

## **SECTION 2 – CURRENT ANALYSIS**

### **Introduction**

The Village commissioned Rich and Associates to complete a comprehensive downtown parking study that evaluates current available parking and parking demand, allocation of parking spaces by user groups, and future parking demand in the downtown based on current demand and future development scenarios. Current parking management practices were also reviewed and recommendations made for more effective use of existing parking.

### **Scope of Work**

The Scope of the analysis has several key components critical to the accurate assessment of parking in Downer Grove.

- Quantify and qualify the parking supply
- Quantify and qualify the current and projected demand for parking via
  - a. Surveys of downtown businesses and employees
  - b. Visitor surveys
  - c. Resident surveys
  - d. Commuter surveys
- Assess best practices for managing the downtown parking supply
- Assess how the existing parking supply should be best allocated among the various user groups
- Examine opportunities that could lead to traffic and parking system improvements. Identify and offer solutions to:
  - a. Parking identification and wayfinding for motorist and pedestrians
  - b. Best use of available parking (time restrictions)
  - c. Special parking needs
    - 1. CBD employee parking
    - 2. ADA parking
    - 3. Loading Zones
    - 4. Taxi Stands
    - 5. Bus Stops
    - 6. Valet Parking
    - 7. Short-Term users

8. Overnight resident visitor parking
  - d. Simplify and right size enforcement of parking regulations
  - e. Utilize technology and intelligent Transportation Systems to improve parking management
    - Identify how the various stakeholders for this project are impacted by the various alternatives
    - Attend various project meetings and presentations as required
    - Present findings to Village staff, Steering Committee and Village Council

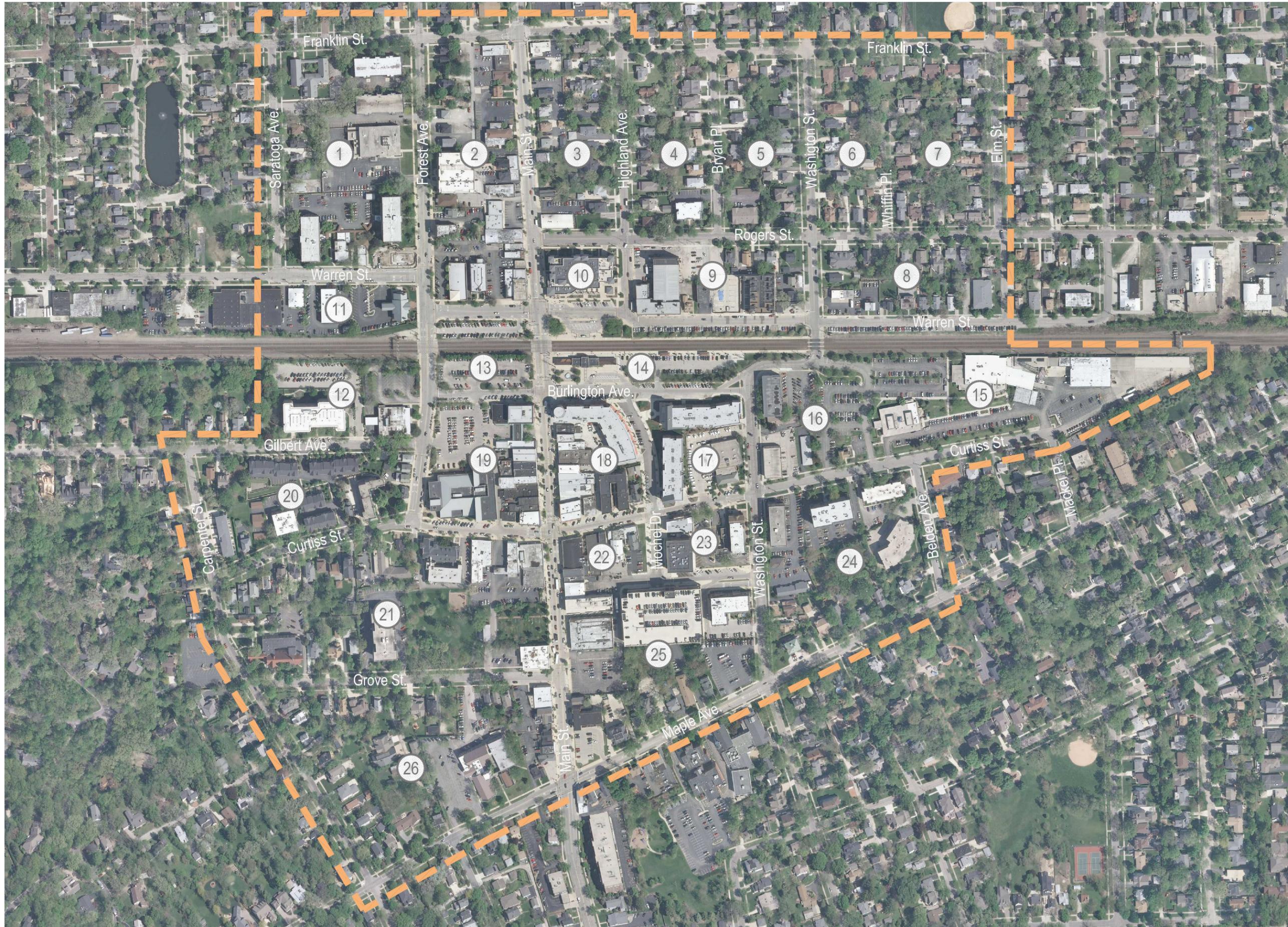
### **Study Area**

The defined study area totaled 26 blocks extending from Maple Avenue on the South to Franklin Street on the North. South of the railroad tracks, Carpenter Street served as the western boundary of the study area while Saratoga Avenue was the western boundary for the north side. Elm Street served as the eastern boundary north of the tracks while the south side eastern boundary extended to and included Village Hall.



Within these boundaries is a mixture of residential and commercial properties, public facilities including the Library, Post Office and Village Hall and both publicly provided and privately controlled parking spaces. In addition to this parking supply spaces necessary to support the businesses downtown, there are the spaces for the commuters using the downtown station at the BNSF tracks which bisect the study area.

Each block within the study area was numbered beginning on the north side of the tracks. Additionally, each block face is given a letter designation corresponding to the compass direction with the north face being labeled as A, the east face as B, south as C and west as D. Therefore, when referring to block 1A one is referring to the on-street spaces on the north face of block 1.



# PARKING STUDY

FOR  
THE VILLAGE OF  
DOWNERS GROVE

DOWNERS GROVE, ILLINOIS

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**LEGEND:**

- BLOCK NUMBER
- STUDY AREA

Sheet Title:

## STUDY AREA

File No	1125
Scale	NTS
Date	09-26-2011
Checked By	DWB



MAP Number:

### MAP 1

## **Parking Supply**

The parking supply serving the Village of Downers Grove is a combination of publicly available parking provided by the Village and privately controlled parking supply associated with various businesses or entities. The available daytime parking supply totals 2,761 spaces that exclude the 911 designated spaces used by commuters since the majority of these are generally occupied by commuters and so effectively not available for customers and visitors to downtown until much later in the day.

In evaluating the parking supply, Rich and Associates define publicly available parking as that which is available to anyone regardless of their destination whereas privately controlled parking would be only intended for customers or staff of a private entity. In this definition, the spaces surrounding Village Hall designated for staff parking only are considered private parking.

In considering the efficiency of the parking supply being able to service the community, the ratio of public to private parking is significant. This is because a ratio that has an insufficient proportion of public parking results in inefficient use of the supply because a patron is generally expected to move their vehicle at the conclusion of their visit whereas with public parking, they are generally free to walk to visit multiple destinations (within the time limits of the parking). A best practice is that the community control or have publicly available a minimum of 50 percent of the parking supply.

**Table 2A - Parking Supply Summary (Daytime)**

<b>Public Supply</b>	
	<b>On-Street</b> 645
	<b>Total Off-Street Non-Commuter Spaces</b> 592
	<b>Total Publicly Available</b> 1,237
<b>Private Supply</b>	
Non-Residential Designated	1,524
<b>Total Privately Controlled (without residential)</b>	<b>1,524</b>
<b>Daytime Parking Supply</b>	<b>2,761</b>
<b>Commuter Spaces</b>	<b>911</b>
<b>Evening Parking Supply</b>	<b>3,672</b>
<b>Residential Parking Supply</b>	<b>400</b>
<b>Total Downtown Parking Supply</b>	<b>4,072</b>

As noted previously, during the daytime hours, the 911 spaces used by commuters are removed from the publicly available parking supply. The commuters who board the trains for Chicago cannot be included in the calculated parking demand for the downtown businesses during the daytime. With this parking supply excluded, the public supply only comprises 45 percent of the downtown parking supply during the daytime hours. Although the commuter spaces are signed as available after 12:00 noon and an occasional space may be open, the location and number of spaces is not consistent. Therefore, the majority of these spaces are not realistically available until the commuters have returned and vacated the space which generally doesn't happen until much later in the afternoon.

**Table 2B - Public vs. Private Parking Supply (Daytime)**

<b>Daytime Parking Supply</b>			
<b><u>Public Supply</u></b>			
	On-Street	645	
	Off-Street (w/o Commuter)	592	
	<b>Total</b>	<b>1,237</b>	<b>45.0%</b>
<b><u>Private Supply</u></b>			
	Private Supply (w/o Residential)	<b>1,524</b>	<b>55.0%</b>
	<b>Total</b>	<b>2,761</b>	<b>100.0%</b>

In the evening, factoring for the inclusion of the commuter spaces as available to the general public, the proportion of the parking supply which is considered publicly available increases to nearly 59 percent.

**Table 2C - Public vs. Private Parking Supply (Evening)**

<b>Evening Parking Supply</b>			
<b><u>Public Supply</u></b>			
	On-Street	645	
	Off-Street (w/o Commuter)	592	
	Commuter Spaces	911	
	<b>Total</b>	<b>2,148</b>	<b>58.5%</b>
<b><u>Private Supply</u></b>			
	Private Supply (w/o Residential)	<b>1,524</b>	<b>41.5%</b>
	<b>Total</b>	<b>3,672</b>	<b>100.0%</b>

Each off street parking area (lot) is given a letter designation corresponding to the tables in **Appendix A** of this report. These tables detail the off-street and on-street parking supply separated into public and private parking as well as separated by north or south of the railroad tracks.

Much of the publicly provided parking supply is time limited with restrictions which range from two hours for on-street spaces to three hours in the off-street lots or four hours in the parking garage. There are also a few 12-hour metered spaces. Excluding the parking garage spaces, most of the 4-hour spaces are located on-street in the residential neighborhoods of the study area. As such, many of these are inconvenient for most users visiting other destinations within the downtown.

