and in the case of identifying visitor and customer spaces, each individual space is signed. The sign is at a level that it is hidden by a regular vehicle when it is parked and is difficult to see.
- For the off-street lots, the lot identification is either not there or is not easily identifiable. This lack of identification creates issues with marketing and wayfinding.
- There are different color/design of the same sign in Grand Forks. This occurs especially with on-street parking signs (examples follow).
- There is no uniformity in the overall placement of on-street parking signs.
- Signage within the parking ramps is complicated by the way the parking spaces are allocated. Changes to the parking allocation will require changes to signage in the ramps.
- As identified above, there is little in the way of wayfinding signage once the driver and passengers have transitioned from driving to walking.



*The pictures above show four different types of two hour parking signs. The different two hour signs may be confusing.*





*The pictures above show two different types of signs that allow a driver to know that there is public parking in the ramps and the signs can be viewed as a driver approaches.*



*The picture above shows one of the Corporate Parking Ramp entrances, there are no signs alerting a customer/visitor of the downtown that there is public parking in this ramp.*



*The Central Parking Ramp has signage that alerts a driver that there is public parking though the sign is flat against the building and cannot be viewed as vehicles approach.*

### **Best Practices for Parking Signage**

Rich and Associates has established a best practice for vehicle and pedestrian wayfinding signage. These best practices have been developed by looking at successful signage in other communities and through signage programs that we have developed.

As a best practice the following four types of parking signs that increases drivers' wayfinding experience are strongly recommended. Communities often miss the important role that signs play in making visitors comfortable with their surroundings and the effect that signs can have on vehicle travel and parking use efficiency. Additionally, there needs to be pedestrian wayfinding signs to assist the driver/passenger transition from a vehicle to walking. It should be noted that sign color, size design and placement may be impacted by local, county or State highway department's regulations.

**Directional/Location:** Directional-parking signage is distinct in color, size and logo and directs drivers to off-street parking areas. Parking location signage complements the directional parking signage. The signs have arrows pointing to the off-street lots. The signs are mounted on poles at standard heights, on the streets.



**Identification:** Identification signage is placed at the entry of each parking lot. The name of the parking area is identified and the type of parking available as well as hours of enforcement and the hours of lot operation is listed on the signage. The identification signage is distinctive in color and size, and it is located on a pole at a lower height.



**Vehicular Wayfinding:** Vehicular wayfinding signs are placed at the points in the downtown to lead to places of interest and parking locations. The sign also points out the various landmarks or attractions that can be found. These types of signs are placed at locations easily found by a driver and are intended to help that driver orient themselves to the downtown area.



**Pedestrian Wayfinding:** Pedestrian wayfinding signs or kiosks are placed at the points of pedestrian entry/exit to parking lots and ramps. Typically a map illustrating the downtown area that points out the various shops or attractions. These types of signs are placed at locations easily found by a pedestrian and are intended to help that person orient themselves to the downtown area to locate their destination and then be able to return to where they parked.





**The general qualities of good signage include the following aspects:**

- Use of common logos and colors. The colors should make the sign stand out from the background of buildings and vegetation. White lettering on a dark background is effective.
- In general, sign lettering should be four inches in height. Smaller lettering may be difficult to see and cause traffic slow-downs as drivers read signs before entering a parking area.
- Use of reflective, durable material.
- All four sign types used in conjunction to guide motorist and pedestrian activity.
- All entrances to the downtown need to have introduction signage.
- All surface lots and parking ramps need to have identification signage.
- All routes through the downtown need to have directional and location signage.
- All pedestrian routes to and from major customer/visitor parking areas need to have way finding signs.
- The identification signs located at parking areas need to convey parking rates, hours of operation, maximum durations, and availability of validation.
- Vehicular way-finding should include direction arrows to key destination places such as theaters, museums, shopping districts, etc., used in conjunction with the parking direction signs to allow a driver to quickly orient themselves to their destination and best parking options. Arrows should always be oriented to indicate forward, left or right movement. Reverse arrows or arrows indicating that a destination has been passed should be avoided to reduce confusion.
- Sign programs are usually best undertaken at a city-wide level and include all the city's signs. The comprehensive nature of a large scale sign program helps ensure that all forms of way-finding signs (vehicular and pedestrian) are taken into account.
- Vehicular way-finding needs to be laid out initially in a coordinated fashion to determine what the preferred entry points to the community should be. Often directed traffic flow is a more efficient option that allows the community to take advantage of planned vehicle routes and entry points. A key 'rule of thumb' is that fewer, well thought out and well placed signs are far better than too many signs scattered randomly throughout a community.
- For parking lots and parking ramps, color coding of parking areas (customer/visitor areas by length of stay restrictions, employee parking etc) is a good visual reminder for parkers and should be used on signage.
- Color coding of parking floors with level number designations. Consider naming floors instead of numbering them to help parkers remember where they parked.

- Candy stripe columns at the end of aisles (yellow and black) to further indicate where aisles are located (*below*).



*Signage/color coding around elevator core*



*Floor color / level sign*



*Level indicator on column/ candy striped column*

## Recommendations for Signage

- A.** A family of signs needs to be developed for the direction/location, identification and vehicle wayfinding in Grand Forks. The color, logo (if used) font type etc. should ideally be consistent and follow best practice as presented in the section. The city should continue with its review and updating of the Downtown regulatory signs to make all signs uniform (same color, wording etc.).
- B.** There should be more directional/location signs in the downtown, especially signs that lead drivers to public parking ramps and lots. These signs should identify customer/visitor parking.
- C.** Use identification signs that let a customer/visitor of the downtown know what lots are public, the allowed parking durations and hours of operation.
- D.** In Rich and Associates experience, the two hour on-street parking signs should be spaced approximately every 100ft – 120ft, but this may vary based on exact conditions on every block face. Though it is not a requirement under MUTCD, all on-street parking areas should be signed. There are some block faces where it is difficult to know what the time durations are.
- E.** Consider using banners throughout the downtown to help market the parking system.
- F.** Install at least two kiosks in the parking ramps with a map of the downtown, business listings and parking locations. Kiosks are helpful in directing visitors/customers throughout downtown. Directing pedestrians to key destinations and then back to where they parked are important elements in tourist/customer/visitor oriented downtowns. Pedestrian wayfinding will work hand in hand with the marketing discussed in these recommendations.



- G.** Consider adding pedestrian wayfinding throughout the downtown. This is a signage package directed specifically to pedestrians.
- H.** Within ramps, redo signage based on revised allocation and location of short term and permit parking. Use color to code floors/areas for different parking types. The city should also consider other signage and graphics that are included in the Parking Ramp Recommendations.

The information that is provided in this recommendation is to show how each of the sign types work together providing a comprehensive wayfinding system. It is recommended that Grand Forks use a firm that specializes in sign design to prepare the signs. Once this is completed, assistance may be required in sign placement.

Responsibility: City of Grand Forks

Cost: \$50,000-\$200,000 includes on-street and off-street, pedestrian wayfinding and vehicular wayfinding.

## **6. Marketing:**

Marketing is an important and often overlooked component to a successful parking system. Marketing initiatives should be directed towards downtown employers, employees and customers/visitors. Materials can include direct mailings, brochures, maps, kiosks, on-line web pages or articles in magazines, newspapers, etc.

Information contained in the marketing material should include parking locations, up-coming changes, regulations, fine payment options and any other information relating to the parking system. An individual's perception of Grand Forks is greatly enhanced if they know ahead of time where parking is located and what the time durations are.

Grand Forks currently has minimal information listed on the city's web page regarding parking. This site has no map or information on available parking or for example, how someone buys a permit. This web page should cover all parking information for both customers/visitors and business owners and employees of the downtown.

