

THE COSTS OF HAVING A CAR DOMINATED CAMPUS: THE CASE STUDY OF ARKANSAS STATE UNIVERSITY

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Many of America's university campuses have fallen victim to the demands of the automobile. Parking and transportation concerns escalate as enrollment advances and an increasing number of students reside off-campus and commute on a daily basis. Colleges have exacerbated the problem by building environments that accommodate cars, not people, which has generated severe financial burdens and created pedestrian-unfriendly environments. Unfortunately, this type of growth is not confined to university settings – it is merely a symptom of a larger cultural problem. However, universities are in a position to change current growth policies both on- and off-campus and it is in their best interest to do so. This paper assesses the costs of car-dependency on land use and environment on campuses of major universities of the Southwest region and presents a case study of Arkansas State University in State University, Arkansas. Several recommendations that lessen the automobile's impacts are made in regard to Arkansas State University's current parking and traffic plans; in turn, these suggestions could also be applied to other universities and communities. *Key Words: Automobile, campus environment, parking, pedestrian safety, urban planning.*

Many of America's university campuses have fallen victim to the demands of the automobile. Parking and transportation concerns escalate as enrollment advances and an increasing number of students reside off-campus and commute on a daily basis. Colleges have exacerbated the problem by building environments that accommodate cars, not people, which has generated severe financial burdens and created pedestrian-unfriendly environments. Unfortunately, this type of growth is not confined to university settings – it is merely a symptom of a larger cultural problem. For instance, Jackson (1985: 272) points out that with an increased reliance on automobiles, the neighborhood communal experience “that used to be the main characteristic of urban life has vanished.” The same can be said for campus environments that are built for the car – they lack community. However,

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universities are in a position to change current growth policies both on- and off-campus and it is in their best interest to do so. If smart growth strategies, based on traditional neighborhood planning methodologies (narrow streets and pedestrian infrastructure, for example), are implemented on campus they have the potential to spill over into adjacent neighborhoods as well (Freeman 2003). Physical appearance is important, as Biddulph (1999) points out, because universities that employ traditional community measures make themselves more attractive to potential faculty and prospective students.

This research uses Arkansas State University – located in Jonesboro, Arkansas – to examine the costs associated with building for the automobile. Arkansas State University, a land-grant institution, was established in 1909 as the Arkansas Agricultural & Mechanical College – a four-year degree program was added in 1930 and Arkansas A & M became Arkansas State College in 1933. More recently, university status was achieved in 1967 and Division I ranking in 1991 as Arkansas State University has continued to grow – according to the NCAA's web site (www.ncaa.org), schools must offer at least 14 sports (seven men's and seven women's) and meet several regulations to be classified as Division I.

Findings for Arkansas State University reveal that accommodating the car creates a hostile environment, which financially and spatially consumes already depleted university resources. Parking figures and plans from other southwestern Division I institutions are evaluated to emphasize Arkansas State University's parking/traffic problems. Also, the way in which a university town develops will impact and influence conditions on campus. Therefore, an evaluation of Jonesboro, Arkansas' growth strategies is undertaken to emphasize the so-called town-gown relationship. Peters and Associates (2000: 29) accurately point out that there is "an opportunity for cooperation" [between Jonesboro and Arkansas State University] on mutually benefiting improvement projects. Finally, recommendations that lessen the automobile's impacts are made in regard to Arkansas State University's current parking and traffic plans. These suggestions could also be applied to other similar universities and their surrounding communities.

A Parking Epidemic

The number of Arkansas State University's students commuting on a daily basis has steadily increased over the past two decades. According to The Office of Institutional Research & Planning, Arkansas State University's 1981 enrollment stood at 7,616 – of that number 2,511 lived on campus (33 percent). Currently, Arkansas State University's student population stands at 10,568, of which 1,675 live on campus (16 percent). Of the number that lives off campus, over 90 percent drive to campus on a daily basis – few, if any, walk or bike. Other universities have avoided commuter problems by housing a higher percentage of students on campus and promoting pedestrian-friendly transportation plans for those who live off. For instance, at the University of Texas-Austin many residence hall parking lots have been converted to faculty/staff parking and students now park off campus. This action has worked, as Bob Harkins, Director of Parking and Transportation Services, explains, because “the majority of resident student vehicles stay parked until the weekend” (Strange 2001). There are transportation options other than the car for those who reside on campus. There is simply no need to drive.

The number of Arkansas State University students who commute generates a massive amount of traffic around and through campus. According to The Stuck Associates' (1997: 9) report, approximately 20,000 vehicles pass through the intersection of Caraway and Matthews (south entrance) on a daily basis, and 18,000 at the Aggie Road and Stadium Boulevard interchange (east entrance) (Figure 1). Furthermore, over 8,300 vehicles pass directly through the university's center on Caraway Road (Carter-Burgess 2002: 3). Peters and Associates (2000: 14) conclude that there “exist many points of conflict between pedestrians and vehicles” at Arkansas State University; the most prevalent being “Caraway Road and on Aggie Road due to the current mix of on- and off-street parking, pedestrian links, and through traffic.” One alternative proposed is the closure of a segment(s) of Caraway Road and that Marshall and Robinson Streets on the “western and eastern sides of campus should be considered as primary traffic routes” (Peters and Associates 2000: 29). However, Peters and Associates (2000: 29) admit that the major pedestrian/vehicle conflicts would then be transferred to perimeter streets. Clearly, these vehicles represent a major impediment to pedestrian activity on and near campus.

