

City of Shreveport, Louisiana
Downtown Development Authority

Parking Demand Study

Draft Final Report

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OVERVIEW/SUMMARY

This study, prepared for the Shreveport Downtown Development Authority examined two areas of the downtown to determine if there was a current and/or future need for additional parking. The two areas were determined based on the location of demand generators and the location of potential parking structure sites in each area.

The overall study was phased and this first phase of the study looked at the potential demand for parking and the potential size of any parking structure in either or both areas. In addition, the study addresses the potential users of any proposed additional parking and issues that affect the parking in these two areas such as signage.

A second phase should look at the site feasibility for any possible parking structure recommended by this report as well as the financial feasibility.

Methodology

The methodology used for this study has been used by Rich and Associates for over 35 years in over 250 municipalities and included the following tasks.

- Review of the parking supply in both study areas based on information provided by the Shreveport DDA. The parking supply was categorized as private where the parking is either actively or passively controlled for specific users or publically available which means that the parking is available to the general public, generally for a charge.
- Review of land use by block from information provided by the Shreveport DDA. The information was provided by building for each of the blocks in the study areas and this information was then used to construct a parking demand model for the two areas.
- Conduct a turnover and occupancy count for on and off-street spaces on Thursday January 19th. Beginning at 8:00 AM and continuing until 6:00 PM the occupancy of most off-street and all on-street spaces in the two areas was recorded every two hours. For the on-street spaces license plates were also recorded to determine the use of the on-street spaces.
- Rich and Associates reached out to stakeholders in the study areas to help understand the parking needs for specific land uses and to discuss issue having to do with parking in the areas.

- Rich and Associates developed parking generation rates for each land use in the study areas by looking at three sources; the Urban Land Institute's Shared Parking publication, the Institute of Transportation Engineers Parking Generation Manual and final Rich and Associates data base from studies we have completed in the South and Southeast United States. These studies collected data from parking demand generators and developed parking generation factors unique to those areas.

The result was the development of parking generation rates that were applied to the number of square feet of the different land uses on a block to project the number of parking spaces needed on that block.

- Once the current parking demand was projected, the model then deducted the parking supply (on and off-street on that block to determine the surplus or deficit of parking on that block
- Rich and Associated also projected re-occupancy of existing vacant space and unless a specific land use was projected or a different time frame for re-development given, we assume that 40 percent of the existing vacant space would be re-occupied in a five year window and that the land use would be mixed use.
- Rich and Associates also looked at the signage for parking and wayfinding and how parking is marketed.

Findings

The following are findings from the study.

- In the two study areas there are a total of 4,210 parking spaces. There are 393 on-street spaces and 3,817 off-street spaces. The City has only 455 on and off-street spaces that it controls (eleven percent) of the total. There are 2,132 off-street spaces that while they are privately owned, they are generally available to the public and are referred to as publically available spaces. The remainder of the off-street spaces are private.
- Based on Rich and Associates' experience and best practices, we have found that to successfully manage municipal parking in downtowns it is especially desirable for the municipality to have control of at least 50 percent of the parking supply. This allows the municipality to effectively manage the parking in terms of allocation, reaction to changing demand, market pricing, and allows the parking to be enforced with greater

efficiency. In the study areas, the City only controls eleven percent and falls short of this benchmark.

- If we take the private publically available spaces and the City spaces there are 60 percent of the spaces that are publically available. While this helps the situation, the ability of property owners to point to publically available parking supply to potential tenants is limited.
- The lack of public parking will continue to be an issue in these two areas and is a factor in the re-development of vacant space. There have been several instances in the study areas where a development has not moved forward due to the lack of public/publically available parking.
- The turnover an occupancy study showed the following results:
 - In both Area 1 and 2 the peak occupancy occurred between 10:00 AM and Noon. For both on and off-street, the peak occupancy in Area 1 was 82 percent and in Area 2 80 percent.
 - Overall on-street occupancy at peak period was 85 percent in Area 1 and 77 percent in Area 2.
 - Overall off-street occupancy at peak period was 81 percent in Area 1 and 80 percent in Area 2.
 - In Area 1, seven of the nine blocks had on or off-street occupancies that were at or exceeded 85 percent occupancy at peak hour while in Area 2 only three of the nine blocks were at or exceeding 85 percent occupancy.
 - A rule of thumb and Rich and Associates best practice is that parkers in general perceive off-street and on-street spaces with occupancies greater than 85 percent to be at capacity, depending on the overall capacity of the parking area. The greater the capacity, the less this perception is valid. When 85 percent occupancy occurs, motorists will begin to re-circulate to seek other parking, adding to downtown traffic congestion and the driver's perception that there is no parking available in the downtown.
- The turnover analysis for the on-street parking showed that 96 percent of the parkers at two hour spaces did not exceed the two hour limit. Five percent stayed between two and four hours and approximately three percent stayed four hours or more.

- Rich and Associates best practice is that the violation rate should not exceed five to seven percent and in the study areas the enforcement and use meets this best practice. This means that the enforcement is sufficient for the areas and is effective.
- The projections for current and five year future parking demand were as follows;
- In Area 1 we projected a current demand for 2,150 spaces and determined a parking supply of 1,963 spaces resulting in a projected current deficit of -187 spaces. In the five year future based on the re-occupancy of vacant space we projected a deficit of -517 spaces.
- In Area 2 we projected a current demand for 2,696 spaces and determined a parking supply of 2,247 spaces resulting in a projected current deficit of -449 spaces. In the five year future based on the re-occupancy of vacant space we projected a deficit of -650 spaces.
- The projections of current deficits are consistent with the occupancy study completed in the two areas. Additionally, the perceptions that there is insufficient parking are confirmed by the occupancy study and the projections of demand. This is also consistent with Rich and Associates experience in other communities.
- The difficulties that property owners have reported in being able to re-develop or lease their properties due to the lack of identifiable available parking is consistent with the results of this analysis and is also consistent with Rich and Associates experience in other cities where parking occupancy is very high.
- Rich and Associates looked at the options for providing additional parking to service the projected parking needs. One option would be to fully develop surface areas for additional parking. One example is on the 700 block of Fannin. There is open space on this block where additional surface parking could be developed.
- The City or DDA may consider leasing private lots to provide public parking or have agreements with parking lot owners to provide public parking with their excess capacity and have those spaces signed public parking. From the results there were a few opportunities to do this, especially with two of the lots on the 700 block of Fannin.
- Two sites were identified for parking structure development, one in each area. In Area 1 the site was in the 600 block of Travis (block 28) and in Area 2 the site was in the 400 block of Crocket (block 48). In both cases, these sites are centrally located to the

current and future demand generators and areas where there are current and projected parking deficits.

- Based on the current and five year future parking projections, we project that there is a need for between 400 and 500 spaces to be added in Area 1 and between 500 and 600 spaces in Area 2. This projection is based upon a market rate charged for parking, the proposed location for a parking structure the current and future demand generators and areas where there are current and projected parking deficits.
- In the next phase, the economic analysis will further refine the capacity based on the development model; publically developed, privately developed or public/private developed parking. The capacity will also be dictated by the functional capacity of a parking structure on the proposed sites.
- Other Recommendations
- Consider providing signage that directs parkers to privately owned publically available parking.
- Provide signage for on-street spaces that are consistent and appropriated located.
- Consider providing pedestrian wayfinding signs (at least two on Texas Avenue) that direct has a map with businesses and locations of publically available parking.
- Enhance the existing parking map on the DDA site to list of the hours and days of enforcement, parking regulations and where to pay a ticket if one is received and identify where the private publically available parking areas are located.

