

University of Arkansas Campus Transportation Plan

Volume II - Appendices

Final Report
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Dickson Street Parking Deck Feasibility Study

Prepared for
University of Arkansas
and
City of Fayetteville, Arkansas

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**MARTIN
ALEXIOU
BRYSON**

EXECUTIVE SUMMARY

The Fayetteville Downtown Master Plan envisions continued growth of Dickson Street, and identifies the need for one or more parking decks to support that growth. Anticipated users of the decks include Walton Arts Center patrons, customers of the commercial establishments (including University of Arkansas students and employees), and students attending classes.

Because the various users have peak demands at different times, the concept of a joint venture facility has emerged. The additional parking would be provided primarily to serve the busy periods of the arts center, restaurants, etc. (night and weekends). Students (and therefore the University) would benefit from the additional parking that may not be fully occupied during the day on weekdays.

This study examines the physical and financial feasibility of such a deck, and the extent to which participation in the deck project would benefit the University and the City. It references the University's and City's future parking needs (and, for the University, potential alternatives to new deck spaces).

The type and amount of proposed development in the Dickson Street area, the commercial and entertainment hub of Fayetteville, is a major driver of future parking demand in the area. The parking forecasts assume that the proposed developments on Dickson Street, which are currently conceptual, are completed and occupied around the time the deck is open, and that the proposed 2,500 seat performing arts theater is successful. It is also assumed that no other decks or significant surface lots are built to serve the area (except those associated with residential development).

On that basis, the study found that a 1,200-space deck (or two decks with that number of spaces) is likely to be financially viable from development-related demand alone, without any University of Arkansas participation.

The University will require some additional parking as a result of the *2010 Initiative*. Even with a North Campus deck and some park-and-ride spaces, there may still be a shortfall at the completion of the *2010 Initiative* of around 300 spaces. The University could therefore benefit from using up to 200 spaces in a Dickson Street deck. Options for University participation include leasing the spaces, participating in the financing of the deck, or (if University land is involved) being assigned a number of spaces in return for the use of its land.

Three potential deck sites were identified: the West Annex site, the Brew Pub municipal lot, and the Walton Arts Center lot. The West Annex site appears at this stage to be the most feasible for the first deck. The Walton Arts Center site is the most conveniently-located, but there are concerns that a deck here would involve losing a lot of prime parking during its construction. Subsequent to this study, the Brew Pub site, which included a building site fronting Watson Street, has become the subject of a development proposal and most likely will not be available for a parking deck.

If the deck displaces the West Annex lot, which has 38 spaces, the University could require that at a minimum these spaces are replaced in the deck and are reserved, at no cost, for University use in perpetuity. Alternatively, the University could sell or lease the land for the deck.

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1.0 INTRODUCTION AND BACKGROUND

Dickson Street is the commercial and entertainment center of the City of Fayetteville, a short distance east of the University of Arkansas campus (Figure 1, Photo 1 and Photo 2).

The Fayetteville Downtown Master Plan envisions continued growth of Dickson Street, and identifies the need for one or more parking decks to support that growth. Anticipated users of the parking structures include Walton Arts center patrons, costumers of the commercial establishments (including University of Arkansas students), and students attending classes.

Given the different times for the peak demands of the various users, the concept of a joint venture facility has emerged. The additional parking would be provided primarily to serve the busy periods of the arts center, restaurants, etc. (night and weekends), with students (and therefore the University) benefiting from the additional parking that may not be fully occupied during the day on weekdays.

This study:

- provides an order-of-magnitude parking demand estimate, and uses this to estimate the deck's potential revenue;
- considers the cost of building a deck;
- examines the resulting financial feasibility and other potential funding streams;
- identifies potential deck sites, considers their fit with the Downtown policy context, and examines their traffic impacts;
- examines the long-term parking needs of the University;
- and examines the potential for the University to participate in a deck.

The study represents the opinions and professional judgment of Martin/Alexiou/Bryson, PLLC. As well as the base-case forecast, it includes a range of sensitivity tests that demonstrate how some factors might affect the forecasts. However, no study can fully account for all factors that affect parking demand or other aspects of a deck's viability.

In particular, the conclusions are based on the specific assumptions set out in this report, and on competent and efficient management of any future parking facility. They presume that the developments expected in Downtown will come to fruition, and that there is otherwise no significant change in the city's economic conditions. Unforeseen changes in economic or other factors could have an impact on the conclusions presented.

Figure 1: Area Map

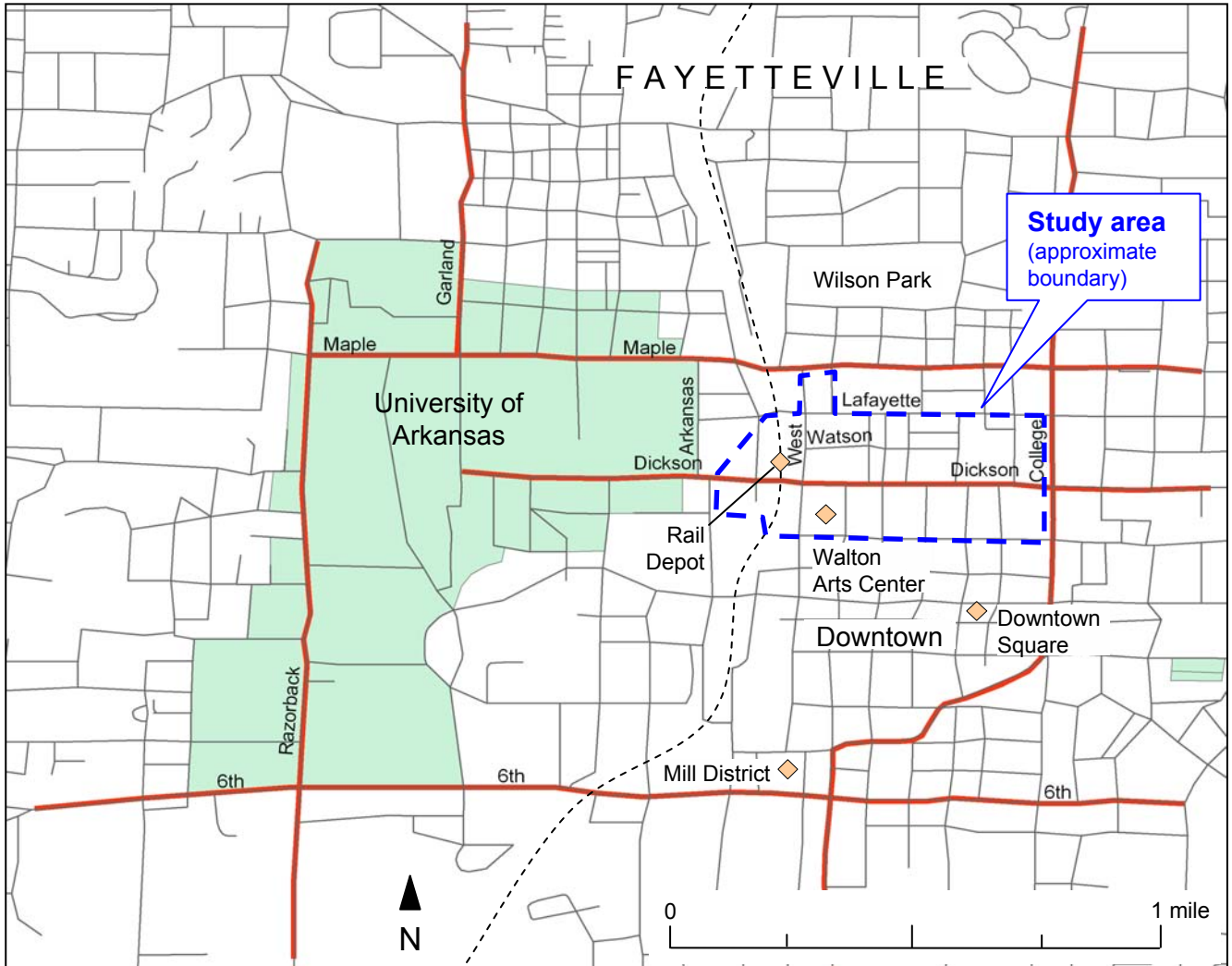




Photo 1: Dickson Street, looking east from West Avenue



Photo 2: Dickson Street, looking west from West Avenue

2.0 CURRENT PARKING SUPPLY AND DEMAND

2.1 PARKING SUPPLY

A parking space count and occupancy study was undertaken for the Dickson Street area to determine the current parking supply and availability. The survey covered all public lots in the vicinity, including those private lots that functioned as *de facto* public lots at certain times of the day, and on-street parking.

