Downtown Parking Study

City of Urbana
Urbana, Illinois

Final Report

October 21, 2008

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SECTION 1 – OVERVIEW/EXECUTIVE SUMMARY

SECTION 1: OVERVIEW & EXECUTIVE SUMMARY

The City of Urbana initiated this parking study to aid in examining how parking interrelated to other planning efforts for transportation and urban development/re-development, through quantitative assessment and stakeholder input. Specifically, parking adequacy, operation and change were examined from a variety of aspects to address the following questions:

> ⇒ Whether current parking satisfied demand?
> ⇒ Whether changes to the existing parking operation are needed to improve function?
> ⇒ What impact future development and re-development in the community will have on the parking supply?

A parking study starts with a quantitative examination of the parking supply and demand in a given study area. For Urbana, that study area encompassed the downtown as demonstrated in **Map 1**, Parking Study area. By examining the buildings in the downtown area and the uses in those buildings, an estimate of parking demand was developed.

In the Urbana study we discovered that the City currently has a surplus of parking, but that there are areas that experience shortages of short-term parking. The recommended methods for addressing the short-term parking-needs, right away are through low cost measures, such as changing some of the parking regulations and using enforcement techniques to create higher turnover of the on-street parking stalls.

Future changes, both planned and proposed for the downtown, were also examined to discover how parking would be impacted over the next decade. The plans for the downtown area include more building space, which in turn will eventually require more parking. Specifically, we discovered that in ten years time, there will be a shortage of up to 1,300 parking stalls.

Next we examined good parking planning practices and the benefits of pedestrian and bicycle activity, the advantages of shared parking and the how transitioning away from surface parking lots to structured parking would benefit the community. Specifically, transportation options, pedestrian activity, mixture of uses and increased density all work together to help reduce parking demand and encourage economic activity.

In the long-term, the recommendation is to consider building a second parking structure near Water Street between Race Street and Vine Street. The structure should be approximately 400 parking stalls, with consideration given to having ground floor commercial space or to develop a multi-modal parking facility that also acts as a transportation hub. Further consideration of a program for a new parking facility will need to be addressed through a parking structure design exercise.
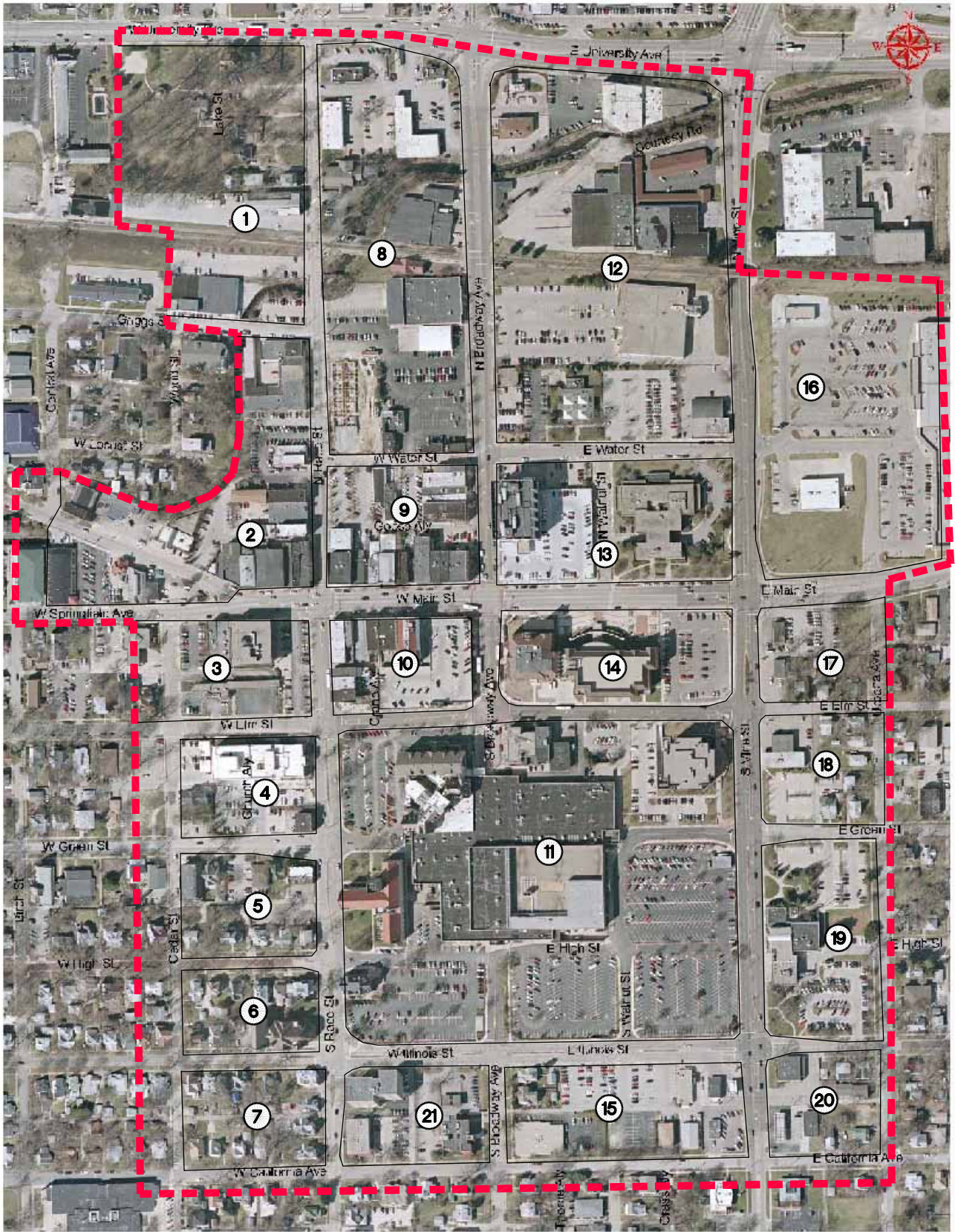
PARKING STUDY
FOR THE CITY OF
URBANA

URBANA , ILLINOIS

STUDY AREA

● BLOCK #

- - - STUDY AREA
BOUNDARY

MAP 1 - PAGE 2

The second parking structure should be built before any major repairs to the existing parking facility are undertaken to avoid a situation where parking is displaced. Once a new facility is open and operational, the old structure can then have repair work undertaken without causing a substantial impact to the parking system if closure is necessary.

Repairs to the existing parking structure will be necessary in the future to ensure that the facilities' life span is maximized. Originally designed to have two levels added to it, the parking structure doesn't meet new building code requirements for structural design and therefore would be too costly to expand. Typically lasting 50 or more years, the Urbana parking structure is in relatively good condition and with repairs to some water damage issues, should provide many more years of service to the community.

The nature of projecting future parking demand growth is based on some guess work. The best way to make sure that planning exercises used to base capital investment on are reasonably accurate is to update the work periodically. Urbana's investment in parking planning should be updated every five years to ensure that the projections used are accurate and up-to-date with private investment and interest in the downtown area.

Finally, this study represents the efforts of a number of different groups and individuals who participated through meetings, interviews and surveys. The study was overseen by Urbana City staff with periodic assessment and input by a Steering Committee made up of stakeholders, staff, elected officials and business owners from the downtown area.

Surveying of the downtown business and their employees were also undertaken to aid in assessing opinions and to establish facts about parking demand influences in Urbana. Finally, a comprehensive examination of planned and potential developments and re-developments in the downtown area was undertaken through input from developers, property owners, business owners, mangers and City staff.

Table 1A, below, summarizes the recommendations presented in this report and offers insight into budget considerations, agency responsibility and the relative implementation importance of each. All of the recommendations will benefit the parking system. Some of the recommendations will require serious consideration before implementation due to the capital investment necessary, while others require only a minor change in process, policy or regulation.

Table 1A: Recommendations Summary

High Priority: (Recommendations that should be undertaken as soon as possible)

Recommendation	Budget Amount	Agency Responsible
Parking Duration	None	Public Works
Sign Program	Budget $200,000 (one time)	Public Works
Marketing	Budget $7,500 per year	Community Development/Public Works
Enforcement Personnel	Budget $55,000 per additional officer	Police Department

Medium Priority: (Items that are needed, but can wait until high priority recommendations are enacted)

Recommendation	Budget Amount	Agency Responsible
Angled Parking	$25,000 per block face + $200 per stall	Public Works
Handheld ticket writers	Budget $35,000	Police Department
Courtesy Ticket	None	Police Department
Ticket Collections	None	Police Department/Finance
Graded Fines	None	Police Department/Finance
Privately Developed Parking/Fee in Lieu	None	Planning/Community Development
Safety & Security (Lighting)	Budget $25,000	Public Works

Lower Priority: (Items that are less urgent and can wait pending budget availability)

Recommendation	Budget Amount	Agency Responsible
Existing Parking Facility & Equipment	$55,000 to $75,000	Public Works
Bicycle Parking/Enhancements	None	Community Development/Public Works
Pedestrian Activity	$172,000 per crossing	Public Works
Enforcement Vehicles (already acquired/on-going)	Budget $40,000	Police Department
New Parking	$9,000,000	Public Works/Community Development
Existing Parking Structure	None at present	Public Works

SECTION 2 - ANALYSIS

SECTION 2 - ANALYSIS

2.1 Introduction

Section 2 is an assessment of how the parking is operating in terms of overall occupancy and turnover of parking. Additionally, **Section 2** defines how much parking is needed to service the existing supply of buildings in the downtown area and how much parking may be needed over the next decade to support further anticipated development within the community.

The analysis used turnover and occupancy (field observation) data, parking and building inventories, downtown business owner surveys and face-to-face stakeholder meetings to refine and determine the parking demand variables. In essence, the process consisted of a two-part analysis.

The first part of the analysis included a calculation of parking demand by downtown block based on existing buildings. A ratio of parking per 1,000 sq. ft. of gross floor space was determined from the user surveys and field observations. The ratio was then applied to the building inventory to calculate overall parking demand. The demand was netted from the existing parking supply to reveal areas with parking shortages or surpluses.

The second part of the analysis involved comparing the parking surplus and deficit patterns to the turnover and occupancy data. Specifically, if areas were projected to have parking shortfalls, field observation to verify the assessment was used. This comparison allowed researchers a benchmark by which the parking demand projections could be verified and calibrated as necessary.

Future parking demand projections were then undertaken to address fundamental questions on whether Urbana has adequate parking for the future and what steps should be taken to ensure that a balance of supply is maintained to suit potential growth in demand. Several sources within the community were drawn on to aid in determining potential future development scenarios, including stakeholder input, developer and property owner interviews, and consultation with City staff from Community Development, Public Works and Engineering.

2.2 Parking Inventory

Table 2A identifies the existing parking supply in the study area. **Table 2B** offers a breakdown of on and off street, as well as public and private.

In the downtown, Urbana offers metered parking both on and off-street. The parking meters on-street are all short term (two hours or less), the parking meters located off-street are both short term and long term. Urbana offers permit parking for employees of the downtown in off-street lots in various areas in the downtown. There is also a parking structure in the downtown that offers both hourly and reserved parking.

Additional important information regarding the parking inventory is the lease the City has with Lincoln Square Village, signed in the spring of 2005. The lease states that the City of Urbana will provide customer and employee parking in the lots surrounding Lincoln Square Village for 23 years. This lease was extremely important to the development of the site. The City also has agreements to provide parking for Champaign County Petit and Grand Jurors, and the Federal Court Jurors.

Table 2A: Parking Supply

| Block | On-Street Public | | | | | Off-Street Public | | | | | | | | Off-Street Private | | Parking |
	5 hr	2 hr	1 hr	BF	15/30	10 hr	5 hr	2 hr	30/60	BF	Deck	Meter	Per/Res	Per/Res	BF	Supply
1						48				2			85	107	2	244
2			12			12				2			14	192	5	237
3			6		1									70	3	80
4		12					46			2			15	18	1	94
5									11	1			10	52		74
6														15		15
7																0
8		13												426	8	447
9		8	8	1	4			64		3				34		122
10			7	1						6	208					222
11				1	11			398		1			358	201	7	977
12		12				111				3			48	343	15	532
13		52												247	8	307
14												81		60	5	146
15													137	44	1	182
16														463	19	482
17														67		67
18													41	18		59
19						27		2	5				121			155
20														21	4	25
21	9													86	7	102
Sum	9	97	33	3	16	198	46	462	13	25	208	81	829	2464	85	4569

Table 2A & 2B Reference Chart

Designator	Parking Type
10 hr	10 hour meters
5 hr	5 hour meters
2 hr	2 hour meters
1 hr	1 hour meters
BF	barrier free (handicap parking)
15/30	15 or 30 minute parking
30/60	30 or 60 minute parking
Deck	parking structure
Meter	pay station meter parking
Per/Res	permit or reserved parking
O/O	on/off street parking
P/P	public/private parking

There are a total of 4,569 parking spaces in the study area. Of these parking spaces, 158 (or 3%) are on-street spaces and 4,411 (or 97%) are off-street spaces. Of the 4,409 off-street spaces, 2,020 (or 44%) are public and 2,549 (or 56%) are private off-street spaces.

A common best practice approach to public parking is for the community to manage or own 50% of the total supply. Urbana is close to this ratio by having direct control or ownership of 44% of the total parking supply. Key reasons for controlling 50% of the parking include market pricing domination of the available parking, ability to respond to development opportunities from a parking and economic development perspective and the ability to aid in achieving overall urban design goals for the community.

Opportunities for adding to the public parking supply in Urbana include the proposed additional on-street parking along Main Street and the possibility of new public parking structures or decks in the future.

Table 2B: Parking Supply Breakdown

Block	On-Street Public					Off-Street Public								Off-Street Private		Parking
	5 hr	2 hr	1 hr	BF	15/30	10 hr	5 hr	2 hr	30/60	BF	Deck	Meter	Per/Res	Per/Res	BF	Supply
Sum	9	97	33	3	16	198	46	462	13	25	208	81	801	2492	85	4569
O/O	158					4411										
P/P	2020													2549		44%/56%

The following two pages contain the parking supply reference maps. **Map 2** identifies public and private parking areas by color. **Map 3** identifies parking duration and uses a color coding to differentiate between long-term parking (more than two hours) and short-term parking (up to two hours).
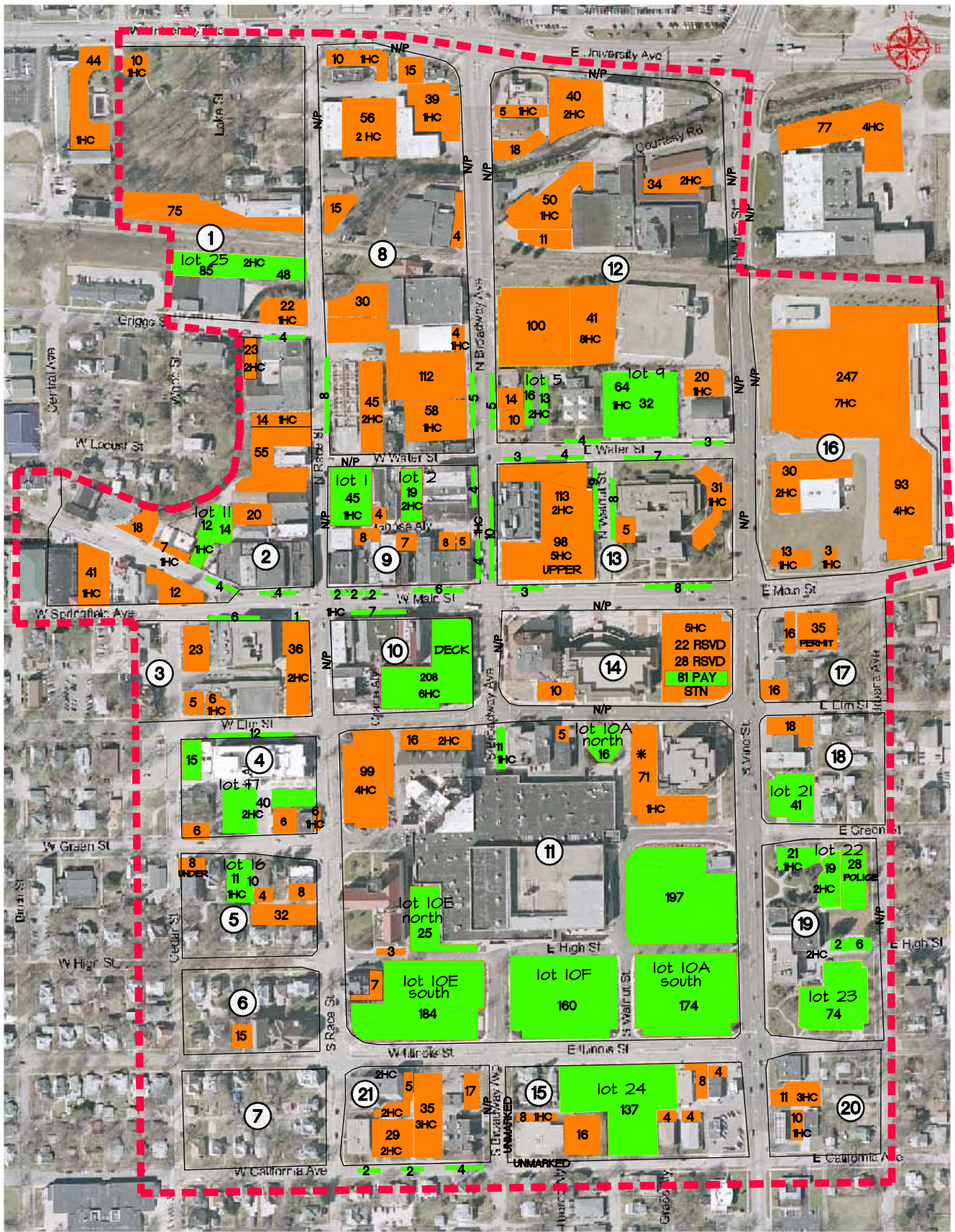
PARKING STUDY
FOR THE CITY OF
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PUBLIC AND PRIVATE PARKING

■ PRIVATE   ■ PUBLIC

(#) PARKING STALL COUNT

MAP 2 - PAGE 4

PARKING STUDY
FOR THE CITY OF
URBANA

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PARKING DURATIONS

LONG TERM		SHORT TERM	
	RESERVED PUBLIC PERMIT		15 MIN / 30 MIN.
	5 HR METERS		1 HR. METERS
	10 HR METERS		2 HR

(#) PARKING STALL COUNT

SCALE: N.T.S.
DRAWN BY: GHC
FILE:
DATE: 10-05-08

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2.3   Turnover and Occupancy Study

A turnover and occupancy study was undertaken in the downtown study area, Thursday, December 6, 2007 from 9:00 A.M. to 5:00 P.M. The study covered 3,403 parking spaces; 153 on-street and 3,250 off-street spaces.

The turnover portion of the analysis, where license plate numbers were recorded, applied to on-street spaces to determine how long specific vehicles where parked in certain spaces and if parkers were moving their vehicles to different spaces to avoid being cited for overtime parking.   The number of parking spaces occupied was observed during each two-hour circuit. The turnover information also yields an occupancy result for the parking area thus allowing a composite occupancy for each circuit to be derived.