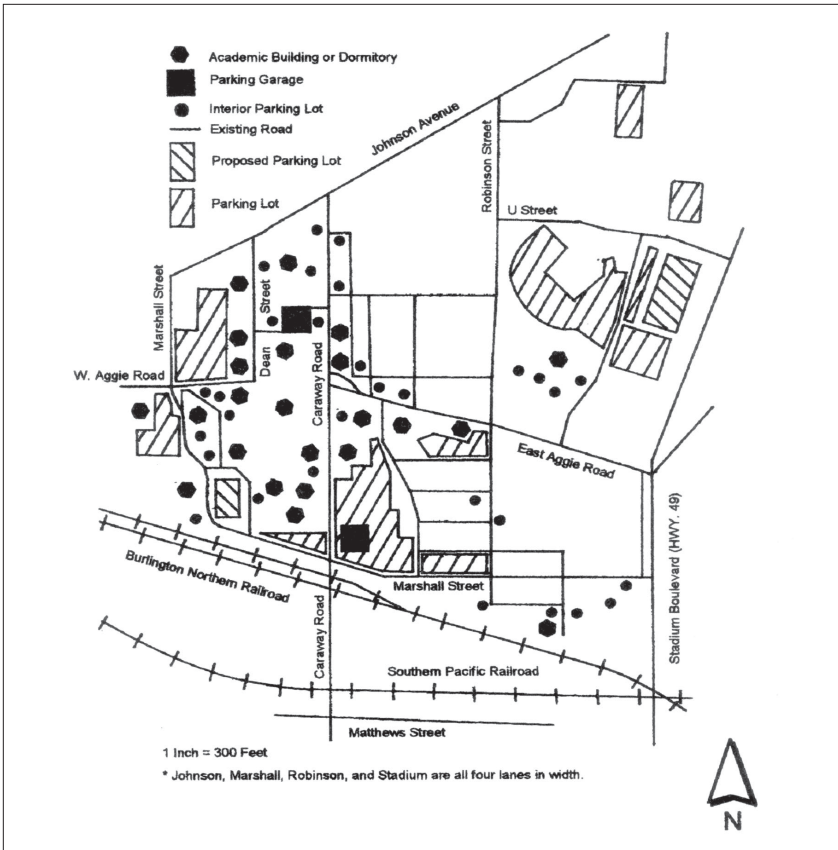


Figure 1. On-street and overall parking scheme at Arkansas State University.

It appears that Arkansas State University has encouraged the commuter college atmosphere by imposing heavy financial burdens on students and faculty at a time when the university is faced with significant budget restraints (Robinson 2002). For instance, Sherry Pruitt, of *The Jonesboro Sun*, reports that Arkansas State University will lose approximately \$402,656 this fiscal year and based on next year's economic projections another \$960,468 in 2002-2003 (Pruitt 2002e). Despite economic constraints Arkansas State University continues to funnel an increasing amount of money into accommodating the car.

The automobile's demands have led Arkansas State University to build a

total of 8,350 parking stalls – 701 chat spaces, 613 in the new parking garage, and 7,034 paved stalls – which consume enormous amounts of money and land. According to published reports, approximately \$300 is required to develop a chat parking space, \$1,500 for a paved one, and \$9,000 for every space in the parking garage at Arkansas State University (Pruitt 2002b). Applying the dollar estimates to the numbers above reveals that Arkansas State University has spent over \$16,000,000 to develop parking lots and this figure does not include long-term costs (Table 1).

Parking does generate approximately \$630,000 annually; however this amount is consumed by expenses (Pruitt 2001a; Division of Student Affairs 2002). The new parking garage, for instance, alone requires \$483,959 each year for utilities, maintenance, debt service, and staff (Division of Student Affairs 2002). Moreover, parking related expenditures for 2002 amounted to \$739,887.79, well above the revenue generated by parking (Table 2) (Controller's Office 2003). Spatially each parking spot requires an average of 166.5 square feet. Thus, Arkansas State University has devoted nearly thirty-six acres to parking, which does not include the infrastructure needed to support parking, such as roads, curbs, gutters, driveways, and turning lanes. The parking garage completed in the spring of 2002 (169,248 square feet) is larger than the new library addition (119,667 square feet) finished in the summer of 1994 that more than doubled the library's capacity. Clearly, accommodating the automobile requires enormous amounts of capital and land.

Compared to other southwestern Division I schools, Arkansas State University has an overabundance of parking (Table 3). With a total population (students, faculty, and staff) of 12,612, Arkansas State University has a patron to parking space ratio of 1:.66 – 8,350 total spaces. This ratio is higher than all ten of the Division I institutions surveyed, and nearly double the amount of seven. The University of Texas at Austin (population of 71,865 and 14,451 spaces) and the University of New Orleans (population of 18,854 and 5,000 stalls) have the least amount of per capita parking, 1:.20 and 1:.27 respectively; only Louisiana State University and Texas A & M University have ratios over 1:.50 (Table 2). Despite the fact that Peters and Associates (2000: 18), after completing a parking survey, determined that Arkansas State University “provides parking spaces well in excess” of normal college

Table 1. Costs of Parking at Arkansas State University.

On-Street Parking		
Number of Stalls	Surface Type	Cost
623	Paved	\$1,500 per = \$934,000
78	Chat	\$300 per = \$23,400
Off-Street Parking		
Number of Stalls	Surface Type	Cost
623	Chat	\$300 per = \$186,900
6,413	Paved	\$1,500 per = \$9,619,500
Parking Garage		
Number of Stalls		Cost
613		\$9,000 per = \$5,517,000
Total Number of Stalls = 8,350		
Total Costs = \$16,280,800		

Source: Pruitt, Sherry. 2002. Cold Puts Brakes on Parking Deck Construction Work. *The Jonesboro Sun*, January 8.; Author's Empirical Data, Spring 2002.

campuses, the long-range plan calls for an additional parking garage (near the intersection of Caraway and Marshall), the pavement of Kays Field, which adjoins the Dean B. Ellis Library, and the conversion of the soon-to-be old track complex to a parking lot (Figure 1).