Study Area

The study area as determined by Rich and Associates and the Shreveport DDA is illustrated in **Map 1** on **page 9**. The study area consists of roughly 18 blocks for the two areas and was based on blocks that surrounded potential parking structure sites. The walking distance from demand generators and the potential parking structure sites was one criterion to determine the study area. The distances people in Shreveport are willing to walk once they have parked their vehicle was estimated to be no more than one and a half blocks.

Parking Supply

Fieldwork for this study entailed a review of the buildings and parking within the study areas. **Table A** summarizes the existing parking supply in the study areas. The DDA provided Rich and Associates a summary of off-street parking counts and these were field verified by Rich and Associates.

It is important to note that the City/DDA controls only the on-street parking, which comprises only 9.4 percent of the available parking in the two study areas. Further, 56 percent of the off-street parking in the two areas can be considered publically available. This means that in general for the two study areas, 44 percent of the off-street parking is not open to the general public; either employees or customers/visitors. Except for a few surface lots, there is no large source of strictly publically available off-street parking in either area.

Based on Rich and Associates' experience and best practices, we have found that to successfully manage municipal parking in downtowns it is especially desirable for the municipality to have control of at least 50 percent of the parking supply. This allows the municipality to effectively manage the parking in terms of allocation, reaction to changing demand, market pricing, and allows the parking to be enforced with greater efficiency. In the two study areas, the City/DDA only controls eleven percent and falls short of this benchmark.

In Study Area 1 there are a total of 1,967 parking spaces which is made up of 205 on-street spaces and 1,762 off street spaces. For the off-street spaces, there are no publically owned (City of Shreveport or DDA) spaces except for the spaces under Government Plaza (62 spaces that are reserved for staff). In addition, of the 1,762 off-street spaces, approximately 460 (26 percent) are publically available which means that the general public can park on an hourly or daily basis and pay, or the parking is available to monthly parkers, again for a fee. The balance

of the off-street parking is private (74 percent) for staff and customers/visitors going to that specific building or business.

In Study Area 2 there are a total of 2,243 spaces which is made up of 188 (8 percent) on-street spaces and 2,041 off-street spaces. For the off-street spaces, approximately 1,672 are publically available (75 percent) and 383 (17 percent) privately available.

If we take the private publically available spaces and the City/DDA spaces there are 60 percent of the spaces that are publically available in the two areas. While this helps the situation, the ability of property owners to point to publically available parking supply to potential tenants is limited. This will continue to be an issue in these two areas and is a factor in the re-development of vacant space. There have been several instances in the study areas where a development has not moved forward due to the lack of public/publically available parking.

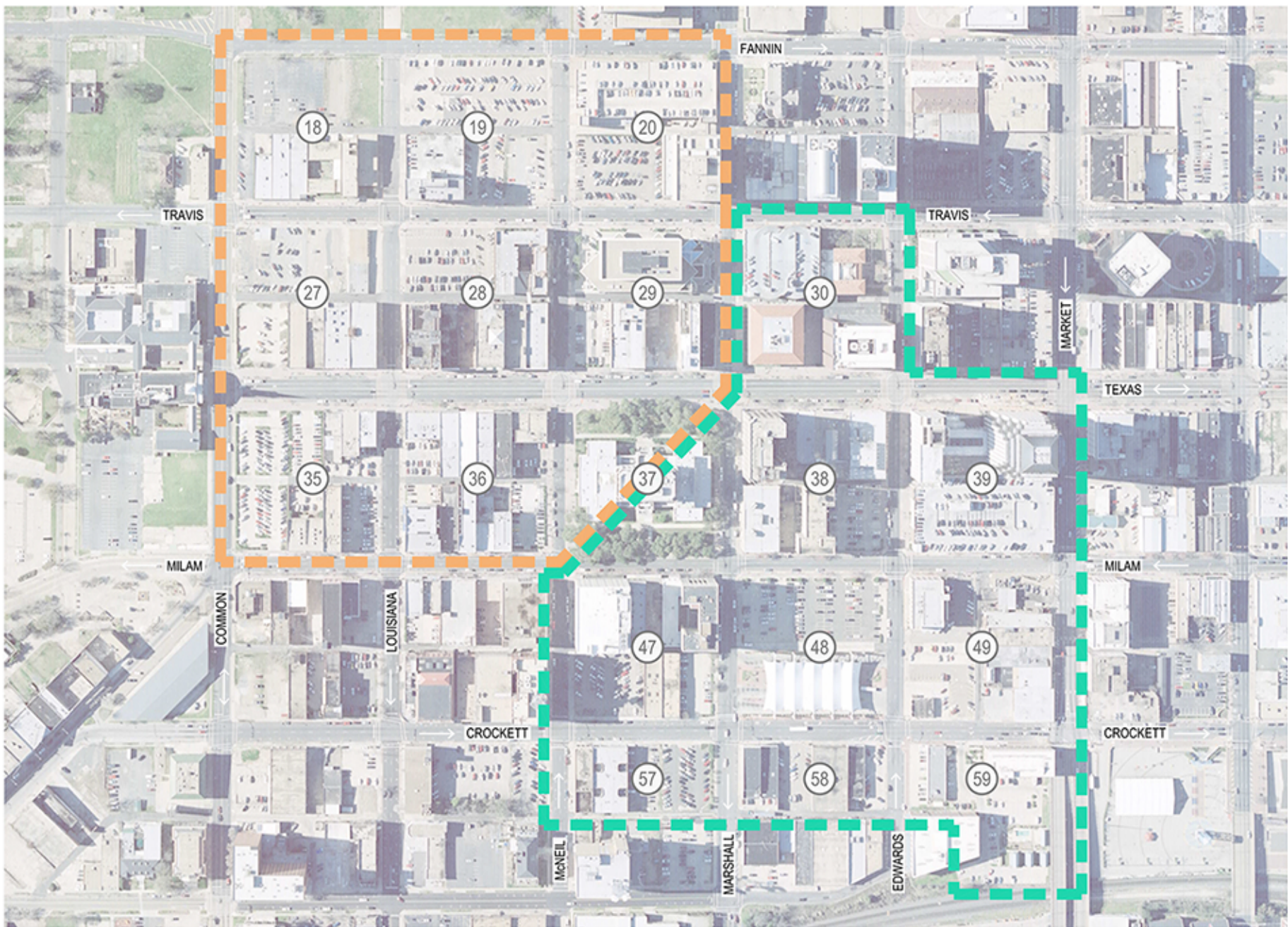
Table B on **page 8** is a detailed parking supply listing types and time durations of parking by block and is followed by **Map 2** on **page 10**, which is a spatial view of the parking supply. In cases where parking spaces were not marked, the number of parking spaces was estimated. For the purpose of the study, any parking marked reserved or privately owned was designated as private parking. Parking that is available for use by the general public was designated as public parking.

