

MBTC 1103
THE NORTHWEST ARKANSAS TRANSIT ASSESSMENT STUDY

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ABSTRACT

Providing adequate public transportation, including transportation services for the disadvantaged in Northwest Arkansas is an ongoing challenge. A 1992 report, submitted to the Governor's Task Force on Public Transportation Issues (1), stated that "transportation still surfaces as one of the top social problems in Arkansas." It also reported lack of transportation for medical services, lack of transportation for work,

difficulty traveling for food and retail shopping, and inability to travel from rural areas to major activity centers within the state. Unmet transit needs for the four-county area (Washington, Benton, Carroll and Madison Counties) included those of the elderly, low-income adults, the disabled, and children.

Approximately 9 separate agencies provide public transportation services within the four counties. This project assesses these various agencies to determine service area, fleet size, total ridership, type of service, and sources of funding, as well as any restrictions on the funds. Users of public transportation services were also contacted to assess quality of service and level of service satisfaction. These users consisted of individuals who utilize public transportation services and agencies that contract services on behalf of their constituents. Data were collected through surveys of both the service providers and the users of transportation services. In addition, key municipalities in the study area that contract for services through transportation providers were interviewed to obtain their experience with transit services in the area. The information was used to identify where problems and gaps in service currently exist.

INTRODUCTION

The purpose of the Northwest Arkansas Transit Assessment Study was to assess the status of public transportation in Washington, Benton, Carroll and Madison Counties. It was jointly sponsored by the Mack-Blackwell National Rural Transportation Study Center and the Northwest Arkansas Regional Planning Commission.

Nationally, it is widely recognized that rural residents who are elderly, children, disabled, or poor are particularly transit dependent. According to the 1990 census, 76 million people nationwide fall into the transit dependent category, and 38 million of them (~50 percent) live in rural areas. Of all rural residents nationwide, 32 percent are classified as transit dependent. Only 30 percent of urban residents are transit dependent. (2)

The 1992 Governor's Task Force Study (1) identified unmet transit needs for the elderly, low-income adults, the disabled, and children in the four-county area. For example, at the time the 1992 report was published, the unmet transit need in Benton County was one of the highest of any county in the state. Public transit in Benton County was meeting only 25 percent of senior citizen demand, less than 50 percent of disabled need, and just over 50 percent of low-income adult need. Carroll County and Madison Counties had substantial unmet transit needs for children. In Washington County, 28 percent of transit service needs for the elderly were being met, and approximately one-half of disabled adult needs were being met.

Northwest Arkansas has experienced explosive growth in the past decade, which has undoubtedly affected the need for and the status of public transportation. These needs are continuing to go unmet for many of the disadvantaged citizens of Northwest Arkansas. While the conventional wisdom in the transit community is that there are significant unmet needs in this area of the state, conclusive data defining the problem has not been available in the past.

The Northwest Arkansas Transit Assessment Study surveyed users and providers of public transportation to collect the data necessary to better define the extent of the public transportation problem. Each of the providers was surveyed, and information such as service area, type of service (route or demand-based), fleet size and type, total ridership, targeted service group (such as the elderly or children), and source of funding

and restrictions was collected. User input was sought to assist in the assessment of quality of service and level of service satisfaction. In addition, key municipalities in the study area that contract for service through transportation providers were interviewed to obtain their experiences.

PROJECT OBJECTIVE

The primary objective of the project was to better quantify public transportation needs in Northwest Arkansas. Currently, there is consensus among transportation providers and users that the needs are significant, but that there is little information available to adequately define the problem. General recommendations for further areas of study are included in the conclusions of the project report, but detailed plans for improvement of service were outside the scope of this project as it was proposed.

METHODOLOGY

Provider Survey

In order to develop a list of transit providers, the project team began with the *Arkansas Public Transportation Needs Assessment and Action Plan* (1), published in 1992, which contained a listing of many transportation providers in the area. The list did not contain contact personnel or phone numbers. The telephone book supplied a limited amount of phone numbers for the list. The list was then circulated among people in the local transit industry, including the Northwest Arkansas Regional Planning Commission (NWARPC), Ozark Regional Transit, the Arkansas Highway and Transportation Department (AHTD), and other providers and consultants. With the aid of these individuals the provider list was completed, with contact personnel, addresses, and phone numbers. Table 1 lists those agencies that provide transportation services with their own vehicles. Table 2 lists agencies that require public transportation services, but contract those services through other agencies. Each provider on the list was contacted and provided with a survey form that asked basic questions about each provider. The transit provider survey form (included as Appendix A) was created specifically for this study. To optimize the format, a literature review was conducted to obtain surveys used in the past, and input was sought from the local transit community. The USDOT's Travel Survey Manual was also used for reference. (3)

TABLE 1
Transit Provider List

Provider	Contact	Phone	Fax
Ozark Public Transit	Len Brandrup	756-9109	
Razorback Transit	Gary Smith	575-2356	
Little Red Wagon	Mavis Downing	501-636-8518	621-9801
Fayetteville Trolley (Jones Transportation)	Harold Jones	501-443-6646	501-443-7144
Youth Center	Dale Clark	501-442-9242	
The Errand Girl	Sue Blumenfeld	501-521-4343	501-521-3689
Ozark Guidance Center	David Williams	751-7052	751-4346
Eureka Springs Transit	Lisa Liggett	501-253-9572	253-8272
Carroll County Learning Center	Karla Gray	870-423-3000	870-423-6646
Fayetteville Elderly Taxi Service	info from NWARPC		
Springdale Elderly Taxi Service	info from NWARPC		
Rogers Elderly Taxi Service	info from NWARPC		
Bentonville Elderly Taxi Service	info from NWARPC		

TABLE 2
Agencies who Contract for Service

Agencies Who Contract for Service	Contact	Phone	Fax
Lifestyles	Carol Hart	521-3581	582-4437
Richardson Center	Jo Ann	501-443-4420	501-443-0547
Area Agency on Aging (Area Connections)	Judy Williams	1-800-432-9721	870-741-6214
Adult Development Center	Brenda Neal	501-636-5082	501-363-5671
Benton County Sunshine School	Leta Shockley	271-2288	
Benton County DHS	Preston Haley	273-9011	273-9055
Kids First	Lisa Williams		501-750-0937
Richardson Kids	Joanne	501-443-4420	501-443-0547
Ozark Guidance	Buzz Baldwin	501-750-2020	501-872-1883
Ozark Guidance	Kelly Helmers	501-750-2020	501-750-2747
Springhouse			

Each of the providers was contacted and sent a copy of the provider survey. Most were faxed a copy, but Razorback Transit and Ozark Transit were interviewed. Some persistence was required to get information from some providers. Most were cooperative and were interested in the outcome of this project. Some were less enthusiastic.