**Table 2D - Parking Time Limit Allocation (Public Spaces)**

<b>Time Limit</b>	<b># Spaces</b>	<b>%</b>	<b>Locations</b>
<b>2-Hour Limit</b>	371	43.5%	Village Hall (40), Lot C (10) + On-Street (321)
<b>3-Hour Limit</b>	135	15.8%	Lot A (5) + Forest Lot N (20) & Forest Lot South (82) + Main/Maple (28)
<b>4-Hour Limit</b>	309	36.2%	Parking Garage (143) + On-Street (166)
<b>12-Hour Limit (used by commuters)</b>	38	4.5%	Lot F Meters
<b>TOTAL</b>	<b>853</b>	<b>100.0%</b>	

**Commuter Parking Supply**

Commuter parking is a source of frustration for some members of the community. There is a perception by some that spaces used by commuters proximate to the railroad tracks would be better used by customers, visitors or employees of the downtown. There is also frustration by commuters who are unable to obtain a commuter permit for a lot in downtown Downers Grove. Instead they are forced to rely upon daily fee parking, carpooling, parking illegally or making private arrangements or even using other stations along the line which they feel do not have trains as convenient to their schedule as downtown Main Street station.

The publicly provided commuter designated parking supply totals 911 spaces per the following table. It has also been reported that some private entities (such as several churches) will lease spaces to commuters in their parking lots. The number of privately provided commuter spaces however is not formally reported to the Village.

Agreements that the Village has in place with Metra require that the Village provide at least 825 spaces. This includes a minimum of 250 daily fee spaces in the parking garage at \$3.00 per day in addition to 575 surface spaces in the vicinity of the Main Street station to be provided. Per the provided total noted below, the Village is exceeding its minimum requirement by 86± spaces.

The 911 commuter spaces represent nearly 25 percent of the total (non-residential) parking supply downtown.

**Table 2E - Commuter Parking Supply Inventory**

<b>Location</b>	<b>Non-Handicap Spaces</b>	<b>Handicap Accessible Spaces</b>	<b>Total Spaces</b>
Lot A	35	0	35
Lot B	57	9	66
Lot C	56	0	56
Lot D	73	4	77
Lot F	51	0	51
Meters (12 Hour)	38	0	38
Lot L	83	0	83
<b>Parking Garage</b>			
Daily Fee Spaces (levels 3 & 4)	374	0	374
Lot S* (Top Level)	131	0	131
<b>Total Public Commuter Spaces</b>	<b>898</b>	<b>13</b>	<b>911</b>
<i>* Commuter spaces + daily fee (after 8:00 am) + employee overlay permits</i>			



# PARKING STUDY FOR THE VILLAGE OF DOWNERS GROVE

DOWNERS GROVE, ILLINOIS



**LEGEND:**

- # BLOCK NUMBER
- STUDY AREA
- ON STREET PARKING**
- VILLAGE STAFF
- 15 MIN. (9A-6P)
- 30 MIN. L.Z. (7A-3P)
- 1 HR. FREE (6P-6P)
- 2 HR. FREE (6A-6P)
- 2 HR. FREE (9A-5P)
- 3 HR. FREE (6A-6P)
- 4 HR. FREE (6A-6P)
- 12 HR. METERS
- UNMARKED
- BARRIER FREE
- CBD OVERLAY
- POLICE
- EMPLOYEE
- VALET (5P-2A)
- VALET (7A-3:30P)
- TAXI
- SHUTTLE STOP
- OFF STREET PARKING**
- PUBLIC
- PRIVATE
- BARRIER FREE

Sheet Title:

## PARKING SUPPLY

File No	1125	
Scale	NTS	
Date	09-26-2011	
Checked By	DWB	

MAP Number:

MAP 2

### **Handicap Parking**

Another critical aspect of the analysis requested by the Village has been an assessment of the handicap accessible parking in the downtown. The number of parking spaces required is determined by Americans with Disabilities Act (ADA) regulations and the State of Illinois<sup>1</sup> which specify the number of handicap accessible spaces depending on the capacity of the individual parking lots. Based on the publicly provided capacity in each lot as noted in **Table 2F** below, the Village is providing 10 spaces less than the number of handicap accessible spaces required.

**Table 2F - Public Off-Street Handicap Accessible Parking Inventory**

<b>Lot</b>	<b>Total Lot Capacity</b>	<b>Required Accessible Spaces</b>	<b>Provided Accessible Spaces</b>	<b>Surplus / (Deficit)</b>
Lot A	52	3	0	(3)
Lot B	66	3	9	6
Lot C	66	3	0	(3)
Lot D	77	4	4	0
Lot F	89	4	0	(4)
Lot L	83	4	0	(4)
Forest Lot N	82	4	2	(2)
Forest Lot S	87	4	5	1
Parking Garage	788	16	16	0
Main/Maple Lot	29	2	1	(1)
<b>TOTAL</b>		<b>47</b>	<b>37</b>	<b>(10)</b>

### **Future Handicap**

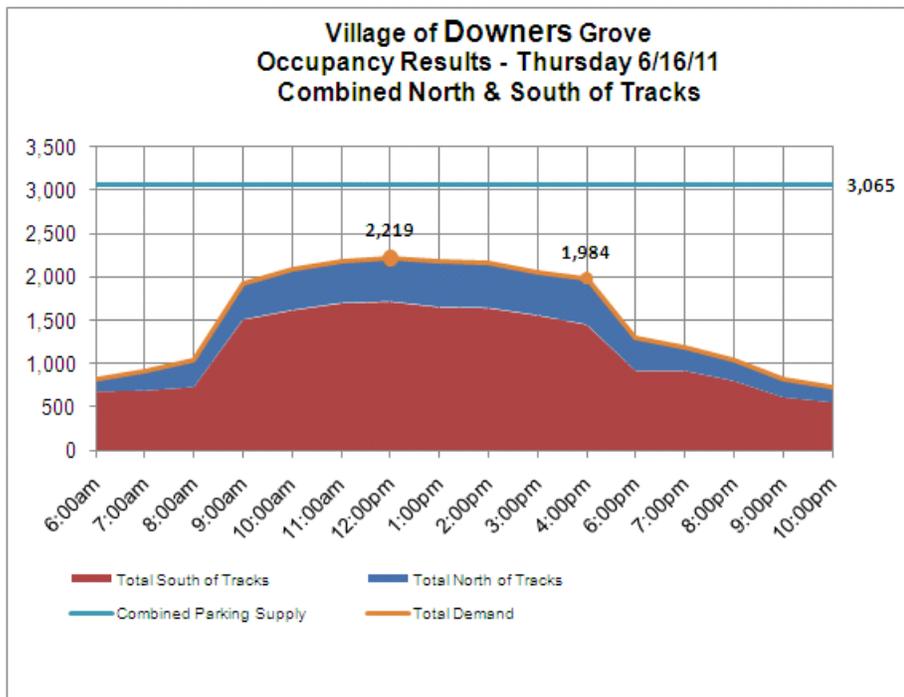
New guidelines that are being considered by the United States Access Board for on-street accessible parking may mean that additional handicap parking will be required to be provided around downtown Downers Grove beyond the 10 spaces noted above. These guidelines, if adopted<sup>2</sup>, would require providing a minimum number of handicap accessible spaces in the public right-of-way (on street) depending on the total number on-street parking spaces on the perimeter of each block. Based on Rich and Associates' field assessment of parking supply, these guidelines if adopted would mean that an additional 26 handicap accessible spaces would have to be provided in on-street spaces.

<sup>1</sup> See Appendix B for Handicap Parking Brochure from the State of Illinois

<sup>2</sup> Also see Appendix B for the proposed guidelines for on-street handicap accessible spaces

**Turnover / Occupancy Analysis**

A critical element of the parking demand determination was the turnover and occupancy analysis conducted over two days in mid June 2011. This analysis which involved hourly counts between 6:00 am and 11:00 pm on both a Thursday and a Saturday provided invaluable information on the actual utilization of both on-street and off-street parking and served as a benchmark to which the calculated parking demand could be compared. By correlating the calculated parking demand to the observed conditions<sup>3</sup>, a reasonable assessment of the required parking and the related parking generation rates by land use was developed.



**Figure A - Thursday Composite Occupancy Results**

The results of the occupancy study were separated into publicly available parking and that which is privately controlled. Additionally, due to the perceived barrier provided by the railroad tracks the results were separated into north side of the tracks and south side. The occupancy results after discounting the commuter parking serve as an important benchmark for comparing the calculated parking demand to the actually observed parking utilization to validate the calculated results.

Detailed tables showing the occupancy results are provided in Appendix A.

<sup>3</sup> After correcting for the spaces not directly observed

Public Parking

- The results showed that nearly 85 percent of the publicly available parking supply (including the commuter spaces) was occupied at peak time on the Thursday survey date.
- Excluding the commuter spaces from the analysis, then the publicly provided spaces would be reduced to about 75 percent occupied at peak time.

Private Parking

- The privately controlled parking which effectively comprises more than one-half (55%) of the available supply during the daytime hours is itself only about one-half occupied at peak time. This means that a significant proportion of the downtown parking supply is going unused. However, generally privately controlled parking is only available to patrons or staff of a particular destination. A customer or visitor using private parking is generally expected to move their vehicle at the conclusion of their visit to make the space available for the next customer.