Turnover is an indicator of how often a parking stall is being used by different vehicles throughout the course of the day. Turnover is relevant to time periods when time limits on non-metered spaces are being enforced and is most important to short-term customer and visitor parking.

Occupancy is an important aspect of parking because it helps us to understand the dynamic of how parking demand fluctuates thought the day. Likewise, the occupancy can be used to illustrate how parking demand is impacted by events in the downtown area. Overall, the occupancy data is used by Rich and Associates to calibrate the parking demand model.   The complete turnover and occupancy results can be found in the **Appendix**. **Map 4** shows the peak occupancy of the on and off-street parking.

A point to consider regarding the parking supply is that motorists in general perceive off-street spaces with occupancies greater than 85 percent to be at capacity, depending on the overall capacity. The greater the capacity, the less this perception is valid. When this occurs motorists will begin to re-circulate to seek more parking, adding to downtown traffic congestion and the driver's perception that there is no parking available in the downtown.

Definitions: The following are definitions used for the analysis:

- *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 length of time a parking space is occupied by a vehicle.
- *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.
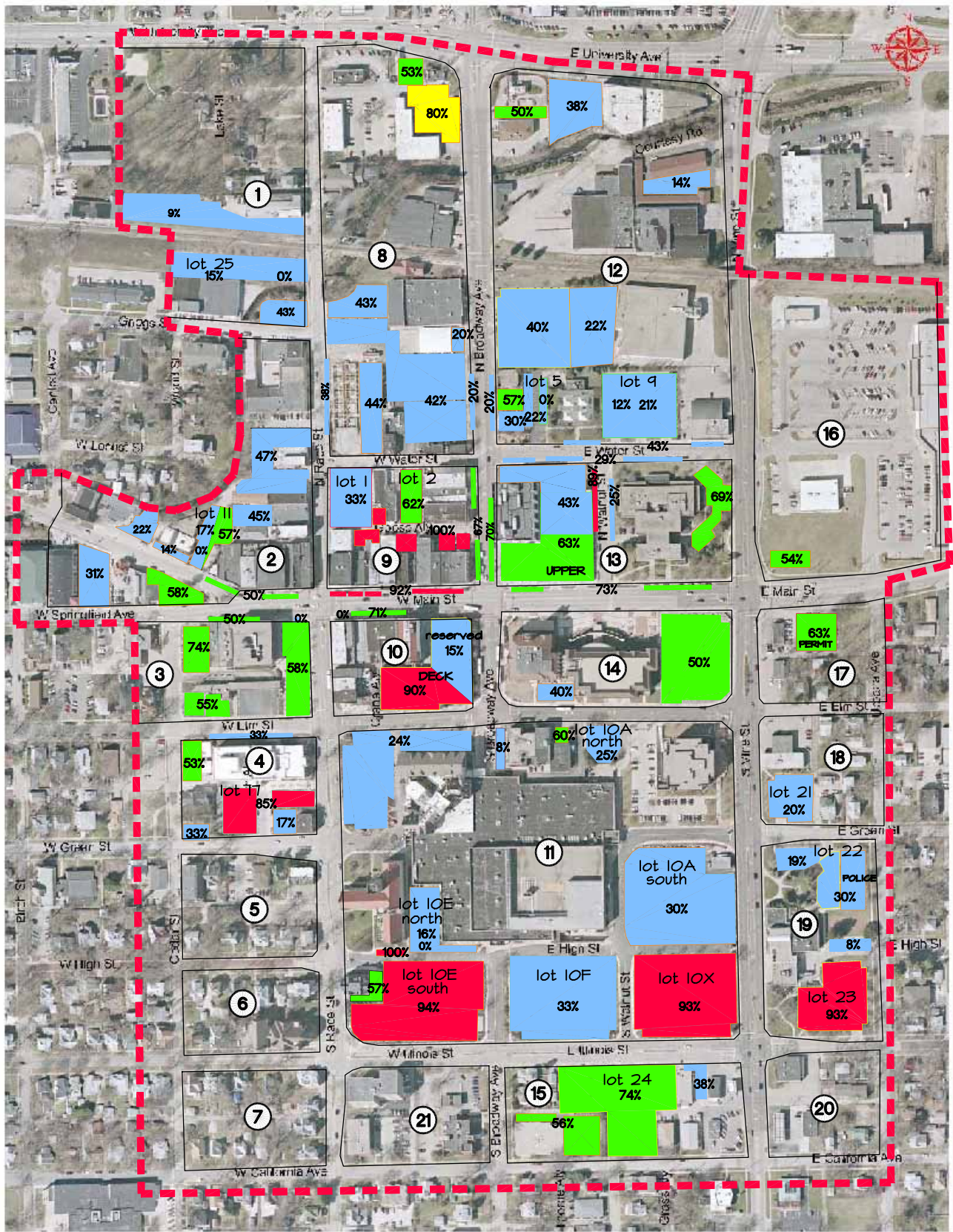
MAP 4 - PAGE 7

PARKING STUDY
FOR THE CITY OF
URBANA

URBANA , ILLINOIS

PEAK OCCUPANCY
THURSDAY DECEMBER 6, 2007

1:00 pm - 3:00 pm

🟥	85% - 100%
🟨	75% - 84%
🟩	50% - 74%
🟦	0 - 49%

Parking turnover and occupancy involves determining how full the parking areas are and how long individual vehicles are parked for. Parking occupancy is the most accurate method available for determining overall parking adequacy in a downtown setting. By plotting this information on a drawing, areas with little available parking can readily be identified. Similarly, available parking can be seen in context for its relationship to concentrations of occupied building space.

There were 196 vehicles observed parking in two-hour on-street spaces and 145 in off-street spaces. The breakdown of vehicles that remained in a stall beyond the posted time is located in **Table 2C**. With parking posted two hour, the optimal turnover rate would be 4.0 for an eight hour day. The overall turnover rates were low on and off-street due to the lower occupancy rather than vehicles parking at a two hour space for long periods of time.

Table 2C: Parking Infraction & Turnover Summary

Parking Turnover Summary (by type)	On-Street Parking	Off-Street Parking
Vehicles that remained less than 2 hours	175 (89 %)	125 (86%)
Vehicles that remained between 2 and 4 hours	17 (8.7%)	13 (9%)
Vehicles that remained between 4 and 6 hours	2 (1.15%)	4 (2.5%)
Vehicles that remained between 6 and 8 hours	2 (1.15%)	3 (2.5%)
Total number of vehicles analyzed	196	145
Total number of 2 hr. stalls analyzed	117	102
Vehicles in violation	22	21

Forty three vehicles (or 13% of the total vehicles parked on the observation day) stayed longer than two hours. Best practices for a parking "violation rate" should be approximately six percent or less. In Urbana's case that would translate into 21 vehicles, indicating that enforcement technique refinements could be used to help increase turnover, benefiting customer and visitor parking.

Specific recommendations on parking enforcement are discussed further in the recommendations sections. In general, consistent enforcement with adequate staffing levels and the use of handheld ticket writers all contribute to an optimal overall enforcement technique.

Chart A graphically represents parking occupancy differences between the public and private parking supply in Urbana. Of note in the chart is the fact that both lines follow similar paths and are relatively close in occupancy. This is a key indication that the parking system is working well in terms of promoting use of private parking areas and preserving public parking for customers and visitors.

Traditionally, private parking has a slightly lower occupancy than public parking as it is exclusionary to specific employees or customers. Issues occur when the public parking is experiencing a dramatically higher occupancy than the private, requiring intervention by the community to help shift the parking burden to the private parking areas.

Chart A: Parking Occupancy, Public vs. Private
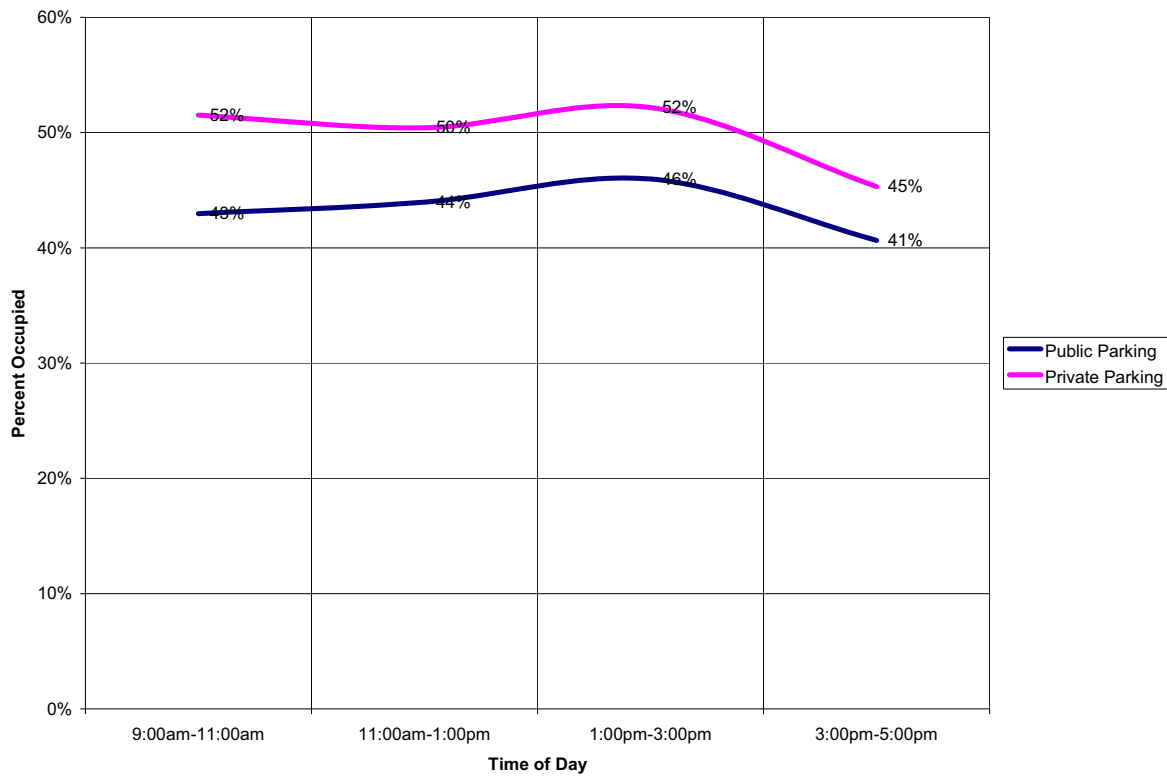
The next comparison examined is long versus short-term parking occupancy (**Chart B**). Specific to the public supply, we see in this graph that the long-term parking experiences greater utilization than the short-term parking. This is an excellent position to be in and is a credit to past parking management in Urbana. Traditionally, the difficulty communities experience is convincing individuals to park in the long-term parking areas. Urbana has done a good job at this and the result is that on-street parking is preserved, as it should be, for customers and visitors.

Chart B: Long Versus Short Term Public Parking
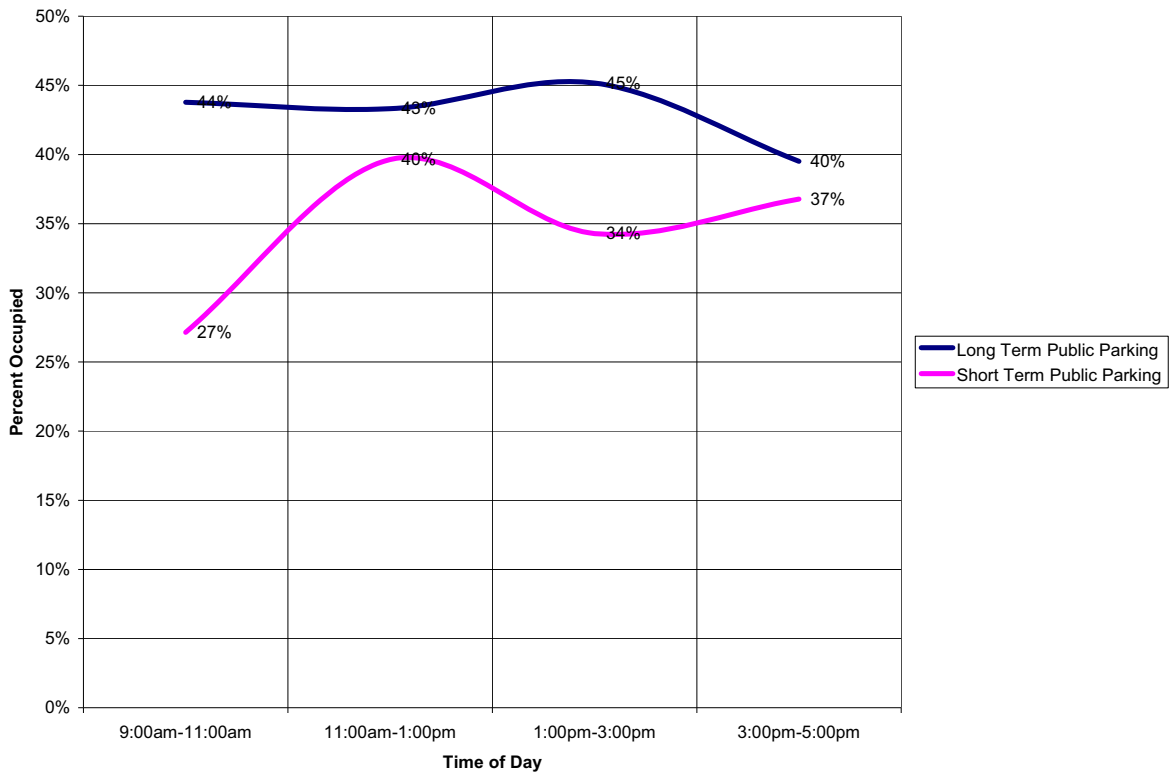
The final comparison presented as part of the parking occupancy analysis examines total (public and private) parking by contrasting on versus off street. This chart is similar in intent to the long versus short term parking comparison, but goes a step further by including the private supply.

Chart C shows that although the total on-street parking supply experiences a higher occupancy than the off-street supply, the occupancies are close enough to be considered a positive result and well within our defined parameter of 85% of total capacity. Specifically, the on and off-street comparison illustrates that the parking system is working very well in Urbana and that adequate parking overall is present to serve the downtown employees, customers and visitors.

Chart C: On Versus Off Street Parking
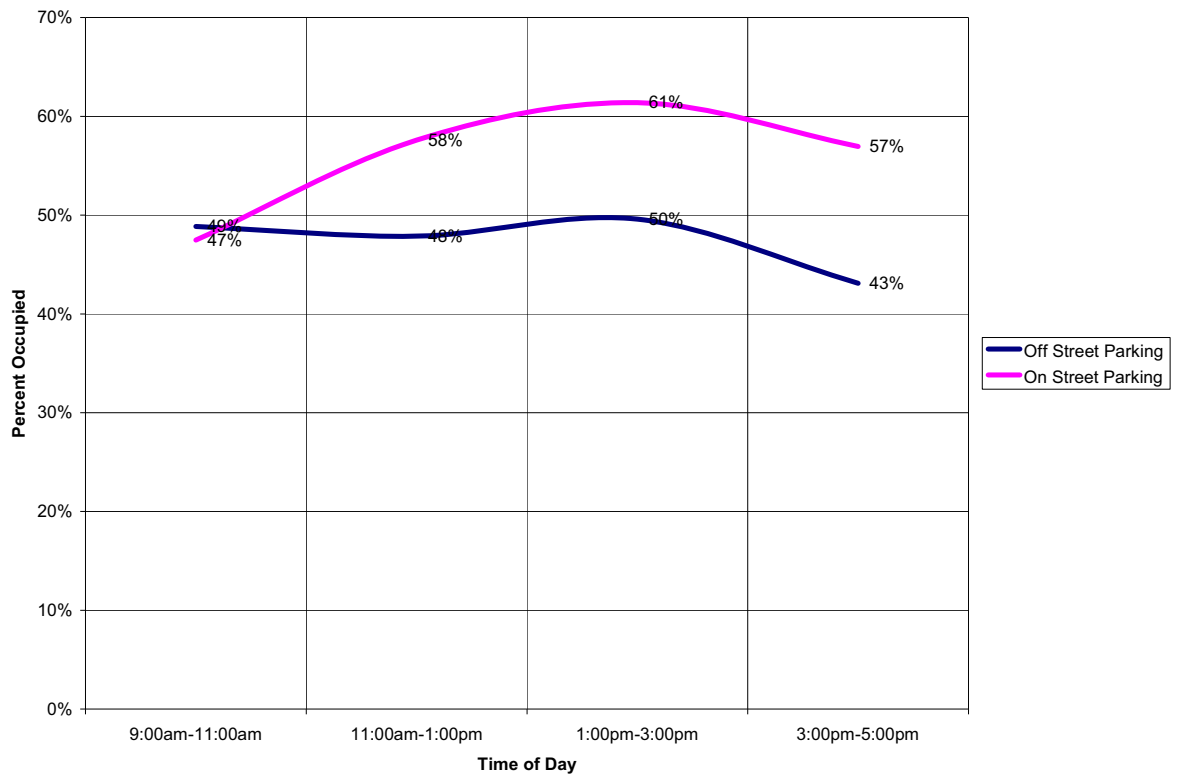
Charts containing the raw parking occupancy data for all parking types examined in the turnover and occupancy sampling can be found in the **Appendix** section of this report.

2.4   Community Input

Community input was sought in three forms for the parking study. First a committee was assembled to represent various groups and interests in the downtown. This committee consisted of individuals from the City (staff and elected representatives), community organizations and downtown business associations. The Parking Committee's primary task was to serve as a review panel for the study process, findings and recommendations.

The second form of community input was a survey distributed to the downtown business managers (or owners) and their employees. These surveys presented an important element in developing the parking demand model for Urbana; as the data gathered helped researchers understand how much parking was needed to serve individual business types in the community. The data also helped assess various aspects of the parking system where improvements could be considered. The survey summaries are included in the **Appendix** section of this report.

The third form of community input included face-to-face stakeholder interviews. Research staff conducted 15 individual stakeholder interviews and group meetings the week of December 3, 2007. Stakeholders were given the opportunity to discuss potential projects, existing scenarios and preferred outcomes. Particularly important to the parking study was the ability for researchers to learn about proposed and potential future development projects in the downtown.

Throughout the stakeholder interviews there were several common themes. Over half of people interviewed felt that Downtown Urbana does not have enough parking. Many stated that the biggest concern was long-term employee parking; particularly employee parking that was well lighted and secure. Stakeholders noted that the employees were parking on the streets taking the prime visitor parking spaces. Other issues of concern revolved around loading zones, security issues in the parking lots and requests for better signs to guide visitors.

Field observation of the parking use and occupancy demonstrated that the use of on-street parking by employees is present in some situations and at some locations. Action suggested in **Section 4** to help discourage use of on-street parking by employees includes parking enforcement enhancements and marketing.

Table 2D on the following page identifies the parking ratios developed for downtown Urbana. These ratios define how many parking stalls are needed to support 1,000 square feet of gross floor area for individual business types. The table continues by comparing the ratios developed from this study with ratios that can be found in Urbana's zoning code for areas outside of the downtown (parking requirements are not applicable in the downtown, see table for details) and with national standards developed by the Institute of Transportation Engineers (ITE).