Passenger Survey

In order to determine how the various providers were servicing the community the passengers of four different transit providers were surveyed. The companies included Eureka Springs Transit, Ozark Transit, Razorback Transit, the Fayetteville Trolley, and the Elderly Taxi Program. These four operations are currently the major public transportation providers in the northwest Arkansas four-county (Benton, Carroll, Madison, Washington) area. A general description of each follows:

- Elderly Taxi Program – a program developed to provide taxi service to the elderly in Fayetteville, Springdale, Rogers, and Bentonville.
- Eureka Springs Transit - a fixed route service for tourists and the general public in Eureka Springs (see Appendix B for route map)
- Fayetteville Trolley - a small fixed route system serving central Fayetteville (see Appendix C for route map)
- Ozark Regional Transit - a demand responsive, zone based service for various transportation disadvantaged groups including the developmentally and physically disabled, elderly, children, and those without an automobile in Benton, Carroll, Madison, and Washington Counties
- Razorback Transit - a fixed route service for university students and the general public in Fayetteville, with a demand-responsive vehicle for disabled riders (see Appendix D for route map)

The surveys were developed to assess the service provided by each of the agencies. The survey forms can be seen in Appendix E. The questions were worded so that the passengers could choose from six available answers; strongly agree, agree, undecided, disagree, strongly disagree, or does not apply. Special attention was given to ensure that the questions were easy to understand and that the font was easy to read. As the survey was being finished, copies were once again sent for review by area agencies and then finalized. They were then printed on heavy cardstock so that they could be filled out without the use of a clipboard.

Elderly Taxi Service

The information regarding the "Elderly Taxi Program" was obtained from the Northwest Arkansas Regional Planning Commission. This program "is designed to improve the mobility of elderly persons through the issuance of coupons by the City to offset a portion of the taxi fare by the City's local franchise taxi services". (4)

Eureka Springs Transit

In order to survey Eureka Springs Transit, project team members initially rode the buses along the different routes. After time, we realized that it would be more productive to simply wait at the main bus depot and survey riders as they exit the various buses. This allowed us to sample from every bus from every route, not just one bus from each of the routes.

Fayetteville Trolley

In order to survey the Fayetteville Trolley, project team members rode the trolley and handed out surveys to each passenger. Surveys were collected from the passengers once they were complete. A large portion of the Fayetteville Trolley passengers were elderly and needed to take the survey form home with them in order to fill them out. Those surveys were returned to the driver of the trolley and were picked up at a later date.

Ozark Regional Transit

Working with Ozark Transit personnel, a survey date was chosen and the surveys were printed. For this survey, the drivers were instructed to hand out surveys to the passengers and collect them once the passengers exited the vehicle. However, only certain routes could be surveyed in this manner. Some of Ozark Regional Transit's passengers were not able to complete the surveys because of developmental disabilities, physical disabilities, or because they were small children. Information regarding routes for these individuals was obtained by surveying the agencies that contract services for these passengers. They filled out the survey according to how they felt their clients were being served. These surveys were collected directly from the agencies, along with the number of their clients served. The list of agencies includes: Benton County Sunshine School, Adult Development Center, Kids First, Richardson Kids, Ozark Guidance, and Springhouse.

Razorback Transit

Razorback transit was surveyed twice. The first survey was conducted near the end of the 1999 summer term and was carried out in the same manner as the Ozark Transit survey. The survey forms were given to the bus drivers to hand out to the riders. The response was excellent on a couple of routes, but other routes had an extremely low return. Due to the great variation in the response rate, another survey needed to be conducted. It was also desirable to re-survey Razorback Transit because the routes changed between the summer and fall semesters. The survey was redone in the fall semester of 1999. Individuals working for the project team handed out surveys. Doing this allowed us to make sure that all of the routes were compared equally.

Government Survey

Municipalities in the study area were another information source. Several key municipalities contract transit services for the transit dependent in their communities. Representatives of the mayor's offices in Fayetteville, Springdale, Rogers, and Bentonville were contacted in late August and early September of 1999 and interviewed by phone to obtain their perceptions of transit services.

Needs Analysis

Accurately and precisely determining to what extent these or any transit operations meet the need for public transit in a given area, or determining what needs are still unmet, can be difficult if not impossible. However, these needs have been approximated in studies of other locales, based on socioeconomic indicators obtained from the decennial U.S. Census.

Number and Location of Transportation Disadvantaged Persons

Those populations considered to be potentially transportation disadvantaged and listed in the Census included:

- senior citizens
- children
- the disabled
- the poor (those living in households with incomes below the poverty line), and
- those living in households reporting no automobile owned

Since the last general census was conducted almost a decade ago (i.e., 1990), available data for the fast-growing northwest Arkansas area are obviously somewhat dated. This limitation is partly overcome by the existence of special censuses made in the mid-1990s for parts of the four-county area. The data reported in the special census are not as extensive as is the data in the decennial census. Appendix F contains certain pertinent values from the 1990 and subsequent special censuses, by county, by census tract, and by municipality. These data reflect responses individuals gave to the

census-taker; for instance, who responded "yes" to "Do you consider yourself to be transportation disabled?"

Table 3 lists the four county census tracts, and to the right a column entry is made if the tract exhibits an attribute that is an indicator of "more likely to need public transit service," compared to other census tracts in the four-county area. For instance, Benton County tract 202.01 has elevated percentages of both "mobility-disabled population 65 and over" and "occupied households with 0 vehicles". The indicator percentages are based on the 1990 census. For the entire four-county area, this table serves to highlight those areas which are more likely to have higher levels of transportation disadvantaged persons.

TABLE 3
Transit Dependent Assessment Matrix

County Name location within county	Tract	Census number greater than ...				
		19% of pop. >= 65	18% of pop. >= 65 & disabled	2.5% of pop. 16-64 disabled	15% of pop. below poverty level	7% of occupy hh. with 0 vehicles
BENTON COUNTY						
north-northeast	201					
Northeast Rogers area	202.01		X			V
Southeast Rogers area	202.02					
Northwest Rogers area	203					
west Rogers area	204.01		X			
west Rogers area	204.02	E				
Southwest Rogers area	204.03					
Northeast Bentonville	205.01					V
east Bentonville	205.02					V
Northwest Bentonville	206.01					
Southwest Bentonville	206.02		X	D		V
east BellaVista area	207	E				
west BellaVista area	208	E				
Northwest	209					
far northwest	210.01					
Decatur-Gentry	210.02				P	V
east Siloam Spgs. area	211		X			V
Northwest Siloam Spgs.	212.01					
Southwest Siloam Spgs.	212.02	E				V
far southwest	213.01		X			
Southwest	213.02			D		
South	213.03					