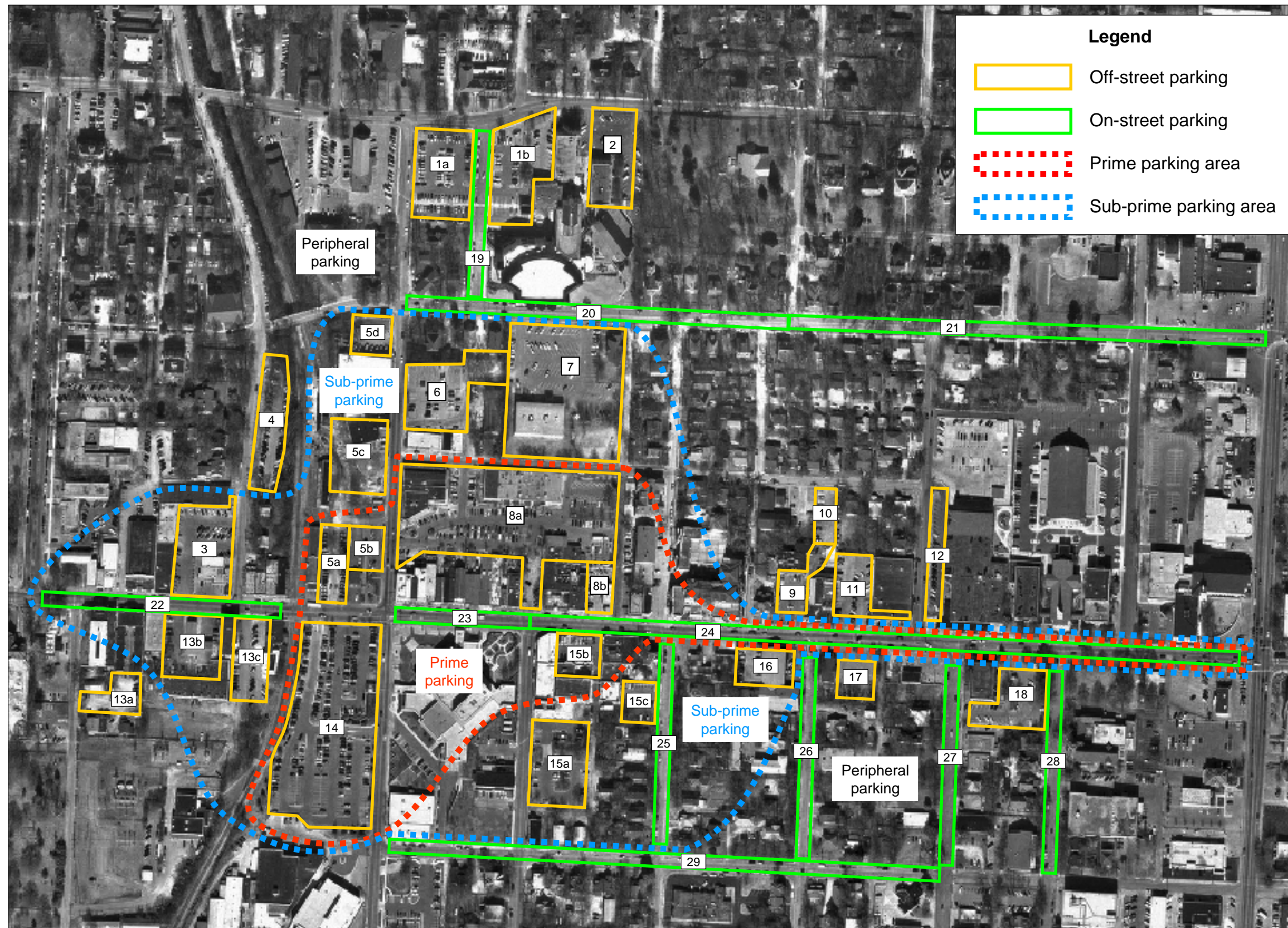
The parking locations were classified into three types: prime, sub-prime and peripheral. The prime parking is closest to the intersection of Dickson Street and West Avenue, which is the core of activity for the Dickson Street commercial area. The sub-prime parking is further away from this core area. The peripheral parking is within walking distance, but is currently not typically used by patrons of the core area.

Figure 2 identifies the locations studied. Table 1 summarizes the parking supply by type and according to whether the spaces are on-street or off-street. (The space count is shown in full in Appendix 1.)

Table 1: Public Parking Supply in the Dickson Street Area, by Type of Parking

Parking Type	Number of Spaces		
	On-Street	Off-Street	Total
Prime	43	520	563
Sub-Prime	59	469	528
Peripheral	330	517	847
Total	432	1,506	1,938

Figure 2: Current Parking Locations



Off-street

1 (a&b)	Western lots of Univ. Baptist Church
2	NE lot of University Baptist Church
3	NW Corner of Gregg and Dickson
4	City pay lot on Gregg
5 (a-d)	Lots on block West/Lafayette/railroad/Dickson
6	NE Corner of West and Watson
7	SE Corner of Campbell and Lafayette
8 (a&b)	Lot behind Brew Pub et al
9	N side of Dickson St, opposite Church Ave
10	S side of Watson St, opposite Church Ave
11	Colliers Drug lot - N of Dickson, just E of Church
12	Post Office lot – NE corner of Dickson & Block
13 (a-c)	South of Dickson St – University to Railroad
14	Walton Arts Center Lot
15 (a-c)	South of Dickson St - School Ave to Locust Ave
16	SW corner Dickson St & Church Ave
17	S side of Dickson St, just E of Church Ave
18	S side of Dickson St, between Block & East

On-street

19	Vandeventer Ave – Maple to Lafayette
20	Lafayette St – West St to Mock Ave
21	Lafayette St – Mock Ave to College Ave
22	Dickson Street - Arkansas to Railroad
23	Dickson Street - West St to School Ave
24	Dickson Street - School Ave to College
25	Locust Avenue – Dickson to Spring
26	Church Avenue – Dickson to Spring
27	Block Avenue – Dickson to Spring
28	East Avenue – Dickson to Spring
29	Spring Street – West St to Block Ave

2.2 PARKING DEMAND

Parking demand varies over a day and over a week. In particular, daytime parking demand must be differentiated from evening parking demand. Several parking occupancy counts were therefore conducted, throughout the day and on different days of the week. These counts were then used to estimate the likely peak daytime demand and peak evening demand. The full survey results are given in Appendix 1.

Table 2 summarizes these peak demands by type of parking. In the prime area, the maximum demand is in the evening, when all prime parking is utilized. In the sub-prime area, the peak demand is approximately the same in the daytime and in the evening. In the peripheral area, the evening peak is much lower than the daytime peak; this parking is probably used mainly by employees or users of businesses or other activities that are only open during the daytime, and by students.

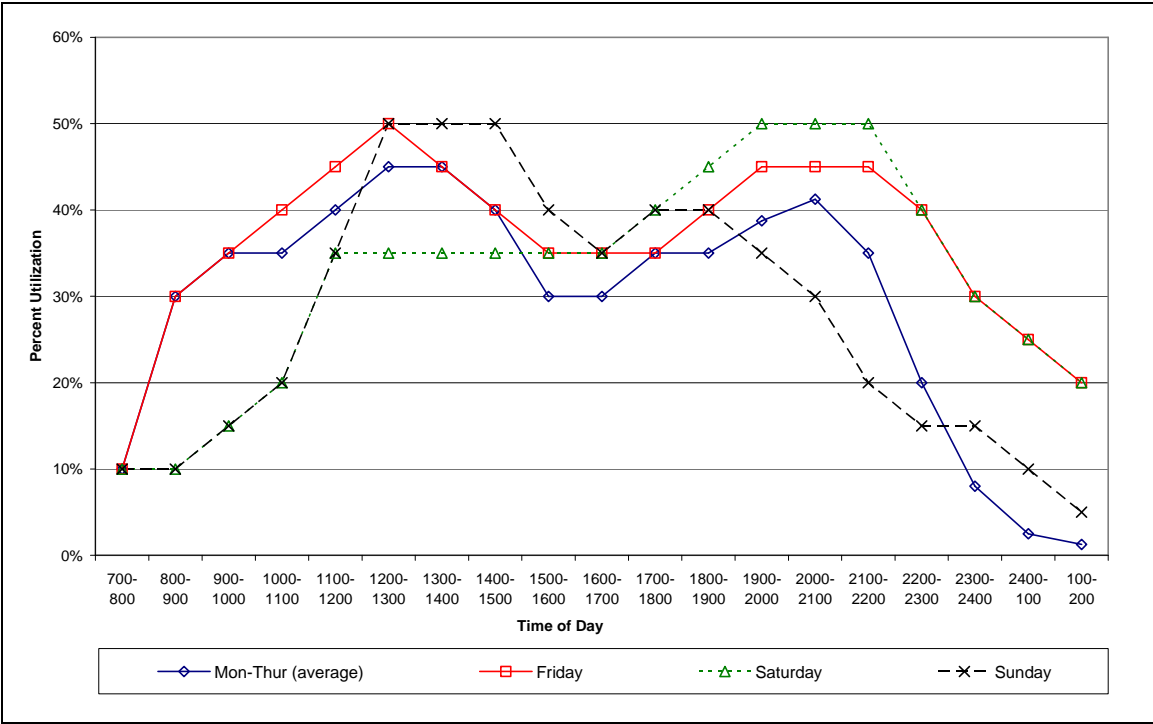
Table 2: Current Demand by Type of Parking

Type of Parking	Daytime Peak			Evening Peak		
	Demand	% of Total	Surplus	Demand	% of Total	Surplus
Prime	350	65.91%	181	531	100.00%	0
Sub Prime	320	57.14%	240	300	53.57%	260
Peripheral	400	47.23%	447	250	29.52%	597
Total	1070	55.21%	868	1081	55.78%	857

These counts, supplemented by counts provided by the City, were used to estimate the average level of demand in each hour of the week. Figure 3 plots this estimated demand profile. (Because Figure 3 shows each hour's average demand level, rather than the absolute peak demand level, the peak occupancy level on Figure 3 is slightly less than the peak figure in Table 2). This demand profile was used as the basis for converting future peak demand estimates to future hourly demand estimates, for the purpose of projecting revenue.

With the likely imposition of parking fees as Dickson Street develops, some of the observed demand can be expected to disappear. In particular, many of the students now parking free in the area will attempt to find free or low-cost parking elsewhere. For this reason, the existing demand figures were reduced by 150 vehicles (representing a portion of students now parking in the area) when projecting future demand.

Figure 3: Parking Occupancy by Day of Week and Hour of Day



3.0 FUTURE PARKING SUPPLY AND DEMAND

3.1 PLANNED DEVELOPMENT AND ITS PARKING IMPACTS

The Downtown Master Plan, finalized in April 2004, describes Dickson Street as the 'social and entertainment backbone of Downtown'. It identifies specific sites for infill and redevelopment projects, as well as a number of possible parking deck sites. Furthermore, the master planning process concluded that several sites had the potential to be developed in the very near future. Completing Dickson Street was prioritized as an "immediate" project. Figure 4 shows the entire Downtown Master Plan, with the Dickson Street section enlarged in Figure 5.