Table 2D: Parking Ratio Comparison

Land Use	Parking Model (1) (stalls per 1,000 sq. ft.)	City Of Urbana Zoning [note: not required in the downtown (2)] stalls per 1,000 sq. ft.)	ITE (3) (stalls per 1,000 sq. ft.)
Office	2.85	3.33	2.79
Retail	2.35	4.00	3.97
Mixed Use	2.47	n/a	3.25
Service	1.40	4.00	n/a
Restaurant	6.00 day/9.00 night	10.00	12.49
Bar	2.00/ 14.00 night	n/a	n/a
Residential	0.68	1.5 (per unit)	1.50 (per unit)
Government	2.90	3.33	4.15
Community & Civic Org.	2.60	2.00	3.00
Hotel	1.00 (per room)	1.00 (per room)	0.95 (per room)
Theater	0.30	1.00 (per 5 seats)	n/a
TFB (Fraternal & Banquet)	0.38 day/7.38 night	n/a	n/a
Industrial	0.40	0.50	n/a

(1) Developed from surveys and field observations for Urbana's downtown area.

(2) In the B-4 District, there are no parking requirements and in the B-4E they are 50% of the requirements shown in this column, except for residential.

(3) Source: Institute of Transportation Engineers Parking Generation Manual, 2005

The parking ratio comparison table demonstrates that in a downtown setting with a mixture of uses, pedestrian activity, alternative modes of transportation, and businesses that have peak parking requirements at different times of the day, less parking is needed to serve a given amount of building space than in a suburban or rural setting. This aspect is referred to as 'shared parking' and demonstrates why traditional zoning that uses uniform parking requirements has a negative impact on a downtown setting.

Urbana currently does not have parking requirements in the downtown area. Some communities take the parking requirements a step further by banning parking development in the downtown with the goal of transitioning to more efficient public parking. By doing so, communities are able to have greater control over urban development and density. Similarly, transportation alternatives become increasingly viable in higher density areas.

Recent increases in fuel costs have also elevated public interest in transportation alternatives and greater environmental awareness. In choosing to encourage development without requiring surface lot parking and by embracing transportation alternatives, Urbana has taken major steps towards creating greater sustainability in its downtown.

Map 5 on the following page illustrates the anticipated future changes in the downtown. The map was developed from a combination of community input and City staff input. As with any planning exercise in anticipating future scenarios, many variables are present. Fundamentally, we aren't sure exactly when these projects will move forward or whether they will occur at all.   The future scenario really represents a "best guess" that helps in parking planning by offering a proposed scenario that should be anticipated.

The future developments map includes a description of the proposed projects, locations and how many square feet of occupied building space may be involved. Additionally, the map references a net impact of parking. The net impact is a calculation of parking impact taking into account parking used for an existing building located on the re-development site and whether existing parking will be removed.

For the majority of the re-development scenarios, parking demand was calculated assuming that the re-development will be a general mixed use. Since we don't know exactly what type of use may be occurring in the re-development, mixed use presents the best estimation that can account for any use ranging from office to residential. In cases where more was know about the re-development proposal, a specific use type was used in the parking demand calculation.

Planning for future development is particularly important in Urbana's case as the community is moving forward with a distinct goal for urban density and mixture of uses within the downtown. Additionally, the community input exercise revealed strong interest by the private sector (developers and property owners) in development and re-development for downtown Urbana.

Urbana is at a cross roads with regard to development. Specifically, vacant building space is limited and business interest in the community is leading towards more growth and increased density. In order to avoid a situation where parking is a constraint on development and economic activity, parking planning in conjunction with anticipated development and transportation scenarios is necessary.

The City has a great resource with the existing surface parking lots in the downtown. As density increases and additional land resources are needed to support development, parking lots can be transitioned to structured-parking that is located and designed to integrate with a variety of transportation alternatives.

The map also includes proposed locations for future parking that is proximate to key development blocks and transportation resources. These locations are either already owned by the City or should be considered for potential future land-banking in preparing for future parking development. In general, some communities acquire land in downtown core areas as an economic development tool for land swaps with developers, future parking or for potential public/private ventures.

POSSIBLE NEW BUILDINGS
5 TO 10 YEARS
65,000 sq. ft. , MIXED USE
NET IMPACT : 55 PARKING STALLS

POSSIBLE FUTURE CHANGE IN USE
10 YEARS
14,030 sq. ft. , CHANGE TO RESTAURANT
NET IMPACT : 74 PARKING STALLS

POSSIBLE FUTURE DEVELOPMENT
10 YEARS
5,000 sq. ft. ADDED
NET IMPACT : 13 PARKING STALLS

POSSIBLE FUTURE REDEVELOPMENT
10 YEARS
20,000 sq. ft. , ADDED
NET IMPACT : 50 PARKING STALLS

POTENTIAL NEW PARKING

NEW BONEYARD CREEK PARK
5 TO 10 YEARS
NET IMPACT:

POSSIBLE RE-DEVELOPMENT
ADDS 40,000 sq. ft.
5 TO 10 YEARS
NET IMPACT: 99 PARKING STALLS

POSSIBLE RE-DEVELOPMENT
ADDS 30,000 sq. ft.
5 TO 10 YEARS
NET IMPACT: 74 PARKING STALLS

POSSIBLE RE-DEVELOPMENT
ADDS UP TO 77,810 sq. ft.
10 YEARS
PARKING IMPACT VARIES
ASSUMES A NET IMPACT OF
UP TO 192 PARKING STALLS

POSSIBLE CHANGE IN USE
DEVELOPMENT OR PARKING
ASSUMES NO PARKING IMPACT

POSSIBLE RE-DEVELOPMENT
ADDS 60,000 sq. ft.
5 TO 10 YEARS
NET IMPACT: 148 PARKING STALLS

POSSIBLE CHANGE IN USE
TO CONVENTION FACILITY
OR RESIDENTIAL USE
5 YEARS
NEUTRAL PARKING IMPACT

POSSIBLE FUTURE SERVICE USE
10 YEARS
NEUTRAL PARKING IMPACT

POSSIBLE RE-DEVELOPMENT
5 TO 10 YEARS
35,000 sq. ft. ADDED
NET IMPACT: 87 PARKING STALLS
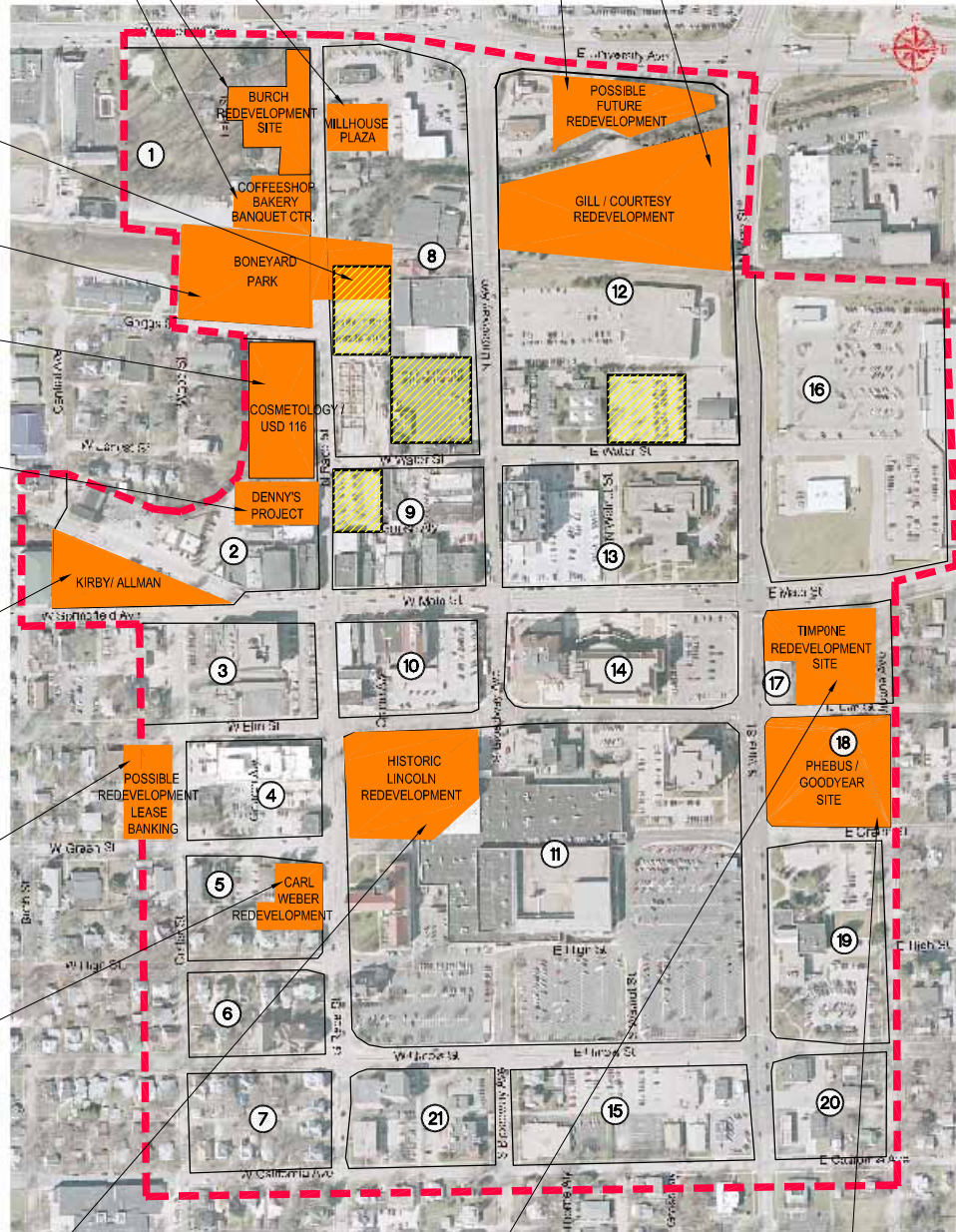
Map labels:
BURCH REDEVELOPMENT SITE
MILLHOUSE PLAZA
POSSIBLE FUTURE REDEVELOPMENT
COFFEESHOP BAKERY BANQUET CTR.
BONEYARD PARK
GILL / COURTESY REDEVELOPMENT
COSMETOLOGY / USD 116
DENNY'S PROJECT
KIRBY/ ALLMAN
POSSIBLE REDEVELOPMENT LEASE BANKING
HISTORIC LINCOLN REDEVELOPMENT
CARL WEBER REDEVELOPMENT
TIMPONE REDEVELOPMENT SITE
PHEBUS / GOODYEAR SITE

2.5 Parking Demand Calculation

Calculating parking demand involves applying a ratio of parking stalls to building floor area to develop a total amount of parking needed figure. Analysis involves developing a chart that summarizes building floor area by block and by use type. The ratios for parking discovered during the fieldwork and community input phases was demonstrated in **Table 2D**.

The parking ratios developed for each use encompass parking for everyone who would utilize the building floor space, including manager/owners, employees and customers. It is important to note that the parking ratios vary over time. Variables, such as the price of gasoline, driver habits, changes in the mixture and density of buildings in a downtown, all gradually impact parking demand.

Typically we find that as the price of gasoline goes up, parking demand falls incrementally since individuals will often choose different forms of transportation, make fewer trips or car pool. Similarly, as the mixture and density of uses increases in an urban area, parking demand decreases because of the effect of shared parking.

The variance in parking demand ratios is gradual and proportionate to changes in a community. Even something dramatic, such as the recent changes in the price of gasoline, will take time to manifest into parking demand changes for Urbana. Therefore, the ratios developed for this study are accurate for the immediate future and relevant for our planning horizon of ten years.

To demonstrate how parking demand is calculated a sample calculation is included below. **Table 2E** on the following page is a summary chart that identifies the parking demand for each block. The table also includes the existing parking supply, the current parking surplus or deficit and the future parking surplus or deficit.

A sample parking demand calculation is as follows:

An office building with 32,450 gross square feet in downtown Urbana would require 2.85 parking stalls per 1,000 square feet. Therefore the entire building would need (demand) 92 parking stalls. If the building had a parking lot with 45 parking stalls, the building would have a net parking demand or deficit of 47 parking stalls.

Table 2E: Parking Surplus/Deficit Calculation Sheet

Block	Demand	5 yr.	10 yr.	Parking	Surplus/	Surplus/	Surplus/	Surplus/
	(current)	Peak	Peak	Supply	Deficit	Deficit	Deficit	Deficit
Evening								(evening)
Daytime		Demand	Demand		(current)	(5 years)	(10 years)	(current)
1	31	123	123	244	213	121	121	229
2	231	427	652	237	6	-190	-415	34
3	130	130	130	80	-50	-50	-50	73
4	69	69	69	94	25	25	25	48
5	7	155	155	74	67	-81	-81	74
6	23	23	23	15	-8	-8	-8	-8
7	0	0	0	0	0	0	0	0
8	186	211	258	447	261	236	189	245
9	115	115	115	122	7	7	7	-112
10	145	154	162	222	77	68	60	34
11	748	1,016	1,067	977	229	-39	-90	569
12	172	235	370	532	360	297	162	412
13	382	382	382	307	-75	-75	-75	254
14	309	309	309	146	-163	-163	-163	63
15	45	45	45	182	137	137	137	165
16	367	371	376	482	115	111	106	173
17	2	2	2	67	65	65	65	66
18	12	99	99	59	47	-40	-40	53
19	174	174	174	155	-19	-19	-19	108
20	12	12	12	25	13	13	13	23
21	51	51	51	102	51	51	51	98
	3,212	4,103	4,574	4,569	1,357	466	-5	2,602
	(stalls)	(stalls)	(stalls)	(stalls)	(stalls)	(stalls)	(stalls)	(stalls)

Since we are interested in understanding the parking demand for the entire downtown area and since some buildings don't have parking or share parking resources, we divide the downtown into blocks. Specifically, all of the buildings on one downtown block are summed by use type. The parking demand is then calculated and the sum of available parking on that block is netted out to revel whether the block has a shortage or surplus of parking.

The complexity of relationships between parking and buildings (in identifying who is using what stall, where they are going, how long they are parked for, who uses the stall next, etc.) can become complex beyond what is reasonably needed to understand adequacy and operation. Therefore, the best way to portray parking is to assemble the shortages and surpluses onto a color coded map by block. In portraying surplus/deficit data spatially, we can then visualize the relationships between parking, buildings, transportation routes and pedestrian movement.

Table 2E demonstrates that Urbana currently has adequate parking to serve its needs. However, there are some blocks or groups of blocks that have shortages of parking. The table continues by examining parking demand changes over time. Specifically, a five year and a ten year scenario are presented. The future scenarios are based on the changes outlined on **Map 5: Future Developments**.

The fundamental presented by the chart is that over time Urbana's parking surplus will diminish and a shortage situation will be reached. We know that there are currently some areas experiencing parking shortages requiring individuals to walk further and adding to parking perceptions. These issues will continue to grow as development occurs in Urbana without efforts being made to optimize the existing parking supply and add new parking in the future.

The following three pages contain the surplus/deficit maps. **Map 6** is the current situation. **Map 7** illustrates the parking surplus and deficits as they are projected to be in five years. **Map 8** is a similar future projection at ten years. For the purposes of parking planning, ten years is generally considered to be the maximum projection. Beyond ten years the statistical margin of error in growth and demand projections begins to double every year and is unreliable for establishing capital budgets.
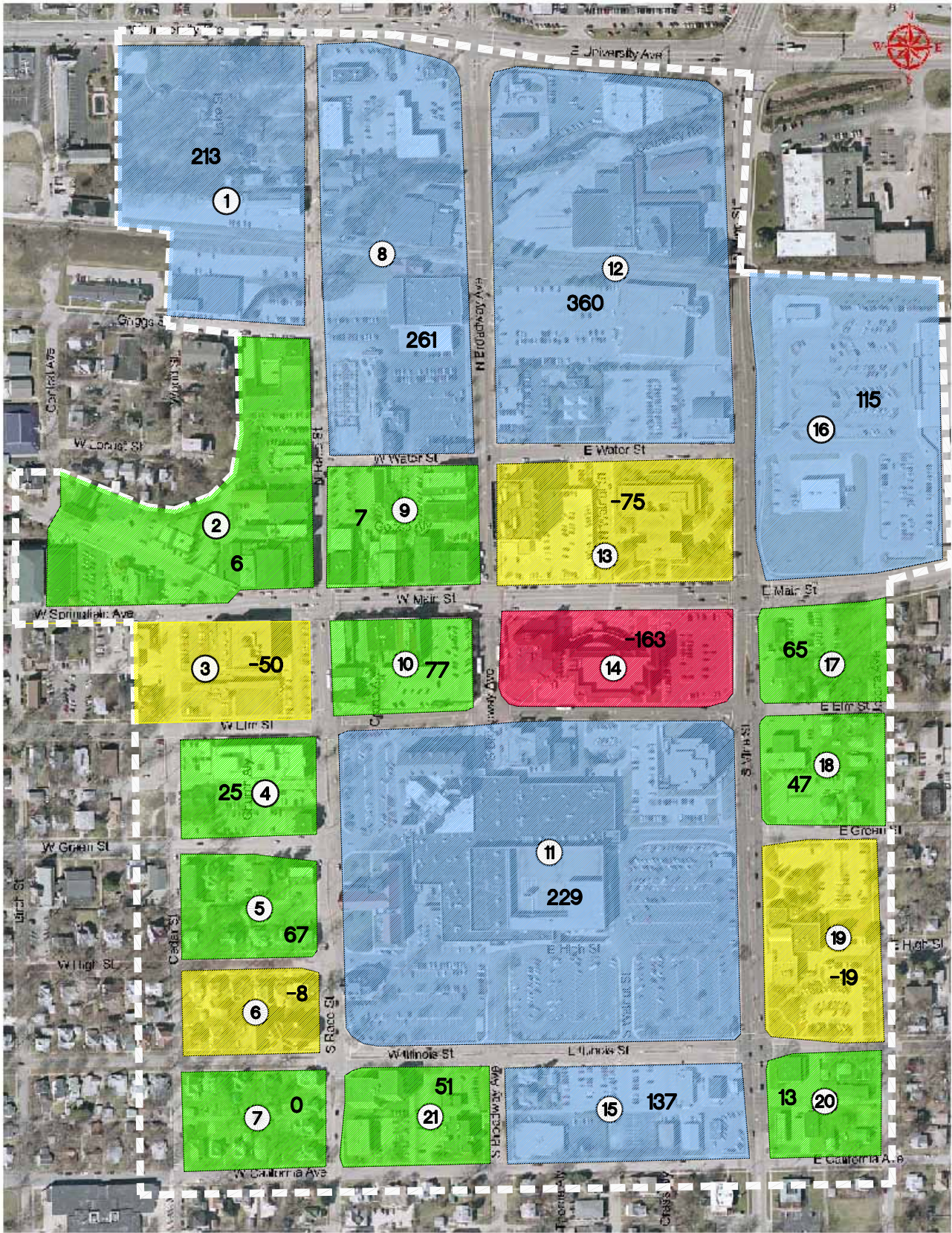
MAP 6 - PAGE 19