north of Beaver Lake	214.01					P	
west of Beaver Lake	214.02	E		D			
south of Beaver Lake	214.03						
CARROLL COUNTY							
Eureka Spgs. area	9501	E	X				V
West	9502	E		D			
Berryville area	9503	E					V
Northeast	9504			D		P	
south-southeast	9505		X			P	V
MADISON COUNTY							
North	9601						
Huntsville area	9602	E	X	D		P	V
Southwest	9603		X	D		P	V
Southeast	9604		X	D		P	
WASHINGTON COUNTY							
far northeast	101.01						
far northeast	101.02						
Northeast Fayetteville	101.03						
east Fayetteville	101.04		X				
Elkins northeast area	101.05			D			
Northeast Springdale	102		X			P	
Southeast Springdale	103						
Northwest Springdale	104.01			D			V
west Springdale	104.02						
Southwest Springdale	104.03		X				
Tontitown area	105.01		X			P	
Elm Spgs - Spgdale	105.02						
sw of Springdale	105.03						
nw of Pr Grove	105.04		X			P	
west of Fayetteville	105.05		X	D			
Farmington north	105.06						
near west side Fay.	106		X			P	
north Fayetteville	107.01		X			P	
Northeast Fayetteville	107.02					P	
central Fayetteville	108					P	V
U of A campus	109						
Pr Grove to Greenland	110.01						

far west	110.02			P	V
west of West Fk	110.03				
far south-sw	110.04		X	P	V
south Fayetteville	111.01		X	D	P
Elkins southwest area	111.02		X	D	P
Southeast	111.03				
central Springdale	112	E	X		V
Fayetteville city			X	P	V
Springdale city					

Based on 1990 *Census* data, the census tracts listed in Table 4 had elevated indicators in at least three of the five categories.

TABLE 4
Census Tract Information

Benton County:	206.02	southwest Bentonville
Carroll County:	9501	Eureka Springs area
	9505	south-southeast part of county
Madison County:	9602	Huntsville area
	9603	southwest part of county
	9604	southeast part of county
Washington County:	110.04	far south-southwest part of county
	111.01	south Fayetteville
	111.02	area to the southwest of Elkins
	112	central Springdale

Overall, the entire city of Fayetteville ranked in three of the five categories. It is not known to what extent the presence of the large university student population contributes to this. Appendixes G through J are maps of each of the four counties, with census tract boundaries outlined. County totals of those in transportation disadvantaged groups are presented in Table 5.

TABLE 5
County Totals of Transportation Disadvantaged Groups

County Name & Category	from General Census 1990	from Special Census '95/'96
BENTON COUNTY - All persons	97,499	
under 16	21,662	22.20%
65 over	17,439	17.90%
Disabled 16-64 (mobility)	1,135	1.50%

Disabled 65 over (mobility)	2,264	13.00%		
Persons below poverty level	9,236	9.50%		
65 over below poverty (1989)	1,798	10.30%		
Total housing units	41,444			
Occupied housing units	37,555			
Households with 0 vehicles	1,842	4.90%		
CARROLL COUNTY - All persons	18,654			
under 16	4,015	21.50%		
65 over	3,389	18.20%		
Disabled 16-64 (mobility)	335	2.30%		
Disabled 65 over (mobility)	468	13.80%		
Persons below poverty level	2,805	15.00%		
65 over below poverty (1989)	553	16.30%		
Total housing units	8,740			
Occupied housing units	7,550			
Households with 0 vehicles	461	6.10%		
MADISON COUNTY - All persons	11,618			
under 16	2,759	23.70%		
65 over	1,907	16.40%		
Disabled 16-64 (mobility)	239	2.70%		
Disabled 65 over (mobility)	400	21.00%		
Persons below poverty level	2,307	19.90%		
65 over below poverty (1989)	492	25.80%		
Total housing units	5,182			
Occupied housing units	4,392			
Households with 0 vehicles	296	6.70%		
WASHINGTON COUNTY - All persons	113,409		141,909	
under 16	25,147	22.20%	31,384	22.10%
65 over	12,784	11.30%	14,460	10.20%
Disabled 16-64 (mobility)	1,448	1.60%		
Disabled 65 over (mobility)	2,236	17.50%		
Persons below poverty level	15,914	14.00%		
65 over below poverty (1989)	1,798	15.60%		
Total housing units	47,349			
Occupied housing units	43,372			
Households with 0 vehicles	2,470	5.70%		

Adjusted Number of Transportation Disadvantaged

When employing census data to estimate the number of persons or households having the attributes associated with "transportation disadvantaged", a problem arises. It is likely that some households or individuals fall into more than one of these categories. So if the number of persons in each category were simply added, the total would include some "double" (or multiple) counting, and overestimate the total number of transportation disadvantaged persons. Therefore, an adjustment to the raw total is in order.

Transportation Disadvantaged Senior Citizens. The number of those 65 and over was taken directly from the *Census* data. Under the Older Americans Act, all those 65 and over are eligible for transportation services, even if they are not disabled or below the poverty level (1). Using information from the 1992 state study, about 30% of the elderly in the northwest Arkansas counties are either disabled, below the poverty level, or both. Column 3 in Table 6 presents estimated numbers of those over 64 whose income or mobility disability makes them transportation disadvantaged.

Transportation Disadvantaged Disabled Demand (excluding Seniors). The number of transportation disabled was taken directly from the 1990 *Census*. For Bentonville-Rogers, Washington county, and Fayetteville-Springdale, the values were inflated at a rate less than the actual population growth shown in the 1995-1996 Special Census, since the growth of some of these groups was slightly less than the general population growth. These numbers are in column 4 of Table 6.

Transportation Disadvantaged Low-Income (excluding Seniors, Disabled). From the 1990 Census (showing 1989 data), the percentages of those in the 16-64 age range and also below poverty were roughly 7% in Benton County, 12% in Carroll and Washington Counties, and 15% in Madison County. The numbers of persons below the poverty level, excluding those over 64 and the disabled, were estimated by taking the number of persons in the age group, then multiplying by 10% for adults and 10% for children. These percentages are slightly less than to those that had been applied to northwest Arkansas in the 1992 statewide study.

TABLE 6
Number of Transportation Disadvantaged Persons

County or City	Persons 65+over	65+over and Disabled or Below Poverty	Mobility Disabled (16-64)	Adult Below Poverty (16-64, exclude Disabled)	Under 16 Below Poverty (exclude Disabled)
1	2	3	4	5	6
Benton	17,439	5,231	1,135	5,840	2,166
Bvl.- Rog.	6,208*	1,862*	499 ^b	3,067*	1,275*
Carroll	3,389	1,017	335	1,125	402
Madison	1,907	572	239	695	276
Washington	14,460*	4,338*	1,738 ^c	9,606*	3,138*
Fay.- Spg.	9,140*	2,742*	569 ^c	6,359*	1,914*

NOTES:

* indicates 1995-1996 Special Census data

b indicates 1990 data multiplied by 1.32 growth factor

c indicates 1990 data multiplied by 1.20 growth factor

65+over and Disabled/Below Poverty estimated at 30% of total 65+over

Adult Below Poverty estimated at 10% of 16-64

Under 17 Below Poverty estimated at 10% of 0-16

Trip-Making Rates

To estimate a demand for public transit services, based on the preceding socioeconomic indicators, the 1992 *Arkansas Public Transportation Needs Assessment and Action Plan (1)* was consulted. This report, sponsored by the Governor's Task Force on Public Transportation Issues, contains the trip rates per year listed in Table 7. For instance, the annual number of transit trips by senior citizens (those 65 and over) in Benton County was 2.0. This value was calculated by dividing the reported number of passenger trips made by seniors by the number of senior citizens ($35,521/17,438=2.0$) estimated to reside in Benton County at that time.