Arkansas State University’s community has been negatively impacted not only by the amount of parking, but by where these lots and spaces are located (Figure 1). Of the total number of stalls, 701 are on-street spaces. Biddulph (1999) demonstrates that on-street parking is devastating to a campus community. On-street stalls create unsafe pedestrian zones and generate visual blight and noise pollution. The Stuck Associates’ (1997: 9) agree, and in their review of Arkansas State University conclude that “parked cars create a negative visual image because they exist on or adjacent to most campus streets. The parking system appears to have developed with . . . minimal consideration for the visual quality of the campus.” The pedestrian-unfriendly Caraway Road, which dissects Arkansas State University’s campus in a north-south fashion, has on-street parking on both sides (thirty-nine feet in width)

Table 2. Total Parking Expenditures, Fiscal Year 2002.

Lot	Amount
Parking Lots (General)	\$226,820.16
Metered Parking	12,928.21
Baseball Lot	4,331.50
Reserved Lots	4,821.42
Facility Management Lot	1,298.00
Equine Parking Lot	5,729.50
Parking Garage	483,959.00
Total Expenditures	\$739,887.79

Source: Controller's Office, Division of Finance and Administration. 2003.

and over 8,300 vehicle trips per day, making it a major source of visual blight and noise pollution – west Aggie Road (sixty-two feet in width), Caddo, Cherokee, Dean, Driver, Danner, Iroquois, Pawnee, and Shelton Streets also have on-street parking. Removing on-street parking from these avenues would dramatically increase pedestrian safety and the university's visual appeal.

In addition to on-street parking, several smaller lots exist in Arkansas State University's interior (Figure 1). These fourteen interior lots range in size from thirty-two to 187 stalls, and contain a total of 852 parking spaces. By comparison, other universities have tried to lessen the negative effect by locating lots on the fringes of their campuses. As long ago as 1949, William Holford, while developing a comprehensive plan for the University of Liverpool, demonstrated that bringing vitality to campus meant eliminating cars (1949: 11). More recently, planners determined that major growth during the 1970s and 1980s at Manchester College was offset by the "congested and chaotic vehicular" traffic and "parking anarchy" that had created an "increasingly unattractive and unfriendly environment" (Cannings 1998: 36). To reverse the trend, Manchester's administrators confined parking to the university's southeast and southwest corners. Additionally, the University of Louisiana-

Table 3. Parking at Southwestern Division I Schools.

Name of University	Number of Students, Staff and Faculty	Number of Parking Stalls	Ratio
<i>Arkansas State University</i>	12,612	8,350*	1:1.66
Louisiana State University	34,000	21,000	1:1.62
Texas A & M University	46,798	25,012	1:1.53
University of Arkansas	19,295	9,340	1:1.48
University of Oklahoma	32,621	12,352**	1:1.38
U. of Louisiana Lafayette	19,906	7,300	1:1.37
Southwest Texas State	26,274	9,290	1:1.35
Oklahoma State University	30,865	10,500	1:1.34
University of New Mexico	32,862	10,000	1:1.30
University of New Orleans	18,854	5,000	1:1.27
U. of Texas at Austin	71,865	14,451	1:1.20
Average***	33,334	12,424	1:1.37

* Does not include fraternity parking or spaces located at the Equine Center and Farm Complex east of Stadium Boulevard.

** 3,500 of these are free parking stalls at the Lloyd Noble Center.

***Average does not include Arkansas State University.

Source: Appendix A.

Lafayette utilizes remote parking lots where patrons are brought to the main campus via a shuttle system. As a result, the majority of students depend on the less expensive transit system and “traffic congestion on the main campus is minimal” (www.louisiana.edu). Finally, Marcus and Wischemann (1998: 186) argue in favor of locating parking at a university’s outer margins by stating that “parking should be strategically located to enable motorists to enter the campus and park their vehicles with minimal physical and social impact on the campus.” Universities should employ traditional planning methods that create pedestrian-friendly environments by eliminating interior lots which create more traffic and visual blight than what they are worth.

The Parking Garage

At the auto-accommodation pinnacle is Arkansas State University's new 613-stall parking garage. Arkansas State University's administration argued in favor of the facility, stating that the garage will allow students "the freedom of parking right at the building where the majority of student business will be conducted [student center]" (Welch 2002). Peters and Associates (2000: 27) also contend that the "additional parking (incidentally, the garage eliminated 137 existing spaces) gained by the [parking] deck construction will provide convenience" in the campus core. Finally, according to Welch (2002), the administration declared that the parking facility represents the third building in the plan to turn Arkansas State University into Arkansas' best state institution.

However, Arkansas State University's parking garage plan comes with a significant financial burden. According to Sherry Pruitt, of *The Jonesboro Sun*, the 169,248 square foot facility cost approximately six million dollars to build. The \$425,000 annual debt load (amortized over twenty years totals \$8.5 million) is to be paid through the sale of parking decals (\$171,000), traffic fines (\$75,000), and anticipated garage revenue (\$160,000)—garage patrons with a parking decal (\$40 annually) pay an additional one dollar for every four hours and those without a decal pay one dollar for every hour (Pruitt 2002d). Other universities have entertained parking garage proposals, but opted for other alternatives based on economics. New Mexico State University officials recently determined that the debt load on a parking facility would be insurmountable, costing between \$15,000 and \$25,000 per parking space to build—does not include interest on the loan, the cost of maintenance and utilities, staffing, or other costs associated with a parking garage (www.nmsu.edu). Moreover, Duany, Plater-Zyberk, and Speck (2000: 207) in their parking analysis argue that "only a [office] tower can pay for a parking garage." Low-density settings that are not spatially confined, like Arkansas State University (940 acres), cannot financially support a parking garage.