**PARKING STUDY
FOR THE CITY OF
URBANA**

URBANA , ILLINOIS

**SURPLUS - DEFICIT
CURRENT**

KEY

(red)	-100 +
(yellow)	-99 - -1
(green)	0 - 99
(blue)	+100

213 ①
8
261
12
360
115 ⑯
7 ⑨
2
6
-75 ⑬
3 -50
10 77
14 -163
65 ⑰
25 ④
11
229
5
67
47 ⑱
19 -19
6 -8
7 0
51 ㉑
15 137
13 ⑳

RICH
& ASSOCIATES
Parking Consultants
Architects · Engineers
Planners

SCALE: NTS
DRAWN BY: GMC
FILE:
DATE: 10-06-09
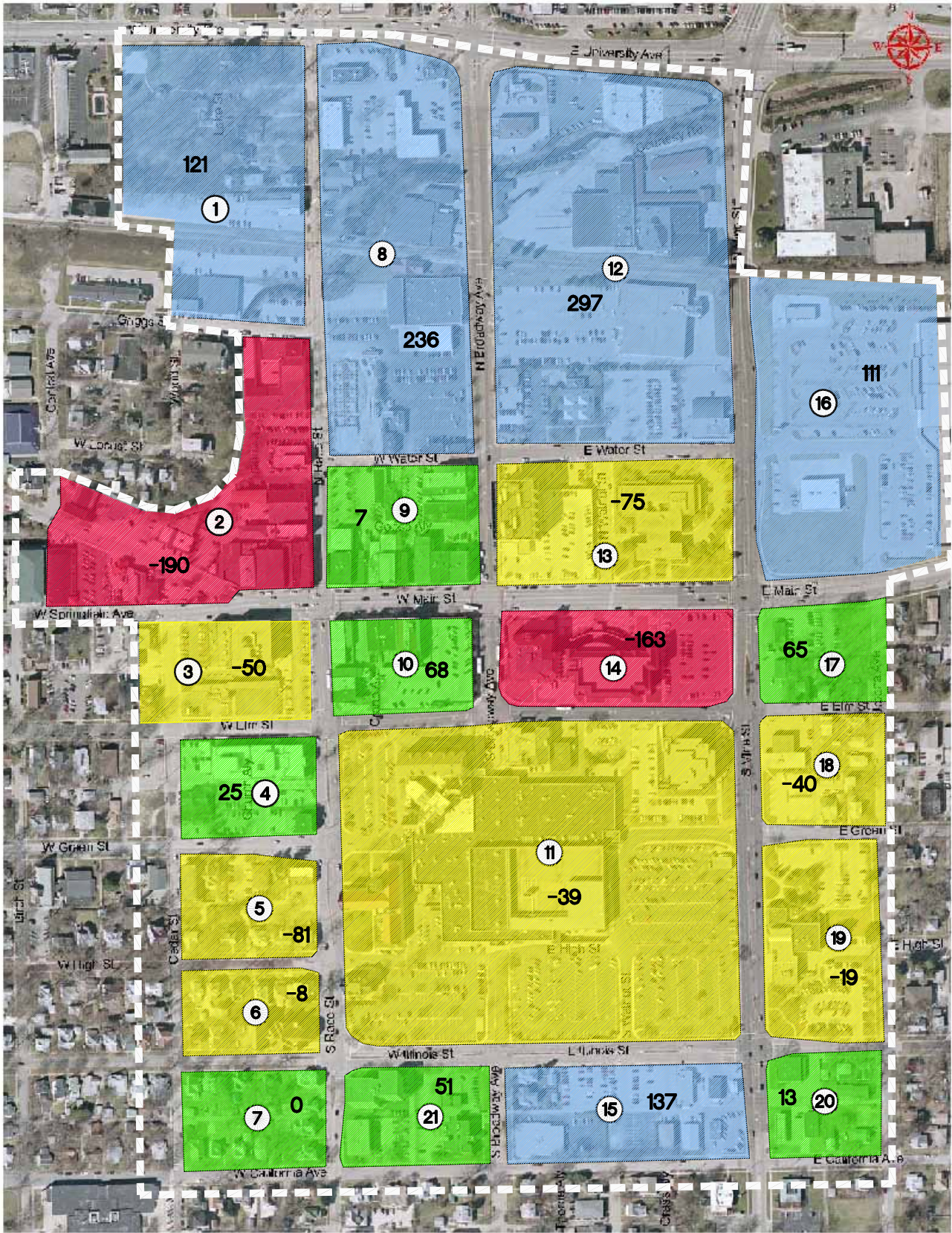
MAP 7 - PAGE 20

PARKING STUDY
FOR THE CITY OF
URBANA

URBANA , ILLINOIS

SURPLUS - DEFICIT
5 YEARS

KEY

🟥	-100 +
🟨	-99 - -1
🟩	0 - 99
🟦	+100
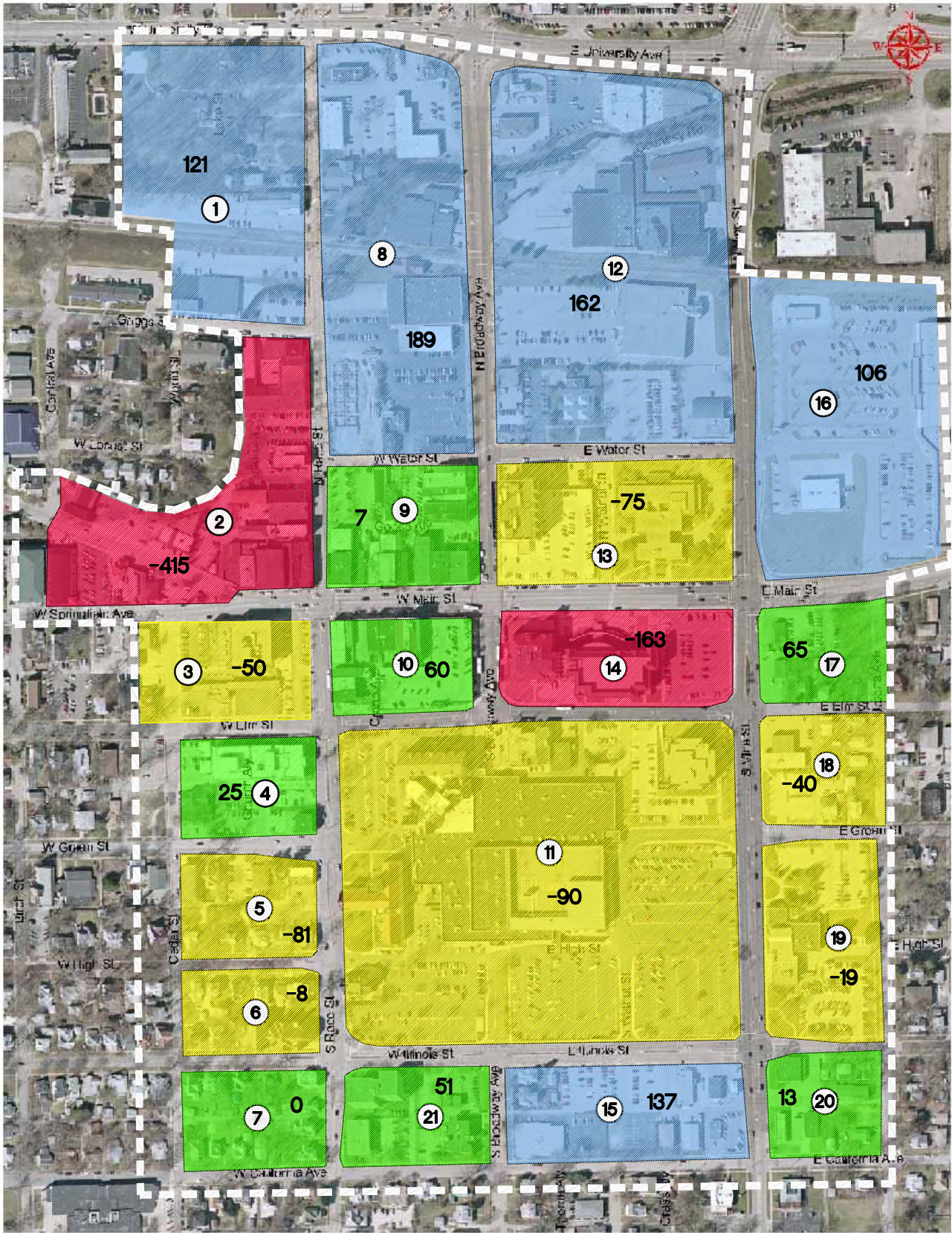
MAP 8 - PAGE 21

PARKING STUDY
FOR THE CITY OF
URBANA

URBANA , ILLINOIS

SURPLUS - DEFICIT
10 YEARS

KEY

🔴	-100 +
🟡	-99 - -1
🟢	0 - 99
🔵	+100

2.6   Conclusions

The parking field work, analysis and maps can be summed up as revealing that Urbana has adequate parking for the most part. However, there are areas that have shortfalls of parking and we do see that there are some instances of individuals using short-term parking for long-term purposes. These two factors contribute to the perception that there is a lack of parking.

Future development and re-develop proposed and or planned for the downtown area in Urbana will cause calculable parking shortfalls. Urbana has a stated vision of transitioning its downtown area to be denser, more pedestrian friendly, with various transportation options. In order to achieve this goal parking will be an important aspect and new parking will be needed.

Short-term or more immediate and low cost initiatives that will aid parking function are reviewed in **Section 4**. These includes initiatives are aimed primarily at enhancing parking enforcement and function. Further suggestions are made that will help the community achieve transportation goals and encourage pedestrian activity.

The next section (**Section 3**) deals explicitly with new parking options. These options range from short-term, low cost surface lot expansions to long-term capital investment in new parking facilitates.

SECTION 3 – FUTURE PARKING

SECTION 3: FUTURE PARKING

3.1   Parking Demand Growth

Urbana is currently experiencing some parking shortages, largely centered on the Main Street between Vine Street and Central Avenue area, as illustrated in **Map 4**, Peak Occupancy. Proposed and planned future developments in the downtown area were reviewed in **Map 5**, future developments. The drawing illustrates that the area near the intersection of Main Street and Race Street is a key focus for urban intensification that will be impacted by parking shortfalls.

Planning for future parking expansion to accommodate growth can be phased to aid in budgeting and to allow adequate time for land acquisition or other system changes to take effect. Specifically, the report outlines a series of measures that will aid in using the existing parking as efficiently as possible. These recommendations are particular to the existing parking system and can be found in **Section 4** of this report. **Section 5** deals with short and long-term options for expanding the existing parking supply.

As demonstrated in **Section 2**, new parking will be needed to support future development and re-development opportunities in the downtown. Consideration will need to be given to providing an additional 400 parking stalls near the Main Street and Race Street area in order to support proposed and planned developments. As an interim step the City has already identified opportunities for expanding existing surface lots.

3.2   New Parking Options

The expansion of surface lots can be a good interim approach to handling parking shortfalls or to accommodate shortages during construction. However, the long-term vision for the downtown should be to transition away from surface lot parking. Surface lots can disrupt pedestrian activity and promote increased automobile use. The ability to use downtown land area for buildings, green space or pedestrian areas is typically considered a higher and better use of land than as surface lot parking.

A better alternative for Urbana is to use surface lots, expansions and other land acquisitions as a short-term approach to adding additional parking and to look to land swaps, sales or public private ventures that utilize land resources to higher and better uses. A long-term possibility that exists in the City is to consider building mixed use parking structures, ringed in commercial space on the surface lots surrounding Lincoln Square once the existing parking leases have expired. This would provide an opportunity to add parking and occupied space, amplifying the economic activity associated with the mall building.

The concept of transitioning away from surface lot parking towards on-street opportunities and structured parking solutions is consistent with Urbana's Master Plan and the overall vision for the community. Further, communities, such as Naperville, Illinois or Grand Rapids, Michigan have successfully transitioned towards structured parking solutions with great success in terms of economic activity and urban design goals.

Surface lots suggested for expansion are as follows:

- Expansion of Lot 11
- Expansion of Lot 21
- Expansion of Lot 24
- Expansion of Lot 25

Lot 11 is largely land locked and is a proposed location for re-development along with adjacent buildings. Additionally, there has been some question in the past of the historical significance of property adjacent to this lot. Lot 11 is most likely a poor choice for expansion given the small amount of parking that could be gained.

Lot 21 serves the City building for the most part. Further this lot is a potential future re-development site. Similar to Lot 11, Lot 21 may be a poor choice for expansion since it could transition in the future. Lot 21 should only be considered for expansion if the City sees value in acquiring additional property at this site, or if additional parking for City Hall is needed.

Lot 24 is a source of parking for employees of Lincoln Square. This lot is consistently well used and will most likely remain surface lot parking for the foreseeable future. Expansion of this lot is viable and recommended if the opportunity arises for the land banking opportunity presented and to be able to offer additional employee parking as needed.

Lot 25 is located along the rail line and is adjacent to some key re-development opportunities. Expansion of this lot could easily be accommodated along the rail right-of-way, without private property acquisition and building demolition. Lot 25 is recommended for expansion as a long-term parking area.   Budgeting for any surface lot expansion should be based on an estimate of $2,000 per parking stall, plus any land acquisition costs.

When considering **long-term** versus **short-term**, the amount of each type of parking that will be needed in Urbana is roughly 40% short-term and 60% long-term. Currently there are approximately 700 short-term parking stalls in the downtown area and 3,800 long-term parking stalls. While the allocation between long and short-term works fairly well now (since Urbana's downtown is more business/employee oriented), future transitions towards increase retail, service and or restaurant activity will require additional short-term parking.

Any new parking developed by the City should either include short-term parking, or be used to trade long-term for short-term. On-street is the best location for short-term parking and the City currently is considering plans to maximize on-street, short-term parking by implementing angle parking.

Other opportunities for new or additional parking that have been examined or proposed include the possibility of structured parking. The potential expansion of the City's existing parking structure or the development of new structured parking were specifically examined. In general, a parking structure will provide more parking spaces in a concentrated area to satisfy parking demand on several blocks and would eliminate the gaps in the street frontage created by surface lots.

Three options for **structured parking** in Urbana were examined for comparative purposes. All three have been proposed by various groups and stakeholders within the community during the parking study process and present viable alternatives. However, in order to fully consider the options in context, it is necessary to look at the capital investment necessary and returns (number of new parking stalls) that can be anticipated.

The three options analyzed are as follows:

Option 1: Repair and expand the existing City parking structure by two levels (approximately 200 spaces)

Option 2: Repair the existing parking structure and build a new 400 space parking structure on a different site.

Option 3: Demolish the existing parking structure and rebuild a new parking structure of 400 spaces on the same site.

For each of these options a cost estimates for the construction and the annual repairs for the facilities was prepared. The repair and replacement included an assumption of concrete crack repair each year, building joint repair/replacement, expansion joint repair and replacement and finally waterproof membrane repair and replacement.

The repair schedule is based on Rich and Associates' experience and from previous study work undertaken by Urbana.   All financing assumes City issued debt (general obligation bond) using a tax exempt bond issue for comparison purposes. The project cost and finance worksheets include a series of calculation lines that are explained by the following glossary.

Glossary:

1. **Construction Costs**: The assumptions also assumed pile foundations which will need to be confirmed by soil borings and a geotechnical report. For **Option 1** the costs assumed the modification costs to the existing structure identified above. For **Option 3** the demolition costs (estimated at $800,000) are included in the construction costs.

2. **Professional Fees**: These are the design fees and reimbursed expenses.   It assumes a conventional design/bid scenario.

3. **Insurance**: Testing during construction paid for by the owner

4. **Legal and Accounting**: The legal and accounting costs for the city during the course of construction.

5. **Geo-Tech and Survey**: Fees for a survey and topographical of the site and soil borings and report on foundations.

6. **Contingency**: Rich has used a 10% contingency for the design and construction to cover design issues and issues during construction.

7. **Project Costs to be Financed**: Project costs represent the construction hard and soft costs.

8. **Finance Term**: The term of the bond is 20 years. A longer amortization schedule is also possible.

9. **Interest Rate**: Based on an un-rated bond issue with no insurance and rates as of the first quarter of 2008. The rate assumed a general obligation type bond issue.

10. **Term of Construction**: The construction period is estimated at 10 months. This depends on the time of year that the project is started and site availability for lay-down for example**.**

11. **Interest During Construction**: All bond proceeds are received up front and draws are made on these funds to pay for construction. This represents capitalized interest for the term of construction.

12. **Interest Income**: The bond proceeds are put into an interest bearing account and generates interest income that is used to offset costs.

13. **Legal and Accounting Fees**: These are the legal fees and accounting fees of the bond issuer.

14. **Debt Service Reserve**: No debt service was assumed.

15. **Financing Fees**: These are the points paid to the bond underwriter.

16. **Cost of Issuance**:   These are expenses such as printing of offering/official statements.

17. **Total Financing Fees**: Total soft costs for financing.

18. **Addition of the Project Costs**: from line 8.

19. **Total Amount of Bonds**: Total of lines 18 and 19.

20. **Debt Service**:   The annual principal and interest payment assuming a level payment   each year.

The three options are examined starting with **Option 1** below. A chart indicating project and finance costs associated with each option is included in the text along with a summary indicating the per-new parking stall cost expressed as net present value.

Option 1: Includes the rehabilitation of the City's existing parking structure with an expansion of an additional 200 parking stalls. This option provides approximately 50% of the needed new parking for the ten year scenario examined in **Section 2**.

A report completed by Desman for the City in 2005 identified issues with the expansion. Though the structure was designed to be expandable, at the time of construction an older building code was in force. Since then a new building code with seismic revisions has been enacted throughout the State and the structure does not meet the new code requirements. In order to expand the facility, it would need to be retrofitted and upgraded to the new code requirements.

The 2005 Desman report estimated the cost to complete the modifications at between $750,000 and $900,000. The construction costs assumed the costs to expand the parking structure, again as estimated by Desman in 2005. Corrected for 2008 dollars the construction cost would be approximately $5.6 million.

Table 3A: Option 1, Project & Finance Worksheet

1	Construction Cost								$5,556,824
2	Professional Fees (Architectural/Engineering & Reimbursed)								$361,000
3	Insurance								$20,000
4	Legal and Accounting								$20,000
5	Geo-tech and Survey								$20,000
6	Contingency								$555,000
7	Project Cost to be Financed								$6,532,824
8	Financing Term							20	Years
9	Interest Rate							4.75	%
10	Term of Construction							12	Months
11	Interest During Construction								$389,000
12	Interest Income	40%	@	1%					($41,000)
13	Legal & Accounting Fees		@	1.00%					$82,000
14	Debt Service Reserve								None
15	Financing Fees (Points)		@	2.00%					$164,000
16	Cost of Issuance		@	0.50%					$41,000
17	*Total Financing Costs*								$635,000
18	+ Project Cost to Be Financed								$6,532,824
19	Total Amount of Bonds								$7,167,824
20	Annual Debt Service								$642,000

Perhaps the most useful way to consider this option in relation to all potential options is to look at the per-added parking stall cost. Using present value for all options and looking at the cost divided by the actual added parking, we can compare each option from a financial perspective. The cost of **Option 1** is $32,441 per newly added parking stall.