TABLE 7
Specialized Public Transportation Annual Rider Rates
on Existing Systems Reported in 1992

	Benton	Carroll	Madison	Washington
Senior Citizens (65 and over)	2	9.2	10.8	2.4
Disabled (excluding Seniors)	18.1	57	108.4	22.6
Low-income Adult (excluding Seniors, Disabled)	6.4	288.8	37.4	134.5
Low-income Child (excluding Disabled, Head Start)	0	0	0	0
Total population	1.2	26.4	6.8	12.7

The trip rates on existing specialized public transportation services fluctuated greatly among the four counties in northwest Arkansas. These differences reflect, among other things, different levels of service available and socioeconomic differences among the counties. The 1992 report (1) also included an estimate of the number of trips that might be made if more specialized public transportation services were provided, based on trip-making rates close to the statewide 80th percentile trip-making rate. The report did not contain information about trip making needs from households with no vehicles, so this variable was not incorporated into the analysis.

TABLE 8
Specialized Public Transportation Annual Rider Rates

	State Average	State 80th percentile rate
Senior Citizens (65 and over)	4.6	8.4
Disabled (excluding Seniors)	18.6	29.3
Low-income Adult (excluding Seniors, Disabled)	7.8	14.5
Low-income Child (excluding Disabled, Head Start)	2	13.1
Total population	3.9	4

NOTE: The average rate for Low-income adult was calculated excluding Carroll, Pulaski, and Washington County data

Fixed-route systems certainly do exist in rural areas of the United States, but are more commonly thought of in an urban context. The fixed-route ridership estimates were made only for certain cities within the four-county area. For fixed-route public transportation systems, a rate of 5 rides per capita per year was used to estimate public transit ridership demand. (1)

RESULTS

Provider Survey

The following table is a brief summary of the results from the provider survey. More complete information can be found in Appendix K.

TABLE 9
Provider Survey Results

Provider	Funding Source	Number of Trips	Who Served
Ozark Regional Transit	FTA Section 9 & 18, 5309, 5311 (\$115,350), State	174,892	Children (age 16 and under), Elderly (age 60 and over), Elderly

	(\$123,698), Local (\$19,698) + (\$9,998), Painted Bus Program, Co-mingled fares, local matches, FTA (\$510,220), State and Local (\$21,761), Local (\$83,804)		Disabled, Elderly Wheelchair Use, Non-elderly (under 60, over 16), Non-Elderly Disabled, Non-elderly Wheelchair Use
Razorback Transit	.5 million for next year from Tea 21, Student Fees (\$208,000), Parking Funds (\$87,775), Charters (\$90,000), Bus Ads (\$42,000), Fayetteville (\$20,000), FTA 5307 (\$411,308), AHTD (\$32,021),	1,215,413	Children (age 16 and under), Elderly (age 60 and over), Elderly Disabled, Elderly Wheelchair Use, Non-elderly (under 60, over 16), Non-Elderly Disabled, Non-elderly Wheelchair Use
Little Red Wagon	\$4770 DHS (TEA Coalition), State 14-B, Contracts	unknown	Children (age 16 and under), Elderly (age 60 and over), Elderly Disabled, Non-elderly (under 60, over 16), Non-Elderly Disabled
Lifestyles	Section 16 (b) 2, AHTD, United Way, Medicaid	912 (only for 1 vehicle) (81,542 passenger miles for all vehicles)	Non-elderly Disabled
Fayetteville Trolley	The grant received required the City to pay 20% (\$25,550) and FTA 80% (\$99,160) of the cost of the trolley.	16,207	General Public
Youth Center	City of Fayetteville + donations, city owns and insures vehicles, sales tax, property tax	3,000	Children (age 16 and under)
The Errand Girl	Clients	Not Reported	Children (age 16 and under), Elderly Disabled, Non-elderly (under 60, over 16), Non-Elderly Disabled
Ozark Guidance	FTA Section 3 & 16 (b) 2, AHTD, Donations, Medicaid, 2 cents from gasoline tax	11,044	Children (age 16 and under), Elderly (age 60 and over), Elderly Disabled, Non-elderly (under 60, over 16), Non-Elderly Disabled
Eureka Springs Transit Dept.	FTA Section 18, AHTD, County, Funds from building lease, parking	298,015	Children (age 16 and under), Elderly (age 60 and over), Elderly

	revenue, vending machine revenue	Disabled, Elderly Wheelchair Use, Non-elderly (under 60, over 16), Non-elderly Wheelchair Use
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Passenger Survey

Once the passenger surveys were collected, the answers were recorded and scored. The scoring system used consisted of awarding 5 points to "strongly agree", 4 points to "agree", 3 points to "undecided", 2 points to "disagree", 1 point to "strongly disagree" and 0 points to "does not apply". The points were then totaled and averaged for each question.

Elderly Taxi Program

The results listed below are from a survey sent out by the Northwest Arkansas Regional Planning Commission to determine the level of service that was being provided by the taxi companies to the various municipalities. Riders were asked to evaluate the waiting time and dispatch of the taxis, the courtesy of the drivers, and the cleanliness of the vehicles, as well as to list any other problems they might have encountered.

Fayetteville

- **Waiting Time/Dispatch:** More than half of those interviewed responded that they were unhappy with the waiting time/dispatch of the Fayetteville taxis in the 1998 survey. This number was up from 22% the previous year. There appears to be a correlation in the number of complaints and the drop in ridership in 1998. It must also be noted that almost half of the respondents had no problems with the waiting time. Some riders reported problems with the dispatching as well. It was reported that it sometimes took over an hour to get through to the dispatcher and some riders were never able to get through at times.
- **Driver Courtesy:** When queried concerning driver courtesy, the "overwhelming majority of participants indicated they were given very courteous, safe service". (4)
- **Vehicle Cleanliness:** There was a significant difference in complaints regarding the cleanliness of the cabs and the working condition and appearance of the vehicles. There were a couple of complaints of drivers smoking in the cabs. There were a few complaints regarding the unacceptable personal appearance of the drivers. (4)

Springdale

The passengers of the Springdale taxi program were asked questions similar to those asked of the Fayetteville taxi passengers.