Information that should be included:

- parking map that shows all public parking locations
- durations both on-street and off-street
- hours of enforcement
- detailed information on tickets
  - fines
  - where to pay
- where employees should be parking
  - importance of on-street parking for success of businesses
- how to purchase a permit
  - where and how much

- any changes to the parking system
- special event parking instructions and directions

### **Recommendations**

- A.** The city's web site should be modified to have a tab on the main page for Parking.
- B.** A specific parking page(s) needs to be developed.
- C.** The parking web site should include information listing the hours and days of enforcement, parking regulations and where to pay a ticket if one is received. There should also be language about promoting the "park once" concept where if someone is coming downtown for more than one purpose, they should look to off-street parking areas so all errands can be done without moving a vehicle.
- D.** Businesses should be encouraged to have a link to the city's web site and parking page. This allows customers and visitors to click on a link and go directly to the parking page.
- E.** Create a downtown marketing flyer that lists the downtown businesses included with a map of parking in the downtown (example locate on pg.40-41). This can be used as a tool to market both the downtown businesses and the parking system.
  - 1.** It is helpful to promote the free parking in the downtown as well as the locations of long term parking for customers and visitors who plan to spend an entire day downtown.
  - 2.** This flyer could be placed on information kiosks, handed out by downtown businesses, parking enforcement staff and be available on the city's website along with any downtown organization websites.
- F.** Develop a marketing plan to encourage alternative forms of transportation. There are tax benefits available to both the employee and employer for riding transit, walking or cycling to work as mentioned above in marketing bicycle ridership. The IRS has a guide to commuter tax benefits: <http://www.irs.gov/publications/p15b/index.html>.
- G.** Specific marketing initiatives must be aimed at local employers and employees that inform them of the importance of keeping on-street parking available for customers and visitors. An incentive program could also be used such as a drawing once a month for those employees that are participating in the program and park in the appropriate parking areas.

Responsibility: Grand Forks

Cost: \$2,500 for flyers and up to \$8,000 for web site design with \$2,000 annually for ongoing maintenance.





*Leave the car parked and ride  
your bike, or ride your bike to  
the bus and ride the bus*

Save money and stay healthy. Bike racks are located throughout the downtown (see map).

Cities Area Transit (CAT) is the public transportation provider for Grand Forks, ND and East Grand Forks, MN.

Cities Area Transit buses operate Monday through Saturday covering the cities with eight different routes as well as providing Dial-A-Ride and Senior Rider services.

Bike racks are provided on the front of the C.A.T. buses so bring your bike.



**City Area Transit**  
867 S. 48th Street  
Grand Forks, ND 58201  
701-746-2600  
701-746-2582 (FAX)

**Jefferson Lines**  
Schedule Bus Service 800-451-5333  
Group Travel 800-767-5333  
Customer Service 888-530-7569

[www.jeffersonlines.com](http://www.jeffersonlines.com)

### Questions regarding Parking?

For more information on parking locations contact:

**Urban Development Dept.**  
1495 1<sup>st</sup> Avenue North  
Grand Forks, ND 58203  
Phone (701) 746-2545  
Fax: (701) 746-2548

For questions regarding parking tickets contact:

**Grand Forks Police Dept.**  
122 S. 5th Street  
Grand Forks, ND 58207  
Ph. 701.787.8000  
Fx. 701.780-8253

**Parking is enforced from  
9:00 A.M. – 6:00 P.M. Monday – Friday  
Parking Tickets are \$20.00**



**City of Grand Forks**  
255 N 4th Street  
Grand Forks, ND 58203  
Phone (701) 746-INFO

[www.grandforksgov.com](http://www.grandforksgov.com)

*the city of*  
**GRAND FORKS**  
North Dakota



**GUIDE TO  
PARKING**



LEGEND	
PARKING	
<u>ON STREET</u>	<u>OFF STREET</u>
NO TIME LIMIT	PUBLIC
2 HR. PUBLIC	PRIVATE
1 HR. PUBLIC	CITY PERMIT
30 MIN. PUBLIC	
15 MIN. PUBLIC	
BARRIER FREE	
LOADING ZONE	
BARRIER FREE	
BIKE RACKS	

#### Downtown Municipal Parking

The City of Grand Forks offers Free Parking to customers and visitors of the downtown.

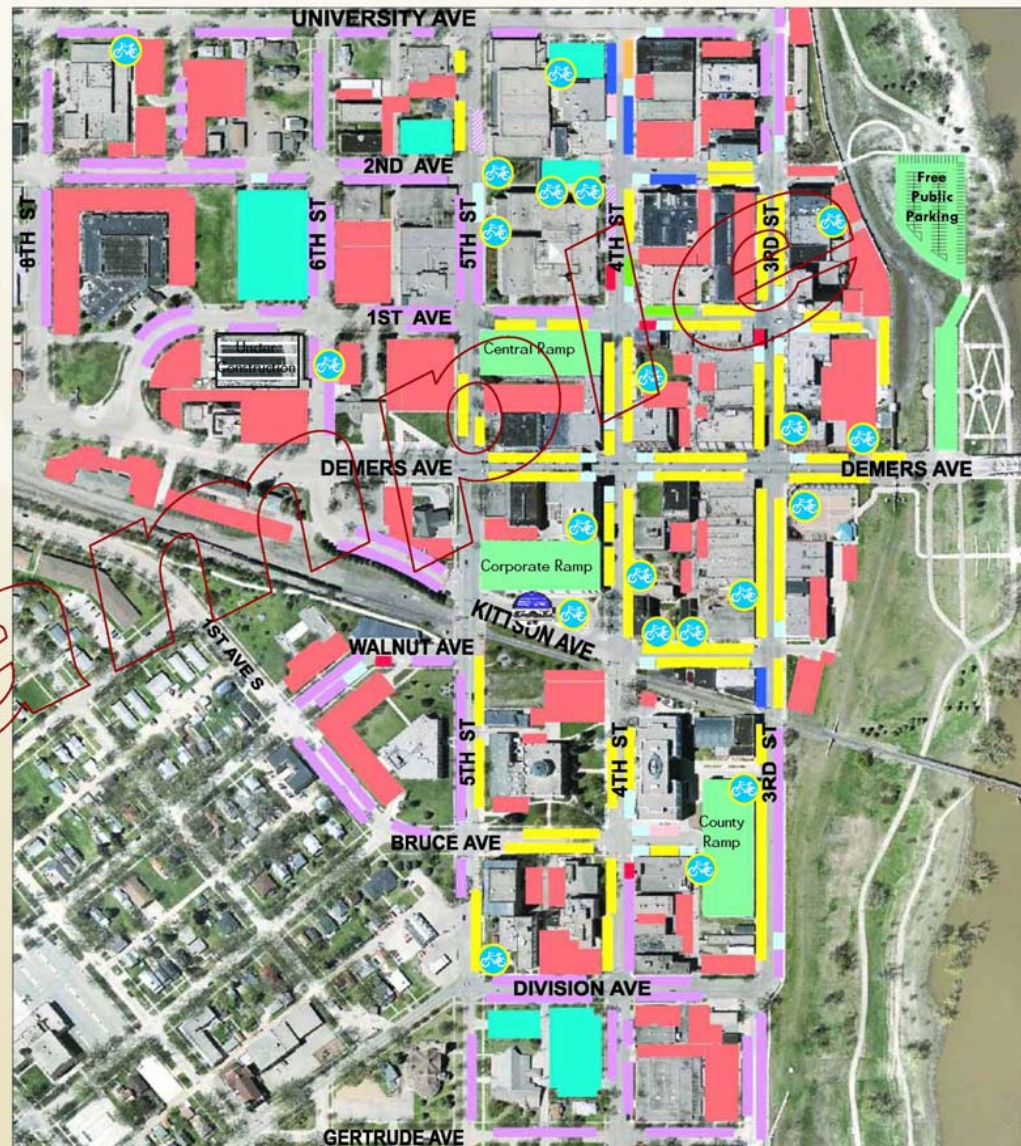
There are 2 hour parking spaces in the public parking ramps. Most on-street parking is limited to 2 hours, check the signs before parking. For customers and visitors planning to spend more than 2 hours in the downtown, there is a large parking lot, with long term free parking spaces in the Greenway.

#### Employee Parking

Contact the Urban Development Department for reserved permit spaces in the ramp. Parking on top floor of the Corporate Ramp and parking in the Greenway is free (unlimited time).

Grand Forks thanks you for leaving the most convenient parking spaces for customers of the downtown.