An initial step in this deck feasibility study was to gather information on projects that were likely to proceed in the near-term. Several potential projects were identified through a meeting with the Fayetteville Downtown Partners and meetings with representatives of the local development community. Seven sites anticipated to be developed within the near-term were identified (Figure 6). Future parking demand was estimated for these sites, based on the standard rates in the *ITE Parking Generation Manual*, but adjusted for urban mixed-use development. The daily peak rates used were:

- Residential – 1.5 parking spaces per unit
- Office – 2.5 parking spaces for every 1,000 gross square feet of development
- Retail – 2.5 parking spaces for every 1,000 gross square feet of development
- Hotel – 1 parking space per room
- Public Use (concert hall) – 280 spaces for every 1,000 seats

Table 3 shows how the rates were applied to the seven development sites. For each land use, the daily peak demand level occurs in either the daytime or the evening, and so a lesser peak demand was estimated for the other part of the day. For example, it is known that offices have their peak demand during the daytime, dropping to 10% of that level after hours. The Table also shows that approximately 780 existing public parking spaces will be displaced by the new development.

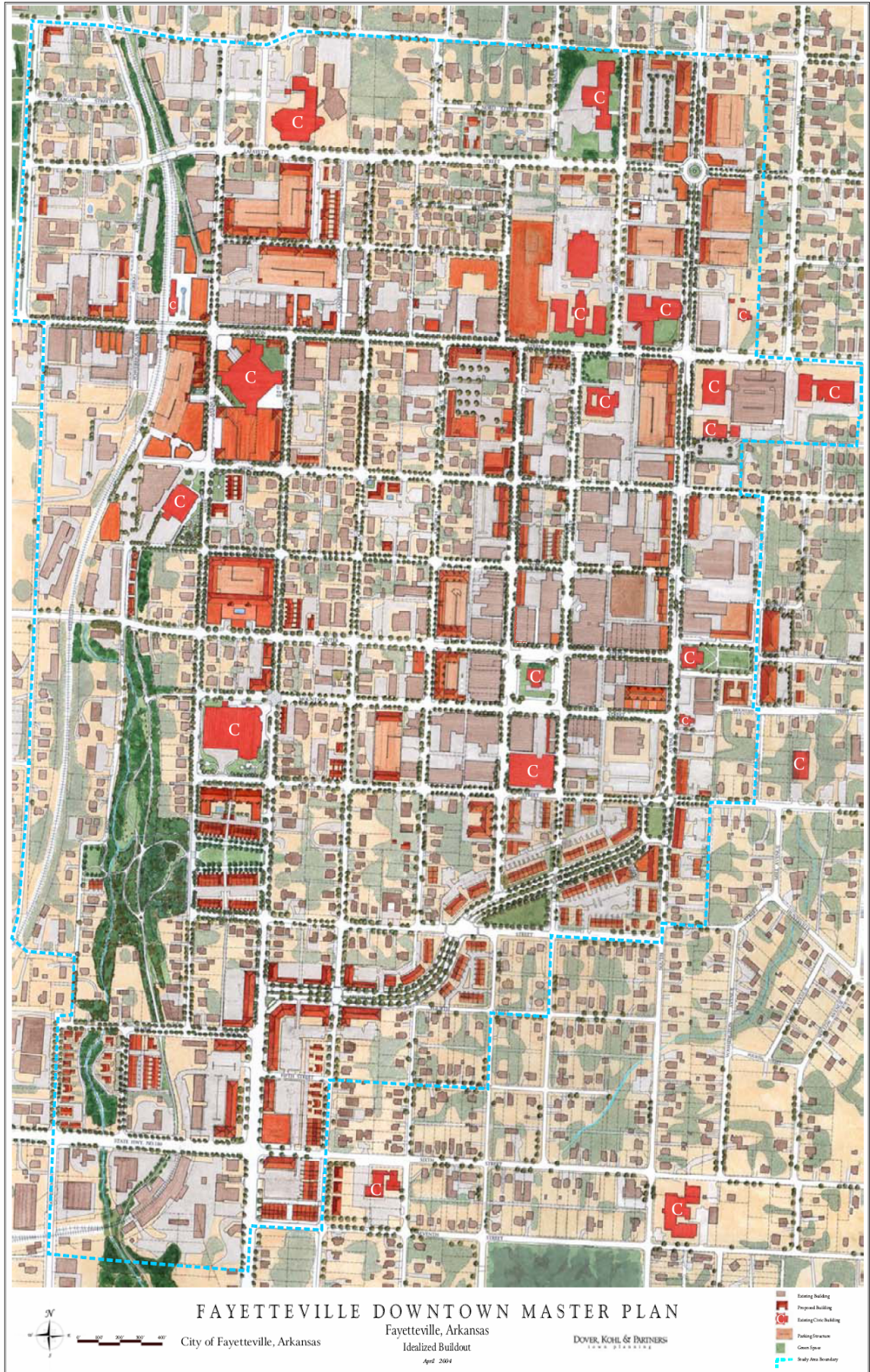


Figure 4: Downtown Master Plan

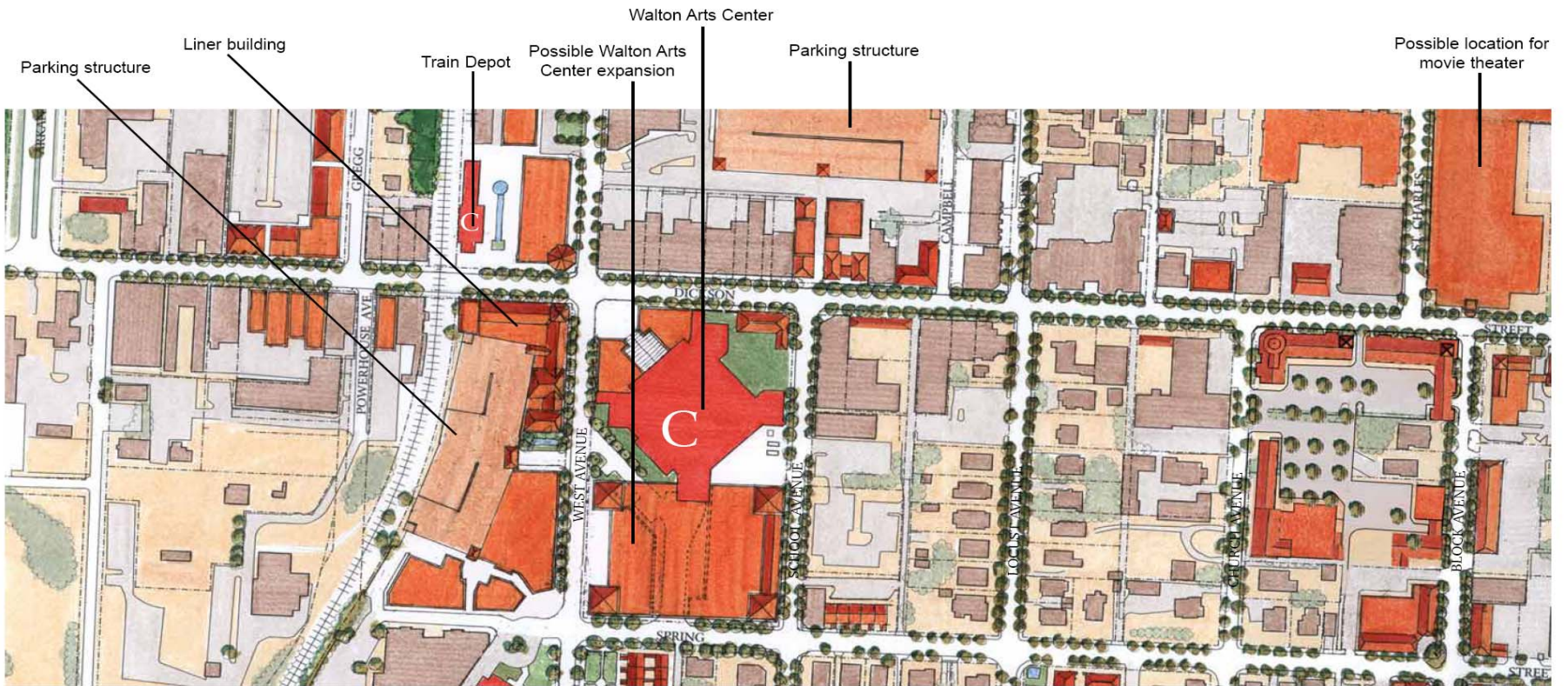


Figure 5: Dickson Street Section of Master Plan

Figure 6: Dickson Street Development Sites



The sites shown are indicative and are not intended to represent property boundaries

Table 3: Planned Projects and Estimated Parking Impacts

Site	Development Type	Square Footage/Units	Units	Rate	Daily Increased Parking Demand	Daytime Demand	Evening Demand	Displaced Parking
1	Residential	180 Condos	180	1.5	270	135	270	
	Office	80,000	80	2.5	200	200	20	
	Retail	40,000	40	2.5	80	80	80	
	Hotel	30 Rooms	30	1.0	30	15	30	
	Total				580	430	400	140
2	Residential	100 Units	100		150	75	150	
	Retail/Office	25,000	25	2.5	63	63	50	
	Total				213	138	200	31
3	Retail/office	200,000	200	2.5	500	500	500	298
4	Residential	30 Units	30	1.5	50	25	50	
	Retail/office	80,000	80	2.5	200	200	160	
	Total				250	225	210	201
5	Residential	25 Units	25	1.5	50	25	50	
	Retail	25,000	25	2.5	62.5	62.5	62.5	
	Total				150	150	150	43
6	Residential	60 Units	60	1.5	100	50	100	26
7	Public Use	2,500 Seats	2500		700	350	700	40
Total						1,843	2,260	779

Note: The program for Site 3 included some public parking in a deck. However, since the purpose of this report is to determine the feasibility of a public parking deck in this area, the public parking proposed for Site 3 has been excluded.

3.2 FUTURE PEAK PARKING DEMANDS

In keeping with the Downtown Master Plan and current planning initiatives by the City of Fayetteville, little or no new public parking will be provided for office or retail land uses. Additionally, it is assumed that private parking may be provided to meet the needs of the new residential developments, as is the current practice. For this reason, it is assumed that none of the residential parking will be available for public use, even when it is not fully occupied by the residents themselves. This means that residential development and its parking will neither impose demand, nor offer supply, to the public parking system, and so the residential element can be removed from future demand calculations.

The concert hall will represent an irregular, rather than daily, parking demand, depending on the schedule of events. This demand should therefore be considered separately.

Some small existing buildings would be demolished as part of the new developments; their existing demand would therefore be eliminated. However, the impact of this is considered to be negligible.