- **Waiting Time/Dispatch:** Almost half of the respondents said that the waiting time was unreasonable and many specified a waiting time of 1-3 hours. When asked if the riders had had any problems with the service, the main problem listed was waiting time.
- **Driver Courtesy:** A majority of the passengers replied that the driver was courteous.

- Vehicle Cleanliness: A large majority said that the vehicles were clean.

Rogers

The City of Rogers Elderly Taxi Program is referred to as CARE (City Assisted Rides for the Elderly). The results from the Rogers survey are strictly anecdotal. A few examples are as follows:

- "Surely this Program has been a blessing to me. In fact, it's been such a help I don't know how I would get by without this help as I have cancer of the liver and I, of course, have to make so many different trips about it, as well as other medical trips. Thank you so much and God bless you for being such a big help. I had to quit driving my car a year ago. I'm 90 years old. God Bless."
- "Great. If not for the coupons, I don't know how I would get my bills paid and get my food home. I have no auto and it's hard to stretch SSI income. Thank you."
- "Your tickets are a Godsend for me. I love it. I have one less worry. I go to the Diagnostic Clinic at least every other week. Then, I go grocery shopping at whatever store I want to go to and Wal-Mart once a month for choice of a lot of things. I have gone visiting. I am 78-1/2 years old with high blood pressure. It's a great problem for me. How did a person think of this cab deal? It's so great. I have such fun with their drivers and they are so grateful and so am I. I just hope it can go on and on. I love it very much. I go to all funerals too. God bless."

Bentonville

The passengers of the Bentonville taxi program were asked questions similar to those asked of the Springdale and Fayetteville taxi passengers. When asked if they had encountered any problems with the service, no problems were listed.

- Waiting Time/Dispatch: All of the riders responded that they were picked up in a reasonable amount of time.
- Driver Courtesy: All of the passengers replied that the driver was courteous.
- Vehicle Cleanliness: All of the riders responded that the vehicles were clean.

Eureka Springs Transit

The results for Eureka Springs Transit were very good. There seemed to be no obvious problem with the service and the passengers rewarded this with high marks on the survey forms. For a summary of averaged responses to survey questions, see Table 10.

Fayetteville Trolley

The passengers of the Fayetteville Trolley gave the Trolley the highest marks of any of the transportation services surveyed. The average score was a 4.6. Many of the passengers of the Trolley are residents of the Hillcrest Towers. In this complex, many of the residents are elderly and transit dependent. As with Ozark Regional Transit, this is the only form of travel some people have. It was noted, while conducting the survey, that the ride was a source of entertainment for some. Different individuals would ride to talk with friends as well as the bus driver, who seemed genuinely concerned about the passengers. Consequently, high marks were given to the driver of this service. For a summary of averaged responses to survey questions, see Table 11.

TABLE 10
Eureka Transit Passenger Survey Data

	5	4	3	2	1	0	Average
This provider provides service at the time of day when I need it.	22	40	3	0	0	1	4.292
This provider provides service on the days of the week when I need it.	24	31	4	0	0	7	4.339
The cost of this ride is reasonable.	32	30	1	1	0	1	4.453
The length of this ride is reasonable.	25	37	4	0	0	0	4.318
This provider goes where I need to go.	25	31	6	2	0	2	4.234
I can easily transfer to other transit services from this one.	24	29	8	0	0	4	4.262
This provider arrived at the time I was told it would.	25	31	4	2	0	5	4.274
This provider was available at the time I requested.	19	29	5	1	0	9	4.222
I was able to communicate with the person who took my reservation.	20	25	4	1	1	16	4.216
Driver assistance between the door of my building and the vehicle was helpful.	14	20	2	0	0	29	4.333
I can communicate with the driver of the vehicle if I need to.	22	35	4	1	0	3	4.258
The driver is able to accommodate my disability.	8	5	1	0	0	49	4.500
I am comfortable with the driver's appearance.	28	38	0	0	0	1	4.424
The vehicle is big enough to accommodate all of the passengers.	22	37	3	3	0	1	4.200
The vehicle is clean.	36	28	0	0	0	0	4.563
The vehicle is comfortable.	19	32	4	6	0	0	4.049
The application for eligibility (or certification process) to use this service was reasonable.	16	21	2	0	0	21	4.359
I am notified of service changes/fares in advance.	12	21	2	0	0	25	4.286
Information regarding the availability of service on this provider is readily available.	21	29	2	0	1	6	4.302
Do you need a vehicle with a wheelchair lift? Y or N	Wheelchair					Avg	4.310
	Yes	No					
	1	60					

TABLE 11
Fayetteville Trolley Passenger Survey Data

	5	4	3	2	1	0	Average
This provider provides service at the time of day when I need it.	13	9	0	2	0	0	4.375
This provider provides service on the days of the week when I need it.	16	5	2	2	0	0	4.400
The cost of this ride is reasonable.	18	2	0	0	0	4	4.900
The length of this ride is reasonable.	18	8	0	0	0	0	4.692
This provider goes where I need to go.	15	7	1	3	0	0	4.308
I can easily transfer to other transit services from this one.	14	4	1	1	0	5	4.550
This provider arrived at the time I was told it would.	13	8	0	2	0	3	4.391
This provider was available at the time I requested.	9	5	0	0	0	11	4.643
I was able to communicate with the person who took my reservation.	10	2	0	0	0	11	4.833
Driver assistance between the door of my building and the vehicle was helpful.	14	2	0	0	0	7	4.875
I can communicate with the driver of the vehicle if I need to.	15	9	0	0	0	0	4.625
The driver is able to accommodate my disability.	6	3	0	0	0	12	4.667
I am comfortable with the driver's appearance.	16	8	1	0	0	0	4.600
The vehicle is big enough to accommodate all of the passengers.	16	8	0	0	0	1	4.667
The vehicle is clean.	17	6	0	1	0	0	4.625
The vehicle is comfortable.	14	8	1	0	0	0	4.565
The application for eligibility (or certification process) to use this service was reasonable.	9	1	0	0	0	9	4.900
I am notified of service changes/fares in advance.	7	3	0	0	0	9	4.700
Information regarding the availability of service on this provider is readily available.	13	4	1	0	1	1	4.474
Do you need a vehicle with a wheelchair lift? Y or N	Wheelchair					Avg	4.621
	Yes	No					
	4	19					

Ozark Regional Transit

The results for Ozark Regional Transit were more complicated as shown in Tables 12 and 13. When the passengers were surveyed (passengers whose rides were not contracted through an agency), the scores were very good (around 4.5) except for "The provider goes where I need to go" which received a 3.88. Discrepancies arose when the results from the proxy survey forms were compared to the results of the passenger survey forms. The proxy survey forms are forms that were filled out by a contracting agency on behalf of their constituents, due to their inability to complete the survey. Many of these passengers are young children, the elderly, or are individuals who are mentally or physically challenged.