**Parking is enforced from  
9:00 A.M. – 6:00 P.M. Monday – Friday  
Parking Tickets are \$20.00**





## **7. Parking Duration/Allocation:**

In general, on-street parking in the core of a downtown should be reserved for customers and visitors. In areas that have little commercial activity, the on-street spaces can have longer durations of stay allowed. The value of a single on-street space in a downtown has been estimated by some to have a value of at least \$20,000 to the economy of a city.

During the turnover and occupancy study, 1,176 (83 percent) of the vehicles stayed less than two hours which indicated good turnover. The issue is that 243 (17percent) of vehicles remained in the same parking space beyond the posted time limits. High turnover rates in a downtown are an important factor to the success of businesses. Most likely the majority of the vehicles staying beyond the posted time limits are business owners and employees of the downtown.

Best Practices include that the shorter stay spaces be located on-street and that longer stay spaces be located off-street. Additionally, loading zone spaces should be located at the ends of blocks and that handicapped parking spaces though not required on-street, be located at the ends of blocks when they are requested. Finally, motorcycle spaces should be provided where possible so that they do not reduce the number of on-street spaces. When this is not possible, the motorcycle spaces should be designed so that that a parking space can be converted to a regular passenger vehicle in the winter season.

Customer/Visitor parking should remain close and convenient, while employee parking should be located further away. It is expected that employees will walk farther; typically 600-800 feet while a customer/visitor to the downtown will typically only walk 300-500 feet to run an errand when the intent is not to shop around. Educating business owners, managers, and employees on appropriate parking behaviors is important. There should be a clear understanding with business owners and employees that leaving on-street parking as well as close and convent parking in lots or parking ramps for customers is vital to the success of businesses in the downtown.

Rich and Associates was asked to look into on-street residential permit parking to see if it would work in Grand Forks like it does in Fargo, ND. Currently, overnight parking is limited to certain nights to allow for street cleaning. Several stakeholders felt that several residents are parking on-street because there is not enough residential off parking in the downtown.

Rich and Associates noted 39 vehicles that had parked overnight on street while conducting the turnover and occupancy analysis. Of these vehicles, 15 were still parked in the same on-street space at 10:00 A.M., four vehicles remained until 12:00 P.M. and one vehicle was still in the same space at 2:00 P.M. More likely than not, these residents have off-street parking available, though they are choosing the more convenient parking on-street.

Fargo charges \$25.00 per month for the residential parking permit that is valid from 6:00 P.M. to 8:00 A.M. The permit holders are limited to parking in city owned lots and designated on-street areas which does not include the core downtown retail area.

**On-Street Parking:**

- A.** Two hour parking should remain the dominant duration for on-street parking as it suits the needs of the majority of customers and visitors. Individuals requiring more than two hours for parking should be directed to off-street parking areas as identified in these recommendations.
- B.** Fifteen minute to thirty minute parking should be located on-street for use as customer loading and unloading spaces or very short-term parking. These parking spaces should be situated as either the first or last space on a block face where needed. When there are long blocks it is sometimes necessary to place the fifteen to thirty minute parking spaces in the middle of a block face. This did not appear to be an issue in Grand Forks
- C.** Based on our analysis, we recommend converting the following on-street parking from all day to two hour parking:
  - 1.** Block face 9B – should the old YWCA building be redeveloped as a mixed use project, these spaces should be changed from long term parking to two hour parking to allow turn over parking for customers and visitors.
  - 2.** Block face 24D - convert to two hour
  - 3.** Parking on block face 24B appears to be unrestricted. This should be two hour parking.
- D.** In areas where there is little or no demand for customer-visitor parking, long term on-street parking can be used to add to the overall long-term parking supply. Long term on-street parking is appropriate in areas that are farther away from the core shopping district. We recommend converting the following change.
  - 1.** Block face 9A - if new traffic signal is installed convert on-street parking back to angled parking to help with the parking demand around Central High School.
- E.** In addition to the off-street options residents have, consider allowing on-street residential permit parking between the hours of 6:00 P.M. and 8:00 A.M. The permit parking areas would include all on-street spaces that are not directly in the core business area. The recommended residential on-street permit parking areas are spatially resented on **Map 6** located on **page 44**.
  - 1.** This recommendation is pending due to legalities and research into state law.
  - 2.** To make issuing the permits easier for the city it is recommended that the permits be issued on a quarterly or yearly basis. The permits would be pro-rated, though not refundable. We recommend that when a resident purchase the permit for the entire year that the permit be sold at a discounted rate (\$280 vs. \$300). All revenue would go into the parking system.
    - a.** Quarterly cost of \$75.00
    - b.** Yearly cost of \$300 (pro-rated or discount for entire 12 months and non-refundable)
    - c.** Permits are only valid for one vehicle and are not space specific.



3. Parking enforcement hours would need to be changed from 8:00 A.M. - 5:00 P.M. to 8:00 A.M. - 6:00 P.M. to make sure that residents vehicles are moved in the morning and are not parking on-street at 4:00 P.M. and staying all evening.
4. The ordinance for street cleaning will still apply.

Responsibility: Grand Forks

Cost: Signs covered under Recommendation 5, permits would require extra parking enforcement, staff hours to distribute, and marketing costs covered under Recommendation 6.