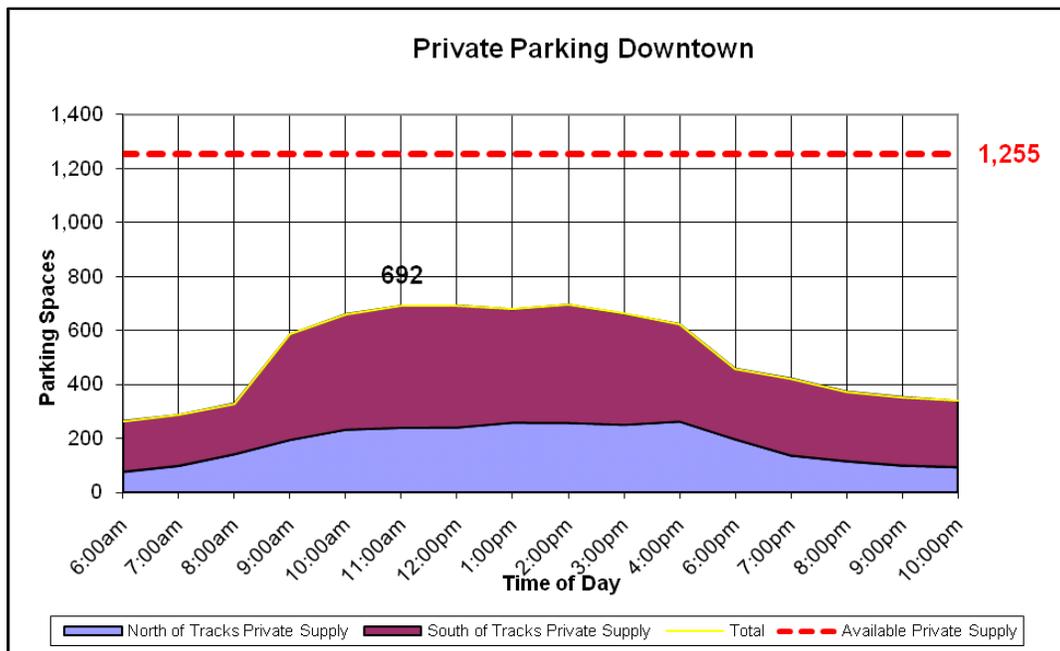


Figure B - Parking Occupancy (Weekday)

Zone Analysis

The public vs. private occupancy results presented to this point have compared these results for the downtown as a whole. A more appropriate measure is to segregate the parking into manageable “zones” which consider the realistic walking distance for patrons.

Downers Grove has a likely boundary with the railroad tracks which bisect the study area and creates a perceptual barrier between the north and south side of downtown. While in reality, several vehicle and pedestrian crossings are provided, patrons to the extent possible are more likely to want to park on the same side of the tracks as their primary destination. Therefore, the following analysis separates the results for north versus the south side of downtown.

North of Tracks Parking Occupancy

Separate occupancy results for the overall parking on the north side of the railroad tracks shows that at peak time about 63 percent of the observed spaces were occupied at peak time.

Separating these results for public versus private parking showed that the publicly provided parking on the north side was 76 percent occupied at peak time compared to only 54 percent of the privately controlled spaces. Privately controlled parking, if underutilized may present an opportunity to have commuters or perhaps downtown employees use these spaces through either individual lease arrangements or through a public/private agreement.

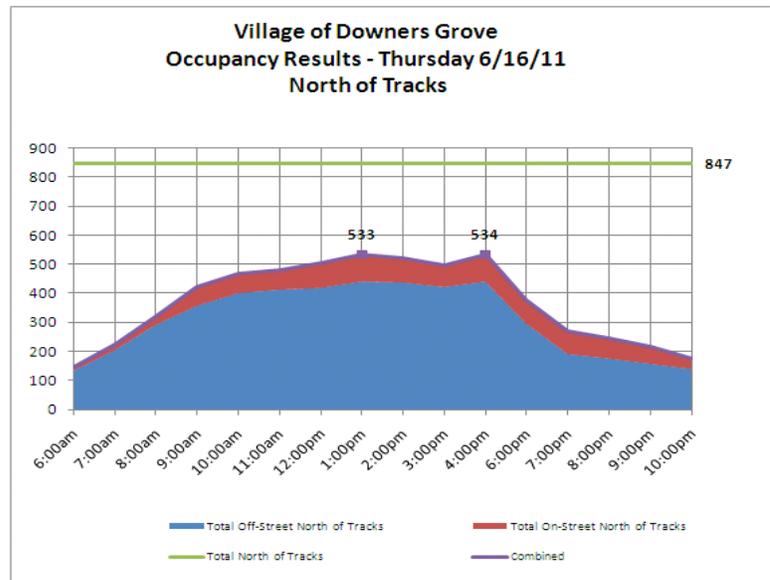
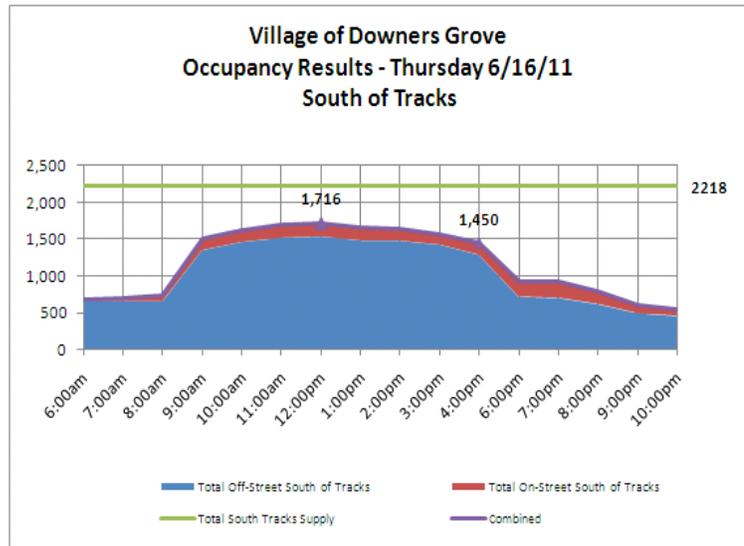


Figure C - North of Tracks Occupancy

### South of Tracks Parking Occupancy

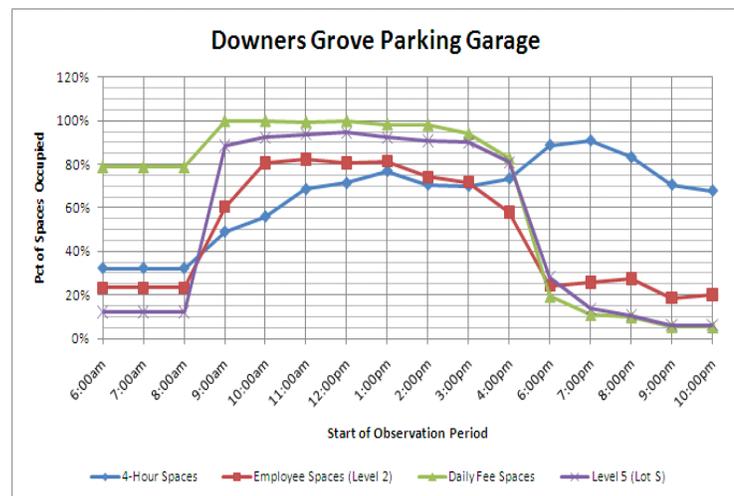
Overall results for the south side of the railroad tracks showed a greater overall proportion (77%) of the parking spaces occupied at peak time with a significant increase in the proportion of public spaces occupied (87%) while the percentage of privately controlled spaces occupied was only slightly higher than on the north side at 59 percent.



**Figure D - South of Tracks Occupancy**

### Parking Garage Occupancy

The largest concentration of parking in downtown Downers Grove is focused in the existing parking garage. While many residents noted in their comments that they felt that the location of the garage was inconvenient to many users, the garage is well used and had peak occupancy in excess of 90 percent. Daily fee spaces on levels three and four of the parking garage used by commuters (under an agreement with Metra) reached 100 percent occupancy relatively early in the day while the employee designated spaces on level two only achieved a maximum of 80 percent occupancy by late morning. Level 5 of the garage is a designated commuter permit lot (Lot S). It also provides employee parking and daily fee parking (but not until 8:00 am) achieved an observed occupancy of about 95 percent of the spaces occupied at peak time (12:00 to 1:00 pm).



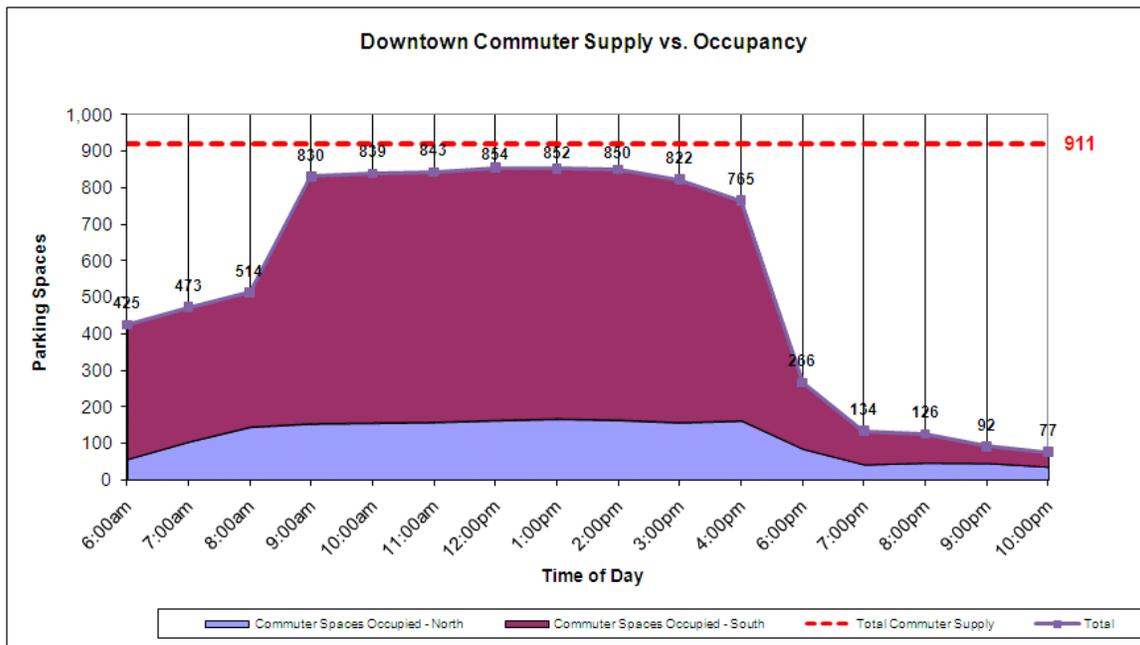
**Figure E - Parking Garage Occupancy**

The four-hour shopper spaces (plus handicap parking) on the ground floor and ramp to level 2 showed a steady increase during the day but didn't achieve its maximum utilization until early evening.

Commuter Parking Occupancy

Occupancy results of the 911 commuter designated spaces found that about 93 percent were occupied at peak time. Vacant commuter parking was generally located on the top level of the parking garage as well as some spaces in Lot D. As shown in the graph below the occupancy of the designated commuter spaces peaks relatively early in the day and then remains constant until late afternoon. The commuter analysis has also shown that the vast majority of commuters boarding during the morning have arrived at the Main Street station by 9:00 am. This may mean that any spaces that have not been occupied in the commuter permit lots could be made available much earlier than the presently permitted 12:00 noon.

Agreements in place between the Village and Metra appear to indicate that the Village is obligated to provide 825 spaces for Metra commuters and that the 250 daily fee spaces leased by Metra in the parking garage are to be reserved exclusively for commuter use between 6:00 am and 3:00 pm Monday through Friday and that the \$3.00 daily fee can only be adjusted with Metra’s approval.