Unfortunately for Arkansas State University, the parking garage so far has indeed been an economic failure. The 613-stall facility opened on February 18, 2002 and initially as few as "ten cars per day" were utilizing the structure (Division of Student Affairs 2002). The number of vehicles increased slightly "to an average of seventy-five" a day by October 2002 (Division of Student

Affairs 2002). Furthermore, according to the Division of Student Affairs (2002) the structure generated a meager \$2,856.30 in 2002, well below the anticipated \$160,000. Although, university administrators contend that usage rates will increase once the student center (directly to the south of the garage) construction is complete – the addition will house administrative offices, such as financial aid, counseling, residential life, and a post office. One university official commented that “after the completion of the one-stop shopping center more students will begin to use the parking garage because it will be more convenient” (McBride 2002). Clearly, the intent at Arkansas State University is to build for the automobile’s convenience, not the pedestrian’s.

Even if the parking garage becomes an economic success, its location will have a long-term negative impact on the entire campus (Figure 1). Located in the center of campus, with feeder roads on the east and west sides, the structure perpetually guarantees a high traffic volume through the heart of campus adversely affecting any sense of community. Duany, Plater-Zyberk, and Speck (2000: 163) state that anti-pedestrian structures like parking garages eliminate social activity [campus life] “since everyone parks immediately adjacent to their destination.” The insular structure adds nothing socially to the campus community, it is a “dead” structure – no students live there, no faculty or staff members work there, its sole function is to house vehicles at a tremendous economic cost. The aforementioned comments by university administrators in regard to the “undistinguished structure,” as Freeman (2003: 39) describes it, making Arkansas State University a better place merely reflect the thinking of an auto-dominated culture.

The Overpasses

To alleviate traffic congestion at Arkansas State University’s south and east entrances a series of overpasses and traffic redirection schemes are planned (Figure 2). According to Carter-Burgess (2002: 46), the \$16.3 million dollar project “improves travel time, access and safety” for those commuting to campus. The plan calls for an overpass on Stadium Boulevard at Aggie Road to “allow continuous left-turn movement to improve traffic congestion,” and Caraway Road traffic that is delayed by trains will be diverted to the university’s western side with a new connecting overpass (Carter-Burgess 2002: C-7).

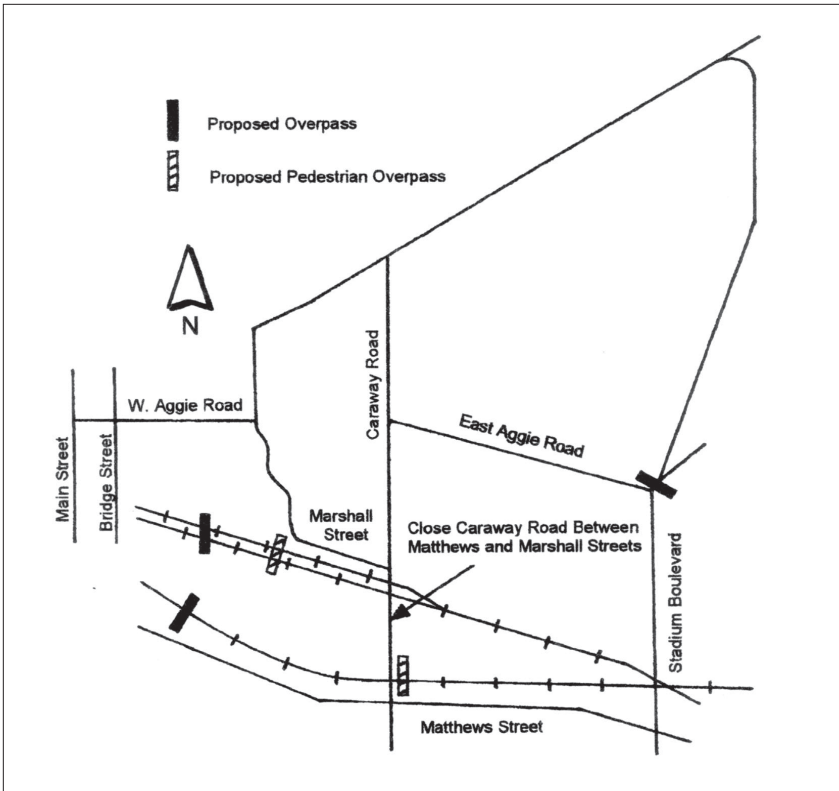


Figure 2. The Caraway Road Project

Peters and Associates (2000: 29-30) agree that the railroad tracks on Caraway are a major “inconvenience” and that an overpass “would improve [vehicle] safety.” It must be noted that an overpass already exists on Stadium Boulevard – less than one mile to the east—and two more are located approximately one mile west of the university on Bridge and Main Streets (Figure 2).

The proposed Caraway Road project contradicts Stuck Associates’ report with regard to campus vehicular accessibility. In that document, Stuck Associates (1997: 9) states that “vehicular access to campus is very adequate,” it provides access to parking, service areas, and cross-campus circulation. Moreover, to suggest that adding lanes and overpasses will reduce congestion is incorrect. Donald Kaul (1999), of *The Des Moines Register*, and Alan Sipress (2000), of the *Washington Post*, discuss separate findings that conclude building

more roads actually increases travel times. Furthermore, Kunstler (1993: 99) states that the principle of traffic generation finds that “any highway built to alleviate congestion on an earlier existing road, would only succeed in generating a larger aggregate amount of traffic for all roads.” Duany, Plater-Zyberk, and Speck (2000: 88) agree that “adding lanes makes traffic worse.” “Trying to cure traffic congestion by adding more capacity is like trying to cure obesity by loosening your belt” (Duany, Plater-Zyberk, and Speck (2000: 89). Ironically, Carter-Burgess (2002: 39) admit that the Caraway Road project will “increase the exposure of area businesses to more traffic,” which “could increase emissions” and negatively impact air quality.

The Caraway Road plan further discourages pedestrian access to campus. Duany, Plater-Zyberk, and Speck (2000: 64) argue that “pedestrian life cannot exist in the absence of worthwhile destinations that are easily accessible on foot.” The Caraway Road project’s two proposed pedestrian overpasses lead to nowhere, there is no connection between the campus and the community (automobile overpasses are not pedestrian-friendly) (Figure 2).