Table 4 summarizes the impact of the developments on public parking supply and demand, with the residential and concert-hall components now excluded. The Table also shows a minimal amount of new public parking that may be included in the various projects.

Table 4: Changes to Dickson Street Area Parking Supply and Demand

Site	Daily Increased Parking Demand	Daytime Demand	Evening Demand	Displaced Parking	Estimated Additional Public Parking	Net Change to Parking Supply	Total Unmet Daytime Demand	Total Unmet Evening Demand
1	350	295	130	140	10	-130	425	260
2	100	63	50	31	5	-26	89	76
3	225	500	500	298	0	-298	798	798
4	250	200	160	201	10	-191	391	351
5	100	62.5	62.5	43	5	-38	100.5	100.5
6	0	0	0	26	0	-26	26	26
7	700	0	0	40	0	-40	40	40
Sub-Total		1,121	903	779	30	-749	1,870	1,652
Current Surplus							850	850
Future Unmet Demand							1,020	800

Note: The public use (concert hall on site 7) is excluded from this Table and is considered separately since it is not a daily activity.

It is important to keep in mind that the proposed projects are in various stages of planning. In fact, there has been no planning for some sites. The square footages or number of units, and the parking loss estimates, are very preliminary and approximate, representing the best thinking of developers in the area.

Based on this information, it is expected that the future development in the Dickson Street area will result in a net impact (i.e. a combination of increased demand and loss of existing spaces) of up to 1,870 spaces during the daytime and up to 1,650 spaces during the evening.

The current surplus of 850 spaces will accommodate some of this impact. If all 850 surplus spaces were filled, the net impact would be reduced to 1,020 (daytime peak) and 800 (evening peak) spaces respectively. This is defined as the unmet parking demand, or projected parking shortfall.

This shortfall does not consider the needs of the planned 2,500-seat concert hall. This is excluded from Table 4 as concert halls do not have the same level of activity every day.

Table 3 showed that the peak parking demand for the concert hall could be 700 spaces for a sold-out evening event.

It is anticipated that event parking would be a priority, and sufficient parking would be reserved as needed. This would place greater demand on all the parking in the area, and improve the financial viability of the deck. For this reason, the potential revenue from event parking is considered separately below.

3.3 POTENTIAL DECK CAPACITY

Given the estimated level of future unmet demand, a 1,200-space deck might be appropriate, and the revenue analysis (below) was made on that basis. A single deck of over 1,200 spaces would not be consistent with the scale of development in the area, and a footprint to support a larger deck is not available (even 1,200 spaces may have to be spread over two facilities). The 1,200 spaces could possibly be spread over two smaller decks, depending on how structured parking could be integrated into buildings (as recommended in the Downtown Master Plan). An additional deck may be needed in the future, depending on the pace of development in the area.

4.0 ESTIMATED REVENUE AND COSTS

4.1 PARKING FEES

A key input into the revenue analysis is the parking rates that could be charged for the deck. Current rates in Downtown provide the basis for this. A review of parking facilities in the area for which charges apply (excluding University facilities) identified the following rates:

- Parking meters: 15¢ per hour
- Gregg Street lot: 15¢ per hour
- City off-street public facilities: \$35-\$50 per month
- Private garages: \$25 -\$35 per month

A \$1.00 per day fee was charged for the Walton Arts Center (West Avenue) lot two years ago, but because demand was low the fee was eliminated (but the gates now open at 10:00 A.M. to discourage University users). The City is considering re-introducing fees this year (25-50¢ per hour).

One property owner reported that he is considering the following rates for a lot on Dickson Street:

- \$2-3 per night during the week
- \$3 per weekend night
- \$20 per month for University of Arkansas commuters

Acceptable parking rates are primarily a function of supply and demand. Dickson Street is building on its success and uniqueness. Several major projects are being planned. The demand analysis described in this report shows that the current parking surplus in the area will, in the near-future, disappear, and a shortage will be experienced as existing lots are developed and more people live in, work in, or visit the area. The supply-demand relationship will be reversed, and most people will accept paying for parking. Over time, as parking becomes a more scarce commodity, public and private lots that are now free will charge a fee.

The following fees (in 2005 dollars) are therefore considered reasonable:

- Short-term parking:
 - 50¢ per hour during the daytime on weekdays
 - \$1.00 per hour in the evening, every day
 - \$5.00 per evening for event parking (parking to be reserved)
 - Free parking during the daytime at weekends
- Long-term (all-day) parking:
 - \$500 for an annual lease (representing about \$2.00 per day)

4.2 FORECASTING METHOD FOR FUTURE OCCUPANCY

To estimate future revenues, the utilization of the parking deck was forecast for each hour of a typical week. This is based on:

- The forecast peak parking demand during the day and in the evening
- The existing demand profile across the day and the week, as a proportion of the peak demand
- The relative availability and attractiveness of parking in the area

The majority of surplus spaces are in the peripheral areas, which are the less desirable locations, particularly at night. Even with the increased demand, it can be expected that a number of peripheral spaces will remain unused, given their undesirable location. To allow for this in the revenue estimates, it is conservatively assumed that, irrespective of demand levels, at least 150 peripheral spaces will remain vacant during the evening, but that all peripheral spaces could potentially be occupied during the daytime (primarily by lower-paid employees prepared to walk a few blocks to park free). This increases the projected parking shortfall in the evening to 950 spaces (with the daytime shortfall unchanged).

The projected parking shortfall consists of two types of demand. Demand from office uses is principally long-term (all-day) commuter parking, on weekdays only. Demand from other uses is principally short-term parking, paid by the hour, on all days. This distinction is important, as long-term parking occupies spaces all day but short-term parking levels vary during the course of the day.

It is likely that the City would want to offer annual permits to the office commuters. Some office commuters would likely attempt to find a free surface space, rather than pay for a deck permit. Given the high levels of demand for short-term parking across the area, it is likely that the City would respond by converting more surface spaces to short-term parking, thus forcing commuters into other lots or the deck. To reflect these issues, it is assumed that 470 spaces, representing about 80% of the forecast new office commuter demand, would be dedicated to annual permits during the daytime on weekdays. This leaves 730 spaces for short-term users at these times. (Sensitivity tests demonstrate that changing the level of commuter spaces has a relatively small effect on the revenue forecasts.) At other times, all 1200 spaces would be available for short-term users.

A key issue is whether short-term users would firstly try to park in surface spaces and only then use the deck, or would firstly try to park in the deck, or some combination of the two. During the daytime, it is assumed that surface spaces would be filled first, with the deck only coming into use for short-term parking when the of surface spaces were filled to effective capacity (95% of 1,199 spaces or 1,139 spaces). During the evening, it is assumed that both deck and surface spaces would fill at similar rates, because the surface spaces would be relatively less attractive at night. These are considered to be relatively conservative assumptions.

A large proportion of the downtown parking demand is generated by students and other members of the university community. It is known that parking demands are lower during summer months than during other months, because student activity (and to some extent, faculty activity) is much reduced during University breaks. To account for this,

the parking demand on 160 days of the year was reduced to 60% in the daytime and 50% in the evening of the calculated level.

Utilizing these parameters and the existing demand profile, the expected occupancy level of the deck was calculated for each hour of the week.

In practice, when a parking facility becomes almost full, users abandon searching for the last few spaces – particularly on the upper levels of decks. Parking facilities are therefore typically regarded as full when their occupancy level reaches approximately 90 to 95% of capacity. However, this effect was regarded as negligible in the forecasts, since it only applies when the deck reaches capacity for a few hours per week.

After the daily parking demand was calculated, the potential demand from the concert hall was added. The daily parking demand forecasts show at least 200 spaces vacant during the evening on any day of the week. It is therefore assumed that 200 spaces could be filled by concert-hall patrons at each event; this is considered realistic and conservative given the 2,500-seat capacity of the hall. It is also assumed that events are held at an average rate of three days per week.

Appendix 2 gives the complete data tables from the forecasts.

4.3 FUTURE OCCUPANCY FORECASTS AND REVENUE PROJECTIONS

Table 5 shows the forecast occupancy of the deck, in terms of the average number of hours that each space is occupied. During the daytime, each space is expected to be occupied for an average of around two or three hours per day, except for Sunday, when the daytime occupancy would exceed three hours. During the evening, the expected occupancy varies greatly through the week, with the lowest occupancy on Sunday and Monday (less than three hours) and the highest occupancy on Thursday, Friday and Saturday (over four hours). Altogether, each space is expected to be occupied for under five hours on Monday and Wednesday, but around six or seven hours on the other days.

Table 5: Expected Occupancy of Deck by Time of Day

	Average Hours of Occupancy		
	Daily	Daytime	Evening
Monday	4.66	2.22	2.44
Tuesday	5.79	2.46	3.33
Wednesday	4.67	1.42	3.25
Thursday	6.53	2.46	4.07
Friday	6.42	1.84	4.58
Saturday	6.59	1.68	4.91
Sunday	6.18	3.35	2.83

Using these occupancy rates and the fees listed above, the expected revenue per space was calculated. Table 6 below shows the revenue by time of day and time of year. All figures are in 2005 dollars. The average occupancy of each space is rounded up to a whole hour, because users would pay in multiples of an hour. The concert-hall parking

has been allocated to Thursday, Friday and Saturday, although in practice this could occur on any nights of the week.

As the Table shows, a 1,200-space deck is forecast to generate approximately \$1,720 per space per year in revenue. This is regarded as the 'base case' forecast.

To understand the uncertainties in this forecast, a range of sensitivity tests was run, involving a variety of changes in the assumptions. Table 7 below shows the results. The key sensitivity is user choice between surface and deck spaces. If users always sought and filled the surface spaces first, the deck would only generate approximately \$1,200 per space. If users always divided evenly between seeking a surface space and seeking a deck space, the deck would generate approximately \$2,100 per space. As the table shows, other variables have a relatively small effect.