Option 2: This option assumes that the existing parking structure will be maintained and that a new parking structure of approximately 400 spaces would be built at a different location. The construction costs for the new parking structure in 2008 dollars were estimated at $18,000 per space.

This option assumes that the existing parking structure is maintained for the life of the new parking structure. **Option 2** allows the existing parking structure to remain open during the new parking structure's construction.

Table 3B: Option 2, Project & Finance Worksheet

1	Construction Cost								$7,200,000
2	Professional Fees (Architectural/Engineering & Reimbursed)								$396,000
3	Insurance								$35,000
4	Legal and Accounting								$25,000
5	Geo-tech and Survey								$35,000
6	Contingency								$720,000
7	Project Cost to be Financed								$8,411,000
8	Financing Term							20	Years
9	Interest Rate							4.75	%
10	Term of Construction							12	Months
11	Interest During Construction								$433,000
12	Interest Income	40%	@	1%					($46,000)
13	Legal & Accounting Fees		@	1.00%					$91,000
14	Debt Service Reserve								None
15	Financing Fees (Points)		@	2.00%					$182,000
16	Cost of Issuance		@	0.50%					$46,000
17	*Total Financing Costs*								$706,000
18	+ Project Cost to Be Financed								$8,411,000
19	Total Amount of Bonds								$9,117,000
20	Debt Service								$716,000

As with **Option 1**, a net present value derived cost per new parking stall is offered for comparison purposes. The cost of **Option 2** is $20,328 per newly added parking stall. This presents a savings over **Option 1** by $12,113 per new parking stall because more new stalls are being provided.

The added benefit to this option is that there is minimal impact on parking operation since the existing parking structure would remain open and functional during construction of the new facility. Locations for a new parking structure are included on **Map 9**.

Option 3: For this option we assumed the demolition of the existing parking and rebuilding on the same site. The construction costs for the new parking structure were the same as **Option 2** except that we added demolition costs.

Option 3 eliminates the parking supply from the existing parking structure during construction, which would require an interim plan for accommodating vehicles. A typical approach for cases where a key parking source is removed from the supply during construction is to implement a shuttle system and lease parking from a nearby mall or shopping center.

Table 3C: Option 3, Project & Finance Worksheet

1	Construction Cost							$8,000,000
2	Professional Fees (Architectural/Engineering & Reimbursed)							$440,000
3	Insurance							$35,000
4	Legal and Accounting							$25,000
5	Geo-tech and Survey							$30,000
6	Contingency							$800,000
7	Project Cost to be Financed							$9,330,000
8	Financing Term						20	Years
9	Interest Rate						4.75	%
10	Term of Construction						12	Months
11	Interest During Construction							$480,000
12	Interest Income	40%	@	1%				($51,000)
13	Legal & Accounting Fees		@	1.00%				$101,000
14	Debt Service Reserve							None
15	Financing Fees (Points)		@	2.00%				$202,000
16	Cost of Issuance		@	0.50%				$51,000
17	*Total Financing Costs*							$783,000
18	*+ Project Cost to Be Financed*							$9,330,000
19	*Total Amount of Bonds*							$10,113,000
20	*Debt Service*							$794,000

As with **Option 1 & 2**, a net present value derived cost per new parking stall is offered for comparison purposes. The cost of **Option 3** is $42,166 per newly added parking stall. **Option 3** is the most expensive option and has compounding issues with removing existing parking during construction. Further, the rational behind **Option 3** could be questioned when alternatives exist and while the existing structure is still viable as a parking source.

3.3   Recommended New Parking

Option 2 is the recommended course of action for Urbana. It makes the most sense from a value perspective and from a logistics perspective. Value wise, the City gains the most new parking for the least cost. However, **Option 2** needs to be further considered by City staff by considering what options are available for acquiring land through purchase, land swap or joint venture. Acquisition costs may significantly impact the overall project cost and the per stall gained cost.

From a logistical perspective, the existing City parking structure is eminently important to the economic activity in the downtown area. **Option 2** allows this facility to remain in tact and operational during construction of a new facility. Repairs to the exiting parking structure could be initiated after anew facility is in operation. Additionally, the useful life of the existing structure is maximized, allowing the City to gain the full value from the original investment in this facility.

Map 6, on the following page, identifies four potential locations for a new parking facility. Identified as A, B, C and D, these sites all present opportunities and were selected based on available parcel size and location proximity to parking demand. Further, the sites all work relatively well with existing traffic routes and present a multi-modal potential with pedestrian activity and planned bicycle routes.

All of the sites have pro's and con's to consider.   The table below offers some key consideration points and offers a relative comparison on sites. As the Table indicates, **Site C** is optimal for new parking, but has the distinct drawback of being limited in size. Before a final decision is made on which site would be best for new parking, a design exercise should be undertaken to develop conceptual layouts and cost estimates for each site. Finally, the potential to incorporate commercial space or to develop a multi-modal transit center should also be examined.

Table 3D: New Parking Site Comparison

Criteria	Site A	Site B	Site C	Site D
Land Owned By City	✗	✗	✓	✓
Optimal Parcel Size	✓	✓	✗	✓
Collector Access	✓	✓	✓	✓
Optimal Pedestrian Access	✓	✓	✓	✗
Nearby Bicycle Route	✗	✗	✓	✗
Proximate To Parking Demand	✓	✓	✓	✗
Ranking	2	2	1	3
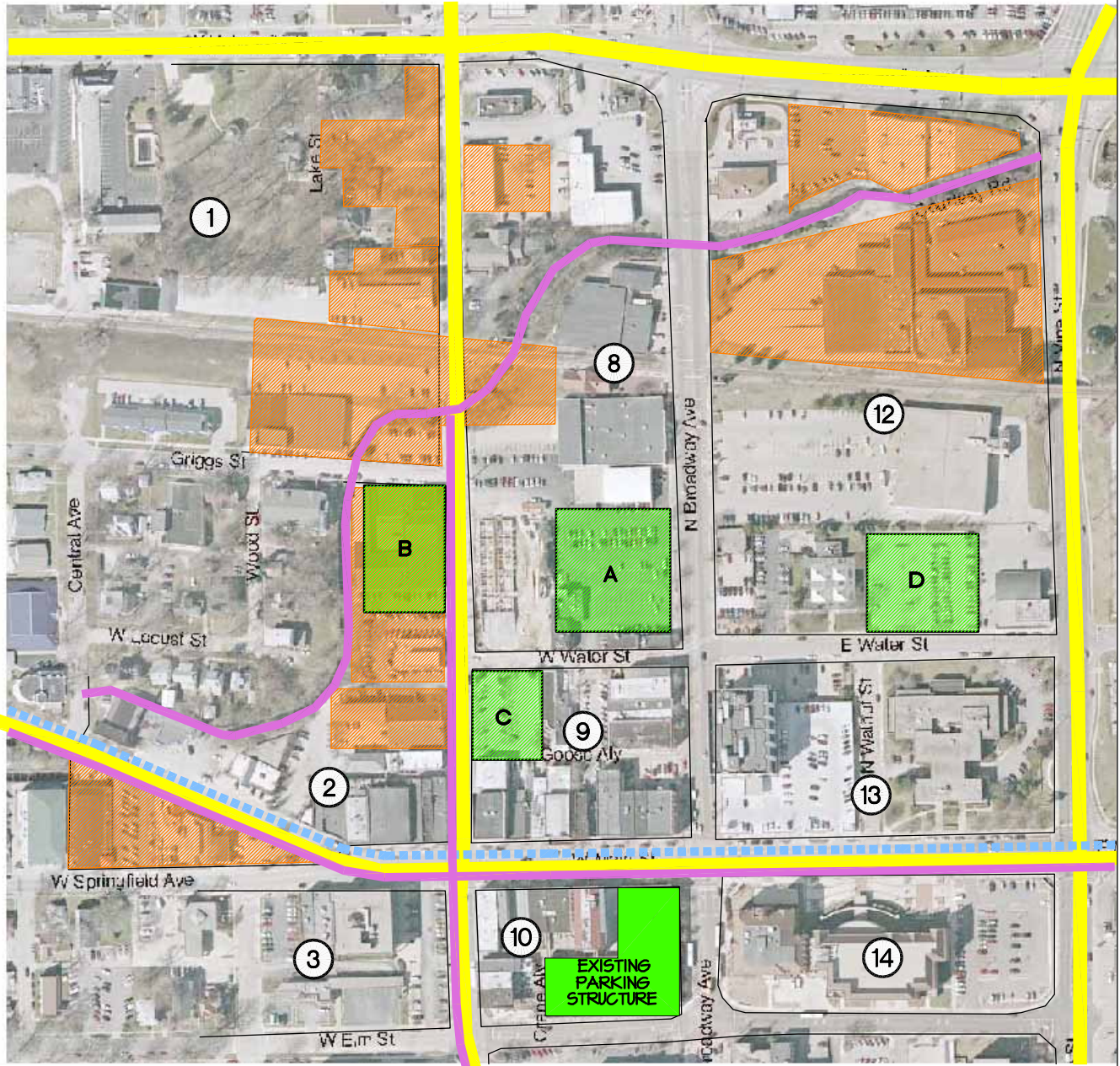
PARKING STUDY
FOR THE CITY OF
URBANA

URBANA , ILLINOIS

PROPOSED NEW PARKING
LOCATIONS

MAJOR TRANSPORTATION
ROUTE

PEDESTRIAN ROUTE

BICYCLE ROUTE

PROPOSED / PLANNED DEVELOPMENTS
AND RE-DEVELOPMENTS

C PROPOSED NEW PARKING
STRUCTURE LOCATIONS

RICH
& ASSOCIATES

Parking Consultants
Architects · Engineers
Planners

SCALE: N.T.S.
DRAWN BY: GHC
FILE:
DATE: 10-07-08

MAP 9 – PAGE 9

SECTION 4 - RECOMMENDATIONS

SECTION 4: RECOMMENDATIONS

The recommendations overview presents a review of the changes being suggested for Urbana's parking system. The recommendations presented in **Section 4** are intended to enhance the existing supply of parking through operational, management, and policy changes aimed at increasing the efficiency of the parking system and to prepare for future development opportunities. The recommendations provide a comprehensive approach to improving parking downtown currently as well as planning for future growth.

One of the first experiences most everyone has in a downtown is finding parking and the second experience is walking to the destination. Overall Urbana is shifting transportation strategies to embrace pedestrian, bicycle and transit enhancements in the downtown and create a better connectivity for all people coming into the downtown no matter what their mode of transportation is.

With the rising gas prices many people are choosing to leave their vehicles at home for short trips and are more frequently riding the bus, walking or riding bicycles. While pedestrian enhancement and bicycle recommendations as a whole cannot significantly reduce the parking needs in the downtown, they are offered to increase the access to the downtown as well as encourage the use of non-automobile forms of transportation.

Several recommendations involve information available to parking system users. These changes include comprehensive signage improvements and new marketing strategies that will aid in way-finding for both vehicles and pedestrian providing both employees and visitors of the downtown with concise information on parking.

Structural changes are also being suggested that will impact how new parking is created in the downtown area. A fundamental shift towards public parking will aid in promoting shared parking and greater use of transportation alternatives. Both of which will reduce parking demand while generating more activity.

4.1 Parking Duration:

Two-hour parking should be 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. The other duration that should be found on-street is fifteen minute or thirty minute parking for use as pick-up and drop off stalls or very short-term parking.

The **fifteen** or **thirty-minute parking** should be located as either the first or last stall on the block face where needed. There are limited short-term spaces on-street and consideration should be given to adding 15 or 30 minute stalls on each block short term spaces at the ends of blocks (either 15 or 30 minutes).

Finally, in areas where there is no demand for on-street customer-visitor parking, **eight hour parking** can be used to add to the overall long-term parking supply.

Summary:

Cost:	Covered under sign program
Benefit:	Parking efficiency is maximized through simplicity. Long-term parking takes place in lots where permits and hourly or daily parking can be utilized. Short-term parking is located on the streets near the businesses, where it is needed the most for customers and visitors.
Responsibility:	Public Works

4.2   Bicycle Parking/Enhancements:

Recently, Urbana conducted a Bicycle Master Plan to connect existing and future bicycle paths into the downtown area. Promotion of bicycle and pedestrian activity adds to the community's multi-modal initiatives. Additionally, installation of facilities such as bicycle racks/lockers in the downtown will help to promote bicycle activity.

Create a special event to promote bicycles in an effort to help enhance alternative modes of transportation, which in turn cuts down on the number of parking spaces needed.

Guidelines on Bicycle Racks:

- Racks should allow bicycle frame to make contact at two points.
- Should allow for more than one bicycle 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.
- Racks currently used in Urbana are of the recommended type.

Urbana currently has recommended bicycle racks and should continue to use this style.

Marketing Bicycle Ridership

- There is National "Ride Your Bike to Work Day/Month" in May every year. Several communities throughout the U.S. participate in this event promoting bicycle use. Information can be found through the League of American Bicyclists www.bikeleague.org.

- Bicycle Friendly Community Campaign (www.bicyclefriendlycommunity.org) awards communities who are bicycle friendly and promote walk-able, safe communities.

  > "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

- Source of possible grant funding through Bikes Belong Coalition, http://bikesbelong.org

- Pedestrian and Bicycling Information center is a useful link that offers advice on funding and marketing bicycling in downtowns. http://www.bicyclinginfo.org

Summary:

- **Bicycle Parking Enhancements/Marketing**

Cost:	None (Urbana currently uses the recommended style of rack and marketing can be combined with parking marketing).
Benefit:	Bicycle friendly communities draw people and activity into the downtown areas, promoting economic and social activity.
Responsibility:	Community Development, Public Works
Issue Addressed:	Creates a more pedestrian friendly downtown and encourages alternate modes of transportation.
Additional Comments:	Investigate State and Federal funding sources for bicycle initiatives. Multi-modal efforts are endorsed through several grant programs including Next-TEA (US Federal – Revised, Transportation Equities Act).

4.3 Pedestrian Activity

Pedestrian movement is a very important aspect of parking. It is difficult to get people to park beyond the front door of their destination if there is any worry about safety or the experience is not pleasant. Lighting and landscaping can greatly change a perception of safety in lots and along sidewalks. A police presence after dusk can also aid in changing the perception by creating a feeling of safety. Murals, art, window decorations and flowers can add to creating a pleasant walking experience.

Minimize surface lots and large breaks between buildings to promote walking in the downtown. People tend to walk further without complaints if the walk is pleasant and enjoyable. Landscaping, murals, and decorated store windows tend to create an improved walking experience. While, parking areas are important, large parking lots without landscaping can be viewed as unsightly and unsafe.

Consider adding pedestrian way-finding to the downtown. **Kiosks** placed near parking areas and on busy corners displaying maps and listings of businesses in the downtown are very helpful in directing visitors/customers of the downtown. Pedestrian way-finding will work hand in hand with marketing and signage in the downtown. The maps should display where long term parking is available for customers/visitors who plan on spending the entire day in the downtown.

Two examples of pedestrian wayfinding kiosks

Minimize pedestrian and vehicular interaction by creating a clear differential between the street and sidewalk. This can be done by using texture, colors, trees, or planters between the sidewalks and streets. The pictures below show a clear distinction between the street and sidewalks. It is also important that all sidewalks are accessible at all intersections. When all sidewalks are accessible it is possible for someone with less mobility to park at a non-handicap designated parking space when the designated handicap spaces are full.

Examples of desirable pedestrian crossings in Urbana.

Example of a sidewalk separating pedestrians from vehicles with texture color and light poles. This example is also handicap accessible.

Another example of using color and texture to create a clear path for pedestrians. This example uses planters to protect pedestrians waiting to cross the road.

Summary:

- **Pedestrian Enhancements**

Cost:	Budget varies; use $172,000 per crossing ($125,000 for pedestrian walk signal with countdown timer, $45,000 for textured concreter crosswalk inset, $2,000 for signs, painting, etc.).
Benefit:	Pedestrian enhancements draw people and activity into the downtown areas, promoting economic and social activity.
Responsibility:	Public Works
Issue Addressed:	Creates a more pedestrian friendly downtown and encourages alternate modes of transportation.
Additional Comments:	Investigate State and Federal funding sources for pedestrian initiatives. Multi-modal efforts are endorsed through several grant programs including Next-TEA (US Federal – Revised, Transportation Equities Act).

4.4   Angled Parking:

Urbana has examined the concept of converting on-street parking to angled parking in some downtown locations (Main Street, Walnut Street and Broadway Avenue) where street widths will accommodate the angled parking. As part of this study, generalizations on angled parking are offered below.

1. **Angled parking typically works to calm traffic**: Overall, this would tend to have a positive impact on the parking on Broadway. Typically, narrower lanes of traffic help to slow traffic down and create a more pedestrian friendly area. Thus, it would most likely be easier for vehicles to park due to a slower rate of speed on Broadway.

2. **This typically adds to the parking supply (increasing up to 1/3 parking stalls)**: The change from parallel to angled parking at 35-40 degrees can add additional on-street parking. The capacity can be increased by approximately 33%, depending on the layout and limitations presented by the street width, lanes and pedestrian crossing points.

3. **Backup movements angled vs. parallel:**

    Traffic Flow Impediments: The ingress and egress time for a vehicle to park needs to be taken into consideration. Parallel parking takes on average of 21 seconds for a vehicle to complete a parking maneuver. Conversely, angled parking takes 11 to 12 seconds helping to reduce the impediment time to other traffic.

Accident Incidences: Diagonal parking is considered by some experts to increase the opportunity for accidents along a roadway. However, diagonal parking also acts as a traffic-calming device, reducing travel speed. Statistically, accident rates attributed to diagonal parking are only higher on high speed, high traffic volume roadways. While diagonal parking may increase the number of accidents, the severity of the accidents is often reduced by slower travel speeds. The traffic flow is less and the speeds correspondingly low, the severity of accidents are reduced.

Pedestrian Safety: Diagonal parking increases the distance between the vehicle travel lane and pedestrian activity on the sidewalks. Diagonal parking also allows the driver of a vehicle to enter and exit in relative safety, as he or she is away from the travel lane. Parallel parking on the other hand forces drivers to enter and exit vehicles adjacent to a travel lane.

Lane reduction to two travel lanes, traffic calming (slower vehicle travel rates) and the use of bump-outs at intersections all add to enhance pedestrian safety by reducing the potential for vehicle/pedestrian conflict.

Economic Activity: Additional on-street parking, slower travel speed and increased pedestrian activity are the key elements of the most successful urban areas. This is particularly important in areas with contiguous commercial and retail space.

The benefits of diagonal parking have been found in most instances to outweigh the potential problems and this is most clearly defined by recent position changes being expressed by the Institute of Transportation Engineers (ITE). This recognized body comprised of traffic engineering and planning professionals has identified the benefits and misconceptions about diagonal parking over the past several years.

The 'rule of thumb' [1] is that if there are more than 10,000 vehicles using a given roadway per day, then parallel parking is recommended. If however, less than 10,000 vehicles use a roadway per day, then angled parking can be considered.