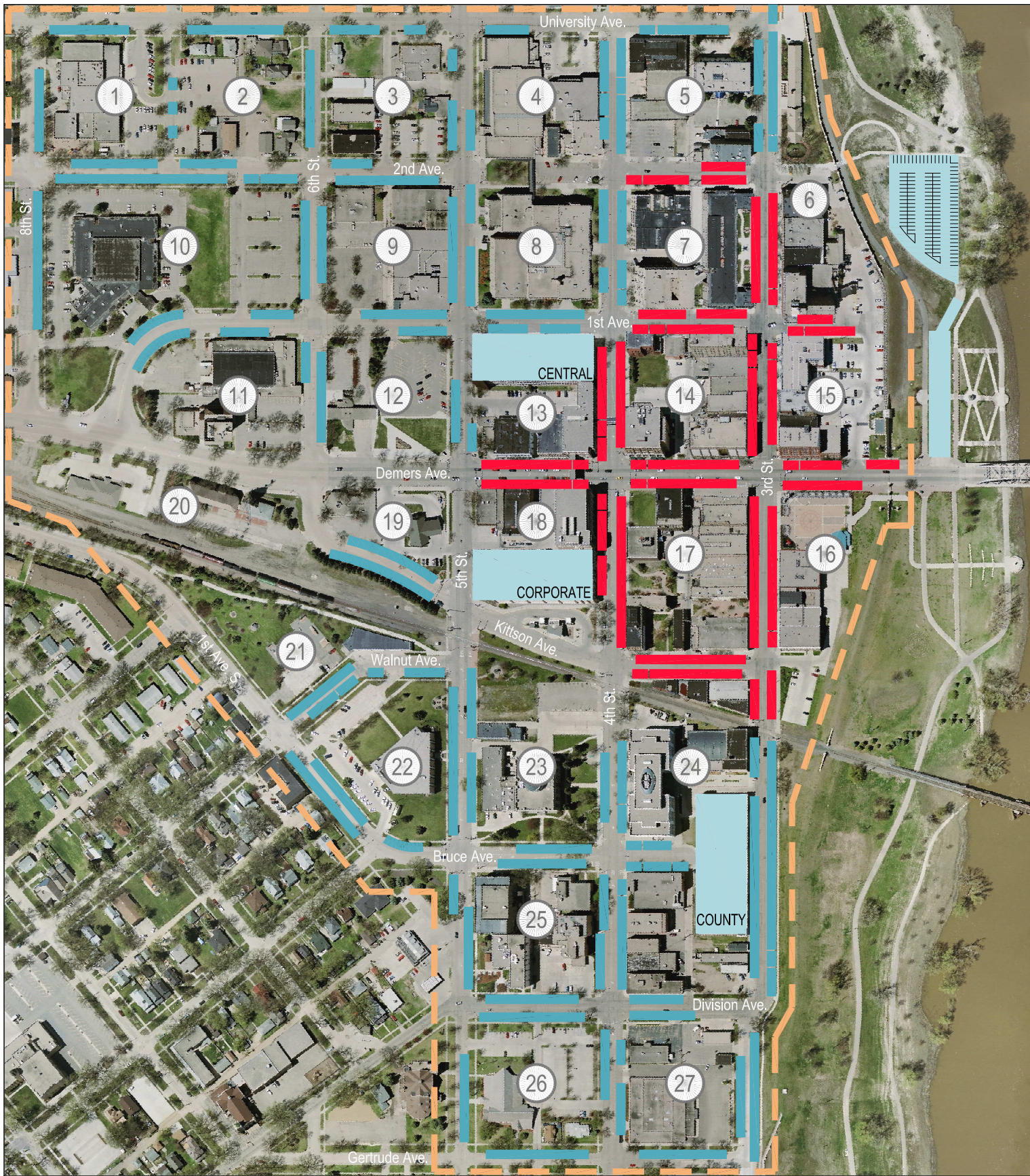
**Off-Street Parking:**

- A. Consider working with the Army Corps of Engineers to develop a second entrance to the parking lot in the Greenway along the river. There are approximately 131 (the lot was re-striped August 2011) parking spaces in this lot that are rarely used. The pedestrian entrance at the end of 2<sup>nd</sup> Avenue could potentially be widened to allow for both vehicular and pedestrian paths to and from the parking. This would make this parking area more assessable and allow this area to be used for employees, long term customer parking and special events parking.
  1. This lot and the pedestrian pathways leading to the downtown would need to be well lighted to encourage use of the lot.
  2. Signage would be needed to direct people to the vehicle entrance to this lot.
- B. The location of customer/visitor spaces in the parking ramps is inconvenient and confusing. In addition, the practice of offering reserved parking to all monthly permit holders has a direct impact on the shared use capability of the parking ramps and does not allow the city to oversell permits (typically five to 15 percent). In order to take advantage of the typical attendance patterns which account for vacations, people attending out of office functions, and other absences there are recommendations to change the allocation of parking in the ramps detailed in 15 Parking Ramp Recommendations.
- C. The two hour parking in the ramps should be converted to three hour parking to provide parking for customers and visitors who want to spend more time in the downtown.

Responsibility: Grand Forks

Cost: Signage is covered in Recommendation 5, allocation in the ramps is minimal and the second entrance to the greenway is to be determined. Costs to widen the entrance to the Greenway lot to be determined.





# DOWNTOWN GRAND FORKS PARKING STUDY

GRAND FORKS, NORTH DAKOTA



**RICH  
& ASSOCIATES**

**Parking Consultants  
Architects - Engineers  
Planners**  
21677 Northwestern Hwy., Suite 208  
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Lutz, Florida  
Tel: 813.945.9860  
www.RichAssoc.com



05-17-11



**BLOCK  
NUMBER**

## LEGEND:

RESIDENTIAL PARKING PERMIT BOUNDARY

ON STREET PARKING

NO PARKING

ELIGIBLE PARKING

OFF STREET PARKING

AVAILABLE 24 Hr. PARKING

Sheet Title:

# RESIDENTIAL PARKING PERMIT PROGRAM

MAP Number:

# MAP 6

Pg. 44



## **8. Special Events Parking Plan**

The need for adequate and quality event parking will enhance visitors' overall downtown experience.

- A.** Rich and Associates recommend that a plan be developed for parking during special events. This plan should include a remote lot location (public school, church, city or county owned lot) and if necessary an agreement with the lot owner, as well as some form of shuttle service possibly arranged with the local transit service, or school.
  - 1.** Temporary signs should be designed to direct traffic to the location of the lot and signs should be developed to direct pedestrians to the event and back to the parking areas. A marketing plan should be developed to spread the word to the community before the special event. These measures will help alleviate traffic directly around the special event.
  - 2.** Use the city's website to market the special events parking plan and parking areas.
  - 3.** If an additional vehicular entrance is cut through the flood wall to access the parking along the Greenway, this lot is a good location for special event parking. Currently, this lot is difficult to use as special event parking due to only one entrance/exit and the volume of traffic on Demers making it difficult to exit.

Responsibility: Grand Forks

Cost: Marketing is covered in **Recommendation 6**, \$500 - \$1,200 for temporary signs and additional entrance to Greenway is covered in **Recommendation 7**.

## **9. Discourage the Development of New Private Parking Lots in the Downtown:**

A parking system works best when the parking is shared and the city is in control of 50 percent or more of the available parking in the downtown. This is important because it allows shared use parking. The city controls almost 65 percent of the parking in the study area. This allows Grand Forks to manage, regulate and enforce the parking more efficiently, keeping these costs down and benefiting the downtown economically.

In general, Rich and Associates recommend minimizing surface lots and large breaks between buildings to promote walking in the downtown. Surface lots should be located behind buildings or on blocks where the city is not trying to create density. People tend to walk further without complaints if the walk is pleasant, enjoyable and engaging. Landscaping, murals, art and decorated store windows tend to create an experience worth walking. Parking areas are important, though large parking lots without landscaping can be viewed as unsightly, unsafe and discourage pedestrian activity.

- A.** Where possible, the city should work with private parking owners to allow for public shared use of private parking. This allows for the use of an underutilized asset after hours and possibly during the day if the parking is underutilized. This recommendation will assist in lessening the amount of towing occurring in private lots. For example, the city should work with Central High School to use the lot on block 12 after 5:00 P.M. to provide

1. Provide signage for the parking areas that denote that they are available for public parking after 5:00 P.M. for example and include these parking areas on the maps and website marketing parking.
  2. The city would agree to indemnify the lot owner and would provide cleaning of the lot and other maintenance related services to compensate for the city's use of the lot.
- B.** The one exception to this recommendation would be Central High School. Their attempt to find adequate parking for staff and students is important. Additionally, it would benefit the downtown at night if the High School parking spaces were made available to the general public.

Responsibility: Grand Forks

Cost: To be determined

## **10. Stripe all On-Street Parking Spaces:**

Striping the on-street parking spaces will help customers from being blocked in due to vehicles parking too close and usually provides more parking than if the spaces were not striped. Also, striping and maintaining the striping and curb painting will give the driver an indication that on-street parking is allowed on that block face. This is important where there is unrestricted and unsigned on-street parking. Parking efficiency is maximized with a clear distinction of the parking space and enforcement can be completed with handheld ticket writers.

It is understood that during the winter there may be some areas where curb paintings or on-street striping may not be visible due to snow. Additionally, it is understood that pavement markings wear faster when an abrasive material such as sand or salt is used in dealing with snow and ice. This is a difficult issue that many communities who receive large amounts of snow. Overall, the overall benefit of striping and curb paintings outweighs the negative winter effects.

- A.** Rich and Associates recommends that Grand Forks stripe all of the on-street parking spaces in the core downtown to make enforcement more efficient as well as making it easier for customer/visitors to park without taking more than one space. This makes enforcement more efficient with the handheld units and allows for the issuance of an anti-shuffling ordinance.
1. The markings could be a "T" versus complete striping to help cut costs.
- B.** This report also recommends that Grand Forks make all curb paintings and signs consistent, such as no parking zones, and loading zones. This could be done with painting rather than multiple signs. Obviously, the harsh winter conditions make the maintenance of the curb painting an on-going issue and cost.
1. There are multiple signs on some block faces indicating that parking is not allowed. Curb painting would eliminate the use of so many signs.
  2. It is difficult to tell where a vehicle should not park on some blocks that do not have signs or curb paintings. There were vehicles parking too close to intersections blocking sight lines and making it difficult for pedestrians to cross. These vehicles were not being ticketed even though the vehicles were clearly parked illegally.



Responsibility: Grand Forks

Cost: Approximately \$15 - \$30 per space the first time and every one to two years in maintenance.

## **11. Parking Enforcement:**

Parking enforcement is an important component of a parking system that is designating on-street parking for customers and visitors. By differentiating the time limits of off and on-street parking, we are helping to ensure that customers and visitors always have adequate and convenient parking. However, it is necessary to enforce the parking time limits in order for the allocation to work.

There are two part time Community Service Officers (CSO's) who conduct parking enforcement on opposite days. The CSO's currently have multiple tasks they are responsible for along with parking enforcement. When conducting parking enforcement, the CSO's chalk tires and write tickets by hand or with a handheld device.