**Figure F - Commuter Parking Occupancy vs. Available Supply**

### Occupancy Analysis by Location

The results demonstrated by the occupancy analysis to this point have focused primarily on the Thursday survey date because that was the busier of the two survey dates. The analysis has also focused on the parking by public versus private designation and on which side of the tracks it is located. The analysis showed there was a daily peak coincident with approximately 12:00 noon to 1:00 pm observation period

The maps on the following six pages demonstrate the occupancy rate in the on-street and off-street parking locations as observed on the Thursday and Saturday survey dates. These are designed to demonstrate varying utilization based on the following scale:

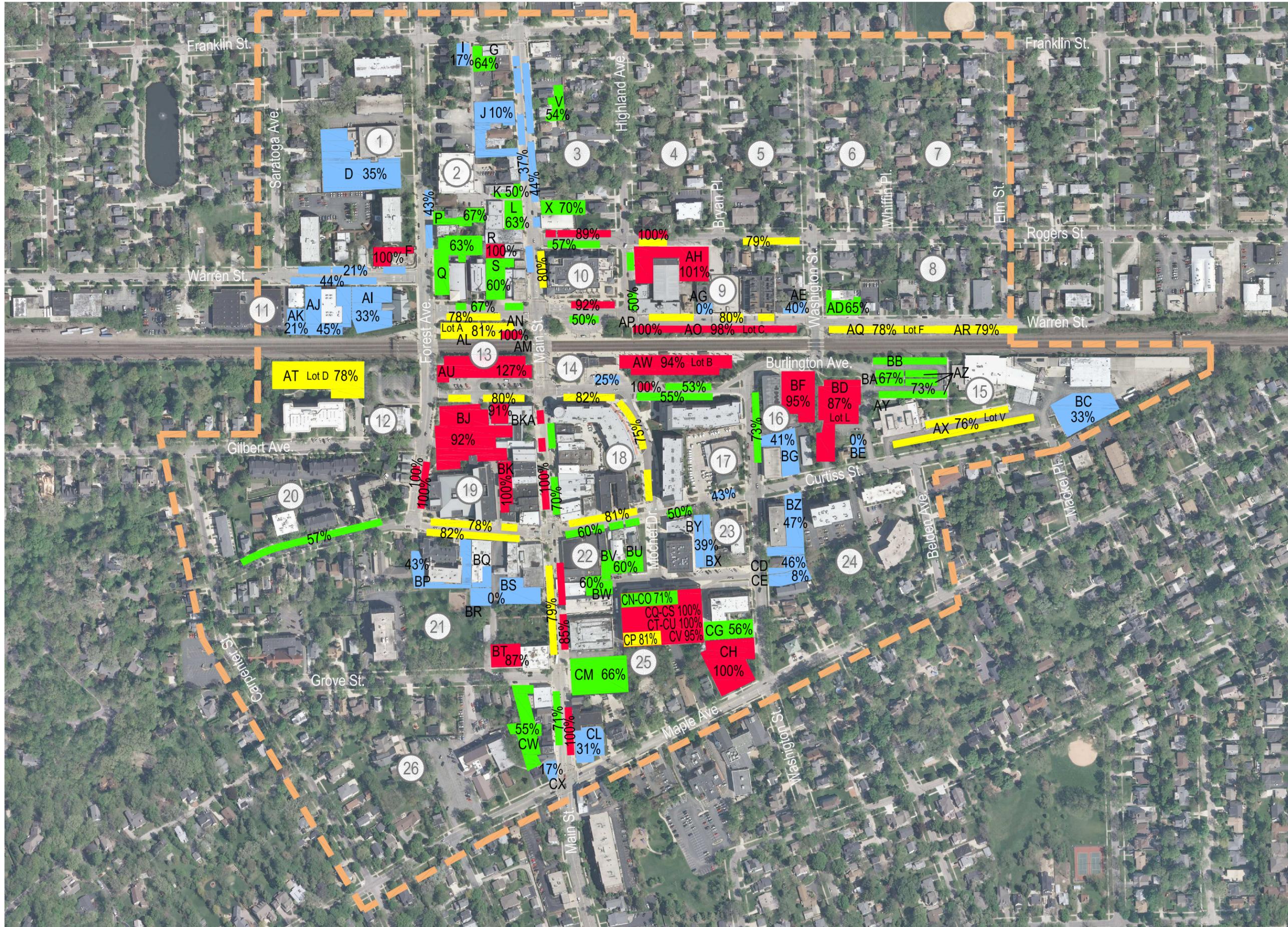
<b>Red:</b>	Occupancy rate in excess of 85 percent
<b>Yellow:</b>	Occupancy between 75 percent and 84 percent occupied
<b>Green:</b>	Occupancy from 50 percent to 74 percent occupied
<b>Blue:</b>	Occupancy less than 50 percent occupied at the selected peak hour.

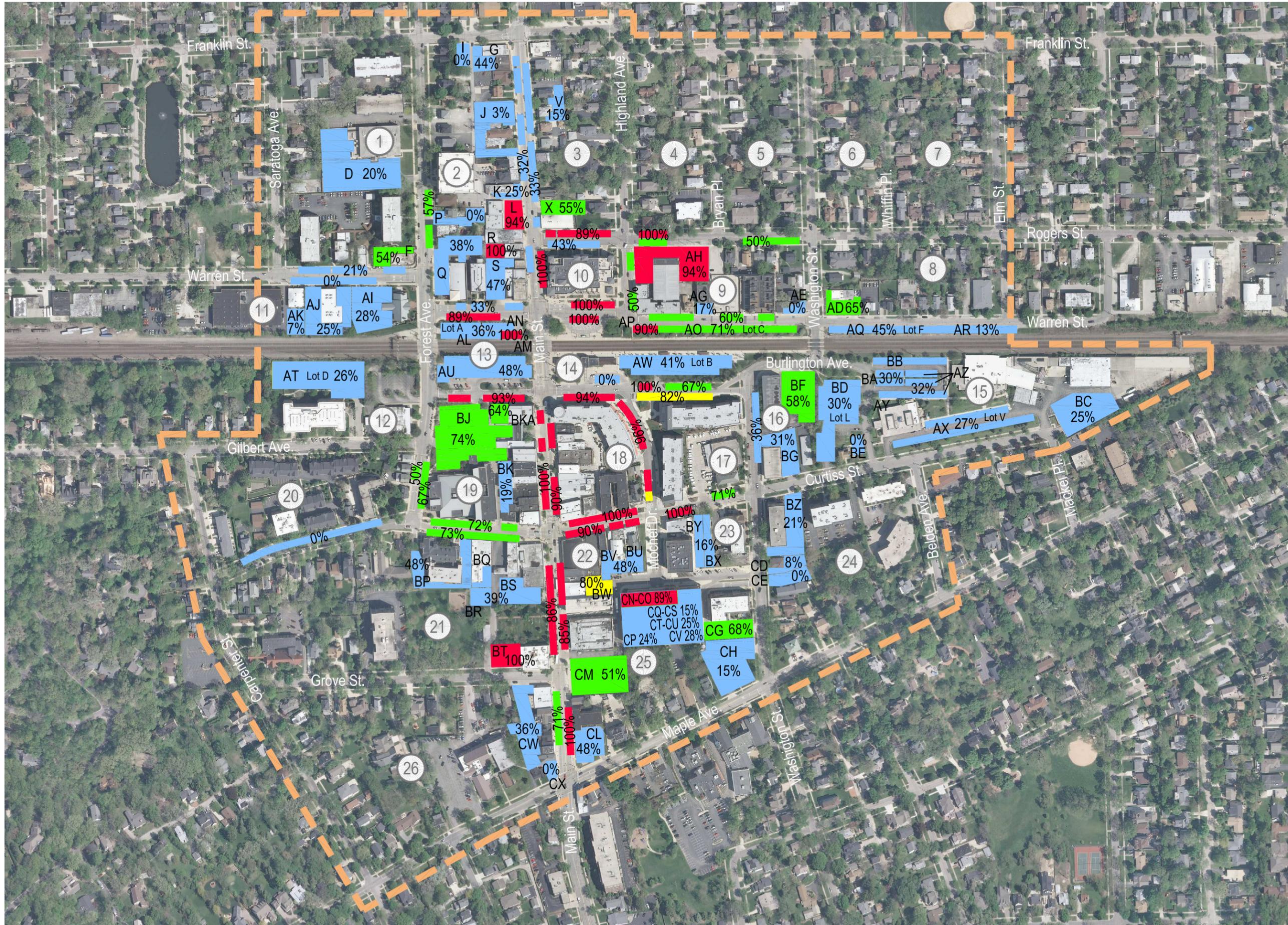
**Map 3** – Thursday Occupancy Daytime Peak - (12:00 – 1:00 pm)

**Map 4** – Thursday Occupancy Evening Peak - (6:00 pm – 7:00 pm)

In addition to these two maps, a third map (**Map 5**) is shown for the Thursday survey date which shows the maximum occupancy that the individual parking areas achieved at some point during the day. This is provided to demonstrate an area that may have its peak occur at some point different than the overall study area due to different influences on the parking demand. One prime example may be the parking serving the Tivoli Theater which would not be expected to peak until later in the evening which would be past the 6:00 to 7:00 pm peak found for the study area in total.

Similar results are demonstrated for the Saturday survey date which was influenced to some extent by the downtown Farmer's Market which appeared to result in the peak occurring early in the day with a steady decline before reaching a second but smaller peak during the early evening hours.