(1) The information and statistics provided are adopted directly from "Changing On-Street Parallel Parking to Angle Parking" by John Edwards PE, ITE Journal, February 2002.

4. **A multi-space meter could be used to help cut costs, and allow for an easy change to angled parking as well as a change back to parallel if necessary:**

   It is possible to use one (or a few, depending on the block length) multi-space meter on each block face instead of using individual meters at each parking space. This would serve all vehicles parked on the block face. Existing meter poles would be used to number the parking spaces. Multi-space meters should be linked via a telephone or wireless line in order to connect to a central computer. Real-time operation audits, accounting and error messages can then be addressed by parking management. The meters should be able to accept debit card, cash or credit cards.

There are many options available to the City including some multi-space meters that are solar powered. Others require a battery or electrical connection. The meters can range in price, but typically cost $25,000 per meter for purchase and installation. The City should ensure that the new equipment is upgradeable and can be linked to a central computer and to hand-held ticket writers for future changes and upgrades to the parking system. Advantages include, better record keeping, longer service life, easy upgrades, more payment options and the meters are less prone to vandalism.

5. Back in angled parking:

Back in angled parking is a very good concept and is technically easier to use. Though this concept looks good on paper, it is very difficult to get people to correctly use the parking. Often parkers pull into the space risking a ticket so they will not have to back into the space. Most parkers prefer front in angled parking verses parallel because they do not have to back into a space. Communities such as Salt Lake City UT, Seattle WA and Austin TX have all run trials on back in angled parking and have found that parkers do not like this type of parking movement.

<u>**Summary:**</u>

- **Convert To Pull In Angled Parking Where Applicable (Broadway Avenue, Walnut Street and Main Street)**

Cost:	Budget $25,000 per multi-space meter, if selected. Budget $200 per stall for re-layout and re-painting
Benefit:	Angled parking creates a traffic calming effect, allows for additional on-street parking.
Responsibility:	Public Works
Issue Addressed:	Additional short-term parking is provided.

4.5 Signage

This recommendation is specifically for parking signs, though this is also part of an entire signage package that promotes the downtown. Many communities come up with a "brand" to help market the downtown and signs are often part of that "branding". This recommendation involves a community effort to developing way-finding and a choice of themes and colors for the signs.

The following five types of parking signs increase a drivers' way-finding experience:

Introduction: Introduction parking signage alerts drivers approaching the downtown of the locations of the publicly owned, off-street parking lots. This type of signage is distinctive in color and size, and it can be characterized by unique logos. The signs display the names of the off-street parking lots and the names of their streets. The signs are located on the street, and are mounted on poles of standard heights.

Directional: Directional-parking signage is distinct in color, size and logo and directs drivers to off-street parking areas. The signs are mounted on poles at standard heights, on the streets.

Location: 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 and located on-street.

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 at the parking area is listed on the sign. The identification signage is distinctive in color and size, and it is located on a pole at a lower height.

Way-finding: Way-finding signs are placed at the points of pedestrian entry/exit to parking lots and structures. The sign is a map illustrating the downtown area that points out the various shops or attractions that can be found. 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 such that they can locate their destination and then be able to return to where they parked.
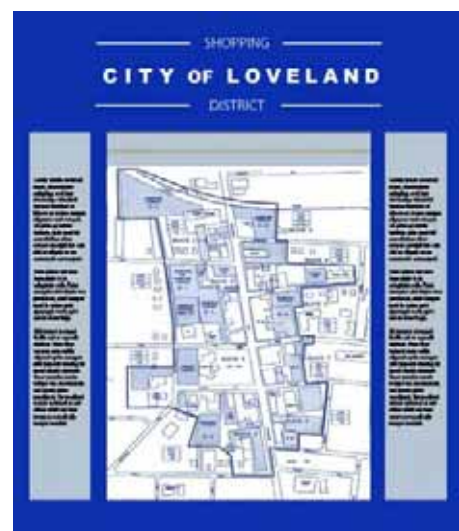
The general qualities of good signage include the following aspects:

- Use of common logos and colors.

- Placement at or near eye level.

- Use of reflective, durable material.

- All parking sign types should be used in conjunction to guide motorist and pedestrian activity.

- All entrances to the downtown need to have introduction signage.

- All parking areas 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 validation availability.

Design Specific Criteria Recommendations:

- In general, sign lettering should be at least 4 inches in height. Smaller lettering may be difficult to see and cause traffic slow-downs as drivers read signs before entering a parking area.

- Depending on the location for the signs, some may need Illinois State Department of Transportation approval before installation. The City Engineering Division will need to be consulted on specific locations that fall under State control and the various regulations that may need to be met.

- Logos and sign colors can be customized to suit the communities' desired design criteria. The important element is to be sure that signs can be read easily by being a distinctive color that stands out from background colors of adjacent buildings.

- The sign colors and logos need to be consistent for ease of understanding and quick visual reference by drivers.

- 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 throughout a community.

- 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 drivers 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.

The parking signs in Urbana have several of the recommended qualities listed above. The signs have a common theme with text, color, and logo. The signs also let drivers know what lot they are in. Important criteria that many lot signs are missing are; the parking duration, who the lots are intended for, customer/visitor or employee/permit and the hours of enforcement. Some of the text size is difficult to read on the parking way-finding signs. It is important that all signs work together in leading the customer or visitor to parking.

Summary:

- **Signage**

Cost:	Budget $200,000 for a way-finding study and design program, sign creation and installation.
Benefit:	Customer/visitor experience of Urbana will be greatly enhanced by a comprehensive new sign program, as will the overall perception of Urbana as a quality destination place.
Responsibility:	Public Works
Issue Addressed:	Existing signs should be replaced with an entirely new sign program. Navigating from the main highways to the downtown and back is difficult for people unfamiliar with the City and a number of the parking signs are confusing.
Additional Comments:	Parking signage throughout Urbana should be consistent. This makes the parking system easy to navigate no matter where you are in Urbana. Consider the associated costs as an investment with long-term results that will champion Urbana's image.

4.6   Marketing

Marketing is one of the most important aspects of a successful parking system. Marketing should be used every time there is a change to the parking system and should be directed towards downtown employers, employees and customers/visitors. It is very important to help encourage downtown employees to park in the long-term parking areas

to preserve the on-street parking for customers and visitors. Additionally, an individual's perception of Urbana is greatly enhanced if they know ahead of time where they can park.

Promotional materials can include direct mailings, brochures, maps, kiosks, on-line web pages or articles in magazines. Information contained in the marketing material should include location, up-coming changes, regulations, fine payment options and any other information relating to the parking system.

Signs are a useful way to market parking. Catchy phrases that designate long term lots can be used to let customers/visitors know where to park. Banners can be used to identify parking areas according to color schemes, letting customers/visitors know where they parked.

Urbana uses brochures and websites to promote the downtown with maps that have listings of businesses in the downtown. Consider representing parking on these maps as well.   There is also a brochure titled "How, When, and Where To Park In Urbana…", this is a great tool to let new businesses, employees and residents quickly learn the most important rules for the parking system.

Examples of banner signs used in Urbana.

Summary:

Cost: Budget $7,500 per year for on-going marketing efforts. Banners could be covered under the sign program.

Benefit:	Customer/visitor experience of Urbana will be greatly enhanced. Also helps to encourage employees to park in long-term lots, providing a greater effective supply of parking for customers and visitors.
Responsibility:	Community Development/Public Works
Issue Addressed:	Employee parking on-street and the issue that on-street parking is used by employees.
Additional Comments:	Aids in promoting the downtown. It is equally as important to market the parking system as it is to market the businesses in the downtown. A customers' first impression of the downtown often involves their parking experience. Customers may not return if the parking experience was difficult.

4.7   Enforcement Personnel:

Some 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 transition to handheld parking ticket writers that track license plate numbers. The handhelds allow for better record keeping, can track shuffling without chalking tires, allow for the implementation of graded fines or courtesy tickets and can be wirelessly linked to databases and computerized meters to track infraction information.

- Every parking stall, whether occupied or not, is then entered into the handheld.

- The handhelds should be programmed to issue tickets for overtime parking and vehicle shuffling (moving vehicle to a different on-street stall every two or three hours throughout the day to avoid a ticket).

- Staffing should be at a level adequate to assign one officer to monitor between 600 and 800 parking stalls 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 to 9:00 A.M. to 5:00 P.M

- Enforcement Personnel should be "Ambassadors" for the downtown. They are most likely to be seen by the customers/visitors of the downtown and their helpfulness with directions and explanations of the parking system can help to market the downtown.

Urbana has over 1,934 public on street and off street parking stalls. Rich and Associates recommends that Urbana have at least three parking enforcement officers (more if using part-time staff) to adequately enforce the public parking in the downtown. This does not include the University District or any areas outside the study area that require parking enforcement.

<u>**Summary:**</u>

Cost:	Budget $55,000 per year per full-time officer.
Benefit:	Consistent enforcement targeted towards discouraging improper parking while minimizing the negative impact on downtown customers and visitors.
Responsibility:	Police Department
Issue Addressed:	Discourages improper parking activity, such as repeat or multiple offenses, shuffling by employees improperly parking on-street. Increases turnover of the most important parking in the downtown area. Customer/visitor friendly efforts consistent with the downtown goals.
Additional Comments:	Consider having the parking enforcement personnel carry small maps of the downtown for visitors.

4.8   Handheld Technology for Enforcement:

It is recommended that Urbana upgrade the existing handheld enforcement computers and software. Newer devices have expanded functionality, are lighter, easier to use and will aid in implementing courtesy tickets, graded fines and an anti-shuffling ordinance.

Smart Mobile, from CTS America

The handheld units increase efficiency by storing the license plate numbers of vehicles, thus negating the need to physically chalk tires. This allows enforcement to occur during inclement weather. Marking tires with chalk cannot be efficiently done in the rain or snow because the chalk gets washed away and does not mark well on a wet tire.

Handhelds units can also store a "hot list" with information such as stolen vehicles, warrants, previous offenders, shuffling of vehicles, and unpaid tickets. When the vehicles license plate gets put into the handheld, the plate gets run through a database and 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.

When Urbana is ready to upgrade or purchase new equipment, Rich and Associates recommends that the equipment and software be purchased that is specifically created for parking enforcement. This would allow upgrades and changes to the system to be made more efficiently. There are several handheld ticket writers and software currently on the market, such as T2 or AutoCite.

Summary

Cost:	$5,000 for each handheld ticket writer and $20,000 for software (one time).
Benefit:	Consistent enforcement targeted towards discouraging improper parking while minimizing the negative impact on downtown customers and visitors.
Responsibility:	Police Department
Issue Addressed:	Discourages improper parking activity such as repeat or multiple offenses, and shuffling by employees improperly parking on-street. Increases turnover of the most important parking in the downtown area. Customer/visitor friendly efforts consistent with the downtown goals.
Additional Comments:	Consider courtesy tickets which are easier to accomplish with the use of handhelds.

4.9   Enforcement Vehicles:

Recently the City acquired new energy efficient hybrid vehicles capable of driving year-round and in inclement weather, for parking enforcement.   A continued effort to adopt greater efficiency and environmentally friendly technology for parking enforcement is encouraged.

Summary:

Cost:	Budget $30,000 to $40,000 as needed for new and replacement vehicles.
Benefit:	New vehicles will allow the officers to provide parking enforcement during all but the most inclement weather.
Responsibility:	Police Department.

4.10 Courtesy Ticket:

Rich and Associates recommends that Urbana consider issuing courtesy tickets for the first offense as opposed to other methods of alleviating parking fines against customers and visitors. This would require a handheld device and storage of data for a long period of time. If a vehicle parking at a short stay space has not received a ticket during a specific period of time (the last six months as an example), then a courtesy ticket could be issued that would first thank the parker for coming to downtown Urbana and state that their patronage is appreciated. The courtesy ticket would go on to alert the parker to the fact that they were in violation and then give the parker a map with alternatives to where they can park for longer periods of time.

There are times when employees of the downtown may receive a courtesy ticket, though this would only happen once every six months (or whatever duration Urbana selects as the grace period). The courtesy tickets are aimed at keeping customers downtown.   The ticket alerts the customer/visitor that they have parked beyond the posted time limits, thanks them for patronizing the downtown and then provides an explanation of appropriate long-term parking areas in the downtown for their continued stay or next visit.

Currently the handheld units are capable of issuing warning tickets. When new changes are made to the parking system and in the Fall at the beginning of the school year Urbana issues warning tickets. The warning tickets are issued for a short period of time to help remind drivers of the parking changes, and acclimate new students to the parking regulations. The recommendation for the downtown however is to use courtesy tickets year round.

Summary:

Cost:	Loss of revenue from the first ticket issued to an individual varies by community (an estimate of 5% of tickets written).
Benefit:	Public relations are championed in Urbana and the customers of the City's businesses are less impacted by more stringent parking enforcement or by other policy and management changes that enhance parking regulations.
Responsibility:	Police Department/Finance
Issue Addressed:	Public relations and improved business relationships between local business and the City due to the creation of a customer friendly atmosphere while still increasing the effectiveness of parking enforcement.

4.11   Ticket Collections:

Table 4A shows the number of tickets issued from January 1, 2005 through June 26, 2008 within the study area. All information on the number of parking tickets and the revenue from parking tickets was provided by Urbana Information Services.   The number of tickets issued in 2005 was 5,199. The number was higher in 2006 with 7,001 tickets written, and the number dropped in 2007 to 5,036. If the number of tickets given out each month is fairly consistent, the number of tickets to be issued for 2008 will drop from 2007.

Table 4A: Ticket Collections

YEAR	# OF TICKETS COLLECTABLE	# OF TICKETS PAID	% OF TICKETS PAID	APPROX PAID	APPROX DUE
2008*	1498	1088	72.6%	$11,914.50	$6,875.00
2007	4389	3572	81.4%	$40,906.00	$14,742.00
2006	5710	4811	84.2%	$52,356.83	$16,371.00
2005	4279	3329	77.8%	$35,801.18	$11,036.00

2008 numbers through June 26, 2008

Urbana works with the State and has the ability to suspend the driver's license of the owner of a vehicle with multiple unpaid tickets. The collection rate has slightly increased each year from 2005 to 2007. In order for the parking system to work properly it is important that when a parker gets a ticket there is a penalty for not paying the ticket. Consistent enforcement with consequences for breaking the rules is a key component for a parking system.

The ticket revenue includes the University area. Even though the University parking area is not included in this study, this area generates almost 50 percent of the overall revenue of the entire parking system. Rich and Associates recommends that the City have a ticket amnesty period for tickets issued in the downtown area, after which, the City will actively pursue suspending driver licenses.

Summary:

Cost:	None.
Benefit:	Increase collections rate to at least 85%.
Responsibility:	Police Department/Finance
Issue Addressed:	Collection on unpaid tickets strengthen the perception that on-street and off-street regulations need to be followed. This will increase parking availability and revenue.

4.12 Graded Fines:

Some communities experience situations where an individual or group of individual's abuse parking privileges regularly. In some cases, the abuse is a result of parking fines being too low to warrant compliance and in other cases the individuals are simply willing to pay a price for convenient parking. The use of a graded fine, such as Urbana currently does for unapproved surfaces parking fines, is a "best practices" method of deterring repeat offenders and for aiding in colleting unpaid parking fines.

Handheld ticket writers are the only efficient means of issuing graded fine tickets, as the device tracks license plate information and can recognize the number of citations issued and whether they were paid. The handheld ticket writer can be programmed to issue tickets in varying amounts at the discretion of the City. An example of a revised fine structure is included below:

Table 4B: Suggested Graded Fine Schedule Example

Standard Overtime Parking Fine (Issued to one vehicle in a three month period and/or applied to unpaid citations)	Amount
1	$15.00
2	$15.00 + warning
3	$30.00 + warning
4	$60.00 + warning
5	Boot or tow vehicle

The failure to comply with parking durations reduces parking turnover and negatively impacts parking availability for customers and visitors. As a result the City should always have a focus of ensuring compliance with the regulations and encouraging prompt payment of fines without resorting to the courts, collection agencies or potential driver's license suspensions. The best way to accomplish this is with handheld ticket writers and a graded fine system that increases fine rates for repeat offenders or delinquent fine payments.

Summary:

Cost:	None, some increase in ticket revenue.
Benefit:	Increased compliance and fine payment.
Responsibility:	Police Department/Finance.

4.13   Privately Developed Parking/ Fee in Lieu:

Consider discouraging future creation of private surface parking lots in the downtown except as a component of residential developments. Small surface parking lots disrupt pedestrian activity and reduce density. A better option for Urbana is to have control over parking through acquisition and/or to build new structured parking as required or seek public/private joint ventures as development increases beyond the parking capacity.

Parking structures increase density. Density combined with a mixture of use types encourages activity in an urban setting. Privately developed surface parking lots can be discouraged through zoning ordinances. Some communities implement parking maximums that limit the amount of on-site parking that can be built with development. Currently in the B-4 Zone parking is not required for a development except for residential use. Consideration should be given to making the B-4 Zone a "parking exempt" zone (except for residential use) where providing parking by tearing down existing buildings to create surface lots is prohibited.

Communities that do not permit additional parking must undertake responsibility for providing parking that is necessary to support economic activity in a downtown setting. This can be accomplished in urban settings where pedestrian activity is substantial. Suburban areas that lack viable pedestrian activity are difficult to service with public parking due to the fact that the development is spread out. Surface parking lots can then be transitioned to higher and better use through development.

Under this scenario, all of the parking needed is provided by the City through parking structures and on-street parking. The City can then consider charging an impact fee for new development to fund new parking projects. This style of parking control and development has been successful in communities such as Grand Rapids, Michigan. The developer will typically pay less to the in-lieu-of fee than if building parking specific to their development.   This reduction in cost to the developer can help spur additional development in the downtown.

In-lieu-of-fees are typically based on a percentage of the cost of providing one parking stall in a new parking structure.   The rate determined needs to be mindful of the need to redevelop the downtown and will need to be re-examined every three to five years to keep the amount in line with market prices and construction costs. The average fee in the United States among communities that provide an in-lieu-option for parking is approximately $10,000 per stall (as of 2006). To determine how much parking a development's assessment should be based on, comprehensive listing of parking ratios are used as a basis and any shared potential can then be applied as a potential reduction.

As an example, if a mixed use development is proposed that includes retail, office and residential space, the floor area of each use would have a ratio applied to it to determine the amount of parking needed. The amount of parking needed to serve the development would then be the basis of the impact fee assessment. If the developer could demonstrate a shared use potential for the development that would result in a reduction

in the overall amount of parking needed, the shared use reduction would then be deducted form the total amount parking needed.

Table 4C offers an example calculation for determining the impact fee for a hypothetical re-development project. The sample uses 50% of the cost of providing a parking stall in a new parking structure.

Table 4C: In-Lieu-Fee Example Calculation

I.	**Building Gross Floor Area:**	**50,000 sq.ft.**

Current Use: Vacant with no parking.
New Use: Mixed retail, offices and residential.