A. An enforcement officer should be able to monitor between 600 and 800 parking stalls per shift. Parking enforcement should be carried out by a parking enforcement officer routinely from 9:00 A.M. until 6:00 P.M., five or six days per week.

1. Grand Forks has 2,007 parking spaces (on-street and off-street) that need enforcement. There are two part time Community Service Officers (CSO's) who conduct parking enforcement on opposite days. It is recommended that the two CSO's enforce three days a week on the same days in order to cover the spaces identified above. The days should alternate each week not following a pattern.

In FY 2010 there were a total of 5,500 parking tickets issued in the downtown with 3,000 of those for overtime parking. Rich and Associates projected the number of tickets that could be written with the proposed changes to enforcement. On the conservative side, there is the potential for the enforcement officers to issue 4,680 overtime parking tickets (versus 3,000 issued in FY 2010). Assuming 4,680 tickets at \$20 per ticket and a 82 percent collection rate this would equal approximately \$76,750 per year.

*\*Assumes handheld ticket recommendations*

2. The enforcement time should be changed from 8:00 A.M. – 5:00 P.M. to 9:00 A.M. – 6:00 P.M. This would help keep evening employees and residents from parking on-street at 4:00 P.M. and staying in the space all evening without the risk of a ticket.
3. Officers should be dedicated only to parking enforcement duties during their shift in order to ensure that proper routing and timing or stall observation is consistent throughout the day. This may require additional staff to cover their other duties.
4. Routing is the pattern that the officer enforcement walks. Time limited public parking stalls should be observed once per duration maximum or at least two to three times daily. Specifically, a two-hour parking space should be observed by an officer every two hours from 9:00 A.M. until 6:00 P.M., on the days they are enforcing. Routes should be developed and rotated on a weekly basis so a pattern is not set.

**Guidelines on efficient and effective parking enforcement include:**

- Routing of officers so that a complete circuit is followed every two hours in the downtown area.
- Officers should use handheld parking ticket writers that track license plate numbers and this would replace chalking.
- Every parking space, whether occupied or not, is then entered into the handheld.
- Staffing should be at a level adequate to assign one officer to monitor up to 600 - 800 parking spaces per shift.
- Parking enforcement officers should be dedicated to parking duties, only being re-assigned during emergencies or special circumstances that may arise.
- Street signs should indicate that parking is enforced from 9:00 A.M. - 6:00 P.M. or whatever is ultimately decided.

Responsibility: City of Grand Forks/Police

Cost: Approximately \$35,000 annually per full time CSO and this cost would have to be pro-rated based on the recommended schedule.

**12. Handheld Technology for Enforcement:**

Rich and Associates recommends that Grand Forks purchase new software for the handheld units to enforce parking and begin using handheld ticket writers for electronic chalking. The handheld units increase efficiency by storing the license plate numbers of vehicles, thus negating the need to physically chalk tires. This will allow enforcement to occur during inclement weather, whereas marking tires with chalk cannot be done in the rain or snow because the chalk gets washed away and does not mark well on a wet tire.

The software can identify multiple infractions within a given time period and notify the CSO's. The handheld software can assist in tracking fine payment. Handheld units can also store a "hot list" with information such as stolen vehicles, warrants, previous offenders, and unpaid tickets. When a license plate gets put into the handheld, the plate is run through a database. If it is an offender the handheld responds with the appropriate information. If a vehicle needs to be booted or towed because of multiple unpaid tickets, the information will come up on the screen of the handheld. This helps make the entire parking system more efficient and enforcement more effective.

Responsibility: City of Grand Forks/Police

Cost: \$5,000 for each unit with docking station and charger, \$15,000 to \$20,000 for software (one time purchase).



### **13. Anti-shuffling Ordinance:**

During the turnover and occupancy analysis there were a few people noted moving their vehicles after two hours to avoid a ticket. Grand Forks currently has an ordinance requiring vehicles to move after 24 hours though there is not an ordinance against anti-shuffling.

*City Ordinance: Twenty four (24) hours shall have elapsed and said vehicle shall not have been moved for a distance of more than on (1) block or three hundred (300) feet, whichever is less, than said vehicle shall be construed to have remained stationary.*

Consider developing and implementing an anti-shuffling ordinance to stop employees from taking up the valuable customer/visitor spaces on-street. An example of an ordinance used in La Crosse, WI is detailed below.

*In any area where parking on the street or in a parking ramp or lot is restricted to two hours or less at a time, and signs are properly posted to indicate such parking time limitation, any vehicle parked along a single block face, as herein defined, or in the same parking ramp or lot in excess of the time restriction, shall be considered to have continuously parked, and shall be subject to citation for violation of such parking time restriction. A block face shall be defined as one side of a single street between two consecutive intersecting streets. For example, the south side of the 300 block of Main Street would be a single block face, and the west side of 3rd Street between Main Street and State Street would be a single block face.*

*The penalty for violating the provisions of Paragraph (1) shall be a forfeiture of \$130.00 plus applicable costs. (Ord. #3822 - 3/11/99; effective May 3, 1999)*

*La Crosse Municipal Code Chapter 9, Traffic Regulations 9.06 PARKING, STOPPING, OR STANDING, 1,2*

Responsibility: City of Grand Forks/Police

Cost: Minimal, staff time to write ordinance.

### **14. Create a Sinking Fund for Maintenance and Upgrades to Parking Lots:**

A best practice in parking management is that cities have a repair and replacement sinking fund for the long term maintenance of a parking system. This repair and replacement fund helps ensure that the city has funds available to address repair issues in a timely fashion avoiding concern over how the repairs will be funded.

- A. Create a sinking fund for maintenance and upgrades to the city lots and parking ramps and begin to put aside \$50.00 per parking space per year or \$38,000 per year.
- B. Further, it is suggested that the net revenue from parking tickets should be used to cover parking operating expenses and any net revenue go back into the downtown assessment area for things such as parking enforcement, sidewalk cleaning, signs, lighting, banners etc. Parking revenue is then helping to pay for the upkeep if the downtown.

Responsibility: City of Grand Forks

Cost: \$40,000 annually.

### **15. Parking Ramps:**

The City of Grand Forks has three parking ramps, Central, Corporate, and the County Ramp. All three ramps are open to the public and have reserved parking by space. Though owned by the county, the County Parking Ramp is managed by the city

Currently, the ramps in Grand Forks are underutilized. During the occupancy study conducted by Rich and Associates, the Central Ramp peaked at 49 percent occupancy, the Corporate Ramp peaked at 49 percent occupancy, and the County Ramp peaked at 68 percent occupancy. The underutilization is due in part to the way permit parking has been sold. Paying for a permit reserves a specific space (or group of spaces for an entity such as the high school) for the person. This negates the ability of the city to oversell parking.

The following recommendations cover signage, lighting and allocation policies to help increase the occupancy of the ramps and aid in decreasing the perception that all parking is reserved and the ramps are scary and dark places. Parking ramps are often the last choice of parking for visitors in a downtown. Typically on-street parking is the first choice due to convenience and proximity to their end destination, surface lots are second choice and a parking ramp is the last choice. This makes it even more important for parking ramps to be user friendly, well signed and lighted. If there is a perceived security risk in the ramps people will not park in them.

### **Parking Ramp Signage**

The fact that the parking ramps are not well identified by name or the type of parking that is available was discussed in Recommendation 5 regarding signage. There are also issues with signage within the parking ramps

The signage in the parking ramps in some areas is difficult to see. There are several signs that are competing with outside light and are unreadable until a vehicle is close to the sign. Updating wayfinding signage in the ramps will help direct parkers to the correct parking locations.

All ramps should have clearly visible signs at the entrance that include the name of the parking area, hours of operation and durations of parking allowed in the ramps. All floors should be clearly numbered and there should be pedestrian reminders near the exits of each level. Signs should clearly lead patrons to the correct level for parking and each type of parking should be clearly labeled (reserved, permit, two hour, and long term parking).



**Best practices for parking signage:**

- Color coding of parking areas (customer/visitor areas by length of stay restrictions, employee parking etc) is a good visual reminder for parkers and can be used on signage. (see photo)
- Color coding of parking floors with level number designations.
- Consider naming floors instead of numbering them to help parkers remember where they parked.