Table 6 - Expected Revenues of Dickson Street Deck(s)

Day of Week	Daytime Demand (7 a.m. to 6 p.m.)										
	Long term Demand	Cost Per Year	Annual Revenue	Remaining Short Term Supply	Cost per hour	Average time (hrs)	Daily Revenue	Annual School Revenue	Annual Non-School Revenue	Total Annual Temporary Revenue	Total Daytime Revenue
Monday	470	\$500.00	\$235,000.00	730	\$0.50	3	\$1,095.00	\$35,040.00	\$13,140.00	\$48,180.00	
Tuesday				730	\$0.50	3	\$1,095.00	\$35,040.00	\$13,140.00	\$48,180.00	
Wednesday				730	\$0.50	2	\$730.00	\$23,360.00	\$8,760.00	\$32,120.00	
Thursday				730	\$0.50	3	\$1,095.00	\$35,040.00	\$13,140.00	\$48,180.00	
Friday				730	\$0.50	2	\$730.00	\$23,360.00	\$8,760.00	\$32,120.00	
Saturday			\$0.00	1200	\$0.00	2	\$0.00	\$0.00	\$0.00	\$0.00	
Sunday			\$0.00	1200	\$0.00	4	\$0.00	\$0.00	\$0.00	\$0.00	
Total			\$235,000.00					\$151,840.00	\$56,940.00	\$208,780.00	\$443,780.00

Day of Week	Evening Demand (6 p.m. to 2 a.m.)										
	Special event demand	Cost per space	Annual Revenue	Temporary Supply	Cost per hour	Average time (hrs)	Daily Revenue	Annual School Revenue	Annual Non-School Revenue	Total Annual Temporary Revenue	Total Evening Revenue
Monday		\$5.00	\$0.00	1200	\$1.00	3	\$3,600.00	\$115,200.00	\$36,000.00	\$151,200.00	
Tuesday	0	\$5.00	\$0.00	1200	\$1.00	4	\$4,800.00	\$153,600.00	\$48,000.00	\$201,600.00	
Wednesday	0	\$5.00	\$0.00	1200	\$1.00	4	\$4,800.00	\$153,600.00	\$48,000.00	\$201,600.00	
Thursday	200	\$5.00	\$52,000.00	1200	\$1.00	5	\$6,000.00	\$192,000.00	\$60,000.00	\$252,000.00	
Friday	200	\$5.00	\$52,000.00	1200	\$1.00	5	\$6,000.00	\$192,000.00	\$60,000.00	\$252,000.00	
Saturday	200	\$5.00	\$52,000.00	1200	\$1.00	5	\$6,000.00	\$192,000.00	\$60,000.00	\$252,000.00	
Sunday	0	\$5.00	\$0.00	1200	\$1.00	3	\$3,600.00	\$115,200.00	\$36,000.00	\$151,200.00	
Total			\$156,000.00				\$34,800.00	\$1,113,600.00	\$348,000.00	\$1,461,600.00	\$1,617,600.00

Annual Revenue	\$2,061,380.00
Number of Spaces	1,200
Revenue per space	\$1,720.00

Table 7: Sensitivity Tests

Scenario	Approximate Revenue per Space
Base case	\$1,720
Retail peak parking demand reduced to 2 (instead of 2.5) spaces per 1,000 sq ft	\$1,620
Commuter permits reduced to 300	\$1,770
Commuter permits increased to 580 (representing the entire forecast increase in commuter demand)	\$1,700
Surface spaces are filled first in the evening, as well as daytime	\$1,170
Surface and deck spaces are filled at similar rates in the daytime, as well as evening	\$2,150

5.0 COSTS

The cost of constructing a parking deck on Dickson Street is subject to many design and operational variables. For budgeting purposes, \$12,000 per parking space should be allowed for (to include design, site development, and construction, but not including property acquisition). A deck that is wrapped by buildings (Photo 4 and Photo 5) would require less architectural treatment, and could therefore be constructed at a lower cost. However, the cost of a high-quality deck with an attractive architectural finish (Photo 3) can easily exceed \$15,000 per space. In addition, the price of materials such as steel has risen steeply in recent months, as a result of record oil prices. Construction costs in 2004 rose nearly 10%.

Using the \$12,000-per space estimate, the budget for the capital cost for a 1,200-space deck is \$14.4 million. Financing debt at 5% over a 20-year period would require an average annual revenue per space of approximately \$1,000 (including financing fees, etc). Operating and maintenance costs can range from as low as \$100 per space to over \$500 per space. Assuming automated revenue collection, a budget of \$400 per space is reasonable. Therefore, the total annual cost to cover the debt service and operate and maintain the parking deck is approximately \$1,400 per space, or \$1.7 million annually for 1,200 spaces.

The base case revenue forecast of \$1,720 per space would be sufficient to cover this cost.



Photo 3: Example of a deck with extensive architectural treatment



Photo 4: A deck with little architectural treatment, awaiting a wrap



Photo 5: The same deck, wrapped with buildings

6.0 POTENTIAL ADDITIONAL FUNDING SOURCES

6.1 POTENTIAL FOR TRANSPORT-RELATED GRANT FUNDING

Potential grant-funding streams that could contribute to the cost of a new deck were investigated.

The key funding stream is federal funding for capital costs. This is currently in a state of uncertainty, as reauthorization of the funding regime is in progress in the federal legislature. However, the broad principles of the existing programs are likely to continue.

A range of transport-related funding programs are administered by the Federal Highway Agency (FHWA) and the Federal Transit Agency (FTA). The funds in many programs are apportioned to States by a formula, and the States then decide how to spend their allocations. Some programs also apportion funds to Metropolitan Planning Organizations. Other programs distribute funds on a competitive basis. In addition, legislators typically earmark funding for a large number of named projects within each year's appropriations. It is possible that the Dickson Street Deck could be included in any of these earmark lists, if it had sufficient priority at a political level.

In most funding programs, the maximum federal contribution to a project is 80%, and the remaining 20% must be found from a State or local contribution. In Arkansas, State contributions are generally made for highway projects on state/US roads, but not for other types of project.

Table 8 describes some key funding streams administered by these two federal agencies. There appears to be little scope for funding a stand-alone parking deck in this location. However, there does appear to be scope for funding if the deck were part of a wider project. In particular, an intermodal terminal, incorporating both parking and transit facilities, might receive funds, even with only minimal transit components. For example, the recently-built Parking and Intermodal Facility at the University of Alabama, Tuscaloosa, consisting of a deck which incorporated a small bus transfer point, was funded under the FTA's Bus and Bus-Related Program (49 USC 5309). In Fayetteville, this program also provided federal funding for the Garland Transit and Parking Facility on the University of Arkansas campus. In Fiscal Year 2005, the program's funds were entirely earmarked by Congress.

6.2 POTENTIAL FOR INNOVATIVE LOCAL FUNDING

Tax increment funding

A Tax Increment Funding (TIF) District does not impose a new tax. Instead, it uses the incremental additional tax revenues arising from increased real property values within the District. These revenues (the 'tax increment') are earmarked for particular projects of public benefit, rather than contributing to general funds. The City Ordinance which creates the District will also include a plan for the project(s) to be funded. In effect, the projects are funded within the District, rather than by taxpayers throughout the city. In technical terms, the projects are funded by revenue bonds, which in turn are supported by the tax increment, which in turn arises from rising real property values due to the regeneration efforts.

Following recent state enabling legislation, and in accordance with the Downtown Master Plan, the City of Fayetteville has created a TIF District covering broadly the entire downtown area including the Dickson Street corridor. Originally designed to assist the redevelopment of the Mountain Inn site, the latest plan also includes sidewalk improvements across the Downtown.

In principle, the Dickson Street Deck project appears to be eligible for TIF funds, particularly for land assembly or site clearance costs. Further financial analysis and an amended project plan would be required if this option were to be pursued.

Business Improvement District

A Business Improvement District (BID) is a special tax district, created with the consent of the district's property-owners. An additional tax is levied, to pay for specific services and improvements that are agreed between the City BID and the property-owners. The revenue can directly fund projects, or provide support for bonds. The Downtown Master Plan proposed the creation of a BID, and the Fayetteville Downtown Partners are actively investigating this option.

BIDs are normally used for relatively small-scale activities, such as streetscape works, maintenance or security. However, a BID could still provide some funding for a deck, perhaps acting as a local match for Federal funds, or could fund complementary measures.

Table 8: Selected Federal Transportation Funding Streams

Funding Stream	Agency	Description	Scope for Dickson Street deck funding
Surface Transportation Program (STP)	FHWA	General funding stream. Traditionally used for highway construction. A wider range of projects are now eligible – for example: <ul style="list-style-type: none"> • Capital costs for inter-city bus transit • Pedestrian facilities • Sidewalk upgrades to meet ADA 	Low.
National Highway System (NHS) funds	FHWA	Part of STP. Razorback St and Maple St (as far as Garland St) are part of the National Highway System, because they link the Interstate to the Razorback Transit terminal. <ul style="list-style-type: none"> • As well as usual road widening etc, eligible projects include (among others): • “Fringe and corridor parking facilities” • Pedestrian walkways • “Publicly-owned intra-city or inter-city bus terminals”. 	Low.
Enhancement Funds	FHWA	10% of each state’s STP allocation is earmarked for enhancement projects. Eligible projects are closely defined – categories include (among others): <ul style="list-style-type: none"> • Pedestrian & bike facilities • Protecting historic landmarks/buildings • Tourist/welcome centers that relate to scenic/historic highways or scenic/historic sites 	Low.
Congestion Mitigation & Air Quality (CMAQ) Improvement Program	FHWA	Eligible projects include (among others): New/expanded transit facilities Pedestrian facilities & sidewalks Travel demand management Broadly, any other project with air quality benefits Projects may not involve new capacity for single-occupancy vehicles.	Potential for funding an intermodal terminal.
Urbanized Area Formula Program	FTA	Capital investments, including passenger facilities, and operating costs.	Potential for funding an intermodal terminal.
Bus & Bus-Related Program	FTA	Most bus-related capital expenditure, including bus/ intermodal terminals.	Potential for funding an intermodal terminal.

7.0 SITE SELECTION AND IMPACTS

7.1 SITES IDENTIFIED

Potential deck sites were investigated by reviewing existing conditions, the *Fayetteville Downtown Master Plan*, and parking counts conducted by the city in the area of the intersection of Dickson Street at West Avenue.