Finally, to suggest that the three sets of railroad tracks that cross Caraway Road between Marshall and Matthews Streets are a major traffic hazard and that overpasses will increase safety is questionable. Duany, Plater-Zyberk, and Speck (2000: 36) found a similar scenario at Confusion Corner in Stuart, Florida. At this particular intersection, seven roads and an at-grade railroad crossing meet; the Florida Department of Transportation wanted to spend hundreds of thousands of dollars to “fix” the hazard. Studies found that the intersection was actually one of the safest in the region. Similarly, Jonesboro Police Department statistics demonstrate that the Caraway Road intersections nearest the tracks are the safest (Figure 3). From 1995 through June of 2002, the university’s southern entrance (Caraway and Matthews) with one set of tracks in close proximity was the site of 182 accidents. Over that same time frame, the next two major intersections south on Caraway (Caraway and Nettleton, and Caraway and Highland) had 284 and 288 traffic accidents, respectively. Further, the Caraway and Marshall intersection, with two sets of tracks near it, had only seven accidents over the same seven year period. Apparently, the railroad tracks work as oversized speed bumps that increase automobile traffic safety.

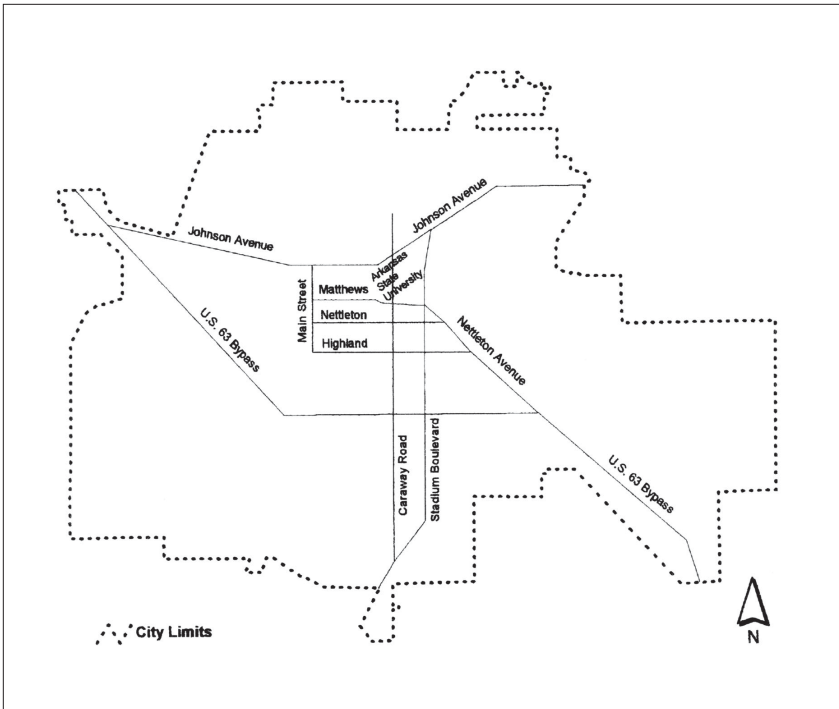


Figure 3. Jonesboro, Arkansas' city limits and major thoroughfares.

University and Community: Arkansas State University and Jonesboro, Arkansas

Arkansas State University is located within the city limits of Jonesboro, Arkansas and is currently Jonesboro's second largest employer behind St. Bernard's Medical Center. The university is indeed a vital part of the community (Peters and Associates 2000: 32). Jonesboro, Arkansas, like Arkansas State University, is built for the car; subsequently, many of the problems currently plaguing the university are also impacting the community.

In recent decades many southern communities have witnessed a dramatic population increase. Shelley et. al. (1996: 257) find that between 1950 and 1990 the "most rapidly growing [U.S.] regions were all in the South and West." Jonesboro, Arkansas is no exception. According to the United States Census Bureau, Jonesboro's population has more than tripled since 1950, and nearly doubled since 1980 (Table 4). Population growth during this time

Table 4. Jonesboro, Arkansas' Rapid Population Growth

Year	Population
1950	16,310
1960	21,418
1970	27,050
1980	31,530
1990	46,535
2000	55,515

Source: www.census.gov

period is noteworthy because many communities and developments, like Jonesboro and Arkansas State University, have literally been built for the car.

Not only has Jonesboro, Arkansas increased in population during the last few decades, but substantial spatial growth has occurred as well. The RM Plan Group (1996: 3) states that, "Jonesboro has relied upon major expansions [annexations] of its boundaries in accommodating growth." Indeed, since 1973 Jonesboro has increased from 13,468 acres to its current 52,480 acres, a change of nearly 300 percent—Jonesboro is now Arkansas' fourth largest city in terms of population, and spatially is second (only Little Rock is larger).¹ Obviously, the population has increased over the same time period but not to that degree; hence, the decline in population density. Cooper and Graham (2000) states that the impetus behind annexation is often a desire for "new sales and property taxes." However, Cooper and Graham (2000) also add that, "the only thing they [cities] understand is consumption. . . . The only way they see that they can grow or to survive is to continue to consume instead of developing a budget with the monies that they have."

Much of Jonesboro's spatial growth can be attributed to new construction, primarily in the residential sector. According to Sadler (2002a) "building starts in Jonesboro reached record levels in 2001, and city officials see no end to a local building boom that has lasted more than a decade" (2001 was the fifteenth consecutive record-setting year). The overall number

of permits issued in 2001 was 997 (337 single-family permits), just short of the 1996 record total of 1,090; however, the value of new construction totaled \$148,345,601, \$14 million above the previous high. Ron Shipley, Jonesboro's Chief Building Inspector, commented that "growth [is] in every area of the city. . . . We see subdivisions northeast, southwest, southeast" (Sadler 2002a). During 2002, Jonesboro's single-family construction boom continued – a record 408 residential permits were issued (Inman 2003a; Sadler 2002b). However, John Galbraith, the Paul M. Warburg Professor of Economics Emeritus at Harvard University, correctly stated in an editorial published by *The New York Times* that "fiscal funkholes are what the suburbs are." The suburbs allow "people to enjoy the proximity of the city while not paying their share of taxes" (The New York Times 1975).