Table A Parking Supply Summary

On-Street Parking Totals	393 (9.4%)
Off Street Parking	<u>3,817</u> (90.6%)
Total Parking Both Areas	4,210
Publically Available Off Street Parking	2,132 (50.6%)
Private Off Street Parking	1,685 (40%)

Table B Parking Supply

Parking Supply																					
	Area 1											Area 2									
Block >	18	19	20	27	28	29	35	36	37	Totals		30	38	39	47	48	49	57	58	59*	Totals
On-Street																					
Loading Zone		2	2			5	1	7		17		3	7	4	3			1	1		19
2 hour on-street metered	16	23	15	13	30	24	18	22		161		21	18	5	31	16	17	16	11	14	149
Free parking	6									6					2						2
Reserved on-street									6	6			4		6						10
Barrier Free on-street	1		2		2	6	1	1	2	15		1	3		4						8
On-Street Totals	23	25	19	13	32	35	20	30	8	205		25	32	9	46	16	17	17	12	14	188
Off-Street																					
Public paid/hourly		49	97	66		31	113	104		460		301	71	850		148	78	89	135		1672
Off-Street Public Totals	0	49	97	66	0	31	113	104	0	460		301	71	850	0	148	78	89	135	0	1672
Private/Reserved	72	170	482	56	90	62	89	69		1090			14		85	57	32			121	309
Private/Publicly Available	32	111		34	34					211					74						74
Barrier Free	1									1											0
Off-Street Private Totals	105	281	482	90	124	62	89	69	0	1302		0	14	0	159	57	32	0	0	121	383
Summary	128	355	598	169	156	128	222	203	8	1967		326	117	859	205	221	127	106	147	135	2243
* Estimated residential parking supply of 105 spaces																					



PARKING STUDY FOR THE CITY OF SHREVEPORT

SHREVEPORT, LOUISIANA



LEGEND

(#) BLOCK NUMBER

STUDY AREA 1

STUDY AREA 2

BLOCK FACE KEY PLAN:



Sheet Title:
**STUDY
AREA**

File No: 1219
Scale: NTS
Date: 03-22-2012
Checked By: AN
MAP Number:

MAP 1
Pg. 9

PARKING STUDY FOR THE CITY OF SHREVEPORT

SHREVEPORT, LOUISIANA



LEGEND

(#) BLOCK NUMBER

STUDY AREA 1

STUDY AREA 2

ON STREET PARKING

BARRIER FREE

2 HR.

LOADING ZONE

RESERVED

FREE

OFF STREET PARKING

PUBLIC

PUBLIC - PRIVATELY OWNED

PRIVATE / RV

PRIVATE / PA

BARRIER FREE

BLOCK FACE KEY PLAN



Sheet Title:

**PARKING
SUPPLY**

File No.

1210

Scale

NTS

Date

03-22-2012

Checked By

AN

MAP Number

AN

MAP 2

Pg. 10

TURNOVER AND OCCUPANCY STUDY

A turnover and occupancy study of the public and private parking within the study areas was completed Thursday January 19th from 8:00 A.M. to 6:00 P.M. The turnover and occupancy studies were an observation of both public and private on-street and off-street parking in the downtown in the two areas.

In the turnover and occupancy study, the number of parking spaces occupied was observed during each two-hour circuit. The turnover portion of the analysis, where license plate numbers were recorded, applied to short term two hour parking spaces to determine how long specific vehicles remained parked in the same time restricted parking space. The turnover information also yields occupancy results for the parking areas and therefore for each circuit a composite occupancy can be derived. Turnover is an indicator of how often a parking stall is being used by different vehicles throughout the course of the day.

Occupancy is an important aspect of parking because it helps us to understand the dynamic of how parking demand fluctuates throughout the day. Overall, the occupancy data is used by Rich and Associates to calibrate the parking demand model.

Occupancy

A summary of the occupancy results for Thursday January 19th can be found in **Table C on page 13**. The peak observed occupancy results are spatially represented on **Map 3 (page 14)**. When looking at the results of the occupancy studies, a rule of thumb and Rich and Associates best practice is that parkers in general perceive on and off-street parking areas with occupancies greater than 85 percent to be at capacity of filled (depending on the overall capacity of the parking area: the greater the capacity, the less this perception is valid). When 85 percent occupancy occurs, motorists will begin to re-circulate to seek other parking, adding to downtown traffic congestion and the driver's perception that there is no parking available in the downtown.

In general, parking planners plan for the 85th level of occupancy to ensure that there is available parking. That is why the maps show parking at 85 percent or higher occupancy as red as these areas can essentially be considered as full.

The peak observed occupancy and key points for Area 1 are:

- The overall peak observed occupancy was 82 percent and occurred between 10:00 A.M. and noon.
- The on-street parking reached 85 percent occupancy and off-street parking reached 81 percent occupancy during this peak period.
- The overall on-street parking at 85 percent occupied reaches our best practice for occupancy for on and off street parking. Generally, parking areas that are at or above 85 percent occupied are perceived as being full.
- There were seven of the nine blocks that were at or exceeded 85 percent occupied at peak time for on-street parking.
- For off-street parking, the overall occupancy of 82 percent is slightly below the 85 percent level, but for five of the nine blocks studied, their off-street occupancy was over 85 percent occupied.
- The fact that in Area 1 in block 18 the occupancies for on and off-street parking is so low is one indication of the unwillingness to walk further than two blocks for parking. Rich and Associates experience that in the South, the distances that employees are willing to walk for parking is generally one and a half to two blocks and for visitors customers no more than one block. In other downtowns the normal acceptable walking distances are up to three blocks for employees and one and a half blocks for visitors/customers.

The peak observed occupancy and key points for Area 2 are:

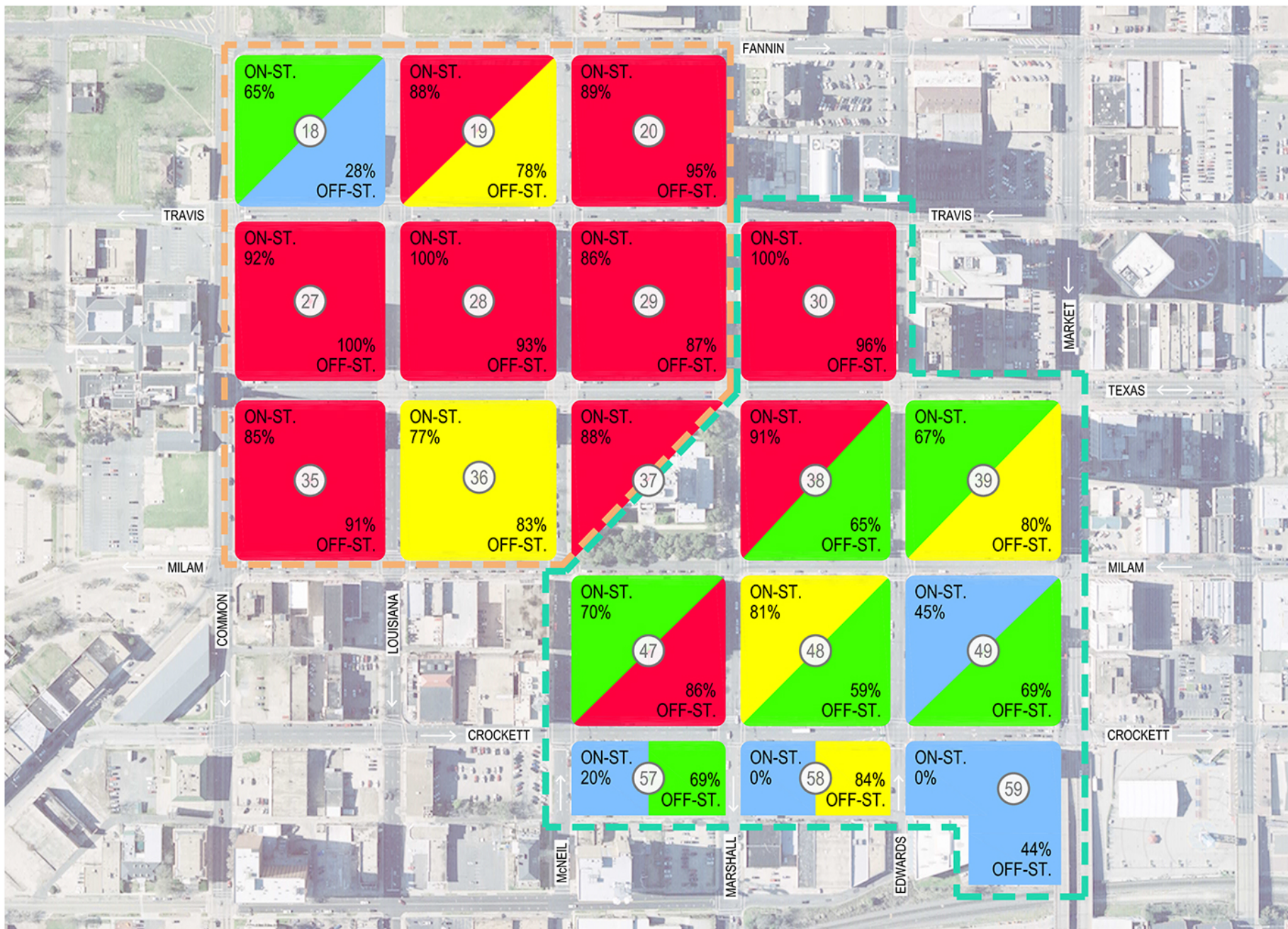
- In Area 2, we did not use the occupancy results from blocks 57, 58 and 59 in this analysis as they were on the periphery and would have skewed the results.
- The overall peak observed occupancy was 80 percent and occurred between 10:00 A.M. and noon.
- The on-street parking reached 77 percent occupancy and off-street parking reached 80 percent occupancy during this peak period.
- While the overall on-street parking at 77 percent occupied did not exceed the 85 percent level, three of the nine block faces did exceed 85 percent occupancy.
- For off-street parking, the overall occupancy of 80 percent is slightly below the 85 percent level but for three of the nine blocks studied, their off-street occupancy was over 85 percent occupied.