Ozark Transit's overall score on the proxy forms was 3.74 and several of the individual questions received much lower scores. The question "The length of the ride is reasonable" received a 4.5 from the passenger surveys and a 1.8 from the proxy surveys. The questions "The vehicle is big enough to accommodate all of the passengers" and "Driver assistance between the door of my building and the vehicle was helpful" also had a large margin between the results, 1.8 and 1.2 respectively, with the passenger survey results higher than the proxy results. What could cause such a large discrepancy?

There are several reasons why there are discrepancies in the results, all of which are speculative but could explain the differences.

- Transit passengers may have had concerns that negative results on the survey could result in the service being halted. The survey forms clearly stated that this was not the case; nonetheless, there may have been a fear of losing service that caused the passengers to give higher service ratings than they actually perceive.
- On the other hand, persons who may not actually use the service filled out the proxy forms. One who is used to driving everywhere they choose would be less tolerant of any wait associated with public transit. Those who are transit dependent would be much more willing to wait, since the alternative is not to go at all. This is quite a different perspective from those whose alternative is to take their own vehicle.
- Also, the lower ratings on the proxy forms may be indicative of the proxy's comparison of the service being provided to what the agency would like to provide to their constituents. Put another way, the service provided may have been compared to the service the agency would like to provide, if they had their own vehicles and were not required to serve the general public and other agencies as Ozark Transit does. This difference in perspective could explain some of the discrepancies.

TABLE 12
Ozark Transit Passenger Survey Data (Proxy Forms Only)

	Ozark Regional Transit Proxy Forms						Average	
	5	4	3	2	1	0		
This provider provides service at the time of day when I need it.	14	174	0	0	0	0	4.074	
This provider provides service on the days of the week	49	139	0	0	0	0	4.261	
The cost of this ride is reasonable.	25	62	0	0	0	10	4.287	
The length of this ride is reasonable.	0	0	0	153	35	0	1.814	
This provider goes where I need to go.	24	164	0	0	0	0	4.128	
I can easily transfer to other transit services from this one.	0	65	91	0	0	32	3.417	
This provider arrived at the time I was told it would.	0	163	25	0	0	0	3.867	
This provider was available at the time I requested.	0	163	25	0	0	0	3.867	
I was able to communicate with the person who took my reservation.	0	71	0	0	0	117	4.000	
Driver assistance between the door of my building and the vehicle was helpful.	10	54	77	0	0	47	3.525	
I can communicate with the driver of the vehicle.	0	111	0	0	0	0	4.000	
The driver is able to accommodate my disability.	0	163	0	0	0	25	4.000	
I am comfortable with the driver's appearance.	0	163	25	0	0	0	3.867	
The vehicle is big enough to accommodate all of the passengers.	0	71	0	117	0	0	2.755	
The vehicle is clean.	0	86	25	0	0	0	3.775	
The vehicle is comfortable.	0	97	14	0	0	0	3.874	
The application for eligibility (or certification process) to use this service was reasonable.	0	72	39	0	0	77	3.649	
I am notified of service changes/fares in advance.	0	174	0	0	0	0	4.000	
Information regarding the availability of service on this provider is readily available.	0	174	14	0	0	0	3.926	
Do you need a vehicle with a wheelchair lift? (check one)	Wheelchair?						Avg	3.741
	Yes	No						
	139	49						

TABLE 13
Ozark Regional Transit Passenger Survey Data (Passenger Surveys Only)

	5	4	3	2	1	0	Average
This provider provides service at the time of day when I need it.	36	30	2	6	4	0	4.128
This provider provides service on the days of the week	39	31	0	3	1	1	4.405
The cost of this ride is reasonable.	47	21	2	1	1	2	4.556
The length of this ride is reasonable.	42	29	2	3	0	0	4.447
This provider goes where I need to go.	43	25	2	1	3	1	4.405
I can easily transfer to other transit services from this one.	19	19	9	4	3	20	3.870
This provider arrived at the time I was told it would.	38	30	3	2	3	0	4.289
This provider was available at the time I requested.	34	35	2	1	2	1	4.324
I was able to communicate with the person who took my reservation.	38	28	1	3	2	2	4.347
Driver assistance between the door of my building and the vehicle was helpful.	36	16	1	0	0	20	4.660
I can communicate with the driver of the vehicle.	49	23	1	0	3	0	4.513
The driver is able to accommodate my disability.	36	16	0	1	0	18	4.642
I am comfortable with the driver's appearance.	45	26	0	2	3	0	4.421
The vehicle is big enough to accommodate all of the passengers.	38	31	1	4	1	0	4.347
The vehicle is clean.	42	30	0	0	0	0	4.583
The vehicle is comfortable.	37	32	2	1	1	0	4.411
The application for eligibility (or certification process) to use this service was reasonable.	42	25	3	0	0	4	4.557
I am notified of service changes/fares in advance.	30	27	6	1	0	9	4.344
Information regarding the availability of service on this provider is readily available.	33	32	2	3	0	2	4.357
Do you need a vehicle with a wheelchair lift? (check one)	Wheelchair?					Avg	4.400
	Yes	No					
	13	63					

Razorback Transit

Near the core of campus, where the demand for parking space exceeds the supply, it is

crucial that some sort of public transportation be available. Razorback Transit received very good marks on most of the responses (average of 4.0). The only lower marks came from "The waiting time for the bus was not too great" and " I am notified of service changes/fares in advance", which received a score of 3.3 and 3.2 respectively. For a summary of averaged responses to survey questions, see Table 14.

TABLE 14
Razorback Transit Passenger Survey Data

	5	4	3	2	1	0	Average
This provider provides service at the time of day when I need it.	35	58	6	5	2	0	4.123
This provider provides service on the days of the week when I need it.	50	43	5	7	0	0	4.295
The cost of this ride is reasonable.	0	0	0	0	0	107	0.000
The length of this ride is reasonable.	41	54	6	4	1	0	4.226
This provider goes where I need to go.	39	47	11	5	2	1	4.115
I can easily transfer to other transit services from this one.	36	36	14	6	0	10	4.109
The waiting time for the bus was not too great.	21	28	24	21	11	1	3.257
The bus service was available at the time of day I needed it.	37	50	5	6	5	0	4.049
I was able to communicate with the person who took my reservation.	0	0	0	0	0	107	0.000
Driver assistance between the door of my building and the vehicle was helpful.	10	12	9	0	0	65	4.032
I can communicate with the driver of the vehicle if I need to.	39	44	21	2	0	0	4.132
The driver is able to accommodate my disability.	6	1	0	0	0	82	4.857
I am comfortable with the driver's appearance.	46	47	10	1	0	2	4.327
The vehicle is big enough to accommodate all of the passengers.	29	42	17	14	4	0	3.736
The vehicle is clean.	47	48	3	2	0	0	4.400
The vehicle is comfortable.	33	62	4	0	0	0	4.293
The application for eligibility (or certification process) to use this service was reasonable.	0	0	0	0	0	102	0.000
I am notified of service changes/fares in advance.	7	20	30	8	6	27	3.197
Information regarding the availability of service on this provider is readily available.	25	51	12	7	2	2	3.928

Do you need a vehicle with a wheelchair lift? Y or N	Wheelchair		Avg	4.067
	Yes	No		
	0	98		

Government Survey

The results of the telephone interviews of the representatives of the mayor’s offices in Fayetteville, Springdale, Rogers, and Bentonville were strikingly consistent. All provide services to their constituents through contracts with Ozark Transit and Elderly Taxi Programs. Fayetteville also supports Razorback Transit and runs the Fayetteville trolley. The results of the interviews with each municipality are summarized below.