Three sites were identified as having the most potential to locate a parking structure:

- the Walton Arts Center (WAC) lot (Photo 6)
- the West Annex lot (Photo 7), and
- the Brew Pub municipal lot (Photo 8).

All three sites corresponded to locations identified for parking decks in the *Fayetteville Downtown Master Plan*. Figure 7 shows the three sites, with an indicative layout showing how a deck on each site could be integrated with the existing urban form using liner buildings on the street frontages.

7.2 CONSTRAINTS

Local business owners and civic leaders consider it extremely important that construction of any new deck in the Dickson Street area not displace a significant amount of prime parking until there is a surplus of available parking. A deck on the Walton Arts Center lot would displace the bulk of prime parking for businesses in the vicinity of the intersection of Dickson Street at West Avenue (Photo 6). For this reason, it is thought that it is not currently feasible to construct a deck on this site. Additionally, the Walton Arts Center site may be the site of a second deck in the future. For these reasons the Walton Arts Center site was not eliminated prior to the examination of the potential sites.

Subsequent to this study, the Brew Pub site has become the subject of a development proposal and most likely will not be available for a parking deck.



**Photo 6: Walton Arts Center parking lot
(behind traffic signals)**



Photo 7: West Annex parking lot



Photo 8: Brew Pub parking lot

7.3 EVALUATION CRITERIA

The three alternative sites were reviewed and the following attributes for each site were identified:

1. Primary vehicular access
2. Secondary vehicular access
3. Distance to Dickson Street
4. Approximate dimensions
5. Number of parking spaces
6. Number of displaced parking spaces
7. Total addition of spaces to parking supply
8. Cost
9. Number of structures that would need to be acquired
10. Specific issues associated with each site

Table 9 details the attributes of each site.

Figure 7: Potential Sites for a Downtown Deck

Scale = 1:200

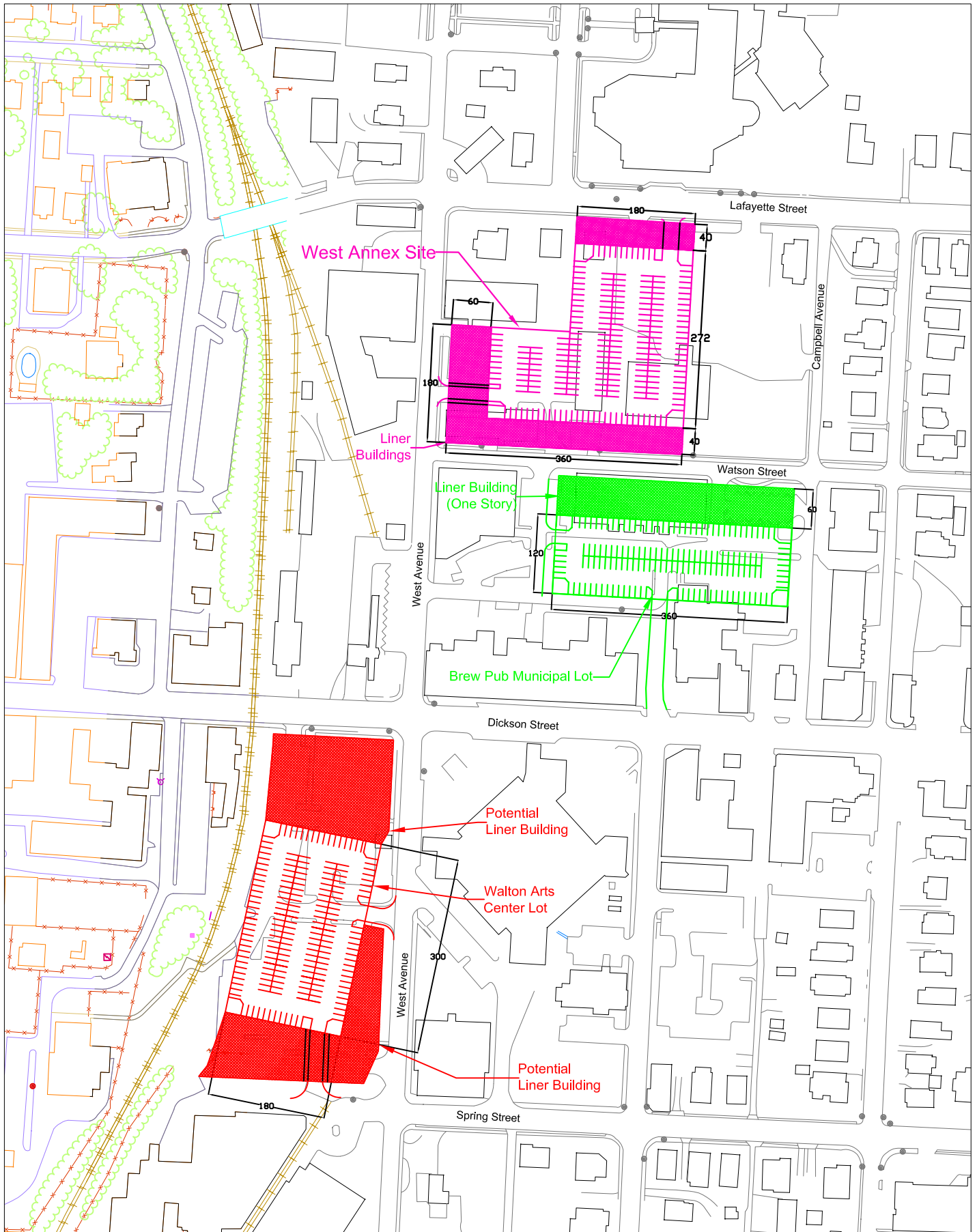


Table 9: Attributes of the three alternative sites

	Walton Arts Center	Brew Pub Municipal Lot	West Annex Site
Location	Southwest corner of Dickson and West	South of Watson between West and Campbell	East of West between Watson and Lafayette
Primary Access	West Avenue, south of Dickson	Watson Street	Lafayette Street
Secondary Access	Dickson Street (possibly)	Dickson Street	West Avenue
Perpendicular distance to Dickson Street	~100 feet	180 feet	350 feet
Approximate Dimensions	300' x 180'	180' x 360 (120' x 360' on the ground floor)	300' x 180' plus 120' x 120' el
Foot Print (Sq Ft)	54,000	64,800	68,400
Spaces per Floor †	168	Ground floor: 135 Upper floors: 202	213
Number of Parking Levels*	4	4	4
Total number of parking spaces	672	741	852
Parking spaces displaced	298	162	201
Total space gain	374	579	651
Cost**	\$8,064,000	\$8,892,000	\$10,224,000
Structures acquired	0	2	4
Specific issues of potential sites	Displacing primary parking supply would negatively affect businesses and Walton Arts Center	Construction activities could shut down patio areas of nearby restaurants and bars	New structure would face University Baptist Church and displace recreation center

† For a typical floor. Assumes 320sq ft per space.

* Assumes ground floor parking, two levels of structured parking, and roof parking.

** Assumes \$12,000 per space. Does not include property acquisition.

7.4 PREFERRED SITE

Parking decks constructed on any of the three sites identified in Figure 1 could add a significant amount of parking in the Dickson Street area. The Walton Arts Center lot is perhaps the most attractive site for a joint-use deck when taking a long-term approach, but has the short-term problem of eliminating a significant amount of prime parking.

Of the two remaining sites, the West Annex Site appears preferable for a joint use deck, based on initial examinations. This site is directly serviced by Razorback Transit every 15 minutes, making it attractive from the University's perspective. While construction on the West Annex site would displace more parking than construction on the Brew Pub Municipal Lot site, a deck on the West Annex site has the ability to add more parking and would displace parking that is significantly less attractive than parking at the Brew Pub site. Additionally, property acquisition for the West Annex site is thought at this time to be less problematic than for the Brew Pub site.

7.5 RELATIONSHIP WITH THE DOWNTOWN MASTER PLAN

All three sites are within the Downtown Master Plan's 'Main Street / Center' zone, except that the northern edge of the West Annex site is within the 'Downtown General' zone. Both of these designations are compatible with a deck. In the Downtown General zone, however, the deck would particularly have to respect the scale and building placement of nearby homes.

The Master Plan reports that the Walton Arts Center lot is owned by the City, the Brew Pub is partly city-owned and partly privately-owned, and the West Annex lot has a mixture of University, Church and private ownership.

The Plan comments that parking must be handled 'in smart ways so that it does not dominate the entire environment.' The Plan endorses the shared-use concept, as proposed for the Dickson Street deck, as being cost-effective and environmentally-friendly friendly.

The three sites shortlisted in this study are all earmarked in the Plan as potential shared and/or structured parking sites. The Plan proposes that structured parking should have a habitable liner building fronting the street (a 'wrap'). To provide ramps in a cost-effective way, a typical deck needs to be at least 300 feet long, and on a constrained downtown site this limits the available options for wraps. The indicative layouts on Figure 7 show how a wrap could be achieved on most street frontages. On the West Annex site, the frontage to Lafayette Street could additionally be wrapped, at the price of a lower-capacity deck.

7.6 TRAFFIC IMPACTS

To understand the potential effects of the deck on traffic circulation, a traffic impact assessment was conducted. At this stage, with no more than an indicative design, only an initial outline assessment can be made. A full traffic impact study would be required in due course.

The intersections studied were West Avenue at Maple Street, West Avenue at Lafayette Street, and West Avenue at Dickson Street.

Traffic and geometric data were already available, as M/A/B was undertaking a concurrent series of traffic impact studies for the University of Arkansas. These covered the area surrounding the University, as far east as West Avenue, modeled in *Synchro Version 6* traffic signal coordination software.

The assessment examined the AM and PM peak hour traffic levels for three scenarios:

- the existing (2004) traffic,
- the projected traffic in 2015 (the '2015 no-build' scenario), and
- the projected traffic in 2015 with a Dickson Street Deck(s) built (the '2015 build' scenario).

The 2015 scenarios took into account projected future traffic growth, including growth due to the University's planned developments. The '2015 build' scenario also assumed a 600-space deck on the West Annex site and a 600-space deck on the Walton Arts Center lot, making a total of 1,200 spaces. The traffic volumes to and from the decks were estimated using rates developed by M/A/B (which had also been used in previous studies for the University). This traffic was distributed to the street network in accordance with likely travel patterns and the indicative deck layouts in Figure 7. Conservatively, this traffic was simply added to the no-build traffic, although in practice many trips would be diverted from exiting parking facilities.