Based on Rich and Associates experience in other similar downtowns, the level of occupancy and the number of blocks that have on and off-street occupancies greater than 85 percent indicates that the perceptions that there is a lack of available parking are valid. Furthermore, this level of occupancy would also point to a lack of available parking for the potential employees, staff, customers and visitors to potentially re-developed/re-occupied spaces that are currently vacant.

Table C
Occupancy Summary
Thursday January 19, 2012

Study Area 1	# stalls	8:00am- 10:00am	% occupied	10:00am- 12:00pm	% occupied	12:00pm- 2:00pm	% occupied	2:00pm- 4:00pm	% occupied	4:00pm- 6:00pm	% occupied
On-street Occupancy	205	119	58%	175	85%	154	75%	111	54%	73	36%
Off-street Occupancy	1229	929	76%	1006	82%	862	70%	864	70%	659	54%
Totals	1434	1048	73%	1181	82%	1016	71%	975	68%	732	51%

Study Area 2	# stalls	8:00am- 10:00am	% occupied	10:00am- 12:00pm	% occupied	12:00pm- 2:00pm	% occupied	2:00pm- 4:00pm	% occupied	4:00pm- 6:00pm	% occupied
On-street Occupancy	148	82	55%	114	77%	92	62%	82	55%	28	19%
Off-street Occupancy	1607	1041	65%	1288	80%	1165	72%	1153	72%	516	32%
Totals	1755	1123	64%	1402	80%	1257	72%	1235	70%	544	31%



PARKING STUDY FOR THE CITY OF SHREVEPORT

SHREVEPORT, LOUISIANA



LEGEND

BLOCK NUMBER

STUDY AREA 1

STUDY AREA 2

PARKING OCCUPANCY

85% through 100%

75% through 84%

50% through 74%

0 through 49%

BLOCK FACE KEY PLAN:



Sheet Title:

**PEAK
OCCUPANCY**

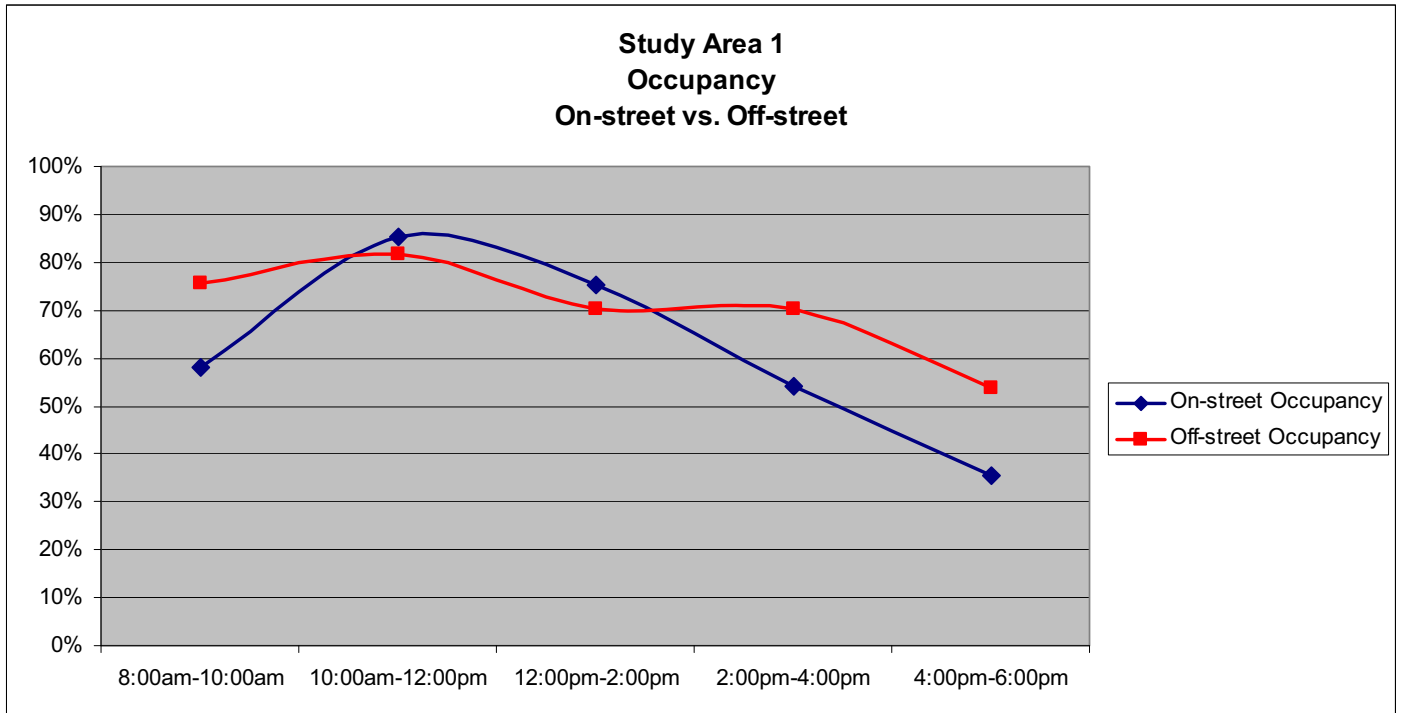
Thursday Jan.19, 2012
10:00am - 12:00pm

File No.	1210
Scale	NTS
Date	03-22-2012
Checked By	AN
MAP Number	

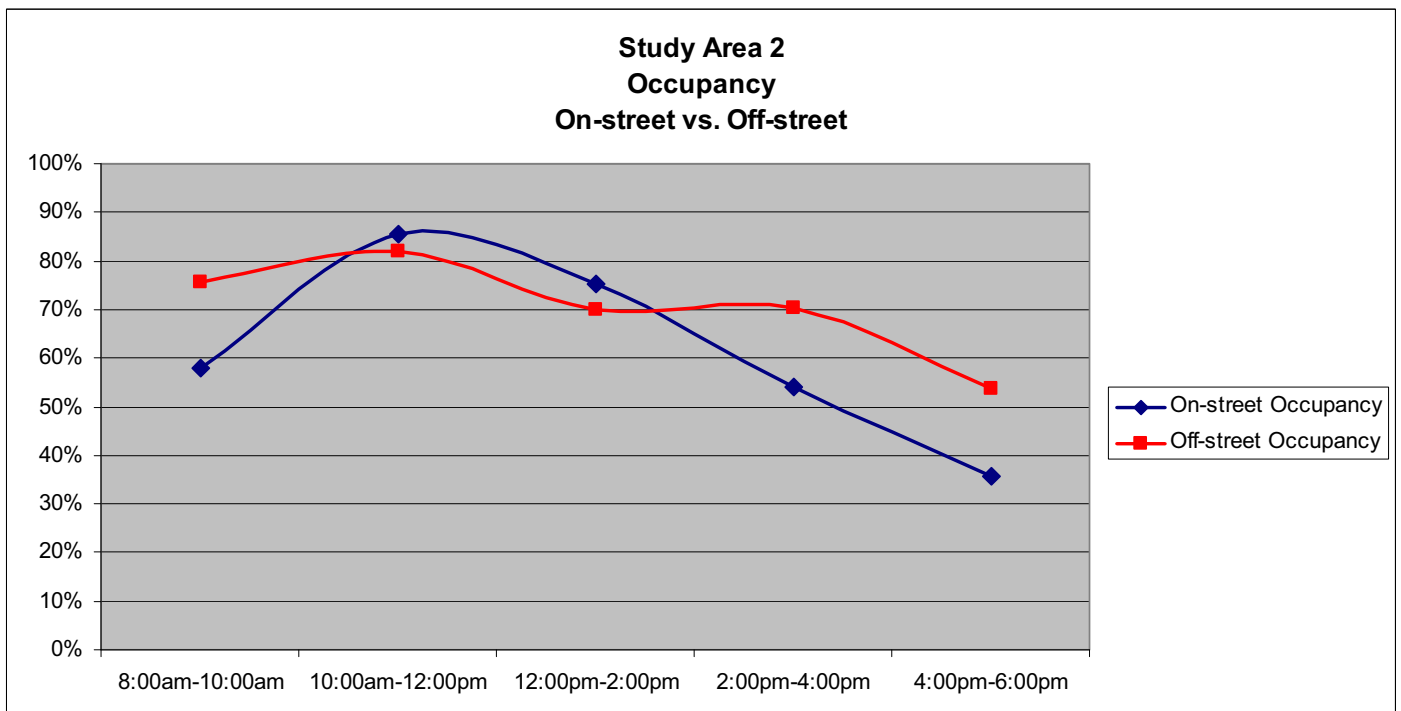
MAP 3

Pg. 14

Graph 1



Graph 2



Turnover

The turnover findings (**Table D**) were for two hour on-street parking spaces. There were 541 vehicles observed parking in the two hour (and less) on-street parking spaces within the study areas during the hours of 8:00 A.M. - 6:00 P.M. In the two hour spaces there were 508 (96 percent) vehicles observed remained less than two hours, 25 vehicles parked from two to four hours in the same parking space and eight vehicles that remained in the same parking space for four hours or more with an overall on-street violation rate of six percent.

The best practice we have set for enforcement is a violation rate of between five and seven percent. In these two areas, the violation rate is at best practice levels which mean that enforcement is effective. Vehicles that stayed beyond the posted time limits are most likely students and in some cases of the longer stays, employees or employers.

Though it was reported that some on-street parkers do shuffle from space to space to avoid being ticketed, we did not observe this during our study.

Table D

Thursday January 19th Turnover Summary	
Parking Turnover Summary (by type)	On-Street 2 Hour or less Parking
Vehicles that remained less than 2 hours	508 (96%)
Vehicles that remained between 2 and 4 hours	25 (5%)
Vehicles that remained between 4 and 6 hours	2 (less than 1%)
Vehicles that remained between 6 and 8 hours	4 (less than 1%)
Vehicles that remained between 8 and 10 hours	2 (less than 1%)
Total number of vehicles analyzed (8:00 A.M. - 6:00 P.M.) in 2 hour stalls	541
Total number of 2 hour stalls analyzed	269

Source: Rich and Associates Field Observations, Thursday January 19 2012

PARKING DEMAND ANALYSIS

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

- An inventory of the study area's on and off-street parking supplies as provided by the DDA.
- Turnover and occupancy study for public and private on and off-street parking areas.
- Block-by-block analysis of the square footage and land use of every building in the study areas. The Shreveport DDA staff provided the building inventory of the downtown.

The parking demand analysis contains two levels of analyses to determine the number of parking spaces needed in the current and future conditions. Rich and Associates has used this methodology for over 35 years and we have refined it as research and our data base has grown.

The first level of analysis is a mathematical or hypothetical model of parking demand based generally on the building gross floor area. The mathematical model multiplies a parking generation rate by the floor area of specific land uses to derive the projected number of spaces needed. The second level uses field observations to calibrate the mathematical model and help to establish projected parking spaces needed.

In the analysis, the scope did not include determining from surveys a specific parking generation rate for the study area. Rich and Associates relies on data from two different sources as well as our data base from over 200 studies in downtowns of all sizes located throughout the United States to establish a parking generation for the parking demand model/

Most parking requirements are based on the floor area of a particular development and the parking generation rate or parking ratio which is specific for each land use. In general, the Institute of Transportation Engineers Parking Generation Manual and the Urban Land Institute's Shared Use Parking Manual are used as a starting point, though the parking generation rates in the Institute of Transportation Engineers Parking Generation Manual tend to be higher than Rich and Associates experience in a downtown setting where shared use and linked trips help to address the peak parking needed for various uses at different times of the day.

Once a parking generation model is developed that illustrates the surpluses and deficits of parking numerically and graphically, we then compare the model with actual field observations, specifically the turnover and occupancy counts. The comparison serves as a test of the demand model and allows Rich and Associates staff to make further revisions or adjustments where necessary to ensure accuracy, as well as to fully understand the overall parking dynamic in the downtown area.

The assumptions used for the parking demand calculations are:

Assumption 1: It was assumed in the initial analysis that the total parking demand calculated for a particular block is only using the parking supply on that block. Therefore, a block with surplus parking supply is not used to offset shortfalls on adjacent blocks in the initial analysis.

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

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

The gross square footage of individual buildings was collected and then sorted by land use categories. The different land uses for each block are in general multiplied by a parking generation rate of parking spaces required per 1,000 square feet. The resulting number of parking spaces demanded is deducted from the available parking supply on each block and a surplus or deficit for each block is then calculated.

There were exceptions to the parking generation rate using square footage. For residential we based the parking generation on dwelling units, for the Southern University Metro Campus we based the parking on spaces per student (this includes faculty and staff) and for theater the basis is the number of seats per space.