Fayetteville

The City of Fayetteville contracts with Jones Transportation to run the Fayetteville Trolley. They stated that they are pleased with the service and are expanding it to include a route in the south part of town. They also indicated positive feedback from the riders.

Fayetteville is also pleased with the quality of service provided by Razorback Transit. However, concerns were expressed about the number of Razorback Transit riders that park in the Dickson Street area, which could adversely impact local merchants.

The Elderly Taxi Service appears to be meeting the needs of the citizens of Fayetteville, according to city staff.

When asked about Ozark Regional Transit, the results are less positive. It was indicated that Ozark had not been forthcoming about specific information that Fayetteville had requested, such as ridership by day and month, and Origin/destination data by quadrant of town. Fayetteville at that time was withholding funding from Ozark Transit until these problems were worked out. In general, Fayetteville was not satisfied with Ozark Transit’s response to requests for information.

Springdale

Springdale officials indicated satisfaction with the Elderly Taxi Service provided there. The taxi program is able to provide origin and destination data for the riders through tracking of the coupons used to procure rides.

The discussion of Ozark Transit yielded similar results to Fayetteville’s experience. They indicated high levels of frustration with Ozark’s perceived lack of cooperation in providing requested information to the city, such as number of individual riders (not contract riders) and where they are going. They acknowledged that they don’t have much contact with the users of the service and so couldn’t speculate on the riders’ level of satisfaction.

Bentonville

Bentonville officials indicated that, although they have had problems with their taxi providers in the past, they are "very pleased" with the quality of their current provider. The new provider has been under an open-ended contract for 18 months, so that they can extend it as long as the service remains satisfactory.

They indicated that they were not as happy with Ozark Transit’s service as with the Taxi service. It was felt that the Bentonville/Bella Vista area was not getting what they are paying for. Interestingly, it was stated that some City Council members are recognizing

the increasing viability of mass transit in the area, and that regional connected mass transit may become feasible soon.

Rogers

Rogers is pleased with their taxi service program, which is based on income. There is a waiting list, and they need more funding to serve all who would like to use it. Nonetheless, it was stated that it is a good program for those who get to use it.

Some of the complaints that were stated regarding Ozark Transit were that they feel the buses are mostly running empty, they dislike that riders have to make reservations 24 hours in advance, and that the buses don't pick up when they say they will. They were considering withholding funding for Ozark at the time of the interview due to what Rogers officials feel is a lack of accountability for where and how the money is being spent.

Needs Analysis

Estimates of the number of transportation disadvantaged persons (presented previously) multiplied by an assumed trip-making rate equal the number of trips that would be made if sufficient transit services were available. One could perform calculations with the state average trip-making rate; selection of this rate implies that the statewide average rate reflects an adequate level-of-service. Or, one could chose a higher rate, such as the 80th percentile rate; selection of this rate implies that there is a significant unmet need for specialized-transit service, and a rate closer to the "high end" (i.e., 80th percentile) is more representative of the level-of-service that should be provided and would be utilized by riders, if the service were available.

The 80th percentile state annual trip-making rates, multiplied by the number of persons in the various categories (adjusted to eliminate double or other multiple counting), yields one estimate of potential specialized public transit ridership. Table 15 displays this.

Table 16 compares this estimated total demand for trips with the number of trips now being provided. Table 17 lists an estimate of the annual number of unlinked public transit trips on a fixed-route system (based on 5.0 unlinked trips per person per year), followed by reported ridership in those locales where actual systems exist.

TABLE 15
Annual Demand for Specialized-Transit Trips

County or City	Total Demand for Trips	65+over and Disabled or Below Poverty	Mobility Disabled (16-64)	Adult Below Poverty (16-64, exclude Disabled)	Under 17 Below Poverty (exclude Disabled)
1	2	3	4	5	6
Benton	190,251	43,940	33,256	84,680	28,375
Bvl. - Rog.	91,436	15,641	14,621	44,472	16,703
Carroll	39,937	8,543	9,816	16,313	5,266
Madison	25,501	4,805	7,003	10,078	3,616
Washington	267,757	36,439	50,923	139,287	41,108
Fay. - Spg.	156,983	23,033	16,672	92,206	25,073
Total	523,446				

TABLE 16
Comparison of Specialized-Transit Demand and Service

Provider	Estimated Total Demand for Trips	Number of Trips Actually Provided
Abilities Unlimited		9,000
Adult Development Center of Benton County		8,579
Carroll County Learning Center		4,410
Eureka Springs Transit		492
Lifestyles		912
North Ark. Transportation Service		15,944
Ozark Guidance		10,146
Ozark Transit		211,421
Razorback Transit		9,058
Total	523,446	269,962

TABLE 17
Fixed-Route City Transit Service Demand Estimate

	Population (1990 or later Special Census)	Estimated annual # of trips, based on 5 trips per person	Actual annual # of trips on existing system
Benton County	97,499		
Bentonville-Rogers	49,630	248,150	none
Carroll County	18,654		
Eureka Springs	1,900	9,500	296,960
Madison County	11,618		
Washington County	141,909		
Fayetteville	52,976	264,880	1,176,194
Springdale	38,897	194,485	none

NOTE: Fayetteville entry is sum of Razorback (1,155,459) and Trolley (20,735)

Fixed-route ridership figures in Fayetteville are affected by the presence of the University student population, and Eureka Springs ridership is unusual due to the high tourist demand which is extremely disproportional to the city population.

Comparison of Specialized-Transit with Other States

As one means of placing the Northwest Arkansas specialized-transit demand estimates in perspective, a comparison with systems in surrounding states was made. Calls were made to the public transportation sections of the Kansas, Missouri, and Tennessee state departments of transportation. State personnel identified specialized-transit systems and persons to contact in their state. Populations of the service areas were obtained from the census; some assumptions and estimates were necessary in order to use this data. Table 18 presents a comparison of the specialized transit systems' reported actual ridership with ridership projections, based on both Arkansas average and 80th percentile rates.