*Candy stripe*



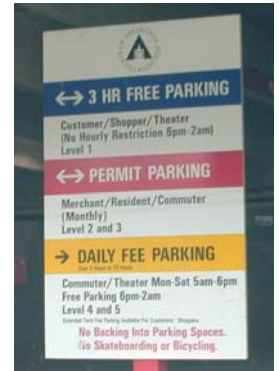
*Color coding and level designations*



*Color coding and level designations*



*Example of color coding parking areas*



- Candy stripe (yellow and black) columns at the end of aisles, both sides of drive aisles and cross aisles to further indicate where aisles are located.
- Wayfinding signs should be hung below the ceiling, signs should leave a clearance of 7'6" (8'4" for van accessible areas)
- Signs at the ends of the ramp that compete with daylight should be illuminated both during the day and night.

**Recommendations**

- Install signs on the exterior of the parking ramp that are perpendicular to the building that identify the name of the parking ramp and that public parking is available.
- Color code parking areas and install signs at the entries that tell parkers what color denotes which parking type and include any time limitations on the spaces (ie two hour parking).
- Add candy-stripping on middle row end of aisle columns.
- At locations where the reflector signs are not easily seen due to daylight, consider LED signs.

Responsibility: City of Grand Forks

Cost: Signage estimated to run between \$25,000 and \$35,000 per ramp.

### **Parking Ramp Lighting**

As previously noted, several stakeholders noted that they get complaints of parking ramps being perceived as dark, scary and unattractive. Lighting can help change this perception in a parking ramp. The lighting recommendations are covered in Recommendation 2.

### **Parking Ramp Reserved Parking**

The parking ramps are confusing especially for new visitors to the downtown. Stakeholders stated that the customers are often confused and think all parking spaces in the ramps are reserved because of the reserved parking spaces that they see when they first drive into the ramp.

Rich and Associates recommends that permit parking should be removed from the first floor and be placed on the upper floors of the ramps. This leaves the most convenient spaces for customers and alleviates any confusion on where customers can park. As discussed, the current policy for permit parking needs to change to reflect the fact that not reserving spaces allows either more permits to be sold in the ramps or would allow the city to reduce the number of permit spaces and add more customer/visitor spaces. Reserved spaces would still be available, but the price should reflect that they are in fact reserved for that permit holder and the city is not able to oversell those spaces.

### **Summary of parking allocation recommendations:**

- A. Create three types of permits
  - 1. Roof permit (lower cost permit)
  - 2. Regular Monthly Permit (current price)
  - 3. Reserved Space (premium cost...\$55 to \$70 per month)
- B. Roof permits are any spaces that are not under cover. A specific permit will be issued for this parking. Allowances need to be made for the winter time when snow may be plowed into the spaces. Consider reducing the number of roof permits in the winter.
- C. Regular permits would allow a permit parker to park in any non-reserved space other than the three hour and roof parking.
- D. Move reserved spaces to the second level and above. Reserved spaces would have a sign stating that the sign is reserved and have a number corresponding to the reserved space number.
- E. Regular permits and Roof permits could be oversold by five to 15 percent. The City should monitor occupancy on an on-going basis, starting with a five percent oversell and then increasing it based on results of the occupancy counts.
- F. Customer/visitor time limited (three hour) spaces should all be on ground floor unless there are agreements to locate those spaces elsewhere in the ramp (this occurs in the Corporate Ramp).
- G. Based on the recommendation to color code parking areas, each parking space would not require a sign. Signs could be spaced along a row of customer/visitor spaces.



### **Conditions of the Parking Ramps**

Rich and Associates reviewed the conditions of each parking ramp. The review was limited to a visual review of the current conditions and included details from previous reports on the conditions of the ramps that had been provided by the city. It is imperative that the parking ramps be maintained. Deferred maintenance in an exposed building such as a parking structure, where it is exposed to temperature extremes, water and salts can reduce the useful life of a valuable asset in a downtown.

There are two options for funding the repairs; either the city can fund them directly and not include them as a recoverable capital repair or the repair costs can be part of the annual general operating assessment. Either way, the city will more than likely need to borrow funds to make the repairs for the Central and Corporate Ramps

### **Central Parking Ramp**

The Central Ramp was built approximately 33 years ago. The structure is steel frame with a cast in place floor slab. A conditions study was completed for the city by *Widseth Smith Nolting and Associates, Inc.* in 2008. This study looked at all of the systems in the parking ramp and developed recommendations for upgrades and repairs. The recommendations included repairs to existing cracking and spalled/delaminated concrete, joint replacement/repair, MEP issues, roofing issues, and elevator replacement/repair.

Based on information provided by the city, the interior of the ramp has been painted and re-lamped with new light fixtures. There has been little or no crack repair completed. Rich and Associates noted that there are many locations where there are cracks in the supported floor slab, exposed reinforcing steel in the slab, expansion and building joint issues and pedestrian access issues. With this information, Rich and Associates recommends that Grand Forks do the following;

- A. A comprehensive conditions study needs to be completed on the structural system, specifically the supported slab. At a minimum this should include a chain drag for determining any delamination and to map out specifically the areas of the slabs that need repair or replacement. Also, the visual cracking needs to be quantified on drawings. Based on the findings, repairs need to be made on the floors to maintain the integrity and to hasten any further damage.
- B. The repairs should be documented on as-built drawings and the city should conduct an annual inspection using city staff to walk the parking structure to identify any additional cracking or delamination and to note those locations on a set of drawings. Based on the severity of the conditions, make repairs annually. The annual inspections will allow the city to monitor the progress of cracks and any spalling or delamination.
- C. It appears that the expansion joints need to be either repaired or replaced. Further, the expansion joints need to be cleaned on a regular basis, especially since the city uses sand in the winter. Sand and grit gets into the joints and can cause premature damage of the actual joint.
- D. Make the other repairs identified in the 2008 report.
- E. The solid walls at the pedestrian ingress and egress point on the east and west face of the ramp should either be eliminated or replaced with a system that is more open. The concrete

walls make the walkway look narrower than it is and they also provide a place for someone to hide creating a security concern.

Responsibility: Grand Forks

Cost: Costs cannot be verified until study is completed, all costs are approximate. Approximate costs, study \$15,000, floor repairs \$220,000, elevator repair \$50,000, walkways \$25,000, and joints \$75,000 (totals = \$395,000).



*Narrow pedestrian entrances and exits in the Central Ramp.*

### **Corporate Parking Ramp**

The Corporate Ramp was built approximately 11 years ago. The ramp was constructed using a precast concrete structural system. A conditions study has not been completed for this ramp. The lighting in this parking ramp is very poor as identified in Recommendation 2. The city has plans to replace the light fixtures in the near future. Rich and Associates identified several issues that need immediate attention in order to minimize further deterioration.

The following are the issues identified and recommendations;

- A. The city should have a conditions appraisal completed for this ramp.
- B. There are issues with how the parking floors are draining. It appears that the issues have to do with the pitch on the floor and the location of floor drains. Though we did not inspect the drains, there may also be issues with the drains being partially blocked. The city should have a design professional with experience in parking ramp design look at the current drainage and make recommendations for corrective actions.
- C. The floor drain pipes are leaking due to freezing that has cracked the pipes. Once there is a thaw, these cracked pipes cause water to leak onto the upper floors and is causing flooding on the ground floor. The main concern is the down pipe on the east side of the parking structure in the middle column line at the crossover. Water draining onto the supported floor is getting into the building joints and then freezing. The expanding ice is damaging the precast column and the inverted tee beam at the crossover.

Rich and Associates reviewed this problem with the city and inquired about heat trace on the piping as this does not appear to be in place. The city stated that the issue appears to be that

where the drain pipes go into the ground that the water is freezing underground and causing the water flowing into the drainage system to back up and then freeze.

Rich and Associates recommends that the city immediately repair the existing drain pipes and install heat trace. The city must also investigate where the drain pipe goes underground to address the possible issues that may be there to eliminate any freezing.