Table 10 shows the key results of the assessment, in terms of Level of Service (LOS), the standard measure of an intersection's performance. Levels-of-service range from A (best) through F (worst), based on the average control delay experienced by vehicles traveling through the intersection during the peak hour. Control delay represents the portion of total delay attributed to traffic control devices (such as signals or stop signs). LOS D is generally regarded as acceptable for signalized intersections in urban areas. At unsignalized intersections, the side streets often function at LOS E or F during the peak hour, but this is only regarded as problematic if the side street volumes are substantial. The intersection of West Ave at Maple St was unsignalized in 2004 but has recently had a signal installed.

Table 10: Traffic impacts of the deck

Intersection	2004		2015 no-build		2015 build	
	AM	PM	AM	PM	AM	PM
West Ave at Maple St* <i>*Unsignalized in 2004</i>	C	F	B (NB-C)	C (NB-E)	D (NB-F)	F (WB-F)
West Ave at Lafayette St † <i>† 2004 volumes estimated</i>	B (WB-B)	B (EB-B)	B (WB-B)	B (WB-C)	C (SB-C)	D (WB-F)
West Ave at Dickson St	B (SB-C)	B (SB-C)	B (WB-C)	C (WB-C)	C (WB-C)	C (WB-D)

Legend: X (XX-X) = Intersection LOS (Worst Approach – LOS of Worst Approach)
At unsignalized intersections, only the intersection LOS is calculated.

In 2004, the three intersections were operating satisfactorily, except for West Ave/Maple St in the PM peak (which the new signal will likely improve). In the 2015 no-build scenario, the intersections still operate satisfactorily, except for the PM peak northbound approach at West Ave/Maple St (LOS E).

In the 2015 build scenario, with the addition of Dickson Street deck traffic, all three intersections deteriorate to some extent. The West Ave/Dickson St intersection remains satisfactory in both peaks. At the West Ave/Lafayette St intersection, the westbound approach fails in the PM peak (LOS F) but the overall intersection performance is satisfactory. At the West Ave/Maple St intersection, only the northbound approach fails in the AM peak (LOS F) but the intersection fails overall in the PM peak (LOS F). Geometric improvements, such as adding one or more turn bays, would likely be required to address the failing LOS here.

8.0 CONCLUSIONS

8.1 PREFERRED SITE

The West Annex site appears to be the most feasible deck site at this stage. The Walton Arts Center lot is the most conveniently-located, but there are concerns that a deck here would involve losing a lot of prime parking during its construction. Subsequent to this study, the Brew Pub site, which included a building site fronting Watson Street, has become the subject of a development proposal and most likely will not be available for a parking deck.

8.2 DECK FEASIBILITY

The analysis has determined that a 1,200-space deck (or two decks with that number of spaces) is financially feasible for Dickson Street, i.e., the estimated revenue is anticipated to cover the total cost (capital, and operating and maintenance). The cost and revenue estimates do not include any University of Arkansas participation, since development-related demand alone is likely to make the deck viable in financial terms.

Since patron demand at peak times is forecast to exceed the surface parking supply in the Dickson Street area, including peripheral parking, patrons will have no practical choice but to pay to park in the deck. Over time, free parking is likely to disappear in any case. The forecast daily demand is broadly appropriate to a 1,200-space deck, with around 200 spaces remaining to be available for event-related (and/or University-related) parking during the day, and over 200 in the evening for event-related parking.

It should be noted that the parking demand and revenue estimates are our opinion, and reflect a number of assumptions, particularly regarding planned development:

- The development that is proposed for Dickson Street is completed and occupied around the time the deck is open. It is a major driver of future parking demand in the area. No development is currently committed.
- The type and amount of development is currently very conceptual. Assumptions therefore had to be made on square footages, number of units, and parking proposals. The proposed development includes a proposed 2,500 seat performing arts theater, and the assumption is that it is successful.
- No other decks or significant surface lots are built to serve the area (except as part of and to serve residential development).

8.3 UNIVERSITY INVOLVEMENT

The parking deck is feasible without University participation. However, the study has shown that a 1,200-space Dickson Street deck could have up to 200 surplus spaces during the day.

Martin/Alexiou/Bryson's concurrent study of the University's future parking requirements has suggested a need for additional parking associated with the *2010 Initiative*. The University has various options for satisfying this need. One of those is to use the Farm for park-and-ride, at an estimated annual cost of \$400 per space (which includes

additional transit service). With a North Campus deck and park-and-ride spaces at the Farm, the University parking shortfall at the completion of the *2010 Initiative* could approach 300 spaces.

The University could therefore additionally lease up to 200 spaces in a Dickson Street deck at \$400 per year, which would provide additional income to the deck. Employees working in facilities in the area, such as West Annex, would have first preference for these permits.

If the deck displaces the West Annex lot, which has 38 spaces, the University could require that as a minimum these spaces are replaced in the deck and are reserved, at no cost, for University use in perpetuity. Alternatively, the University could sell or lease the land for the deck.

APPENDICES

Appendix 1 - Parking Supply and Occupancy Counts

Lot # (M/A/B map)	On or off- street	City's lot #	Name	Spaces	Type of Parking	Peak Daytime Demand			Peak Evening Demand			Average Daytime Demand			Average Evening Demand		
						Filled Spaces	Empty Spaces	Percent Filled	Filled Spaces	Empty Spaces	Percent Filled	Filled Spaces	Empty Spaces	Percent Filled	Filled Spaces	Empty Spaces	Percent Filled
24	On		Dickson Street - School to College	32	Prime	26	6	81.25%	32	0	100.00%	17	15	53.13%	25.0	7.0	78.13%
23	On		Dickson Street - West to School	11	Prime	9	2	81.82%	11	0	100.00%	7	4	63.64%	10.3	0.7	93.94%
22	On		Dickson Street - Arkansas to the Railroad	19	Sub Prime	19	0	100.00%	15	4	78.95%	13.5	5.5	71.05%	11.3	7.7	59.65%
13---			South of Dickson - University to the Railroad														
13a	Off		Sub-lot (a) - facing University	31	Peripheral	17	14	54.84%	17	14	54.84%	14.5	16.5	46.77%	6.2	24.8	20.07%
13b	Off		Sub-lot (b) - facing Dickson, mid-block	36	Sub Prime	17	19	47.22%	9	27	25.00%	15.5	20.5	43.06%	1.4	34.6	4.01%
13c	Off		Sub-lot (c) - facing Dickson, E end of block near RR	33	Sub Prime	16	17	48.48%	11	22	33.33%	15	18	45.45%	4.3	28.7	13.13%
14	50	Off	Walton Arts Center Lot	298	Prime	266	32	89.26%	298	0	100.00%	192.5	105.5	64.60%	187.7	110.3	62.98%
15---			South of Dickson - School to Locust														
15a	Off		Sub-lot (a) - frontage to School, mid-block	57	Sub Prime	15	42	26.32%	38	19	66.67%	14	43	24.56%	13.2	43.8	23.20%
15b	Off		Sub-lot (b) - frontage to Dickson	17	Prime	5	12	29.41%	15	2	88.24%	4.5	12.5	26.47%	6.1	10.9	35.95%
15c	Off		Sub-lot (c) - frontage to Locust	33	Prime	17	16	51.52%	34	-1	103.03%	16.5	16.5	50.00%	10.7	22.3	32.32%
8--	Off		Lot behind Brew Pub et al														
8a	Off		Lot behind Brew Pub et al	135	Prime	52	83	38.52%	151	-16	111.85%	46.5	88.5	34.44%	132.6	2.4	98.19%
8b	Off		NW corner Dickson & Campbell	0	Prime	0	0	0.00%	0	0	0.00%	0	0	0.00%	0.0	0.0	0.00%
5--			Lots on block West St / Lafayette St / railroad / Dickson St														
5a	Off		Sub-lot (a) - Dickson alongside RR station	33	Prime	35	-2	106.06%	33	0	100.00%	24.5	8.5	74.24%	10.6	22.4	31.99%
5b	Off		Sub-lot (b) - West St just off Dickson	4	Prime	4	0	100.00%	4	0	100.00%	3	1	75.00%	1.1	2.9	27.78%
5c	Off		Sub-lot (c) - West St mid-block, big lot	48	Sub Prime	34	14	70.83%	42	6	87.50%	32.5	15.5	67.71%	13.7	34.3	28.47%
5d	Off		Sub-lot (d) - SW corner of West St & Lafayette	14	Sub Prime	7	7	50.00%	14	0	100.00%	5	9	35.71%	2.4	11.6	17.46%
4	70	Off	City pay lot on Gregg [just S of Lafayette]	55	Peripheral	32	23	58.18%	32	23	58.18%	28.5	26.5	51.82%	7.3	47.7	13.33%
3	Off		NW Corner of Gregg and Dickson	71	Sub Prime	55	16	77.46%	28	43	39.44%	53.5	17.5	75.35%	17.0	54.0	23.94%
6	Off		NE Corner of West and Watson	59	Sub Prime	39	20	66.10%	45	14	76.27%	37.5	21.5	63.56%	20.4	38.6	34.65%
7	Off		SE Corner of Campbell and Lafayette	142	Sub Prime	86	56	60.56%	84	58	59.15%	81.5	60.5	57.39%	36.7	105.3	25.82%
2	Off		NE lot of University Baptist Church	61	Peripheral	37	24	60.66%	26	35	42.62%	31	30	50.82%	7.1	53.9	11.66%
			Western lots of University Baptist Church														
19	On		(a) On Vandeventer St, from Maple to Lafayette	30	Peripheral	16	14	53.33%	1	29	3.33%	15	15	50.00%	0.1	29.9	0.37%
1a	Off		(b) SW corner of Maple and Vandeventer	82	Peripheral	92	-10	112.20%	16	66	19.51%	84.5	-2.5	103.05%	2.9	79.1	3.52%
1b	Off		(c) SE corner of Maple and Vandeventer	53	Peripheral	43	10	81.13%	12	41	22.64%	41.5	11.5	78.30%	2.3	50.7	4.40%
20	On		Lafayette St - West St to Mock Ave	78	Peripheral	29	49	37.18%	20	58	25.64%	28.5	49.5	36.54%	6.0	72.0	7.69%
21	On		Lafayette St - Mock Ave to College Ave	78	Peripheral	3	75	3.85%	6	72	7.69%	1.5	76.5	1.92%	1.6	76.4	1.99%
12	Off		Post Office lot - i.e. NE corner of Dickson & Block	28	Peripheral	20	8	71.43%	3	25	10.71%	17.5	10.5	62.50%	0.7	27.3	2.38%
11	Off		Colliers Drug lot - i.e. N side of Dickson, just E of Church Ave	53	Peripheral	22	31	41.51%	17	36	32.08%	20	33	37.74%	6.6	46.4	12.37%
17	Off		South side of Dickson St, opp. Colliers Drug, just E of Church Ave	43	Peripheral	7	36	16.28%	23	20	53.49%	6.5	36.5	15.12%	5.3	37.7	12.40%
9	Off		North side of Dickson, slightly west of being opposite Church Ave	33	Peripheral	7	26	21.21%	31	2	93.94%	7	26	21.21%	11.4	21.6	34.68%
10	Off		South side of Watson St, between Thompson & St Charles	26	Peripheral	19	7	73.08%	10	16	38.46%	18.5	7.5	71.15%	3.4	22.6	13.25%
18	Off		South side of Dickson, between Block Ave and East Ave	52	Peripheral	31	21	59.62%	38	14	73.08%	23	29	44.23%	6.1	45.9	11.75%
27	On		Block Avenue - Dickson to Spring	21	Peripheral	1	20	4.76%	22	-1	104.76%	1	20	4.76%	2.6	18.4	12.17%
29	On		Spring St, from West St to Block Ave	90	Peripheral	32	58	35.56%	18	72	20.00%	27	63	30.00%	6.1	83.9	6.79%
25	On		Locust Ave, from Spring St to Dickson St	40	Sub Prime	7	33	17.50%	15	25	37.50%	6	34	15.00%	4.8	35.2	11.94%
16	Off		SW Corner Dickson St & Church Ave	9	Sub Prime	3	6	33.33%	10	-1	111.11%	1.5	7.5	16.67%	2.8	6.2	30.86%
28	On		East Ave, from Spring St to Dickson St	33	Peripheral	19	14	57.58%	33	0	100.00%	9.5	23.5	28.79%	4.8	28.2	14.48%