Parking Needed: 50,000 x 0.00247 (in downtown Urbana)   124 stalls

II.   Cost of Supplying Parking in a Deck/Structure $17,500/parking stall

Parking Impact Fee (50% of cost)

$17,500 x 50%   = $8,750 / parking stall

III. Project Subsidy (Incentive x Added Public Parking)

124 stalls x $8,750 / stall = $1,085,000 (for parking fund)

4.14   Timing for Additional Parking Development

Parking development in the downtown will need to be coordinated with demand increases to ensure that as development occurs the City will have the ability to decide when to consider a second parking structure.

Deciding when to initiate the second parking structure will depend first and foremost on financial constraints. However, deciding when development demands warrant the parking structure is a relatively straightforward calculation. The following is a calculation worksheet the Town should use as a decision making tool determining when additional parking is needed. The model works using building gross floor area (existing and

proposed) as the variable in a decision making flow chart that will assist with determining when new parking demand justifies a new parking structure.

When the proposed new development's parking demand along with the existing parking demand exceed the available parking (on-street and off-street, then the target capacity for new parking is approximately 85% of that total. Due to the size of the downtown, it may be possible to use the entire square footage rather than using the square footage of the block where the new development is planned.

The following is an example for Urbana:

Table 4D: New Parking Threshold Worksheet

Part A: Determining Floor Area

Total Built Gross Floor Area For Entire Downtown: <u>1,500,000 sf</u>

(+) Proposed New Gross Floor Area: <u>250,000 sf</u>

(--) Gross Floor Area to be removed as part of redevelopment: <u>150,000 sf</u>

(=) Total Existing and Proposed New Gross Floor Area: <u>1,600,000</u>

Part B: Determining Parking Need

Total Existing and Proposed New Gross Floor Area: <u>1,600,000 sf</u>

(X) 3.15 (for downtown Urbana) Parking Stalls Per 1,000 Square Feet: <u>5,040 spaces</u>

(-) Existing On & Off-Street Parking: <u>4,569 spaces</u>

(=) New Parking Demanded: 5,040 - 4,569 = <u>471 spaces</u>

Part C: Decision Guide

New Parking Demanded: <u>471 spaces</u>

(X) 85%: <u>401 spaces</u>

(=) Minimum New Parking Needed: <u>401 spaces</u>

If the Minimum New Parking Needed is equal to or greater than the optimal capacity for a parking structure (typically 300 spaces) then consider provided structured parking. If the Minimum New Parking Needed is less that the optimal capacity for a parking structure, consider providing surface parking and land banking for a future parking structure.

4.15   Safety and Security

Rich and Associates reviewed the safety and security issues with parking in Urbana. The existing parking structure appears to be secure. The state-of-the-art is for CCTV and voice activated sound systems. Ideally, this would be provided in the parking structure. The issues are costs and who will watch the monitors and during what hours. Since the parking structure is a manned operation (cashier) this provides a level of security.

The Police should make drives through the parking structure and the surface lots to show that the facility is being watched. Lighting needs to be maintained not only in the parking structure but in the surface lots. Stakeholder's identified the City lot south of the train tracks, west of Race Street as having poor lighting. This is an issue for security but also it is important for off-street parking (structure and lots) to be secure and well lit in order to promote their use to employees.

Lighting levels should be checked and lighting increased based on the following:

The Illuminating Engineering Society of North America (IESNA) recommends the following design criteria for parking lot lighting in the 9th edition if the IESNA Lighting Handbook Reference and Application:

- Parking lot lighting levels should be illuminated to a minimum horizontal luminance of 0.5 foot candles (fc) maintained as measured horizontally on the pavement surface without any shadowing effect from parked cars or columns.

- A minimum maintained vertical luminance of 0.25 fc should be achieved as measured 5 feet above the parking surface at the point of lowest horizontal luminance.

- Maximum to minimum uniformity ratio should be 15:1.

Summary:

Cost:	Budget $25,000 for analysis of the lighting levels and remedial recommendations.
Benefit:	Provide security to the lots and make them more attractive for employees to use instead of parking on the street
Action Time:	2008.
Responsibility:	Public Works

Issue Addressed: It is important to choose lighting that does not create light pollution, especially in residential areas. There are several lighting manufactures that have lighting solutions that reflect the light down and not up.

4.16   Existing Parking Facility and Equipment:

The parking structure operates with a cashier (and card reader) at the exit and a ticket dispenser and card reader at the entrance. As can be seen on the next page, the exiting equipment is in need of repair or replacement. Typically, the life expectancy of parking and revenue control equipment is between seven and ten years. There are several options. First, existing equipment can be repaired and repainted. Another option would be to replace the existing equipment. If this is done, consideration should be given to going to a cashier-less operation. This would involve a ticket dispenser and card reader at the exit, and would also eliminate the cashier at the exit and replace that with a pay-in-lane machine. The parker would simply insert their ticket into the pay-in-lane machine and then either pay with cash, coin or credit card. The machine could also accept validations.

If there was an issue such as insufficient funds, lost ticket etc, there would be an intercom at the exit and entry connecting the customer with staff. The intercom could be set up to ring to a central station or a cell phone. This would allow staff to speak directly to the parker and if necessary remotely open the gate.

The downside to the pay-in-lane system is that the cashier also operates as a pair of eyes and ears in the parking structure. There is a positive perception of security if there is a cashier. The pay-in-lane equipment does reduce labor costs however.

Parking Control Equipment In Urbana

Summary:

Cost:	To replace existing equipment without pay-in-lane +/- $55,000, with pay-in-lane +/- $75,000.
Benefit:	Equipment needs repair or replacement. If replacement, a pay-in-lane machine would reduce labor costs.
Responsibility:	Public Works

4.17   Existing Parking Structure:

Rich and Associates reviewed the condition of the existing one level parking structure located on block 10 as well as the potential for expanding the parking structure. The parking structure consists of at grade plus one supported floor and contains approximately 214 parking spaces. The parking structure was built in 1983 and had rehabilitation work completed in 1993 and again in 2003.

In general the parking structure is in good condition. There are several joints between the pre-cast tees that should be reviewed by a structural engineer. This was determined based on visual inspection of the underside of the top floor. Significant deterioration was noted around all of the door frames leading to the stair and elevator towers. These need to be repaired or replaced.

Joint issues and slab leaks in the Urbana parking structure.

One option to add parking to the downtown in the future would be to add additional levels to this parking structure. Desman Parking reviewed the as-built structural drawings to ascertain if the structure was designed for expansion. Based on Rich and Associates experience on similar projects even if the structure was design to take additional floors, there are several issues:

First, the structural design requirements have changed since 1983, especially seismic design. Any expansion would have to take this into account and would be an added cost. In addition the parking structure is positioned on the site is close to property lines. Expanding the parking vertically may require a fire rated wall on the north and west faces. Finally, the ramp from the ground floor to the first supported floor is situated such that expansion vertically may be difficult since this ramp is not part of the supported floor.

Second, the overall cost per space could be significantly higher than if a new structure was built on a new site. Third, all of the existing parking structure will have to be closed during the construction. Lastly, there is the issue of adding additional levels to a parking structure that is already 25 years old.

Summary:

Cost:	None at this time
Benefit:	Parking structure longevity.
Responsibility:	Public Works

APPENDICES

Appendix A
City of Urbana Turnover and Occupancy December 6, 2007

Blk #'s	Desc	On-street or Off-street	Public or Private	# of Stalls	9:00am-11:00am	% Occ.	11:00am-1:00pm	% Occ.	1:00pm-3:00pm	% Occ.	3:00pm-5:00pm	% Occ.
1	Lot 25 metered	off	public	48	1	2%	0	0%	0	0%	0	0%
1	Lot 25 permit	off	public	87	11	13%	18	21%	13	15%	1	1%
1	Across St. Gravel Lot	off	private	75	2	3%	4	5%	7	9%	7	9%
1	Board of Education	off	private	23	17	74%	23	100%	10	43%	14	61%
2C	On-street meters	on	public	8	1	13%	7	88%	4	50%	6	75%
2	Lot 11	off	public	12	1	8%	5	42%	2	17%	3	25%
2	Lot 11 HC	off	public	1	1	100%	1	100%	0	0%	0	0%
2	Lot 11 reserved	off	public	14	9	64%	12	86%	8	57%	6	43%
2	Cosmo	off	private	55	22	40%	28	51%	26	47%	18	33%
2	Allmans	off	private	12	13	108%	7	58%	7	58%	4	33%
2	Private next to Lot 11	off	public	20	7	35%	11	55%	9	45%	3	15%
2	Law Offices	off	private	7	1	14%	2	29%	1	14%	5	71%
2	Piccadilly	off	private	18	3	17%	3	17%	4	22%	4	22%
2	Strawbery Fields	off	private	42	12	29%	14	33%	13	31%	22	52%
3A	On-street 15 min	on	public	1	0	0%	0	0%	0	0%	0	0%
3A	On-street 1 hr meter	on	public	6	1	17%	5	83%	3	50%	2	33%
3	Emp. Lot Busey Bank	off	private	23	20	87%	13	57%	17	74%	18	78%
3	Busey Bank Customer lot	off	private	36	29	81%	30	83%	21	58%	25	69%
3	Busey Bank Drive Through lot	off	private	11	4	36%	4	36%	6	55%	7	64%
4A	On-street meters	on	public	12	0	0%	2	17%	4	33%	8	67%
4	Library Lot 17	off	public	48	24	50%	36	75%	41	85%	37	77%
4	City permit lot	off	public	15	11	73%	11	73%	8	53%	8	53%
4	Law Office	off	private	6	2	33%	2	33%	1	17%	1	17%
4	Law Office	off	private	6	3	50%	4	67%	2	33%	1	17%
8B	On-street meters	on	public	5	0	0%	1	20%	1	20%	2	40%
8D	On-street Meters	on	public	8	4	50%	5	63%	3	38%	1	13%
8	Chase Bank/Strip Mall	off	private	40	22	55%	35	88%	32	80%	28	70%
8	Silver Creek 3	off	private	15	3	20%	3	20%	8	53%	3	20%
8	Jolly Roger	off	private	171	39	23%	32	19%	72	42%	36	21%
8	Stratford Apartments	off	private	50	30	60%	24	48%	22	44%	18	36%
8	Fenced in lot Carte Foundation Hospital research	off	private	30	15	50%	13	43%	13	43%	9	30%
8	Recovery Optics	off	private	5	0	0%	0	0%	1	20%	0	0%
9B	On-street meters	on	public	9	5	56%	8	89%	6	67%	5	56%
9C	On-street meters	on	public	12	6	50%	10	83%	11	92%	8	67%
9	Lot 1 - 2 hr meters	off	public	46	19	41%	34	74%	15	33%	18	39%
9	Lot 2 - 2 hr meters	off	public	21	9	43%	11	52%	13	62%	20	95%
9	Alley	on	private	32	28	88%	30	94%	32	100%	29	91%
10A	On-street meters	on	public	7	5	71%	5	71%	5	71%	5	71%
10A	On-street HC	on	public	1	0	0%	0	0%	0	0%	0	0%
10	Parking Deck reserved	off	public	84	13	15%	14	17%	13	15%	14	17%
10	Parking Deck not reserved	off	public	124	92	74%	93	75%	111	90%	88	71%
11A	Post Office meters	on	public	12	3	25%	2	17%	1	8%	3	25%

11	Lot 10 A North	off	public	16	2	13%	9	56%	4	25%	5	31%
11	Lot 10 E North 2 hr	off	private	25	10	40%	10	40%	4	16%	7	28%
11	Lot 10 E North HC	off	private	1	0	0%	0	0%	0	0%	0	0%
11	Lot 10 E South 2hr	off	private	184	182	99%	175	95%	173	94%	132	72%
11	Lot 10 F permit	off	private	160	65	41%	67	42%	53	33%	46	29%
11	Lot 10 X permit	off	private	174	173	99%	149	86%	161	93%	115	66%
11	Lot 10 A South 2hr	off	private	197	58	29%	62	31%	59	30%	73	37%
11	Hotel	off	private	115	11	10%	23	20%	28	24%	25	22%
11	Post Office	off	private	5	3	60%	5	100%	3	60%	5	100%
11	Liberty Square Residence	off	private	7	7	100%	4	57%	4	57%	3	43%
11	Church	off	private	3	3	100%	3	100%	3	100%	3	100%
12C	On-street meters	on	public	7	0	0%	1	14%	3	43%	3	43%
12D	On-street meters	on	public	5	2	40%	2	40%	1	20%	0	0%
12	Lot 9 reserved	off	public	34	4	12%	2	6%	7	21%	1	3%
12	Lot 9 metered	off	public	66	0	0%	0	0%	8	12%	2	3%
12	Lot 5 metered	off	public	13	0	0%	0	0%	0	0%	0	0%
12	Lot 5 reserved	off	public	18	7	39%	9	50%	4	22%	4	22%
12	Private lot	off	private	10	1	10%	2	20%	3	30%	1	10%
12	Law firm lot	off	private	14	5	36%	5	36%	8	57%	3	21%
12	Save-a-lot permit	off	private	100	39	39%	38	38%	40	40%	34	34%
12	Save-a-lot	off	private	49	9	18%	13	27%	11	22%	15	31%
12	Blockbuster	off	private	42	15	36%	23	55%	16	38%	21	50%
12	Laundry	off	private	6	5	83%	2	33%	3	50%	1	17%
12	Corkscrew	off	private	36	3	8%	4	11%	5	14%	2	6%
13A	On-street meters	on	public	14	0	0%	0	0%	4	29%	4	29%
13C	On-street meters	on	public	11	8	73%	8	73%	8	73%	5	45%
13D	On-street meters	on	public	10	7	70%	3	30%	7	70%	6	60%
13	On-street meters (mid blk. W)	on	public	9	8	89%	3	33%	8	89%	5	56%
13	On-street meters (mid blk. E)	on	public	8	6	75%	1	13%	2	25%	3	38%
13	County Plaza upper	off	private	101	59	58%	55	54%	64	63%	53	52%
13	County Plaza lower	off	private	115	62	54%	49	43%	50	43%	57	50%
13	Sherfis lot	off	private	32	22	69%	19	59%	22	69%	23	72%
14	County Lot (corner sw)	off	private	10	6	60%	4	40%	4	40%	3	30%
14	County Lot F	off	private	136	70	51%	43	32%	68	50%	42	31%
15	Lot 24	off	public	137	115	84%	91	66%	101	74%	94	69%
15	Cleaners	off	private	8	4	50%	3	38%	3	38%	2	25%
15	Law Office	off	private	25	16	64%	7	28%	14	56%	13	52%
16	Starbucks	off	private	13	7	54%	5	38%	7	54%	11	85%
17	County Lot E	off	private	35	26	74%	25	71%	22	63%	20	57%
18	Lot 21 reserved	off	public	41	6	15%	7	17%	8	20%	8	20%
19	Mid-block meters	on	public	8	2	25%	3	38%	3	38%	3	38%
19	Lot 22 meters	off	public	21	5	24%	2	10%	4	19%	6	29%
19	Lot 22 reserved	off	public	50	17	34%	14	28%	15	30%	20	40%
19	Lot 23 permit	off	public	74	70	95%	57	77%	69	93%	69	93%
Combined Totals				**3403**	**1608**	**47%**	**1569**	**46%**	**1650**	**48%**	**1435**	**42%**

11	Lot 10 A North	off	public	16	2	13%	9	56%	4	25%	5	31%
11	Lot 10 E North 2 hr	off	private	25	10	40%	10	40%	4	16%	7	28%
11	Lot 10 E North HC	off	private	1	0	0%	0	0%	0	0%	0	0%
11	Lot 10 E South 2hr	off	private	184	182	99%	175	95%	173	94%	132	72%
11	Lot 10 F permit	off	private	160	65	41%	67	42%	53	33%	46	29%
11	Lot 10 X permit	off	private	174	173	99%	149	86%	161	93%	115	66%
11	Lot 10 A South 2hr	off	private	197	58	29%	62	31%	59	30%	73	37%
11	Hotel	off	private	115	11	10%	23	20%	28	24%	25	22%
11	Post Office	off	private	5	3	60%	5	100%	3	60%	5	100%
11	Liberty Square Residence	off	private	7	7	100%	4	57%	4	57%	3	43%
11	Church	off	private	3	3	100%	3	100%	3	100%	3	100%
12C	On-street meters	on	public	7	0	0%	1	14%	3	43%	3	43%
12D	On-street meters	on	public	5	2	40%	2	40%	1	20%	0	0%
12	Lot 9 reserved	off	public	34	4	12%	2	6%	7	21%	1	3%
12	Lot 9 metered	off	public	66	0	0%	0	0%	8	12%	2	3%
12	Lot 5 metered	off	public	13	0	0%	0	0%	0	0%	0	0%
12	Lot 5 reserved	off	public	18	7	39%	9	50%	4	22%	4	22%
12	Private lot	off	private	10	1	10%	2	20%	3	30%	1	10%
12	Law firm lot	off	private	14	5	36%	5	36%	8	57%	3	21%
12	Save-a-lot permit	off	private	100	39	39%	38	38%	40	40%	34	34%
12	Save-a-lot	off	private	49	9	18%	13	27%	11	22%	15	31%
12	Blockbuster	off	private	42	15	36%	23	55%	16	38%	21	50%
12	Laundry	off	private	6	5	83%	2	33%	3	50%	1	17%
12	Corkscrew	off	private	36	3	8%	4	11%	5	14%	2	6%
13A	On-street meters	on	public	14	0	0%	0	0%	4	29%	4	29%
13C	On-street meters	on	public	11	8	73%	8	73%	8	73%	5	45%
13D	On-street meters	on	public	10	7	70%	3	30%	7	70%	6	60%
13	On-street meters (mid blk. W)	on	public	9	8	89%	3	33%	8	89%	5	56%
13	On-street meters (mid blk. E)	on	public	8	6	75%	1	13%	2	25%	3	38%
13	County Plaza upper	off	private	101	59	58%	55	54%	64	63%	53	52%
13	County Plaza lower	off	private	115	62	54%	49	43%	50	43%	57	50%
13	Sherfis lot	off	private	32	22	69%	19	59%	22	69%	23	72%
14	County Lot (corner sw)	off	private	10	6	60%	4	40%	4	40%	3	30%
14	County Lot F	off	private	136	70	51%	43	32%	68	50%	42	31%
15	Lot 24	off	public	137	115	84%	91	66%	101	74%	94	69%
15	Cleaners	off	private	8	4	50%	3	38%	3	38%	2	25%
15	Law Office	off	private	25	16	64%	7	28%	14	56%	13	52%
16	Starbucks	off	private	13	7	54%	5	38%	7	54%	11	85%
17	County Lot E	off	private	35	26	74%	25	71%	22	63%	20	57%
18	Lot 21 reserved	off	public	41	6	15%	7	17%	8	20%	8	20%
19	Mid-block meters	on	public	8	2	25%	3	38%	3	38%	3	38%
19	Lot 22 meters	off	public	21	5	24%	2	10%	4	19%	6	29%
19	Lot 22 reserved	off	public	50	17	34%	14	28%	15	30%	20	40%
19	Lot 23 permit	off	public	74	70	95%	57	77%	69	93%	69	93%
Combined Totals				**3403**	**1608**	**47%**	**1569**	**46%**	**1650**	**48%**	**1435**	**42%**