TABLE 18
Comparison with Specialized-Transit Ridership in Surrounding States

	Actual Number of Trips Reported	Number Projected with Average Ark. Rate	Number Projected with 80th % Ark. Rate
Douglas County Area Trans. (serves Lawrence, Kansas, urbanized area)	71,000	70,869	142,704
Dunklin County Transit (Mo.; inc'l west part New Madrid County)	123,665	44,530	84,988
First Tennessee Human Resource Agency (7 counties in far northeast Tennessee)	138,931	359,363	688,632
Hutchinson - South Hutchinson (Kansas)	42,112	102,881	209,887
OCCK (9 counties in north central Kan)	90,000	102,881	209,887

The annual ridership reported by these systems varies from ridership predicted with Arkansas' average and 85th percentile rates. Ridership on the Douglas County and the OCCK systems was on par with that of the average Arkansas system. Ridership on the First Tennessee and on the Hutchinson systems was below the ridership predicted with the average Arkansas rates. The Dunklin County system, serving the Missouri bootheel, reported an annual ridership well above that predicted with the Arkansas 80th percentile rates. It was noted that the Dunklin County system had been nominated for national awards, which indicates that it is an exemplary specialized-transit service provider.

The Hutchinson, Kansas provider maintained detailed records that included the number of trips made by the elderly and the disabled. Taking the Arkansas 80th percentile rates and multiplying them by the Hutchinson population produces numbers close to the actual number of elderly and disabled trips made. However, the ridership estimates based on the Arkansas 80th percentile-rates were well above the actual number of trips made in the other categories.

These comparisons with specialized-transit operations in surrounding states suggest two things. First, actual ridership rates can and do vary widely among different systems. Using any assumed rate to predict actual ridership of a particular system is problematic. The level of service provided, local awareness of the availability of specialized-transit services, and local attitudes toward using specialized-transit services are just a few of the factors that may affect actual specialized-transit use. Second, using 80th percentile rates to predict demand is not necessarily unrealistic, as indicated by the high ridership rate of the Dunklin County system.

CONCLUSIONS AND OBSERVATIONS

As previously noted, this report represents a "snapshot in time" of the state of public transportation in Northwest Arkansas. Generally speaking, those who actually use the

various services as a means of transportation are pleased with the level of service they are receiving. The data indicate, however, that there is not enough transit service to meet the needs of transit-dependent residents of Northwest Arkansas.

At the time the study was conducted (in late summer of 1999), the quality of service being provided by Ozark Transit was perceived to be low by the public service agencies who contract with Ozark and by the municipalities in the area who support the service. This could be explained by a difference in perspective on the part of the agencies and Ozark, and to a lack of communication and trust between the public officials and Ozark Transit. The public officials contacted were unanimous in expressing concern over a lack of accountability in how their funding for public transportation was being spent. As this report goes to press, however, an advisory committee has been formed for Ozark Transit consisting of representatives of the municipalities. This new development may help open the lines of communication and aid in creating an atmosphere of trust.

From the data and ridership estimates the following observations were made.

- The number of trips per year actually reported by the specialized-transit providers (such as Ozark Transit) is less than the number predicted using the trip-making rates in the 1992 statewide report.
- The public transit service in the small town of Eureka Springs, in addition to serving local tourists and therefore removing automobile traffic from narrow, winding streets, also serves an area that is more transportation disadvantaged than many other areas in the four-county area.
- The data support current proposals to expand public transit service to south Fayetteville (tract 111.01). This tracts and adjacent tract 111.02 (southwest of Elkins) were among the few that rated "transportation disadvantaged" in four of the categories. In considering the feasibility of serving tract 111.02, one should consider that the population density of 111.01 was 624 persons/square mile, whereas the density of 111.02 was 86 persons/square mile. In addition, 111.02 population grew 40% from 1990 to 1996, so the proportions of transportation disadvantaged could have significantly changed.
- Many sections of Madison County appear to have a higher proportion of transportation disadvantaged persons than other parts of the four-county northwest Arkansas area.
- The combined populations of Bentonville and Rogers listed in the 1996 special census is almost 50,000. This is much larger than the reported 1990 population of Hot Springs, and not much less than Fayetteville's or Pine Bluff's, all of which have public fixed-route transportation systems.

RECOMMENDATIONS

The purpose of this study is to assess the status of public transportation in Washington, Benton, Carroll, and Madison Counties. The primary objective is to better quantify public transportation needs in this Northwest Arkansas area. Although detailed plans for public transit service improvements are outside the scope of this study, some general recommendations for further areas of study will be given.

In general, the existing public transit services in Northwest Arkansas currently serve specific populations, such as University students, tourists, disabled, etc. The more likely scenario in the foreseeable future is that both existing and any expanded services will be

most used by targeted groups (many of which would not otherwise have access to transportation) and not be regularly used for transportation by the general public. Due to special circumstances, the Eureka Springs Transit (tourism) and Razorback Transit (university students) ridership rates are much higher than what one would expect based on area populations alone. The needs analysis highlights specific parts of the four county area where additional transit services are more likely to be justified, according to the socioeconomic characteristics of that area. Two locales that may merit consideration for public transit service are south Fayetteville and the Bentonville-Rogers area.

As Northwest Arkansas continues to grow, origins and destinations for the transportation dependent will become less confined by municipal and/or county lines -- political boundaries will become less relevant to public transportation users. Developing a more coordinated regional system in the future may better serve the demand. To accomplish this, transportation providers and the agencies and municipalities that fund them will have to enter into a cooperative effort.

More study is needed to recommend specific ways that public transportation can be better coordinated in Northwest Arkansas. The needs analysis identified census tracts with large percentages of transit dependent individuals, but it was outside the scope of this study to determine origins and destinations of transit riders. The first step would be to conduct an Origin/Destination survey to gain a better understanding of transit travel patterns. Once travel behavior is understood, suggested routes may be developed. More densely developed areas may benefit from increased fixed-route service. In less densely developed areas, it is less likely that fixed-route service would be feasible, and it is more likely that demand-responsive service would be the appropriate option.

A Task Force with representatives of the various municipalities and counties, along with the Northwest Arkansas Planning Commission, should be considered as a way to better coordinate services in the area. Transit providers, agencies that contract for services, and the users of the services should be included. Input from all interested parties will improve communication and perhaps aid in bridging the political barriers to coordinated public transportation.

The rider surveys can be used to identify potential problems with existing services. For example, the responses to the Razorback Transit survey question "the waiting time for the bus was not too great" were less favorable than were responses to most questions on the Razorback Transit passenger survey. This suggests a need to study and analyze the actual (not planned or intended) waiting times between Razorback Transit buses on various routes and how closely the buses adhere to schedule. If problems actually exist, the next steps would be to identify factors which may cause buses to deviate from the schedule and ascertain what can be done to allow buses to operate more closely to the schedule.

If the study goes into the next phase, the Census 2000 data should be used to update the information in this study. It is possible that the indicators used to identify a highly transit-dependent census tract have changed significantly.

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