Not only are residential developments planned for automobiles, but commercial ventures are as well. In Jonesboro, two obvious examples of auto-dominated growth are the new Central Baptist Church and the new Southern Hills Mall. The church, currently in the heart of Jonesboro at the intersection of Cherry and Main, will relocate to 46.6 acres south of town and is expecting "about 800 to 1,200 vehicles" each Sunday morning (Sadler 2001b). The new mall also located south of town will have 70 acres of parking (Hodges 2002). Similar to the university's landscape much of Jonesboro is devoted to accommodating the car.

John Norquist (1998: 159), Mayor of Milwaukee, Wisconsin, writes in *The Wealth of Cities*, that "sprawl is the direct result of auto accommodation." Along with sprawl, as the numbers for Arkansas State University demonstrate, comes a heavy financial burden (Hylton 2002). Pope (1999) agrees and contends that "it is no exaggeration to say that sprawl is now the fastest growing threat to America's environment." Fulton and Shigley (2002: 82) claim that "residential development does not pay for itself," and that "cities often grow faster than infrastructures can support or service." Unfortunately, this appears to be the case for Jonesboro, Arkansas. Despite several continuous years of record growth, "a cloudy revenue forecast paints the most grim fiscal picture of [Mayor] Brodell's 16-year tenure" (Sadler 2001a). Ironically, according to Sadler (2001a), many city departments face budget shortfalls, although, the street department and the Metropolitan Area Traffic

Authority, with an annual budget of nearly \$8 million, “will not be cut as substantially as elsewhere.” Simply stated, unmanaged sprawl is not sustainable.

Urban sprawl is often accompanied by large volumes of automobile traffic. With a separation of activities (zoning) this occurs because people are forced “to rely on their cars for every local travel” (Norquist 1998: 162). Muller (2002: 139) adds that with the “now pervasive automobile culture. . . . It [automobile] had become a necessity for commuting, shopping, and socializing.” In “response to the growing traffic deficits” Jonesboro, Arkansas created the Metropolitan Area Traffic Authority (MATA) (RM Plan Group 1996). In early 1995, Jonesboro residents voted to issue bonds worth \$44 million dollars to fund MATA (Inman 2002). At the time it was the largest highway bond issue in Arkansas history. The initial \$44 million investment by Jonesboro taxpayers has been supplemented by the Arkansas Highway and Transportation Department and the municipal Street Department to provide \$65 million dollars of improvements, such as, “wider streets, improved drainage systems, computer-enhanced traffic signals, and the paving of more than 80 miles of gravel city streets” (Inman 2002). As of early 2003, the initial funds have “all been spent” while “three projects remain from the original priority list” (Inman 2003b). MATA has also “identified nine more projects that Jonesboro should undertake in coming years” (Inman 2003b). Despite the enormous taxpayer investment, Ockert (2002) states that “inside the circle [Jonesboro’s core district] we’re rapidly approaching gridlock.” This upholds recent findings that conclude building more roads makes traffic worse (Duany, Plater-Zyberk, and Speck 2000; Kaul 1999; Kunstler 1993; Lockwood 2002; Sipress 2000). Discussing this topic, McKnight (2001: 76) rhetorically questions, “What will prevent the North American city from grinding to a halt someday under the sheer bulk of its street and freeway traffic?”

A portion of Jonesboro’s traffic problems relates to the fact that transportation modes, other than the car, are not utilized or supported. Reports have documented the need to “establish a comprehensive and integrated transportation system that includes automotive, public transit, pedestrian, bicycle, and ride-sharing modes” to generate a “greater integration of the campus and the community” (RM Plan Group 1996: 13). In the early 1990s, Jonesboro developed a master bicycle plan that would have linked

the urban core and the university; in part, due to the “presence of a large university population” (RM Plan Group 1996: 66). The RM Plan Group (1996: 66) acknowledges the fact that Jonesboro’s topography and climate are both “conducive to bicycling” (the bicycle plan proposed in 1992 was never funded). Peters and Associates (2000: 32) add that “Jonesboro has been sensitive to the important relationship between the campus and the city,” and that the “transportation systems need to recognize the unique travel characteristics in and around the campus.” However, pedestrian-friendly transportation plans have not been developed and automobile reliance prevails. As revealed by recent census data, most of Jonesboro’s residents heavily rely upon the car – the 2000 census found that 83.2 percent of Jonesboro’s citizens 16 years of age and older drove to work alone, and 94.6 percent of the total working population drove to work. Like Arkansas State University, Jonesboro’s infrastructure for other means of transportation is nonexistent – which is typical of auto-dominated environments. For instance, Norquist (1998: 192) states that “sidewalks are fast disappearing from the U.S. landscape,” since “most new subdivisions don’t have sidewalks.” In Jonesboro, according to the city planner’s office, only “one subdivision built in the last forty years has had sidewalks” (MAPC 2003).

Based on long-term plans it appears as though the transportation situation will only get worse. Similar to what Kaul (1999) found in Atlanta, Georgia – which built another beltway further out in an attempt to alleviate the original beltway’s congestion – Jonesboro’s community leaders and state transportation officials recently detailed the need for a new northern bypass (estimated to cost between \$100 to \$150 million) (Ockert 2002). The bypass will be located approximately three to five miles north of town, and will (according to officials) relieve a portion of the existing bypass’ load and allow the city to expand north and east (The Jonesboro Sun 2002). Longer-term plans also call for another southern bypass approximately three to five miles south of the U.S. 63 Bypass completed in 1977 (Figure 3). Unfortunately, new bypasses will further expand the city and increase automobile dependency, and, as numerous studies have indicated (Duany, Plater-Zyberk, and Speck 2000; Jacobs 1961; Kaul 1999; Kay 1997; Kunstler 1993; Norquist 1998; Sipress 2000), lead to increased travel times and continued fiscal concerns.