Appendix B - Urbana Business Owner/Manager Downtown Parking Questionnaire

1. Type of Business

		Response Percent	Response Count
Office Professional		**30.0%**	6
Restaurant		10.0%	2
Financial		10.0%	2
Service		25.0%	5
Clerical		0.0%	0
Retail		20.0%	4
Medical Office		0.0%	0
Public Use/Government		10.0%	2
		Other (please specify)	1
	answered question		20
	skipped question		0

2. Primary sales or office space in square feet?

		Response Count
		15
	answered question	15
	skipped question	5

3. Where do your employees typically park?

	Response Count
	18
answered question	**18**
skipped question	**2**

4. Do you have a policy that encourages/requires employees to reserve the most desirable parking for customers?

		Response Percent	Response Count
Yes		45.0%	9
No		**55.0%**	11
If so, please tell us about it. Do your employees adhere to the policy?			10
	answered question		**20**
	skipped question		**0**

5. How many parking spaces are dedicated for your employees?

	Response Count
	16
answered question	**16**
skipped question	**4**

6. There are an adequate number of parking spaces for employees/customers/visitors.

	Strongly Disagree 1	2	3	4	Neutral 5	6	7	8	Strongly Agree 9	Rating Average	Response Count
Do you agree?	**29.4% (5)**	0.0% (0)	0.0% (0)	5.9% (1)	11.8% (2)	11.8% (2)	**29.4% (5)**	0.0% (0)	11.8% (2)	4.94	17
										answered question	17
										skipped question	3

7. The parking downtown is resonably close to my location.

	Strongly Disagree 1	2	3	4	Neutral 5	6	7	8	Strongly Agree 9	Rating Average	Response Count
Do you agree?	10.5% (2)	0.0% (0)	0.0% (0)	0.0% (0)	5.3% (1)	5.3% (1)	21.1% (4)	**31.6% (6)**	26.3% (5)	7.05	19
										answered question	19
										skipped question	1

8. If the City constructed a well designed and secure parking structure I would use it.

	Strongly Disagree 1	2	3	4	Neutral 5	6	7	8	Strongly Agree 9	Rating Average	Response Count
Do you agree?	22.2% (4)	5.6% (1)	11.1% (2)	5.6% (1)	**27.8% (5)**	0.0% (0)	5.6% (1)	11.1% (2)	11.1% (2)	4.56	18
										answered question	18
										skipped question	2

9. I would pay to park closer to my destination.

	Strongly Disagree 1	2	3	4	Neutral 5	6	7	8	Strongly Agree 9	Rating Average	Response Count
Do you agree?	**23.5% (4)**	11.8% (2)	5.9% (1)	0.0% (0)	17.6% (3)	0.0% (0)	11.8% (2)	5.9% (1)	**23.5% (4)**	4.94	17
										answered question	17
										skipped question	3

Appendix C - Urbana Downtown Employee Parking Questionnaire

1. Employment Status

		Response Percent	Response Count
Full-time (more than 30 hours per week)		**92.2%**	188
Part-time (less than 30 hours per week)		7.8%	16
		answered question	**204**
		skipped question	**0**
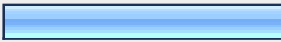
2. Employment Classification

		Response Percent	Response Count
Professional		**54.4%**	111
Service (including restaurant)		4.9%	10
Clerical		28.4%	58
Retail Sales		1.5%	3
Medical		14.2%	29
Other (please specify)			5
		answered question	**204**
		skipped question	**0**

3. How do you generally come to work downtown?

		Response Percent	Response Count
Drive and park		**98.5%**	201
Ride with friend or relative		1.5%	3
Bus		0.5%	1
Ride bicycle		0.0%	0
Dropped off		0.5%	1
Walk		0.5%	1
Other (please specify)			1
		answered question	204
		skipped question	0

4. If you drive when you come downtown to work where do you usually park?

		Response Percent	Response Count
Public lot		**63.2%**	129
Privatley owned lot		36.3%	74
On-Street		3.9%	8
		answered question	204
		skipped question	0

5. How far do you generally walk from your parking location to your workplace?

		Response Percent	Response Count
50 feet or less		18.6%	38
more than 50 feet, less than one block		**50.5%**	103
1 - 2 blocks		27.5%	56
more than 2 blocks		6.9%	14
		answered question	204
		skipped question	0

6. There are an adequate number of parking spaces for employees/customers/visitors.

	Strongly Disagree 1	2	3	4	Neutral 5	6	7	8	Strongly Agree 9	Rating Average	Response Count
Do you agree?	**39.4% (80)**	10.8% (22)	12.3% (25)	6.4% (13)	11.3% (23)	4.9% (10)	7.4% (15)	3.4% (7)	3.9% (8)	3.25	203
									answered question		203
									skipped question		1

7. The parking downtown is resonably close to my destination.

	Strongly Disagree 1	2	3	4	Neutral 5	6	7	8	Strongly Agree 9	Rating Average	Response Count
Do you agree?	9.4% (19)	4.4% (9)	10.3% (21)	5.4% (11)	**20.7% (42)**	12.3% (25)	15.3% (31)	13.8% (28)	8.4% (17)	5.41	203
									answered question		203
									skipped question		1

8. If the City constructed a well designed and secure parking structure I would use it.

	Strongly Disagree 1	2	3	4	Neutral 5	6	7	8	Strongly Agree 9	Rating Average	Response Count
Do you agree?	8.0% (16)	6.0% (12)	5.0% (10)	2.5% (5)	**30.2% (60)**	4.5% (9)	17.1% (34)	5.5% (11)	21.1% (42)	5.77	199
									answered question		199
									skipped question		5

9. I would pay to park closer to my destination.

	Strongly Disagree 1	2	3	4	Neutral 5	6	7	8	Strongly Agree 9	Rating Average	Response Count
Do you agree?	**47.8% (96)**	10.9% (22)	6.0% (12)	3.5% (7)	15.9% (32)	2.0% (4)	5.0% (10)	2.5% (5)	6.5% (13)	3.06	201
										answered question	201
										skipped question	3

10. Paid parking in Urbana:

$ Per Day

	< $1.00	$1.00	$2.00	$3.00	$4.00	> $4.00	Response Count
Off-street parking for customers/visitors usage should be no more than?	**44.4% (63)**	12.7% (18)	15.5% (22)	11.3% (16)	8.5% (12)	7.7% (11)	142
The daily cost of employee parking downtown should be?	**63.9% (94)**	11.6% (17)	15.0% (22)	3.4% (5)	1.4% (2)	4.8% (7)	147
The monthly cost of parking for downtown permits should be?	28.2% (40)	5.6% (8)	8.5% (12)	7.0% (10)	12.0% (17)	**38.7% (55)**	142
						answered question	156
						skipped question	48

11. The fine for overtime parking should be?

$ Fine Amount

	<$5	$6	$7	$8	$9	$10	> $10	Response Count
Per ticket -	**79.2% (133)**	2.4% (4)	3.6% (6)	3.0% (5)	0.0% (0)	8.9% (15)	3.0% (5)	168
							answered question	168
							skipped question	36

12. How many of the downtown shops or services do you typically visit during the week?

Number of Shops

	1	2	3	4	5	> 5	Response Count
Pick the best answer -	**27.4% (48)**	18.9% (33)	20.6% (36)	8.0% (14)	11.4% (20)	13.7% (24)	175
						answered question	175
						skipped question	29
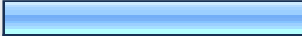
13. Please feel free to make additional comments regarding parking

	Response Count
	93
	answered question	93
	skipped question	111

10. The fine for overtime parking should be?

$ Fine Amount
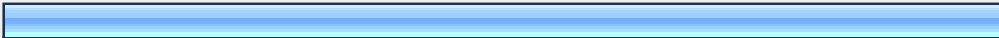
	<$5	$6	$7	$8	$9	$10	> $10	Response Count
Per ticket -	**77.8% (14)**	0.0% (0)	0.0% (0)	0.0% (0)	0.0% (0)	11.1% (2)	11.1% (2)	18
							answered question	18
2							*skipped question*	2

Appendix D - Lincoln Square Village Owner/Manager Downtown Parking Questionnaire

1. Type of Business

		Response Percent	Response Count
Office Professional		20.0%	1
Restaurant		0.0%	0
Financial		0.0%	0
Service		20.0%	1
Clerical		0.0%	0
Retail		**40.0%**	2
Medical Office		0.0%	0
Public Use/Government		20.0%	1
Other (please specify)			1
	answered question		**5**
	skipped question		**0**

2. Primary sales or office space in square feet?

		Response Count
		5
	answered question	**5**
	skipped question	**0**

3. Where do your employees typically park?

	Response Count
5	5
5	***answered question*** **5**
	skipped question **0**

4. Do you have a policy that encourages/requires employees to reserve the most desirable parking for customers?

		Response Percent	Response Count
Yes		**66.7%**	2
No		33.3%	1
2	If so, please tell us about it. Do your employees adhere to the policy?		2
3	***answered question***		**3**
2	***skipped question***		**2**

5. How many parking spaces are dedicated for your employees?

	Response Count
3	3
3	***answered question*** **3**
2	***skipped question*** **2**

6. There are an adequate number of parking spaces for employees/customers/visitors.

	Strongly Disagree 1	2	3	4	Neutral 5	6	7	8	Strongly Agree 9	Rating Average	Response Count
Do you agree?	40.0% (2)	20.0% (1)	0.0% (0)	20.0% (1)	0.0% (0)	20.0% (1)	0.0% (0)	0.0% (0)	0.0% (0)	2.80	5
										answered question	5
										skipped question	0

7. The parking downtown is resonably close to my location.

	Strongly Disagree 1	2	3	4	Neutral 5	6	7	8	Strongly Agree 9	Rating Average	Response Count
Do you agree?	20.0% (1)	0.0% (0)	20.0% (1)	0.0% (0)	0.0% (0)	20.0% (1)	20.0% (1)	20.0% (1)	0.0% (0)	5.00	5
										answered question	5
										skipped question	0

8. If the City constructed a well designed and secure parking structure I would use it.

	Strongly Disagree 1	2	3	4	Neutral 5	6	7	8	Strongly Agree 9	Rating Average	Response Count
Do you agree?	**50.0% (2)**	0.0% (0)	0.0% (0)	0.0% (0)	25.0% (1)	25.0% (1)	0.0% (0)	0.0% (0)	0.0% (0)	3.25	4
									answered question		4
									skipped question		1

9. I would pay to park closer to my destination.

	Strongly Disagree 1	2	3	4	Neutral 5	6	7	8	Strongly Agree 9	Rating Average	Response Count
Do you agree?	**50.0% (2)**	25.0% (1)	0.0% (0)	0.0% (0)	0.0% (0)	0.0% (0)	0.0% (0)	0.0% (0)	25.0% (1)	3.25	4
									answered question		4
									skipped question		1

10. The fine for overtime parking should be?

$ Fine Amount

	<$5	$6	$7	$8	$9	$10	> $10	Response Count
Per ticket -	**60.0% (3)**	0.0% (0)	0.0% (0)	0.0% (0)	0.0% (0)	40.0% (2)	0.0% (0)	5
5							*answered question*	5
0							*skipped question*	0

11. Please feel free to make additional comments regarding parking -

	Response Count
	0
0	*answered question*	0
5	*skipped question*	5

Appendix E - Lincoln Square Village Employee Downtown Parking Questionnaire

1. Employment Status

		Response Percent	Response Count
Full-time (more than 30 hours per week)		**94.4%**	235
Part-time (less than 30 hours per week)		5.6%	14
	answered question		**249**
	skipped question		**0**
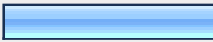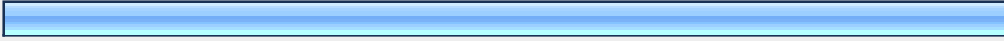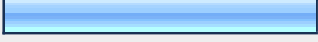
2. Employment Classification

		Response Percent	Response Count
Professional		**57.0%**	142
Service (including restaurant)		1.2%	3
Clerical		24.1%	60
Retail Sales		3.6%	9
Medical		17.3%	43
Other (please specify)			7
	answered question		**249**
	skipped question		**0**

3. How do you generally come to work downtown?

		Response Percent	Response Count
Drive and park		**100.0%**	249
Ride with friend or relative		0.8%	2
Bus		0.4%	1
Ride bicycle		1.2%	3
Dropped off		0.4%	1
Walk		0.4%	1
Other (please specify)			3
answered question			**249**
skipped question			**0**

4. If you drive when you come downtown to work where do you usually park?

		Response Percent	Response Count
Public lot		**86.3%**	215
Privatley owned lot		13.7%	34
On-Street		0.8%	2
answered question			**249**
skipped question			**0**

5. How far do you generally walk from your parking location to your workplace?

		Response Percent	Response Count
50 feet or less		14.1%	35
more than 50 feet, less than one block		**67.1%**	167
1 - 2 blocks		20.9%	52
more than 2 blocks		1.6%	4
		answered question	249
		skipped question	0

6. There are an adequate number of parking spaces for employees/customers/visitors.

	Strongly Disagree 1	2	3	4	Neutral 5	6	7	8	Strongly Agree 9	Rating Average	Response Count
Do you agree?	**45.3% (112)**	17.4% (43)	7.7% (19)	7.3% (18)	8.5% (21)	3.6% (9)	5.3% (13)	2.0% (5)	2.8% (7)	2.75	247
									answered question		247
									skipped question		2

7. The parking downtown is resonably close to my destination.

	Strongly Disagree 1	2	3	4	Neutral 5	6	7	8	Strongly Agree 9	Rating Average	Response Count
Do you agree?	12.3% (30)	8.6% (21)	10.7% (26)	5.3% (13)	**25.0% (61)**	10.2% (25)	14.8% (36)	8.2% (20)	4.9% (12)	4.82	244
									answered question		244
									skipped question		5

8. If the City constructed a well designed and secure parking structure I would use it.

	Strongly Disagree 1	2	3	4	Neutral 5	6	7	8	Strongly Agree 9	Rating Average	Response Count
Do you agree?	9.8% (24)	2.9% (7)	2.0% (5)	0.8% (2)	**31.6% (77)**	7.4% (18)	10.7% (26)	9.0% (22)	25.8% (63)	6.06	244
									answered question		244
									skipped question		5

9. I would pay to park closer to my destination.

	Strongly Disagree 1	2	3	4	Neutral 5	6	7	8	Strongly Agree 9	Rating Average	Response Count
Do you agree?	**55.9% (138)**	7.3% (18)	3.6% (9)	2.4% (6)	17.0% (42)	1.6% (4)	4.0% (10)	2.0% (5)	6.1% (15)	2.85	247
										answered question	247
										skipped question	2

10. Paid parking in Urbana:

$ Per Day

	< $1.00	$1.00	$2.00	$3.00	$4.00	> $4.00	Response Count
Off-street parking for customers/visitors usage should be no more than?	**62.9% (112)**	13.5% (24)	10.7% (19)	5.6% (10)	6.7% (12)	0.6% (1)	178
The daily cost of employee parking downtown should be?	**75.4% (135)**	16.8% (30)	3.4% (6)	2.2% (4)	2.2% (4)	0.0% (0)	179
The monthly cost of parking for downtown permits should be?	**51.5% (85)**	4.2% (7)	6.1% (10)	2.4% (4)	13.9% (23)	21.8% (36)	165
						answered question	193
						skipped question	56

11. The fine for overtime parking should be?

$ Fine Amount

	<$5	$6	$7	$8	$9	$10	> $10	Response Count
Per ticket -	**82.5% (151)**	2.7% (5)	3.8% (7)	1.1% (2)	0.0% (0)	8.2% (15)	1.6% (3)	183
							answered question	183
							skipped question	66

12. How many of the downtown shops or services do you typically visit during the week?

Number of Shops

	1	2	3	4	5	> 5	Response Count
Pick the best answer -	**40.0% (78)**	23.1% (45)	14.4% (28)	6.2% (12)	6.2% (12)	10.3% (20)	195
						answered question	195
						skipped question	54

13. Please feel free to make additional comments regarding parking

	Response Count
	170
	answered question	170
	skipped question	79

Appendix F
City of Urbana
Building Inventory

A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T
Block	Office	Retail	Bank	Medical Office	Mix	Conference	Service	Bar	Bar/Restaurant	Restaurant	Residential	Res. (S)	Government	Community	Theater	Hotel	TFB	Industrial	Vacant
Evening	0.15	1.90	1.90	0.70	1.02	7.81	0.95	14.00	12.00	9.00	1.00	0.41	0.78	2.60	1.82	1.00	7.38	0.05	1.02
Daytime	2.85	2.35	2.35	2.90	2.47	2.10	1.40	2.00	4.00	6.00	0.68	0.41	2.90	2.60	0.30	1.00	0.30	0.40	2.47
1	0	0	0	0	0	0	13,800	0	0	0	0	0	0	0	0	0	0	28,000	0
2	37,330	17,560	0	0	0	0	12,790	2,700	0	9,680	3,300	0	0	0	0	0	0	0	22,790
3	45,540	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4	8,400	0	0	0	0	0	0	0	0	0	0	0	0	17,080	0	0	0	2,200	0
5	2,480	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6	0	0	0	0	0	0	0	0	0	0	0	0	0	8,770	0	0	0	0	0
7	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8	24,095	5,660	0	0	5,860	0	0	2,387	0	6,340	58,200	0	0	2,780	0	0	0	0	25,220
9	8,993	3,850	0	0	20,236	0	1,780	7,470	0	0	1,500	0	0	2,400	9,230	0	10,080	0	0
10	27,288	0	0	0	0	0	0	6,792	0	8,920	0	0	0	0	0	0	0	0	8,890
11	103,929	39,839	0	0	0	0	8,725	0	0	15,514	10,664	0	65,140	14,153	0	17,655	0	6,316	52,134
12	3,333	37,301	0	0	10,300	0	0	0	0	0	0	0	0	7,324	0	13,000	0	42,795	3,730
13	80,730	0	0	0	0	0	0	0	0	0	0	0	52,440	0	0	0	0	0	0
14	0	0	0	0	0	0	0	0	0	0	0	0	106,669	0	0	0	0	0	0
15	10,980	0	0	0	0	0	4,985	0	0	0	10,120	0	0	0	0	0	0	0	0
16	0	150,110	0	0	0	0	2,090	0	0	1,923	0	0	0	0	0	0	0	0	4,200
17	0	0	0	0	0	0	1,190	0	0	0	0	0	0	0	0	0	0	0	0
18	1,190	0	0	0	0	0	5,915	0	0	0	0	0	0	0	0	0	0	0	0
19	0	0	0	0	0	0	0	0	0	0	0	0	59,960	0	0	0	0	0	0
20	3,478	0	0	0	0	0	1,795	0	0	0	0	0	0	0	0	0	0	0	0
21	17,507	0	0	0	0	0	1,065	0	0	0	0	0	0	0	0	0	0	0	0
	375,273	254,320	0	0	36,396	0	54,135	19,349	0	42,377	83,784	0	284,209	52,507	9,230	30,655	10,080	79,311	116,964

Rich and Associates, Inc.