# PARKING STUDY

## FOR THE VILLAGE OF DOWNERS GROVE

DOWNERS GROVE, ILLINOIS



**LEGEND:**

# BLOCK NUMBER

STUDY AREA

**PEAK HOUR % OCCUPANCY**

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

Sheet Title:

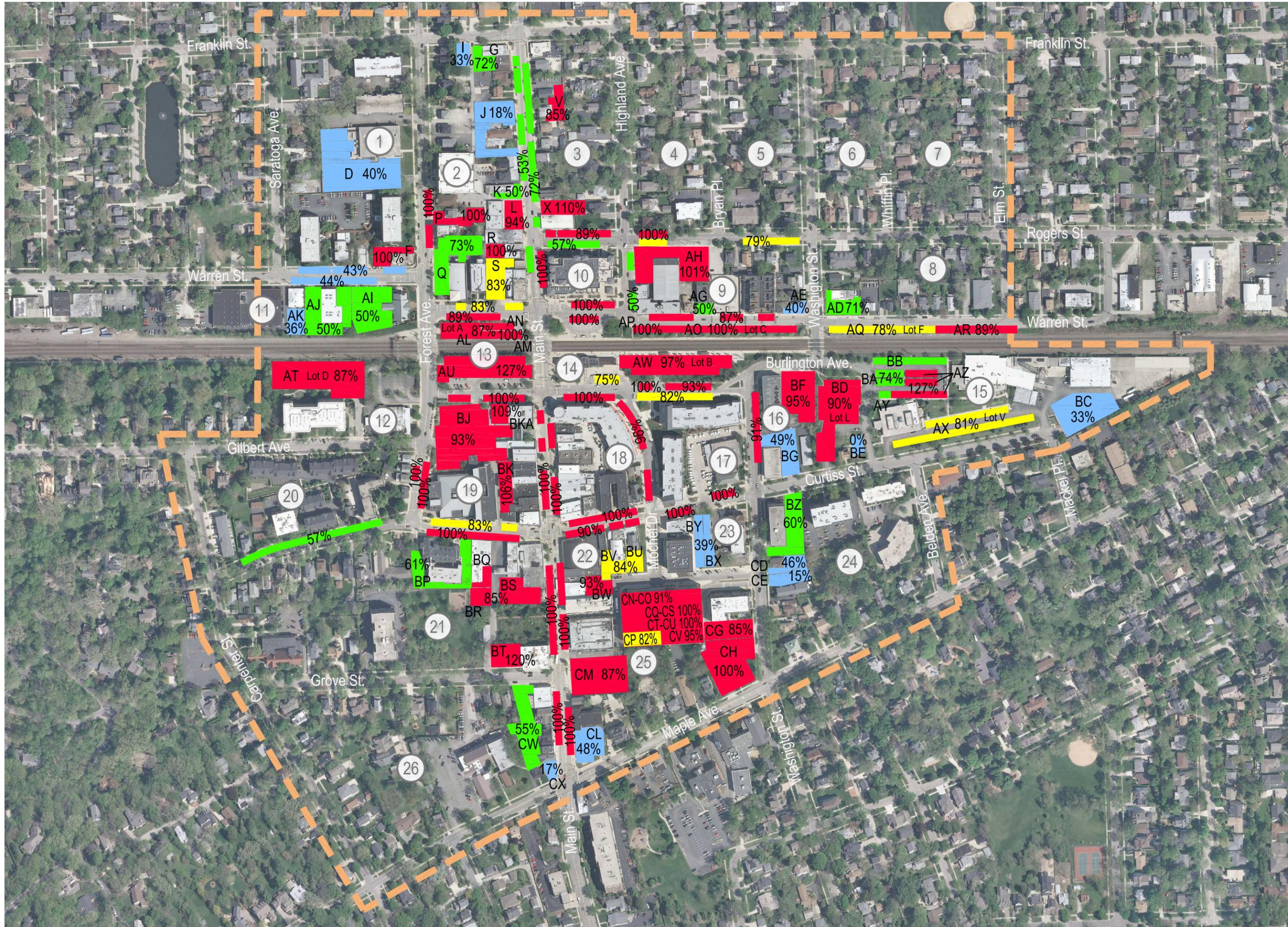
**PEAK HOUR OCCUPANCY**  
**JUNE 16, 2011**  
 (EVENING 6pm-7pm)

File No	1125
Scale	NTS
Date	09-26-2011
Checked By	DWB



MAP Number:

**MAP 4**



# PARKING STUDY

FOR  
THE VILLAGE OF  
DOWNERS GROVE

DOWNERS GROVE, ILLINOIS



**LEGEND:**

# BLOCK NUMBER

STUDY AREA

**PEAK HOUR % OCCUPANCY**

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

Sheet Title:

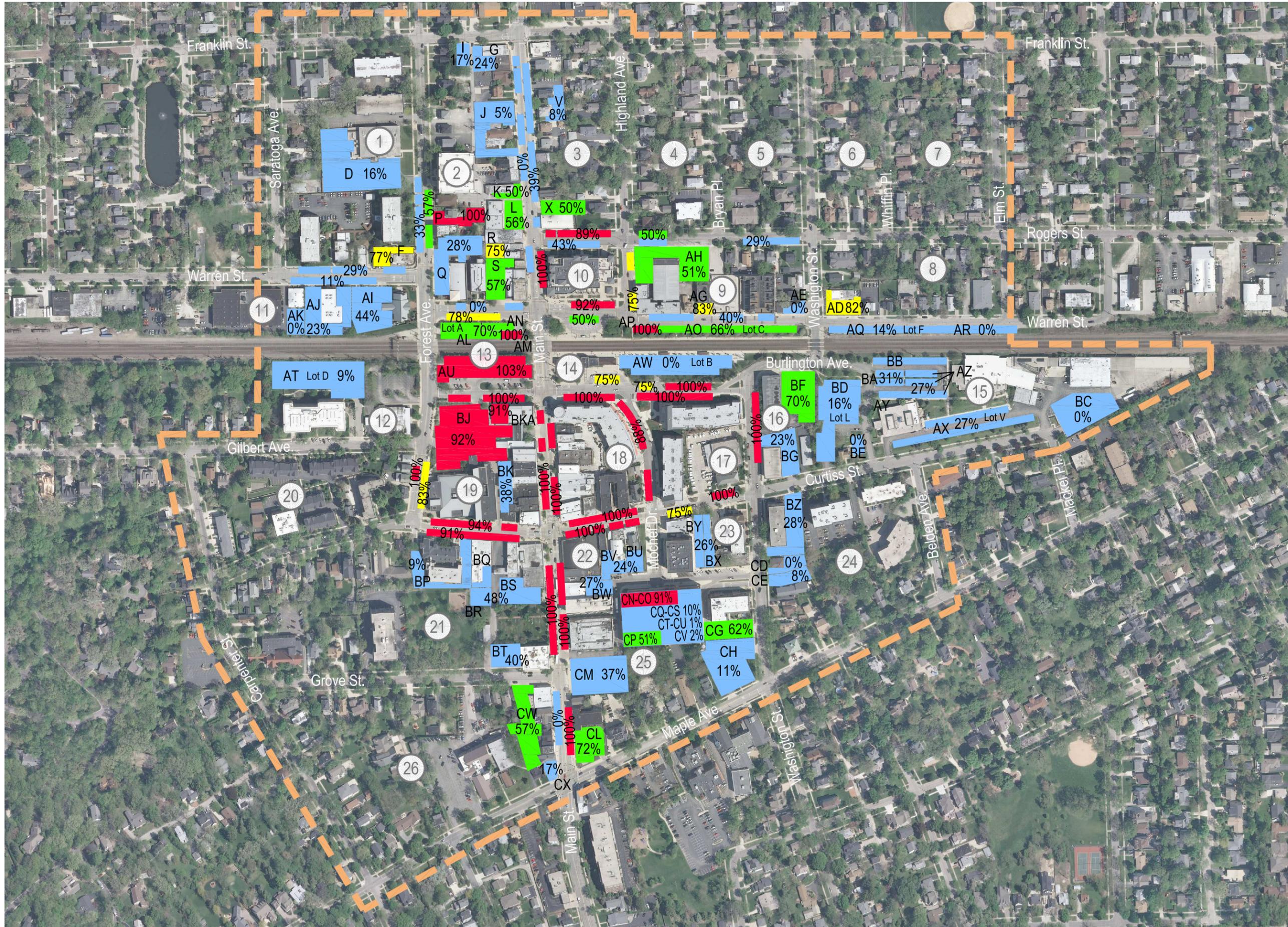
**PEAK ACHIEVED  
OCCUPANCY  
JUNE 16, 2011**

File No	1125
Scale	NTS
Date	09-26-2011
Checked By	DWB



MAP Number:

**MAP 5**



# PARKING STUDY

## FOR THE VILLAGE OF DOWNERS GROVE

DOWNERS GROVE, ILLINOIS



**LEGEND:**

# BLOCK NUMBER

STUDY AREA

**PEAK HOUR % OCCUPANCY**

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

Sheet Title:

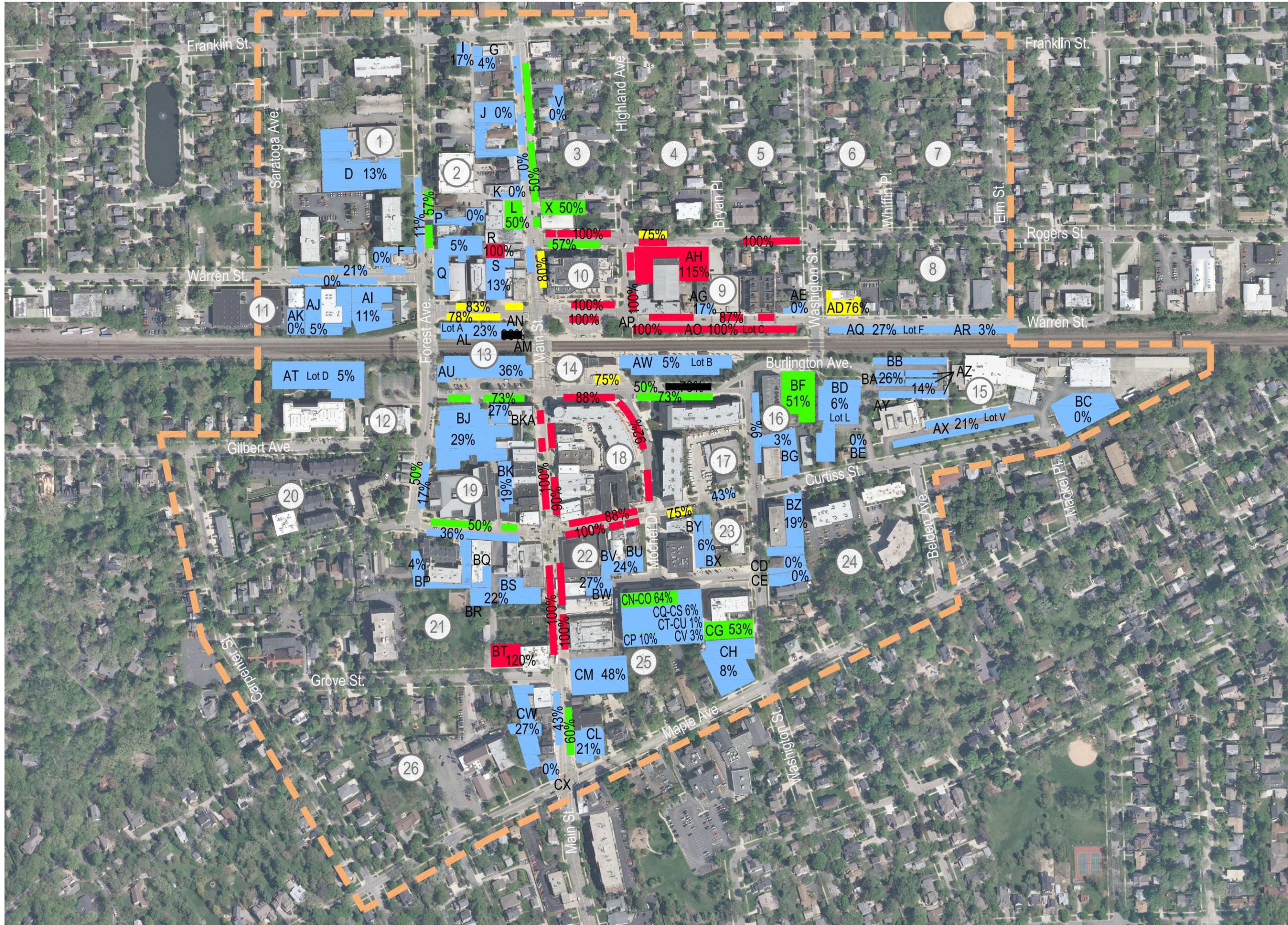
**PEAK HOUR OCCUPANCY**  
**JUNE 18, 2011**  
 (DAY)