Muller (2001: 425) correctly points out that “rather than solving traffic problems, bigger and better highways only encouraged increased use.” In regard to the university, Johnson Avenue (on the university’s north side) is presently being widened to five-lanes which will expose the area to more traffic. Moreover, if the proposed Caraway Road project is completed the university will then have a major thoroughfare (at least four-lanes) on three sides and railroad tracks on the fourth which will further hinder pedestrian efforts to reach the university. Finally, according to Aubrey Scott (Scott 2002), Director of the Metropolitan Area Traffic Authority, there are currently no funds available and no desire for the proposed bicycle plan that would link the university and community.

Recommendations

One of the most important changes universities can make is to close interior roads and/or redesign excessively busy routes to alleviate interior traffic congestion (Allpass 1993; Biddulph 1999; Marcus and Wischemann 1998). Holford (1949: 15) suggested this strategy for the University of Liverpool in 1949, with beneficial results. Likewise, interior streets were eliminated at Manchester College and replaced with “green” commons and places for students, faculty, and staff to congregate (Cannings 1998: 36). With over 8,300 vehicle trips per day and running the university’s entire north-south length, Caraway Road poses a major impediment to pedestrian activity at Arkansas State University. Closing Caraway Road from Marshall Street, the university’s southern edge, to Aggie Road would allow the university’s east and west sides to safely connect and create a much-needed section of greenspace to maximize, what Jacobs (1961: 56) calls, informal contact (Figure 4). Additionally, west Aggie Road (sixty-two feet in width) to Dean Street is a major automobile thoroughfare and divides the university’s core, it should also be closed. Finally, Cooley Circle and the Library Loop, two roads that service interior lots, should be eliminated. According to Aubrey Scott, MATA’s director, the recommended street closures would not negatively impact the surrounding community (Scott 2002). All remaining traffic routes should be narrowed to slow traffic. These actions would assist in improving the university’s overall sense of community, and aid in connecting Arkansas State

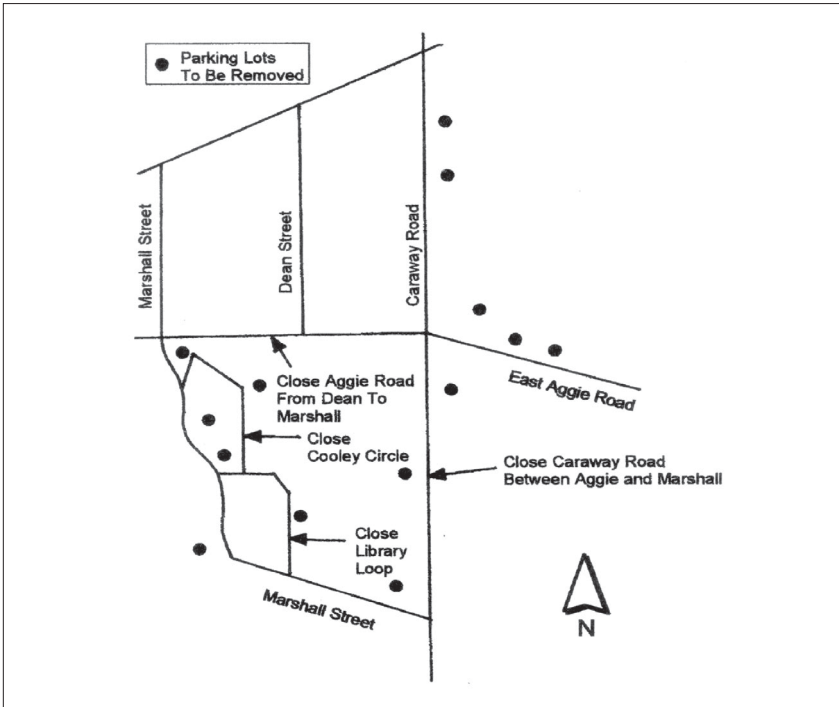


Figure 4. Recommended changes for Arkansas State University (elimination of on-street parking and interior lot removal).

University to adjacent neighborhoods.

Beyond the alteration of Arkansas State University's current street plan, several parking scheme changes would alleviate a portion of the automobile burden. First, designating lots as off-campus commuter, faculty/staff, or residence hall parking would "greatly reduce intra-campus traffic" (The Stuck Associates 1997: 25). Intra-campus traffic is so congested that in the fall of 2001 Sargent Jim Smith, of the University Police Department, advised students to walk from class to class rather than "trying to move closer with their cars at each class change" (Pruitt 2001a). Assigning patrons to specific lots would diminish the number of vehicle trips around and through Arkansas State University's campus.

In addition to changing the street pattern, all on-street parking should be eliminated. Arkansas State University has just over 700 on-street parking

stalls, which represent a mere 8.5 percent of the total amount. On-street parking, as mentioned previously, is a major pedestrian hazard and source of noise pollution and visual blight. Its removal, while having a limited impact to the overall parking plan, would dramatically improve Arkansas State University's aesthetic appeal.

The number and location of small interior lots has a tremendous negative impact on Arkansas State University's environment (Figure 3). These fourteen interior lots generate more traffic congestion and consume more green space than they are worth. As Marcus and Wischemann (1998) and Cannings (1998) point out, the encroachment of parking lots destroys any sense of community. Their removal would allow Arkansas State University's core to develop into a cohesive pedestrian-friendly academic setting.