Appendix 2: Future Demand Estimates

Table 2-1 Current Number of Parking Spaces Occupied

	700-800	800-900	900-1000	1000-1100	1100-1200	1200-1300	1300-1400	1400-1500	1500-1600	1600-1700	1700-1800	1800-1900	1900-2000	2000-2100	2100-2200	2200-2300	2300-2400	2400-100	100-200
Monday	194	581	678	678	775	775	872	775	581	581	678	678	678	581	485	97	39	0	0
Tuesday	194	581	678	678	775	872	872	775	581	581	678	678	775	872	678	388	97	0	0
Wednesday	194	581	678	678	775	969	872	775	581	581	678	678	775	872	775	485	194	0	0
Thursday	194	581	678	678	775	872	872	775	581	581	678	678	775	872	775	581	291	194	97
Friday	194	581	678	775	872	969	872	775	678	678	678	775	872	872	872	775	581	388	194
Saturday	194	194	291	388	678	678	678	678	678	678	775	872	969	969	969	775	581	388	194
Sunday	194	194	291	388	678	969	969	969	775	678	775	775	678	581	388	291	291	194	97

Table 2-2 Current Percentage of Parking Spaces Occupied

	700-800	800-900	900-1000	1000-1100	1100-1200	1200-1300	1300-1400	1400-1500	1500-1600	1600-1700	1700-1800	1800-1900	1900-2000	2000-2100	2100-2200	2200-2300	2300-2400	2400-100	100-200
Monday	10.00%	30.00%	35.00%	35.00%	40.00%	40.00%	45.00%	40.00%	30.00%	30.00%	35.00%	35.00%	35.00%	30.00%	25.00%	5.00%	2.00%	0.00%	0.00%
Tuesday	10.00%	30.00%	35.00%	35.00%	40.00%	45.00%	45.00%	40.00%	30.00%	30.00%	35.00%	35.00%	40.00%	45.00%	35.00%	20.00%	5.00%	0.00%	0.00%
Wednesday	10.00%	30.00%	35.00%	35.00%	40.00%	50.00%	45.00%	40.00%	30.00%	30.00%	35.00%	35.00%	40.00%	45.00%	40.00%	25.00%	10.00%	0.00%	0.00%
Thursday	10.00%	30.00%	35.00%	35.00%	40.00%	45.00%	45.00%	40.00%	30.00%	30.00%	35.00%	35.00%	40.00%	45.00%	40.00%	30.00%	15.00%	10.00%	5.00%
Friday	10.00%	30.00%	35.00%	40.00%	45.00%	50.00%	45.00%	40.00%	35.00%	35.00%	35.00%	40.00%	45.00%	45.00%	45.00%	40.00%	30.00%	20.00%	10.00%
Saturday	10.00%	10.00%	15.00%	20.00%	35.00%	35.00%	35.00%	35.00%	35.00%	35.00%	40.00%	45.00%	50.00%	50.00%	50.00%	40.00%	30.00%	20.00%	10.00%
Sunday	10.00%	10.00%	15.00%	20.00%	35.00%	50.00%	50.00%	50.00%	40.00%	35.00%	40.00%	40.00%	35.00%	30.00%	20.00%	15.00%	15.00%	10.00%	5.00%

Table 2-3 Future Temporary Parking Space Demand

	700-800	800-900	900-1000	1000-1100	1100-1200	1200-1300	1300-1400	1400-1500	1500-1600	1600-1700	1700-1800	1800-1900	1900-2000	2000-2100	2100-2200	2200-2300	2300-2400	2400-100	100-200
Monday	356	1,065	1,243	1,243	1,421	1,421	1,599	1,421	1,065	1,065	1,243	1,554	1,554	1,332	1,112	222	89	0	0
Tuesday	356	1,065	1,243	1,243	1,421	1,599	1,599	1,421	1,065	1,065	1,243	1,554	1,777	1,999	1,554	889	222	0	0
Wednesday	320	959	1,119	1,119	1,279	1,599	1,439	1,279	959	959	1,119	1,399	1,599	1,799	1,599	1,001	400	0	0
Thursday	356	1,065	1,243	1,243	1,421	1,599	1,599	1,421	1,065	1,065	1,243	1,554	1,777	1,999	1,777	1,332	667	445	222
Friday	320	959	1,119	1,279	1,439	1,599	1,439	1,279	1,119	1,119	1,119	1,599	1,799	1,799	1,799	1,599	1,199	800	400
Saturday	400	400	600	800	1,399	1,399	1,399	1,399	1,399	1,399	1,599	1,799	1,999	1,999	1,999	1,599	1,199	800	400
Sunday	400	400	600	800	1,399	1,999	1,999	1,999	1,599	1,399	1,599	1,599	1,399	1,199	800	600	600	400	200

- Notes: 1) Assumes parking demands by time of day will be the same in the future as in the present
 2) Assumes that 1,199 spaces will remain in the future which will result in a daytime unmet demand of 1,020 spaces and an evening unmet demand of 800 spaces
 3) Assumes 470 space daytime demand generated by office development will utilize long term permitted parking
 4) Assumes 150 persons parking in the Dickson Street area and walking to campus will choose to park outside of the area in the future
 5) Assumes that no surface spaces will remain unused during daytime hours and that 150 spaces will remain unused during evening hours

Appendix 2 (continued)

Table 2-4 Future Temporary Structured Parking Space Occupancy Assuming Most Surface Spaces Are Occupied First

	700-800	800-900	900-1000	1000-1100	1100-1200	1200-1300	1300-1400	1400-1500	1500-1600	1600-1700	1700-1800	1800-1900	1900-2000	2000-2100	2100-2200	2200-2300	2300-2400	2400-100	100-200
Monday	0	0	104	104	282	282	460	282	0	0	104	415	415	193	0	0	0	0	0
Tuesday	0	0	104	104	282	460	460	282	0	0	104	415	638	860	415	0	0	0	0
Wednesday	0	0	0	0	140	460	300	140	0	0	0	260	460	660	460	0	0	0	0
Thursday	0	0	104	104	282	460	460	282	0	0	104	415	638	860	638	193	0	0	0
Friday	0	0	0	140	300	460	300	140	0	0	0	460	660	660	660	460	60	0	0
Saturday	0	0	0	0	260	260	260	260	260	260	460	660	860	860	860	460	60	0	0
Sunday	0	0	0	0	260	860	860	860	460	260	460	460	260	60	0	0	0	0	0

Table 2-5 Future Temporary Structured Parking Space Occupancy Assuming All Structured Spaces and Surface Spaces Are Occupied at the Same Rate

	700-800	800-900	900-1000	1000-1100	1100-1200	1200-1300	1300-1400	1400-1500	1500-1600	1600-1700	1700-1800	1800-1900	1900-2000	2000-2100	2100-2200	2200-2300	2300-2400	2400-100	100-200
Monday	178	533	622	622	711	711	800	711	533	533	622	777	777	666	556	111	45	0	0
Tuesday	178	533	622	622	711	800	800	711	533	533	622	777	889	1,000	777	445	111	0	0
Wednesday	160	480	560	560	640	800	720	640	480	480	560	700	800	900	800	501	200	0	0
Thursday	178	533	622	622	711	800	800	711	533	533	622	777	889	1,000	889	666	334	223	111
Friday	160	480	560	640	720	800	720	640	560	560	560	800	900	900	900	800	600	400	200
Saturday	200	200	300	400	700	700	700	700	700	700	800	900	1,000	1,000	1,000	800	600	400	200
Sunday	200	200	300	400	700	1,000	1,000	1,000	800	700	800	800	700	600	400	300	300	200	100

**MARTIN
ALEXIOU
BRYSON**