File No	1125
Scale	NTS
Date	09-26-2011
Checked By	DWB



MAP Number:

**MAP 6**



# PARKING STUDY

FOR  
THE VILLAGE OF  
DOWNERS GROVE

DOWNERS GROVE, ILLINOIS



**LEGEND:**

# BLOCK NUMBER

STUDY AREA

**PEAK HOUR % OCCUPANCY**

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

Sheet Title:

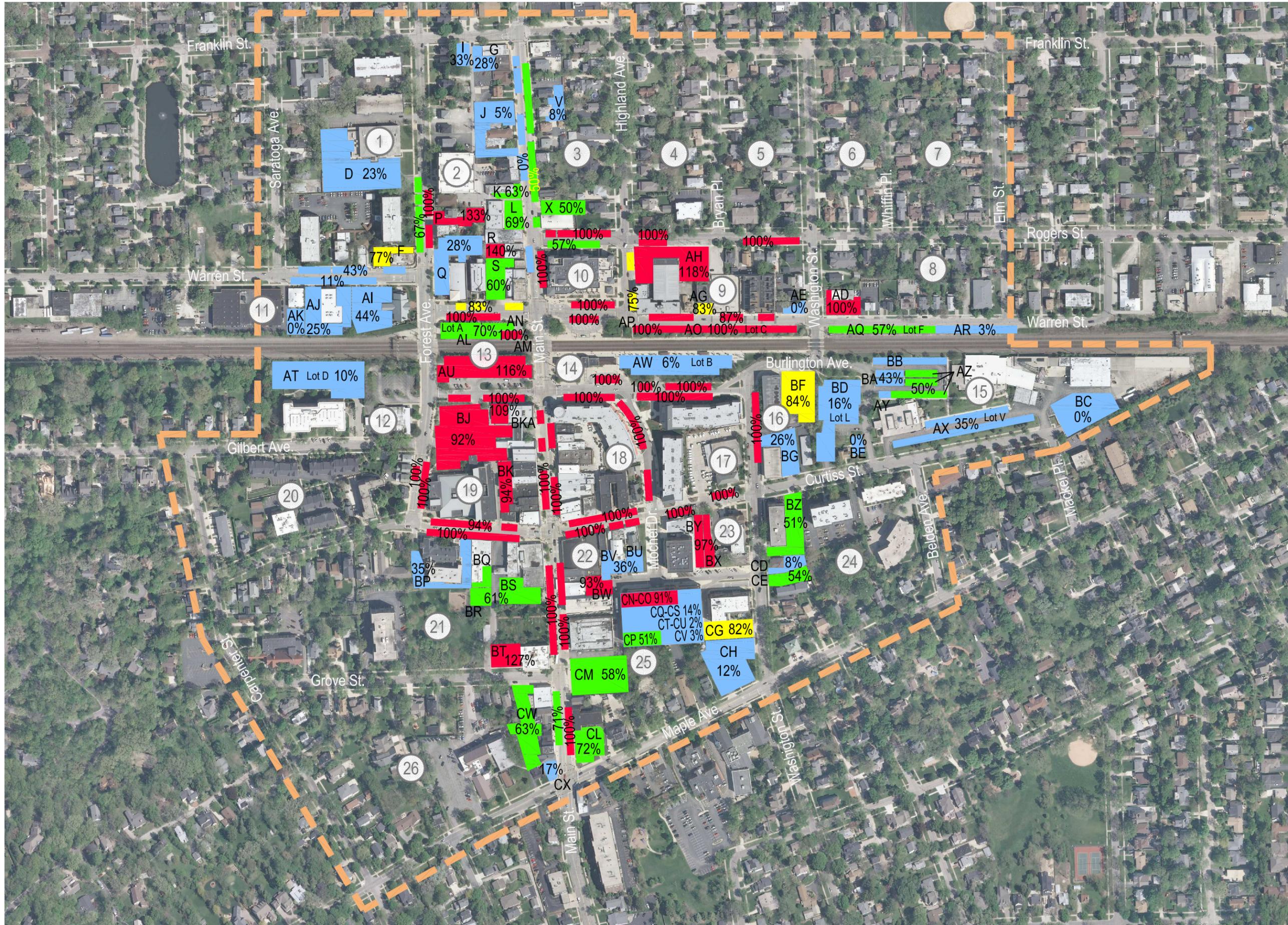
**PEAK HOUR  
OCCUPANCY  
JUNE 18, 2011**  
(EVENING 7pm-8pm)

File No	1125
Scale	NTS
Date	09-26-2011
Checked By	DWB



MAP Number:

**MAP 7**



# PARKING STUDY

FOR  
THE VILLAGE OF  
DOWNERS GROVE

DOWNERS GROVE, ILLINOIS



**LEGEND:**

# BLOCK NUMBER

STUDY AREA

**PEAK HOUR % OCCUPANCY**

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

Sheet Title:

**PEAK ACHIEVED  
OCCUPANCY  
JUNE 18, 2011**

File No	1125
Scale	NTS
Date	09-26-2011
Checked By	DWB



MAP Number:

**MAP 8**

### Turnover Results

In many if not most of the on-street spaces around downtown, Rich and Associates recorded portions of each license plate as part of the occupancy analysis in order to determine average turnover of spaces in addition to the utilization. The turnover ratio gives an indication of the average number of vehicles that are using a defined number of parking spaces. However, it suffers from the deficiency that a low turnover can be the result of either vehicles staying for extended periods of time or a low utilization of the spaces. Therefore the turnover ratio if considered alone may be misleading.

For this reason, Rich and Associates have developed the concept of the turnover index which considers not only the turnover of spaces but also the occupancy rate. It then benchmarks the turnover rate depending on the maximum length of stay permitted by the subject spaces. On block 10 (Stations Crossing) the north and south faces of the blocks had turnover indexes which indicated long-term parking with some vehicles staying four hours to as long as 12 hours in two hour limited spaces.

Overall, six percent of vehicles on the Thursday survey date were overstaying the limit. However, this would not include employees who shuffled their cars from one on-street space to another either on the same block or an adjacent block to avoid receiving a parking citation. Since these would be counted as new vehicles under the current enforcement guidelines they would not be considered as parking violations. Therefore, Rich and Associates reexamined the turnover data and found about 14 different vehicles that may have been shuffling on the Thursday survey date. These vehicles if counted as parking violations would increase the violation rate to about seven percent.

**Table 2G** on the following page shows the turnover results for the Thursday survey date.

The results for the Saturday survey showed about 10 percent of the observed on-street vehicles were staying past the two-hour time limit. This is understandable given there is no enforcement on Saturdays so this is likely the result of downtown employees taking advantage of the convenient on-street parking.

Saturday turnover results are shown by **Table 2H** on page 2-24.





## **Parking Demand – Current**

### **Introduction**

Among the primary goals of the analysis is the determination of the adequacy of the parking supply serving downtown Downers Grove. This is accomplished through the determination of the parking demand compared against the available parking supply. In order to verify its accuracy, the parking demand determination is compared to the calibrated observed parking utilization.

From the provided data, Rich and Associates performed parking demand calculations which quantify the number of parking spaces needed within the downtown. The parking demand is developed from the square footage as collected and provided by the Downtown Management Corporation and parking generation rates for each land use (retail, office, restaurant, etc) determined by Rich and Associates. The applied parking generation rates equate the calculated parking demand to the observed conditions. Determining the parking demand is therefore based upon

- The downtown inventory of businesses and parking completed by Rich and Associates
- The business square footage as provided by the DMC
- The turnover and occupancy analysis which provides the actually observed conditions to which the calculated parking demand is related

The table below summarizes the existing square footage by land use as determined from the information provided by the Downtown Management Corporation (DMC) and Rich and Associates field inventory.

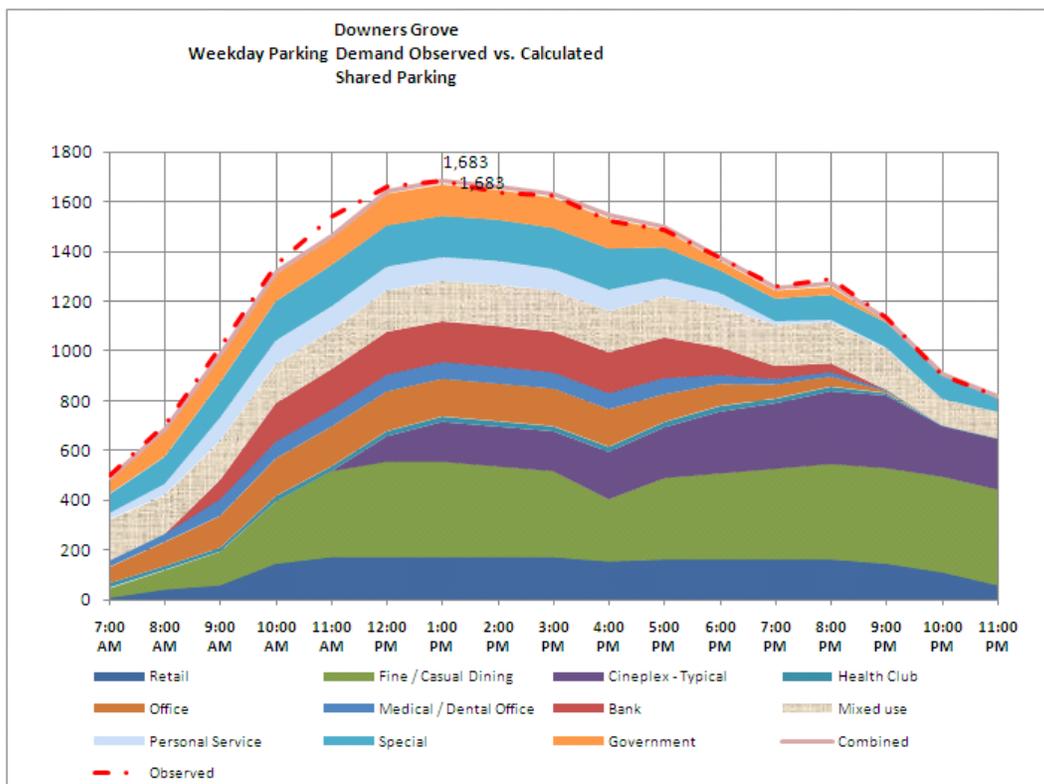
**Table 2I - Parking Square Footage Summary by Land Use**