A summary of the parking demand is found in **Table E** on **page 21** and is represented spatially in the Current Surplus/Deficit **Map 4** on **page 22**. Future parking demand (**Map 4.1 page 23**) assumed a re-occupancy rate for vacant space in the study area. This was based on information provided by the Shreveport DDA and from property owners and developers. Future parking demand assumed a re-occupancy rate for vacant space in the study area.

Area 1

In Area 1 there is a current projected daytime deficit of -187 spaces. This deficit is driven by primarily by two blocks; blocks 29 and one half of block 37 and to a lesser extent by blocks 28 and 36. Block 29 (deficit of -442 spaces) contains Government Plaza and a significant amount of office space. Block 37 was split evenly between Area 1 and 2 (total deficit of -405 spaces) is the location of the Caddo Parish Court which has no parking on-site.

There is approximately 201,401 square feet of vacant space in Area 1. For everything except for the 100,000 square feet in the Sears Building and adjacent buildings on block 28 we assumed 40 percent re-occupancy at 2.89 spaces per 1,000 square feet. For the 100,000 square feet in the Sears Building and adjacent buildings on block 28 we assumed 100 percent re-occupancy within the five year planning window. For the five year future condition, we projected a possible deficit of -517 spaces. In the five year future projections there are now four blocks with large deficits; blocks 28, 29, 36 and 37.

In general, the parking demand and the resulting calculation of a deficit condition in Area 1 is consistent with the results from the turnover and occupancy study where we found that with the exceptions of a few locations that the parking was in excess of 85 percent occupied.

Area 2

In Area 2 there was a current projected daytime deficit of -449 spaces. This deficit is driven by four blocks; blocks 30, 37, 38 and 47.

There is approximately 304,196 square feet of vacant space in Area 2. For everything except for the 130,000 square feet in the vacant Slattery Building 38 we assumed 40 percent re-occupancy at 2.89 spaces per 1,000 square feet. For the Slattery Building we did not assume re-occupancy in the next five years. If it was redeveloped, the projected parking demand for that building is 376 spaces.

For the five year future condition, we projected a possible deficit of -650 spaces in Area 2. In the five year future projections the same four blocks had large deficits; blocks 30, 37, 38 and 47.

Conclusions that can be drawn from the parking demand analysis are:

1. The projections of current deficits are consistent with the occupancy study completed in the two areas.
2. Perceptions that there is insufficient parking are confirmed by the occupancy study and the projections of demand.

3. The difficulties that property owners have reported in being able to re-develop or lease their properties due to the lack of identifiable available parking is consistent with the results of this analysis.
4. There is a need for additional parking to be developed in both areas.

Study Area #1
Parking Demand Matrix
Shreveport, LA

A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S
Block	Office	Retail	Mixed Use	Service	Restaurant	Banquet Facility	Residential	Community	Government	Library	College	Theater	Warehouse	Vacant	Demand	Parking	Surplus/	Surplus/
							(per unit)				(per population)	(per seat)			(current)	Supply	Deficit	Deficit
Parking Generation Ratios	2.45	2.38	2.89	2.43	6.00	6.00	0.75	0.60	2.25	0.75	0.35	0.15	0.20	2.89	DAY		(current)	(5 yrs)
18	17,350	0	0	0	0	0	0	0	0	0	0	0	0	36,500	43	128	85	43
19	50,000	0	0	0	0	0	0	0	0	0	0	0	0	0	123	355	233	233
20	182,174	0	0	0	0	0	0	0	0	0	0	0	0	0	446	598	152	152
27	27,000	14,000	0	0	0	0	0	20,000	0	0	0	0	12,000	7,256	114	169	55	47
28	0	0	0	0	0	0	0	71,250	0	0	530	0	0	100,000	228	156	-72	-286
29	150,000	1,400	36,000	1,080	2,268	0	0	0	26,334	0	0	0	0	1,400	550	128	-422	-424
35	55,500	0	0	0	0	0	1	0	0	0	0	0	0	0	137	222	85	85
36	26,845	12,000	17,146	0	10,400	10,000	5	8,000	0	0	0	188	0	56,245	303	203	-100	-165
37*	0	0	0	0	0	0	0	0	91,650	0	0	0	0	0	206	4	-202	-202
TOTALS	508,869	27,400	53,146	1,080	12,668	10,000	6	99,250	117,984	0	530	188	12,000	201,401	2,150	1,963	-187	-517
															(stalls)	(stalls)	(stalls)	(stalls)

* Block 37 - Caddo Parish Court court demand divided = between study are 1 and 2

Study Area #2
Parking Demand Matrix
Shreveport, LA

A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S
Block	Office	Retail	Mixed Use	Service	Restaurant	Banquet Facility	Residential	Community	Government	Library	College	Theater	Warehouse	Vacant	Demand	Parking	Surplus/	Surplus/
							(per unit)				(per population)	(per seat)			(current)	Supply	Deficit	Deficit
Parking Generation Ratios	2.25	2.38	2.89	2.43	6.00	6.00	0.75	0.60	2.25	0.75	0.23	0.15	0.20	2.89	DAY		(current)	(5 yrs)
30	185,692	0	0	20,000	0	0	0	0	0	80,000	0	0	0	0	526	326	-200	-200
37*	0	0	0	0	0	0	0	0	91,650	0	0	0	0	0	206	4	-202	-202
38*	156,740	2,755	0	0	15,000	0	0	0	0	0	0	0	0	232,568	449	117	-332	-451
39*	492,293	0	0	0	0	0	0	0	0	0	0	0	0	0	719	859	140	140
47*	25,000	0	0	820	0	0	0	0	0	0	0	0	0	51,128	451	205	-246	-305
48	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	221	221	221
49	39,214	32,000	0	0	0	0	0	0	0	0	0	0	0	8,500	164	127	-37	-47
57	0	0	0	12,000	0	0	0	0	0	0	0	0	0	12,000	29	106	77	63
58	3,420	0	0	0	0	0	0	0	0	0	0	0	0	0	8	147	139	139
59	26,000	0	0	0	0	0	112	0	0	0	0	0	0	0	143	135	-8	-8
TOTALS	928,359	34,755	0	32,820	15,000	0	112	0	91,650	80,000	0	0	0	304,196	2,696	2,247	-449	-650
															(stalls)	(stalls)	(stalls)	(stalls)

* Future development of 130,000 square foot in Slattery not shown in 5-Year Future, but at build out would add projected 376 spaces to needs

* Block 37 - Caddo Parish Court court demand divided = between study are 1 and 2

* Block 39 - Office use has a special parking generation ratio of 1.46 (719 spaces) & Block 47 Centerpoint Office Building (268,875 sf = 393 spaces)

* Block 47 Centerpoint Office Building has a special parking generation ratio of 1.46 (268,875 sf = 393 spaces)

PARKING STUDY FOR THE CITY OF SHREVEPORT

SHREVEPORT, LOUISIANA



LEGEND

BLOCK NUMBER

STUDY AREA 1

STUDY AREA 2

SURPLUS OF PARKING

+100

0 through 99

DEFICIT OF PARKING

-99 through -1

-100 +

BLOCK FACE KEY PLAN:



Sheet Title:

**SURPLUS /
DEFICIT
(CURRENT)**

File No:

Scale:

Date:

Checked By:

MAP Number:

1219

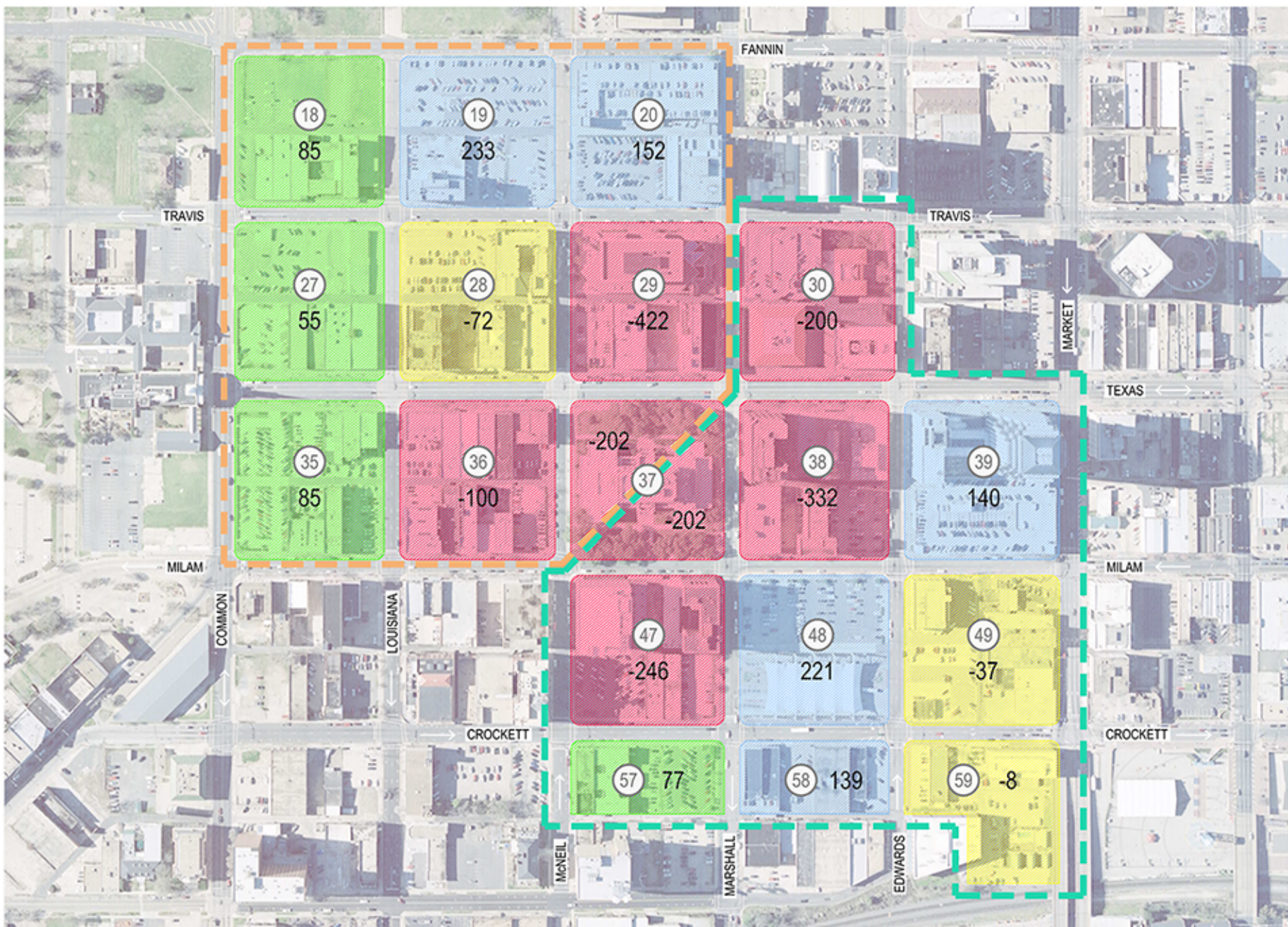
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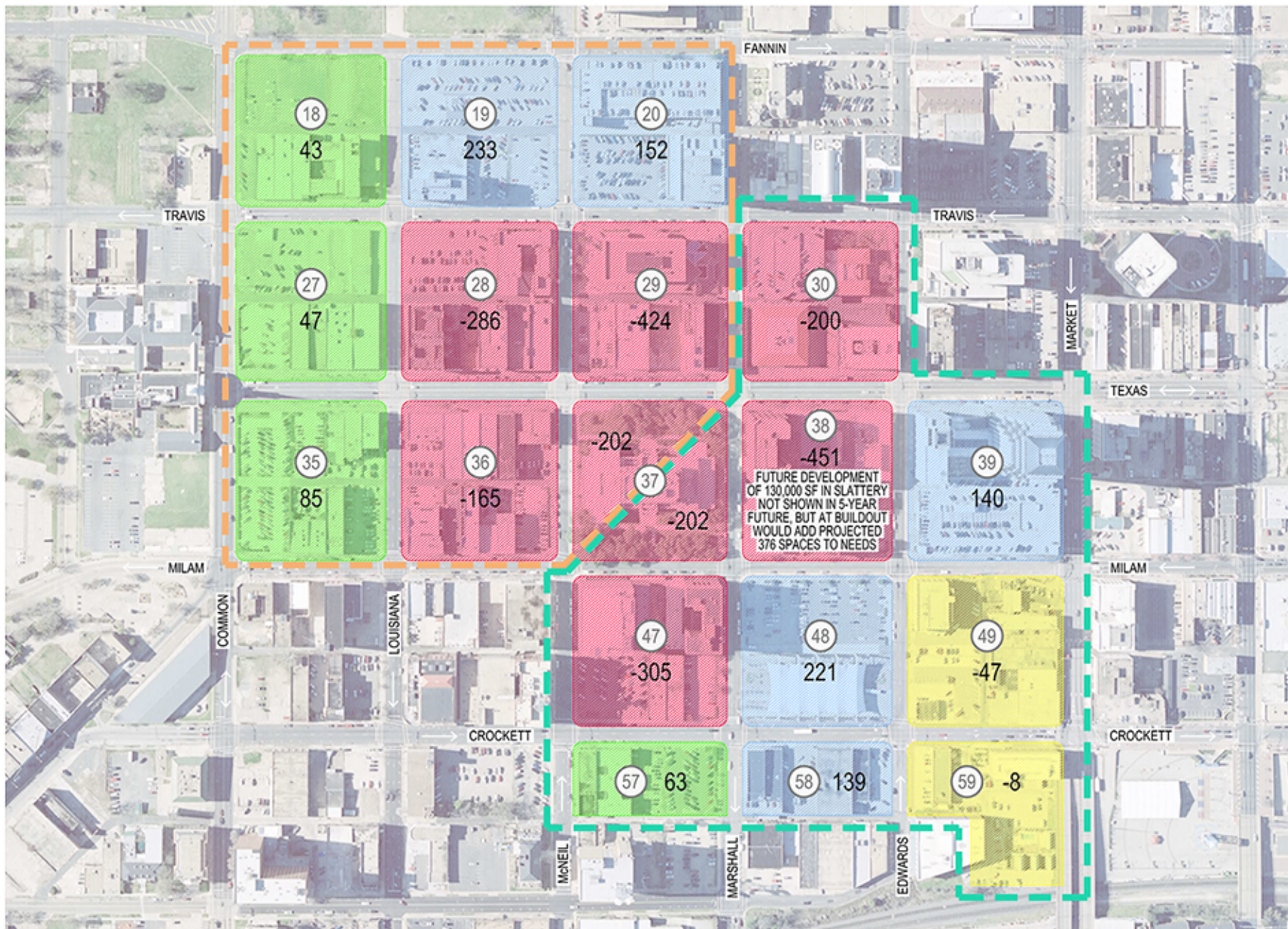
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MAP 4

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PARKING STUDY FOR THE CITY OF SHREVEPORT

SHREVEPORT, LOUISIANA



LEGEND

BLOCK NUMBER

STUDY AREA 1

STUDY AREA 2

SURPLUS OF PARKING

+100

0 through 99

DEFICIT OF PARKING

-99 through -1

-100 +

BLOCK FACE KEY PLAN:



Sheet Title:

**SURPLUS /
DEFICIT
(5 yrs.)**

File No: 1219
Scale: NTS
Date: 03-22-2012
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MAP 4.1
Pg. 23

PARKING RECOMMENDATIONS

The recommendations presented here are intended to enhance the existing supply of parking through possible improvements. Because the City and DDA do not control any publically available off-street parking, these improvements center on signage (for on and off-street) and marketing efforts that will help identify public and private publically available parking.