- D. In a precast parking ramp there are more building joints since there is a caulked joint between each double tee. These joints need annual inspection and periodic repair. There appeared to be several locations where the joints need to be repaired/replaced. The life of these joints is generally five to seven years so these joints may have exceeded their useful life.
- E. Several of the expansion joints need repair. Similar to building joints, expansion joints have a useful life of seven to 10 years and it is probably time that these be replaced. Also, the use of sand in the winter affects the expansion joints and they must be cleaned on a regular basis.
- F. There was some cracking in tees observed from the underside of the floors. There was efflorescence coming from the cracks which indicated that these cracks are leaking moisture. These cracks should be identified and repaired.
- G. The repairs should be documented on as-built drawings and the city should conduct an annual inspection using city staff to walk the parking structure to identify any additional cracking, joint issues and water leaking and note those locations on a set of drawings. Based on the severity of the conditions, make repairs annually.

Responsibility: Grand Forks

Cost: Costs cannot be verified until study is completed, all costs are approximate. Approximate costs, study \$15,000, drain repairs \$35,000- \$50,000, joints \$100,000, and cracking \$50,000 (totals = \$200,000 – \$250,000).



### **County Parking Ramp**

The County Ramp is owned by the county and managed by the city. All major capital repairs are done by the county. Rich and Associates identified drainage issues with this structure as well as expansion joint and building joint issues. The county should consider having a conditions study done.

Responsibility: County

Cost: Study \$15,000.

## **16. Parking Assessment Districts**

One of the key tasks for the parking study was a review of the assessment districts. There are two separate parking assessment districts in the downtown. The first is the Corporate Parking Ramp Construction Assessment District and the second is the Operation and Maintenance Assessment District.

The Construction Assessment District covers the remaining debt service on the Corporate Ramp. The initial cost of the Corporate Ramp was \$4,330,300. Through grants and equity, the basis for the assessment was reduced to \$1,730,300. This amount was further reduced by an assessment to the Corporate Center Buildings, funds from prior ramp fund and the city making additional payments. As of 2009, 90 percent of the project had been paid for by the city or other sources.

The Operation and Maintenance Assessment District was started sometime in the early 1980's. The assessment is based on the projected operating deficit for the parking system. Each year the city estimates revenue and expenses and any deficit is the basis for the assessment. The operating costs from the latest budget report (2009), were approximately \$248.00 per space, this number was based only on the parking supply in the parking ramps (1,096 spaces). The average costs for unmanned parking ramps in a northern climate range from \$240.00 to \$275.00 per space. The operating costs for the Grand Forks parking system are on the low end of the range.

The two assessment areas are different, though the Construction Assessment area is contained within the Operation and Maintenance area where these businesses pay both the Construction and Operation and Maintenance Assessments. There are several issues with the current system.

First, the Operation and Maintenance assessment is to the business and not the property owner. This has two impacts; as a business changes the assessment can change (since it is based on parking spaces required for that land use) and collection of the assessment in arrears is more difficult to collect. The entire collections process is time consuming and has required the city to hire a collection agency to collect on overdue assessments.

Second, the current assessment method calculates the parking spaces required by the business using the existing City Ordinance for CBD parking spaces required (parking generation ratio as discussed in the Parking Demand Analysis beginning on page 15). While this is a common method that cities employ, the City Ordinance for CBD parking requirements in Grand Forks has not been updated in at least 25 years.

The third issue is the administration of the assessments. Invoices are sent out quarterly and city staff is supposed to update the businesses and the land uses. This is difficult since there are no business licenses and depending on any changes to space, a building permit may not be required. So, unless city staff goes out quarterly to check, there may be errors in the assessments.

Based on the analysis of the existing assessment system, the follow recommendations were prepared.

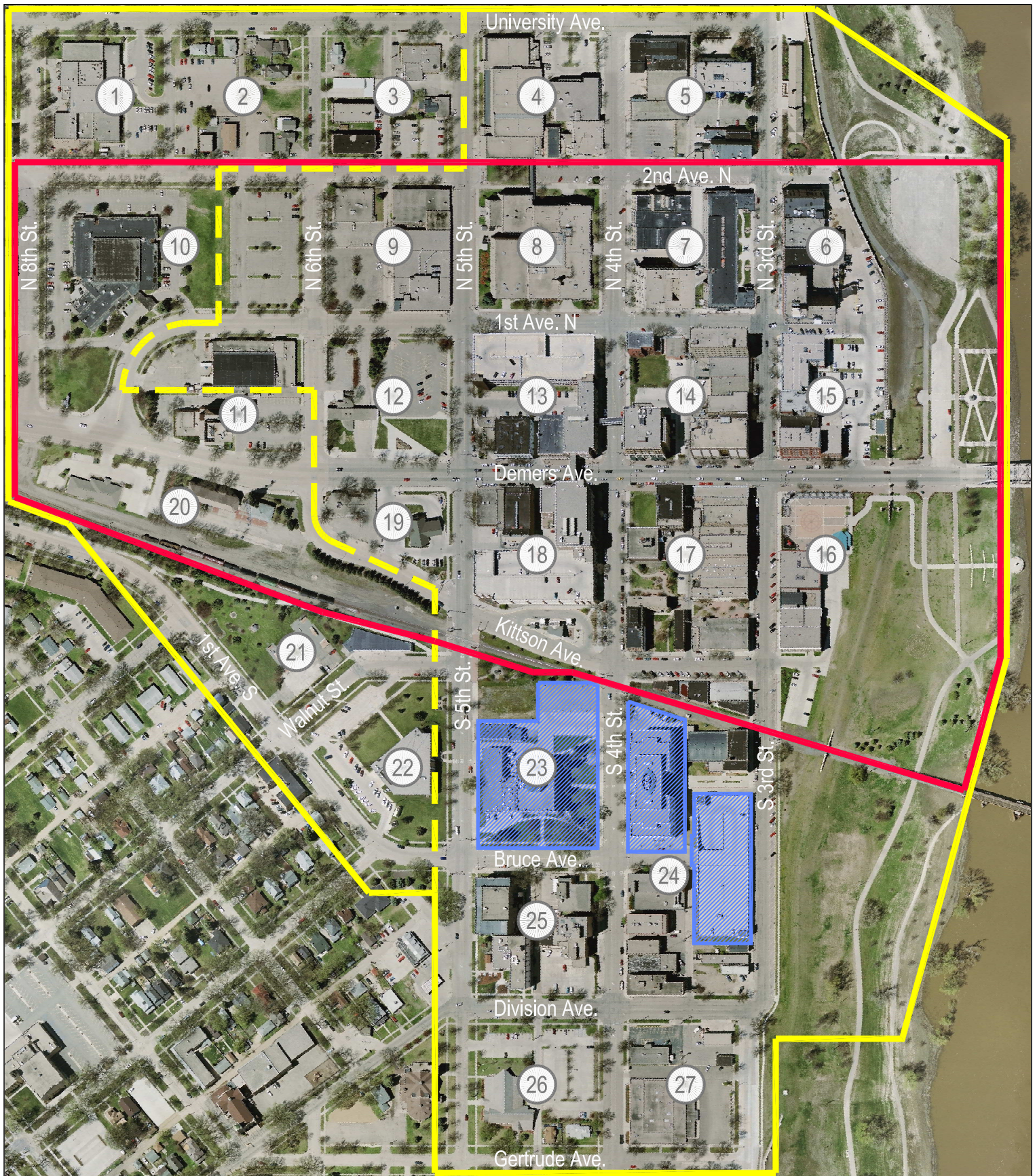
- A. The Operating and Maintenance Assessment District boundaries should be expanded slightly to incorporate blocks 1, 2, 3, 10, 11, 20, 21, and 22 as shown in **Map 7** on **page 58**. The Construction Assessment District would remain the same.

The rationale for expanding the Operation and Maintenance Assessment District boundaries is to address the fact that the parking operations are not only covering the parking ramps but also include the off-street lots and on-street parking.