Eliminating on-street parking and removing interior lots would leave Arkansas State University with 6,795 parking stalls and a per capita ratio of 1:53, which is still higher than eight (and tied with Texas A & M University) of the ten Division I schools sampled in this research.² The remaining overall plan would be similar to Manchester College's, discussed by Cannings (1998), which called for isolating on-campus parking in peripheral zones. Removing Arkansas State University's on-street and interior parking would leave major lots on the college's west, north, southeast, and east sides, leaving no campus segment unserved. Clearly, there is no need for another parking garage and the pavement of Kay's Field and the track facility (Figure 1).

Freeman (2003: 39) argues that one simple way to stop people [students] from using their cars is to "not give them a place to park." However, the removal of parking cannot occur without alternative transportation plans. A shuttle system, both on-campus and off-campus, would ameliorate some of the traffic/parking problems (The Stuck Associates 1997: 9). The proposed shuttle system could utilize the "many unoccupied parking spaces . . . in the non-core area," including the several thousand in the athletic complex just two blocks from the university's core (Peters and Associates 2000: 15). All other Division I schools sampled had some type of on-campus shuttle system and many were connected to a greater metropolitan line. Currently, Arkansas State University has no shuttle plan and Jonesboro, Arkansas is the only metropolitan area in the United States over 50,000 in population with no

public transportation (Buchanan 2002).

In addition to the creation of a shuttle system, another suggestion is to prohibit patrons that reside within a one-mile buffer zone around Arkansas State University to purchase a parking permit. This action would discourage many unnecessary vehicle trips and encourage biking and/or walking. Marcus and Wischemann (1998: 197) argue that bicycles are the most cost- and time-effective means of student transportation. Moreover, Duany, Plater-Zyberk, and Speck (2000: 199) state that college students, “even in icy Wisconsin,” will tolerate a twenty-minute walk. According to Mr. Aubrey Scott (2002), in the 1960s a plan to eliminate parking within a ten-minute walking radius of Wilson Hall (Arkansas State University’s core) was recommended by the architecture firm of Stuck, Frier, Lane, and Scott. Members of the firm toured other universities and agreed that closing Arkansas State University off from car traffic would create a “much more pleasant environment” (Scott 2002). Faculty and staff at the time rejected the proposal before students had the opportunity to comment.

Although, without adequate infrastructure the argument in favor of pedestrian activity at Arkansas State University is moot – the current plan supports automobile use at the expense of other transportation modes. For example, many students drive to the intramural fields on the university’s eastern edge (three to six blocks in distance) because “there are not inviting and convenient walkways linking” this area to the rest of campus (The Stuck Associates 1997: 5).

Faculty and staff also voiced concerns over the fact that students will now have to drive to access the new health center at the corner of U Street and Stadium Boulevard—the existing health facility is in the university’s core (Figure 1) (Keller 2002). University administrators responded by stating that “there are 8,000 commuter students on this campus who can drive” and that “not many students walk anyway” (Jarrett 2002). Finally, pedestrian access from off-campus is severely limited because the university is not connected in any direction to neighboring communities by sidewalks, and the campus is surrounded by a four-lane highway. For instance, Jonesboro’s business district (directly to the south of campus) is not accessible via pedestrian modes of transportation because “sidewalks do not currently extend beyond the border of campus”

(Stuck Associates 1997: 6). Biking or walking at Arkansas State University is discouraged by the amount of car traffic and the limited amount of pedestrian infrastructure. It is simply too easy to drive and unsafe to do otherwise.

Town-gown relationships between universities and their neighboring communities need recognition. Freeman (2003: 59) comments that the University of California at Berkeley discussed construction plans with the city's preservation and design committees, "even though these groups had no real jurisdiction." In similar fashion, Jonesboro and Arkansas State University must focus on sustainable growth strategies and cooperate in the development a comprehensive pedestrian-friendly transportation scheme.

Conclusions

Jane Holtz Kay argues in *Asphalt Nation* that funding car-friendly developments has become a social priority in this country. A recent edition of *The Jonesboro Sun* reflects this idea. The lead article discussed state budget shortfalls which eliminated the guaranteed "\$1,000 pay raises for teachers, threatened human services programs, delayed opening of prison beds," . . . and the loss of "scholarships for thousands of high school seniors" (Jefferson 2002). However, another article on the front page highlights the highway department's work on 2.8 miles of roadway just northeast of Arkansas State University. Burns (2002) states that the impetus behind the \$461,000 resurfacing project has been the "complaints from motorists because of its lack of a turning lane." Arkansas State University's numbers further demonstrate this point – millions of dollars (not to mention the environmental, social, spatial costs) have been spent on parking facilities to create an automobile dominated landscape. However, smart growth – traditional planning methods–alternatives do exist (Stroud 2002). Removing internal parking lots, narrowing and/or closing streets, developing pedestrian infrastructure, and opening green spaces can assist in lessening the automobile's negative impacts. Additionally, universities are capable of encouraging adjacent neighborhoods to use smart growth strategies as well; which, in turn, will make the university and the community more appealing.

Arkansas State University's predicament does not represent what is occurring at all universities; although, neither is it a unique situation. All too often the

automobile-centered transportation/parking remedies proposed by universities and communities are based solely on economics and are not long-term solutions. Moreover, the short-term scenarios fail to realize the larger environmental and social consequences. As the research indicates, supporting a car dominated environment devours critical resources—social, spatial, and financial – in the short-term and destroys the community in the long-term.

Footnotes

¹In comparison to Jonesboro's auto-dominated landscape, Chicago, Illinois' population of 1.1 million (roughly seventeen times Jonesboro's current population) in the pre-automobile year of 1890 was distributed over basically the same amount of territory, 53,117 acres (Conzen 2001).

²According to Peters and Associates (2000: 18), a Little Rock engineering firm, the recommended design standard for college campuses is 1:50 parking spaces per student (Arkansas State University has a ratio of 1:79 per student).

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