1. Signage

Signage recommendations cover not only parking signs but also wayfinding signs once a driver and passengers make the switch from a driving to a pedestrian mode. In general, there are issues with signage in Shreveport.

The on-street parking signs need to be consistent and all spaces need to be signed with the limitations on them. Though the City or DDA do not control any off-street parking, there should be signage added to the downtown that helps a driver find private publically available off-street parking. The current lack of identification creates issues with marketing and wayfinding and enhances the perception that there is no parking in the two areas.

- All on-street parking in the core downtown should be signed two hour or loading zone.
- Pedestrian kiosks at each end of town would help customers and visitors find their way to and from the parking areas.

Best Practice Sign Types Include

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

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

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



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



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



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



Quality signs for parking and wayfinding have the following elements incorporated into their design and placement:

- Use of common logos and colors.
- Placement at or near eye level.
- Use of reflective, durable material.
- All three types used in conjunction to guide motorist and pedestrian activity.
- All entrances to the downtown need to have wayfinding signage.

- All routes through the downtown need to have directional and location signage oriented on the same side a vehicle is traveling.
- All pedestrian routes to and from major customer/visitor parking areas need to have wayfinding signs.

Recommendations for Signage

- A. A family of signs needs to be developed for the direction/location, identification and vehicle wayfinding. The color, logo (if used) font type etc need to be consistent and follow best practice as presented in the section.
- B. Install pedestrian wayfinding in the downtown Pedestrian wayfinding is critical once a person parks and transitions to walking. Directing pedestrians to key destinations and then back to where they parked are important elements in tourist/customer/visitor oriented downtowns. Pedestrian wayfinding will work hand in hand with the marketing discussed in these recommendations.
- C. Install at least two kiosks possibly along Texas Avenue with a map, business listings and parking locations. Kiosks are helpful in directing visitors/customers throughout downtown.
- D. All signs should be at a height where the sign cannot be blocked by a parked vehicle in both on-street and off-street parking areas.
- E. The two hour on-street parking signs should be spaced at approximately every 100ft – 120ft. The signs need to be consistent in shape, font size, color and message.

Cost: estimated \$30,000-\$50,000 includes on-street, pedestrian wayfinding and vehicular wayfinding.

2. Marketing

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

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

Currently there is a parking map that shows parking locations but there is no key so someone going to the site will have issues identifying publically available parking. This map can be found on the Downtown Shreveport web site after clicking Parking and then on the Parking Map

Recommendations

- A.** The DDA or City should modify the web site map. The information that should be included is a list of the hours and days of enforcement, parking regulations and where to pay a ticket if one is received. There should also be language about promoting the "park once" concept where if someone is coming downtown for more than one purpose, they should look to off-street parking areas so all errands can be done without moving a vehicle. Most importantly, the private publically available parking areas need to be more clearly spelled out on the map.
- B.** Businesses should be encouraged to have a link to the DDA's web site and parking page. This allows customers and visitors to click the link and go directly to the parking page and find where they can park.
- C.** Create a downtown marketing flyer that lists the downtown businesses included with a map of parking in the downtown. This can be used as a tool to market both the downtown businesses and the parking system.

3. Parking for the Current and Future Conditions

Rich and Associates recommends that Shreveport provide sufficient parking to handle customer/visitor and employee parking needs to satisfy the most consistent parking demand level. Most importantly, the amount of parking that is currently available is insufficient to accommodate the re-occupancy or redevelopment of much more vacant space. There is little that the City or DDA can do at this point to provide additional on-street parking or surface lots without demolition of existing buildings.

There are some small opportunities to potentially use some surface lots that have some unused capacity. One example is the surface lots on block 18 in Area 1 and block 57 in Area 2. Unfortunately, there will always be an issue of acceptable walking distances from these lots that are farther away from the core demand generators.

Based on discussions with stakeholders, the maximum acceptable walking distance for an employee seems to be a block or a block and one half, though there are some exceptions such as the Parish Court House staff. The limited acceptable walking distances eliminates the potential use of remote parking areas for employee parking.

Additionally, the distance issue does not seem to be price driven. This means that even if substantially cheaper monthly parking were provided, employees would be reluctant to use it.

Therefore, additional convenient parking will need to be provided in each of the study areas for redevelopment and re-occupancy are to occur. Though not discussed in detail, if any of the existing privately owned surface lots are considered for redevelopment, there will be reduced parking supply and increased parking demand.

Options

Provide New Surface Public Parking

An option for adding additional spaces to the study areas is to develop additional surface parking on vacant or underutilized property. In the two study areas this opportunity does not appear to exist except for improving the lot on block 18 designated lot 67. Part of one of these private lots could accommodate additional parking spaces

An over reliance on surface parking, however, limits opportunities for development and for increasing the commercial and residential density in the downtown core. Also, where surface lots front streets and pedestrian pathways, they create breaks in the streetscape that are detrimental to pedestrian activity and can be a perceptual issue for pedestrians.

One strategy that is used by other municipalities is to lease private parking areas from private owners to make them publically available. This strategy is used where there is generally unused parking capacity in these private lots. In the study areas though, this is not viable since most of the private parking lots are close to fully utilized. As identified in this report, it would be beneficial to for the City/DDA to market all publically available parking though signage and maps etc.

Structured Parking

In the long term, we recommend that Shreveport should develop a parking structure in each area to address parking deficiencies and to promote redevelopment and re-occupancy. The City needs to be looking forward and begin the process of developing a parking structure plan to address the long-term parking needs of these two area especially considering the large amount of vacant space (and whole buildings) in the two areas. The process of actual planning, design and construction can take from one to two years so starting a dialogue and identification of possible sites and development strategies now is appropriate.

In the stakeholder interviews, Rich and Associates was told about potential redevelopment and re-occupancy in the core downtown. One issue that came up often was available parking. It may be difficult to re-occupy buildings, redevelop properties to more appropriate land uses and density consistent with the long term goals of the downtown without an identifiable parking supply.

Based on Rich and Associates experience in other downtowns where there were limited parking availability due to the high occupancy rates and so many re-development potentials, having a plan that the City can show property owners, stakeholders and potential developers is important to promote growth and maintain stability within the downtown. In our experience, public parking needs to be available for lenders and prospective tenants in order to advance re-development.

Based on the current and five year future parking projections, we project that there is a need for between 400 and 500 spaces to be added in Area 1 and between 500 and 600 spaces in Area 2. This projection is based upon a market rate charged for parking. Additionally, we took into account the proposed location for a parking structure in Area 1 (block 28) and in Area 2 (block 48). In both cases, these sites are centrally located to the current and future demand generators and areas where there are current and projected parking deficits.

In the next phase, the economic analysis will further refine the capacity based on the development model; publically developed, privately developed or public/private developed parking. The capacity will also be dictated by the functional capacity of a parking structure on the proposed sites.