<b>Land Use Category</b>	<b>Existing Building Square Footage</b>
Retail	71,545
Restaurant	85,131
Health Club	9,938
Office	134,070
Medical/Dental Office	26,693
Bank/Financial Institution	69,022
Mixed Use	38,956
Personal Service	39,581
Government	41,000
Short-Term	8,550
Special Use	235,782
<b>Sub-Total</b>	<b>760,271</b>
Vacant	16,698
<b>Total</b>	<b>776,969</b>
<b>Movie Theater (Seats)</b>	1,012

Parking Demand – Shared Use

The parking utilization in any downtown environment typically fluctuates throughout the day. Typically, the demand for parking increases to a daytime peak which is caused by the steady increases as employees come into work and customers and visitors come downtown for their shopping, office or doctor visits or personal services. There may be a decline and then a second peak as entertainment uses increase in the evening hours.

Understandably, demand for various land uses will fluctuate as, for example restaurants which experience an increase in use around lunch time after which there may be a drop off until early evening when they would again increase while office or other uses are decreasing. Under such a dynamic situation, parking if properly provided can serve multiple users since the peak for one business may correspond to a low period for another type. This is referred to as shared use and is demonstrated for Downers Grove by the graph below for a “typical” weekday.



**Figure G - Current Parking Demand by Time of Day (Weekday)**

The amount of parking required by the various land uses by time of day is demonstrated by the relative area of each and its relationship to the total parking demand.

The red dotted line in the graph corresponds to the adjusted observed<sup>4</sup> occupancy from the turnover/occupancy study conducted in mid-June. As the graph shows, there is a very good correlation throughout the day between the composite calculated parking demands as determined from the parking generation rates and square footage values and the observed parking resulting in a peak need of 1,683 spaces corresponding to the 12:00 noon to 1:00 pm time period.

Separating for evening peak demand, the graph shows that this peak would likely occur between about 7:00 pm and 8:00 pm. The amount of parking needed by different land uses varies to match the overall observed parking at that time following the assumption whether the demand would be expected to be increasing (such as a restaurant around meal times) or decreasing (such as office uses later in the day).

#### Calculated Parking Demand by Block - Daytime

Using information provided by the graph, Rich and Associates applied the peak hour (12:00 noon – 1:00 pm) parking generation rates for each land use to the square footage on each block to calculate the parking demand by block.

**Table 2J** on the following page demonstrates the peak weekday daytime parking demand by block and the peak hour parking generation rates. The table shows the calculated parking demand compared against the total parking supply on each block resulting in either a net surplus of parking or a net deficit of parking as exist on eight blocks.

This information is also shown by **Map 9** on page 29.

**Table 2K** on page 30 shows the calculated parking demand demonstrating peak hour evening conditions with this information shown on the map on page 31. This reflects the additional parking spaces available from vacated commuter parking which may be used by downtown customers and visitors. Analysis of the daytime and evening parking maps show that many of the blocks that were in a deficit condition during the daytime continue to experience parking deficits although at a smaller magnitude during the evening hours..

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<sup>4</sup> After correcting for the small proportion of spaces which were not directly observed as part of the occupancy study and subtracting commuter occupied spaces during the daytime hours.

**Table 2J – Current Daytime Parking Demand vs. Parking Supply**

Block	Retail	Fine/Casual Dining	Cineplex	Health Club	Office	Medical/Dental	Bank	Mixed Use	Personal Svc	Government	Short-Term	Vacant	Special	Demand (Current)	Parking Supply	Surplus / (Deficit) (Current)	
<b>Current</b>	2.40	4.50	0.16	2.11	1.42	2.43	2.38	2.57	2.40	3.10	1.52						
<b>Base Year Values</b>																	
1													33,558	0.74	25	139	114
2	794	4,073			28,452	13,596			4,691		950	8,516	32,668	0.18	112	246	134
3					22,318				1,100		5,500	2,659	5,500	3.45	62	75	13
4															0	24	24
5															0	7	7
6															0	30	30
7															0	21	21
8													2,184	5.04	11	51	40
9	986	1,442	1,012		6,607				1,440			544	36,457	0.32	195	108	(87)
10		7,974			1,092				2,390				10,000	0.50	48	25	(23)
11					10,203		12,123								43	103	60
12															0	42	42
13															0	110	110
14									500						1	41	40
15										41,000					127	228	101
16	4,880				950				2,118						18	99	81
17	5,875	3,183											20,000	2.20	72	71	(1)
18	20,736	21,505			1,331	2,103			12,790			1,907	628	1.59	185	90	(95)
19	8,860	10,439			7,850		34,899		1,440			2,300	78,738	0.97	242	159	(83)
20					2,426				1,012						6	24	18
21		14,320			4,900	1,600	19,500		1,400						125	162	37
22	14,400	19,550			14,083	887			2,000		1,100				151	54	(97)
23	3,123				14,790	3,546	2,500		2,700		1,000	772	16,049	0.75	63	56	(7)
24					3,541			38,956							105	43	(62)
25	7,188	2,645			15,527	4,961			3,400						71	538	467
26	4,703								2,600						18	215	197
27															0		0
	<b>71,545</b>	<b>85,131</b>	<b>1,012</b>	<b>0</b>	<b>134,070</b>	<b>26,693</b>	<b>69,022</b>	<b>38,956</b>	<b>39,581</b>	<b>41,000</b>	<b>8,550</b>	<b>16,698</b>	<b>235,782</b>		<b>1,682</b>	<b>2,761</b>	<b>1,079</b>
													<b>767,028</b>				<b>61%</b>



# PARKING STUDY FOR THE VILLAGE OF DOWNERS GROVE

DOWNERS GROVE, ILLINOIS



**LEGEND:**

# BLOCK NUMBER

STUDY AREA

**SURPLUS OF PARKING**

+100

0 through 99

**DEFICIT OF PARKING**

-99 through -1

-100 +

**NOTE:**

## Numbers shown in red indicate commuter supply. Surplus or Deficit for each block does not include commuter supply or demand.

Sheet Title:

## SURPLUS/ DEFICIT DAYTIME

File No	1125
Scale	NTS
Date	09-26-2011
Checked By	DWB

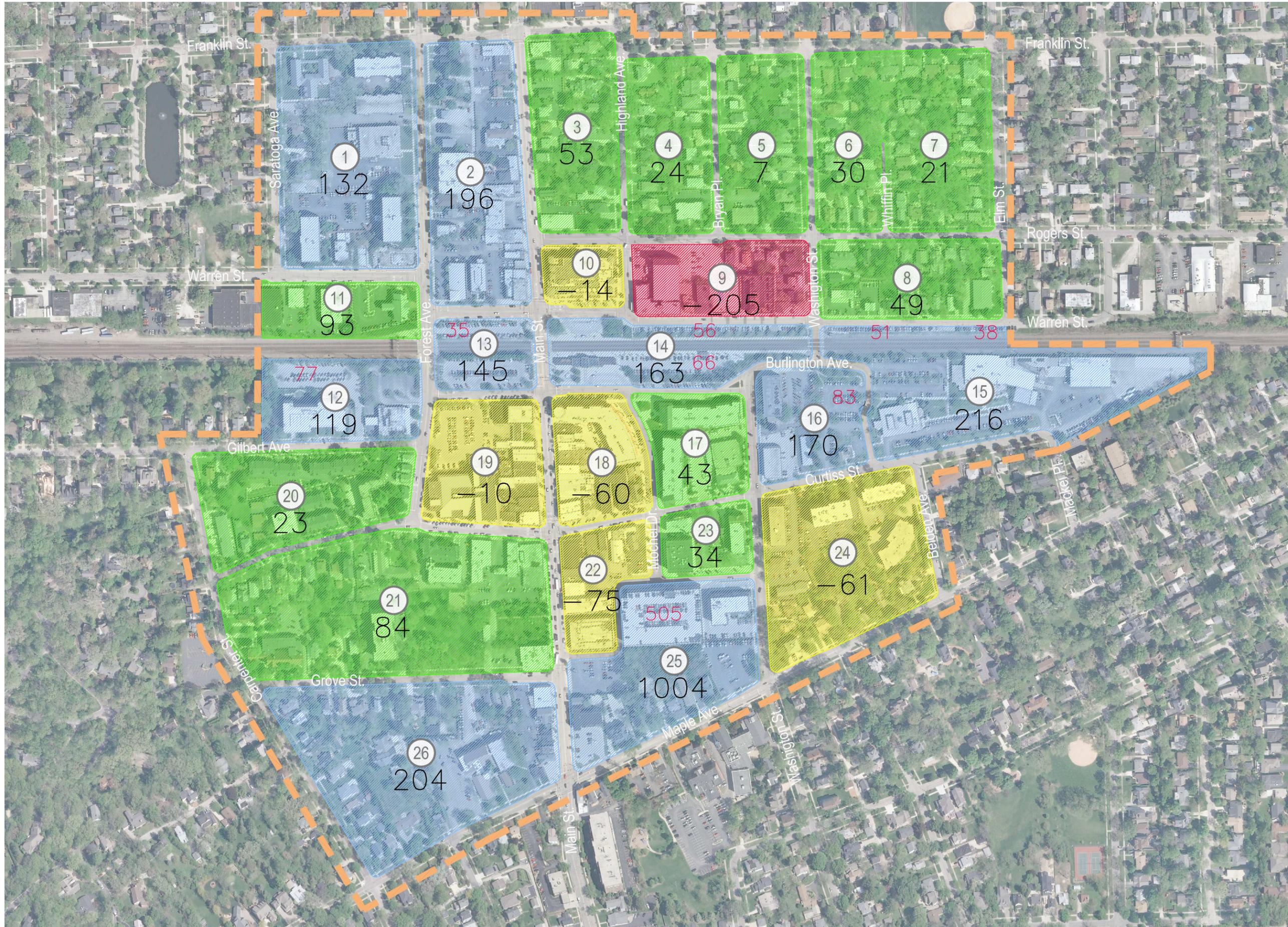


MAP Number:

MAP 9

**Table 2K - Current Evening Parking Demand vs. Parking Supply**

Block	Retail	Fine/Casual Dining	Cineplex	Health Club	Office	Medical/Dental	Bank	Mixed Use	Personal Svc	Government	Short-Term	Vacant	Special	Demand (Current)	Parking Supply	Surplus / (Deficit) (Current)	
<b>Current</b>	2.28	4.50	0.29	1.81	0.38	0.73	0.51	2.63	0.23	2.46	1.40						
<b>Base Year Values</b>																	
1													33,558	0.20	7	139	132
2	794	4,073			28,452	13,596			4,691		950	8,516	32,668	0.20	50	246	196
3					22,318				1,100		5,500	2,659	5,500	1.00	22	75	53
4															0	24	24
5															0	7	7
6															0	30	30
7															0	21	21
8													2,184	1.00	2	51	49
9	986	1,442	1,012		6,607				1,440			544	36,457	0.22	313	108	(205)
10		7,974			1,092				2,390				10,000	0.20	39	25	(14)
11					10,203		12,123								10	103	93
12															0	119	119
13															0	145	145
14									500						0	163	163
15										41,000					101	317	216
16	4,880				950				2,118						12	182	170
17	5,875	3,183											20,000	0.00	28	71	43
18	20,736	21,505			1,331	2,103			12,790			1,907	628	1.00	150	90	(60)
19	8,860	10,439			7,850		34,899		1,440			2,300	78,738	1.02	169	159	(10)
20					2,426				1,012						1	24	23
21		14,320			4,900	1,600	19,500		1,400						78	162	84
22	14,400	19,550			14,083	887			2,000		1,100				129	54	(75)
23	3,123				14,790	3,546	2,500		2,700		1,000	772	16,049	0.19	22	56	34
24					3,541			38,956							104	43	(61)
25	7,188	2,645			15,527	4,961			3,400						39	1043	1,004
26	4,703								2,600						11	215	204
27															0		0
	<b>71,545</b>	<b>85,131</b>	<b>1,012</b>	<b>0</b>	<b>134,070</b>	<b>26,693</b>	<b>69,022</b>	<b>38,956</b>	<b>39,581</b>	<b>41,000</b>	<b>8,550</b>	<b>16,698</b>	<b>235,782</b>		<b>1,285</b>	<b>3,672</b>	<b>2,387</b>
													<b>767,028</b>				<b>35%</b>



# PARKING STUDY

## FOR THE VILLAGE OF DOWNERS GROVE

DOWNERS GROVE, ILLINOIS



**LEGEND:**

- # BLOCK NUMBER
- STUDY AREA
- SURPLUS OF PARKING**
  - +100
  - 0 through 99
- DEFICIT OF PARKING**
  - 99 through -1
  - 100 +

**NOTE:**  
 ## Numbers shown in red indicate commuter supply. Surplus or Deficit for each block does not include commuter supply or demand.

Sheet Title:

### SURPLUS/ DEFICIT EVENING

File No	1125
Scale	NTS
Date	09-26-2011
Checked By	DWB



MAP Number:

MAP 10

## **Public vs. Private Parking Demand**

The analysis on the previous pages has compared the calculated parking demand against the total available parking supply. This analysis shows (Table 2J) that on this gross basis, the downtown has an overall surplus in excess of 1,000 spaces.

A shortcoming of comparing the parking demand to the gross parking supply is that the calculated surplus overstates the true condition. That is due to the fact that there may be surplus privately controlled parking in the calculation. This surplus parking in the privately controlled parking lots is generally not available to visitors to other destinations.

**Table 2L** on the following page shows that the 1,081 space surplus for the total downtown on the gross basis would be reduced to just 368 spaces if the surplus private parking supply is excluded from the calculation. Separating the results for north side of the tracks shows that the 333 space surplus on the gross basis would be reduced to just 96 spaces without the surplus private supply and that the 748 space surplus on the south side would be reduced to a 272 space surplus.

Taking this process one step further, the overall surplus and deficiency comparison also includes publicly available on-street parking adjacent the residential properties north of Rogers Street as well as along Grove Street and Carpenter Street. Although publicly provided and available, in reality, it is not likely that these spaces would be used by downtown customers or visitors because of their relatively long walking distance from parking demand generators (businesses). Therefore, these spaces have also been discounted to derive a more realistic assessment of downtown parking demand versus parking supply. This reduces the north side surplus to just 11 spaces instead of 96 spaces and from 748 spaces on the gross basis to just 214 spaces (instead of 272) on the south side of the tracks.

**Table 2L - Net Surplus / Deficit of Parking**

Daytime		Gross			Excluding Surplus Private Supply			Excluding Surplus Private Supply + Remote On-street Spaces		
		Total Downtown	North Side of Tracks	South Side of Tracks	Total Downtown	North Side of Tracks	South Side of Tracks	Total Downtown	North Side of Tracks	South Side of Tracks
	Parking Demand	1,680	496	1,184	1,680	496	1,184	1,680	496	1,184
	Parking Supply *									
	Public	1,237	273	964	1,237	273	964	1,094	188	906
	Private	1,524	556	968	811	319	492	811	319	492
	Total	2,761	829	1,932	2,048	592	1,456	1,905	507	1,398
	Surplus / (Deficit)	1,081	333	748	368	96	272	225	11	214
* Daytime Parking Supply does not include Residential Spaces or Commuter Spaces										
Evening		Gross			Excluding Surplus Private Supply			Excluding Surplus Private Supply + Remote On-street Spaces		
		Total Downtown	North Side of Tracks	South Side of Tracks	Total Downtown	North Side of Tracks	South Side of Tracks	Total Downtown	North Side of Tracks	South Side of Tracks
	Parking Demand	1,250	464	786	1,250	464	786	1,250	464	786
	Parking Supply **									
	Public	2,148	576	1,572	2,148	576	1,572	2,005	491	1,514
	Private	1,524	592	932	534	192	342	534	192	342
	Total	3,672	1,168	2,504	2,682	768	1,914	2,539	683	1,856
	Surplus / (Deficit)	2,422	704	1,718	1,432	304	1,128	1,289	219	1,070
** Evening Parking Supply does not include Residential Spaces										

Finally, to put this into perspective for individual blocks, **Table 2M** on the following page has been prepared which demonstrates the condition of excluding the surplus private supply and remote public supply for individual blocks. This separates the results for both the north and south sides.

As the table shows, those blocks that have overall parking deficits (meaning that the total parking demand exceeds the total parking supply on that block) would continue to have deficits under the improved analysis. However, because of the impact of not including surplus private parking supply from adjacent blocks, the overall parking *surplus* is reduced.

**Table 2M - Net Parking Surplus / Deficit – North Side of Tracks**

Village of Downers Grove Net Parking Demand - Current Daytime							
North of Tracks - Day Time							
Supply							
Block	Public	Private	Total	Calc Demand	Gross Surplus / Deficit	Net Surplus / Deficit	
1	47	92	139	25	114	47	
2	30	216	246	112	134	30	
3	27	48	75	62	13	13	
4 *	3	0	3	0	3	3	
5 *	0	0	0	0	0	0	
6 *	0	0	0	0	0	0	
7 *	0	0	0	0	0	0	
8 *	19	26	45	11	34	19	
9	28	80	108	195	(87)	(87)	
10	25	0	25	48	(23)	(23)	
11	9	94	103	43	60	9	
<b>Total North</b>	<b>188</b>	<b>556</b>	<b>744</b>	<b>496</b>	<b>248</b>	<b>11</b>	
* Blocks where peripheral on-street spaces not included							
South of Tracks - Day Time							
Supply							
Block	Public	Private	Total	Calc Demand	Gross Surplus / Deficit	Net Surplus / Deficit	
12	6	36	42	0	42	6	
13	110	0	110	0	110	110	
14	41	0	41	1	40	40	
15	44	184	228	127	101	44	
16	11	88	99	18	81	11	
17	31	40	71	72	(1)	(1)	
18	67	23	90	185	(95)	(95)	
19	136	23	159	242	(83)	(83)	
20 *	7	0	7	6	1	1	
21 *	71	71	142	125	17	17	
22	16	38	54	151	(97)	(97)	
23	25	31	56	63	(7)	(7)	
24	11	32	43	105	(62)	(62)	
25	323	215	538	71	467	323	
26 *	7	187	194	18	176	7	
<b>Total South</b>	<b>906</b>	<b>968</b>	<b>1,874</b>	<b>1,184</b>	<b>690</b>	<b>214</b>	
* Blocks where peripheral on-street spaces not included							

### **Summary – Daytime / Evening Parking Demand versus Parking Supply**

The parking demand versus parking supply comparison as shown on the tables and maps shows various blocks where the parking supply cannot support the calculated demand on those blocks. In reality in a downtown environment, parking intended to service one block will often be on a nearby block. However, when parking deficiencies exist on contiguous blocks and sufficient publicly available parking is not available on adjacent blocks to support the level of parking demand one can begin to see where a true parking issue may exist.

### Tivoli Movie Theater

Another aspect evaluated by Rich and Associates was the parking requirements generated by the Tivoli Movie Theater. The theater has one auditorium with a present capacity of 1,012 seats. Using recent show times as advertised on the theater website (with summertime matinees) and the turnover period between showings, Rich and Associates have calculated a peak parking need of 289 spaces using an assumed 85 percent of patrons arrive by car with an average of 2.1 people per car. The 289 spaces required equates to 0.29 parking spaces per seat. As a point of comparison, the Institute of Transportation Engineers (ITE) in their *Parking Generations Manual* has an average factor of 0.26 spaces per seat for theaters with matinees on a weekday.

Based on Rich and Associates calculations, the theater could be as many as 100 spaces short during weekday afternoons in the summer after factoring the capacity of the Tivoli Building lot (+/- 75 spaces) and the limited number of spaces that may be available in nearby commuter lots (based on the occupancy study). This deficit is based on use of the theater for movies and the anticipated level of attendance for a weekday matinee.

The theater has been increasingly marketing its auditorium for corporate events and meetings. This effort could result in significantly higher attendance during the daytime hours than the values shown. The higher attendance from such events could obviously substantially increase the parking needs and require identifying other solutions to be reviewed with the Village.