Responsibility: Grand Forks

Cost: N/A





# **DOWNTOWN GRAND FORKS PARKING STUDY**

GRAND FORKS, NORTH DAKOTA



**RICH  
& ASSOCIATES**

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05-13-11



**BLOCK  
NUMBER**

## **LEGEND:**

- EXISTING - O & M PARKING ASSESSMENT DISTRICT
- NEW - O & M PARKING ASSESSMENT DISTRICT
- RAMP CONSTR. ASSESSMENT DISTRICT
- COUNTY PROPERTY

Sheet Title:

## **ASSESSMENT DISTRICTS**

MAP Number:

**MAP 7**

Pg. 58



### **Method of Assessment**

The current method of establishing what businesses will pay in the Operating and Maintenance Assessment District is cumbersome and difficult to ensure that fees are paid in a timely fashion. Also, the basis for this fee (parking generation ratios) has not been adjusted for over 25 years. The recommendation is to change the assessment system as follows;

- A. The property owner should be assessed and not the individual businesses. Based on benchmarking communities across the Midwest such as Owatonna, MN; Sheboygan and La Crosse, WI; and Dearborn, MI assessing the property owner is a best practice.
- B. There are two possible options for establishing the fees that will be paid. In either case, the parking generation ratios used to calculate the number of parking spaces needed for the land use(s) of a property need to change to the values on **Table G** shown on **page 61**. In addition, the city should change from using net square footage to using gross square footage to calculate the parking spaces needed. In either option, the city would maintain the current practice of estimating parking system revenues and expenses for the coming year and projecting any deficit which would be the amount to be collected from assessments.

**Option 1:** A property owner will be assessed for the different land uses on the property (or in the building). If the building on the property is vacant, the property will be assessed at the mixed use ratio (3.15 spaces/1,000 GSF). Vacant land will not be assessed.

Using the Assessing Departments square footage, the city should determine basement footage and apply the warehouse land use to the space or the appropriate parking generation rate if the basement has another obvious use beyond storage.

**Option 2:** The assessment would be calculated using a “form based” parking generation ratio where all land uses with a few exceptions are assessed using a single parking generation ratio. The form based parking generation ratio for Grand Forks would be the mixed use ratio of 3.15 spaces per 1,000 GSF. If the building on the property is vacant, the property will be assessed at the mixed use ratio (3.15 spaces/1,000 GSF). Vacant land will not be assessed.

Using the form based option would eliminate the need to verify land use.

Exceptions to the form based ratio would be the high school, hotels/motels, residential, church, theater and warehouse (including basements of buildings that have storage). These land uses should be assessed using the parking generation ratios from Table E. In the case of a residential mixed use development, the mixed use portion of the project would be calculated at the formed based ratio (3.15 spaces per 1,000 GSF) and the residential at one space per unit.

We recommend Option 2 because it virtually eliminates the need verify land uses and greatly simplifies the work city staff must do.

Either assessment option will require an initial assessment of the properties. City staff would use the Assessing Departments square footage to do an initial update to the property inventory looking at all businesses on a property and identifying land uses and the square footage. If the city decides to go to a business license, this information could be used to get the land use data, though land uses that might be exempt from a business license would still require that the city verify those uses. For Option 2, this would be greatly simplified since staff would only be looking at the exceptions to the form based land uses.

- C. Assessment will be done annually and the land uses will not be updated during the year unless a property owner voluntarily comes in to self report or there is a new development which in theory should be receiving a building permit. The building permit process should require that the property owner submit the project for parking assessment.
- D. Since the property owner is assessed for parking, we recommend that the assessment be collected with the property taxes. This means that the assessment would come in December and be due in February. For tax exempt properties, they would be billed in December and payment made in January. If the property is sold, the seller needs to disclose the assessment and when it was paid.
- E. In either option, the property would receive a credit for parking spaces owned by the property owner and located on the property. Credit would also be given for parking spaces owned or long term leased (at least a one year lease, not month to month) by the property owner not located on the property as long as they were reserved for the parkers from that property in question and the property owner can provide proof of the lease agreement. This includes long term (at least one year) permits purchased from the city. This is a best practice for many communities.

**Table G: Parking Generation Ratios For Assessment**

<b>Parking Ratios</b> (Parking stalls per 1,000 gross square feet unless otherwise noted)	Established for Grand Forks (day) (3)
Office/Banks	2.85
Professional Offices	2.85
Medical Office	4.00
Retail	2.00
Retail/Secondhand, Used and Thrift	2.00
Retail/Furniture, Appliance and Floor covering stores	2.00
Mixed Use	3.15
Automobile Service Stations	2.75
Service/Beauty and Barber shops	2.75
Service/Travel agencies, Floral shops and Photography studios	2.75
Grocery (Specialty Retail )	3.76
High School	0.31
Restaurant/Bar	5.00
Hotel – (per unit)	1.00/room
Residential – (per unit)	1.00/unit
Residential for elderly	0.50/per unit
Boarding and lodging / Dormitory	1/each 2 persons
Community / Fraternal and Lodge buildings	0.63
Mortuary and Funeral parlors	2.00
Fitness center	1.80
Church Synagogues and Temples	0.20
Theater (per seat)	0.15/seat
Bowling alley (per lane)	2/per lane
Government	2.50
Manufacturing/Printers and Newspapers	0.75
Warehouse	0.20

(1) Source: City of Grand Forks Code of Ordinance, Part 1- City Code, Chapter XIV – Grand Forks Central Business District, Article 2.-Parking

(2) Source: Institute of Transportation Engineers Parking Generation Manual, 3<sup>rd</sup> ed., 2004

(3) Source: Rich and Associates Fieldwork & Surveys, Fall 2010



## **17. Possible Sale of Central Parking Ramp**

During meetings with the Downtown Parking Steering Committee and the Downtown Parking Technical Committee, the potential of selling the Central Parking Ramp to the Grand Forks Public School District was discussed. The rationale for selling the parking ramp from the committee's standpoint would be to give the school district a location to park all of their staff and students as well as transferring the operating costs from the city to the school district. This would also include the potential capital repair costs that have been identified in this report.

Assuming that the school district purchased the Central Parking Ramp (403 spaces) and parked all of their vehicles in the ramp, this would leave only 50 spaces available for public parking in the daytime during the school year. This assumes that the schools need for parking is 350 spaces (by their estimate, though they would like up to 400 spaces) and that they would no longer use the 78 space lot on block 12 that they own.

Rich and Associates questions why the school district would purchase the parking ramp even if the purchase price was discounted to take into account the on-going capital repairs that will be needed in the ramp. More importantly though, even if the school district continued to use their lot (78 spaces) on block 12, they would still need/use 325 spaces of the total 403 spaces. This would significantly reduce the number of publically available spaces during the school year to 78 spaces. Most likely, the school district would rent these spaces to permit parkers thereby eliminating the hourly public parking (customer and visitor spaces) because it would be difficult to charge for hourly parking since there is no other paid hourly parking in the downtown.

Additionally, if the school district purchased the Central Parking Ramp for staff and student parking, there is not a way to ensure that they actually park in the ramp. Currently the school district leases 165 spaces in the Central Parking Ramp, though the occupancy counts identified less than 50 percent of those spaces were being used. The study identified students parking on-street in all day spaces and in some cases in two hour spaces.

Generally, on-street parking is the first choice for parkers followed by parking lots as the second choice and parking ramps as the last choice due to the perceived inconvenience. Unless all of the unrestricted (no time limit) on-street spaces in the area were converted to two hour spaces and enforcement was significantly increased, we believe that students will still prefer parking on-street rather than in the parking ramp. In reality though, the existing unrestricted spaces could not easily be converted to two-hour spaces because the public permit spaces would most likely be eliminated from the Central Ramp (approximately 145 spaces) and will need to utilize the unrestricted on-street parking.

Finally, the potential of eliminating customer/visitor parking from the Central Parking Ramp is an issue for the downtown. When the on-street two hour spaces are full, the next choice is the Central Parking Ramp.

From a parking plan standpoint, the only way the sale of the Central Parking Ramp to the school district may make sense is;

1. The city creates a condo arrangement for the parking ramp. Under this arrangement the City would sell to the school district a portion of the ramp (the roof and next level below the roof for example) for a agreed upon price.
2. The school district would have exclusive use of their spaces and would pay their pro-rated share of operating and capital repair costs for the ramp.
3. The school district would not get all of the spaces they need in the ramp because the city should maintain at least 200 spaces for permit and hourly parking. To the extent that the city did not lease all of their permit spaces, they could be made available to the school district for the current market rate (depending on the type of permit the school district wanted based on our recommended revised permit rates).