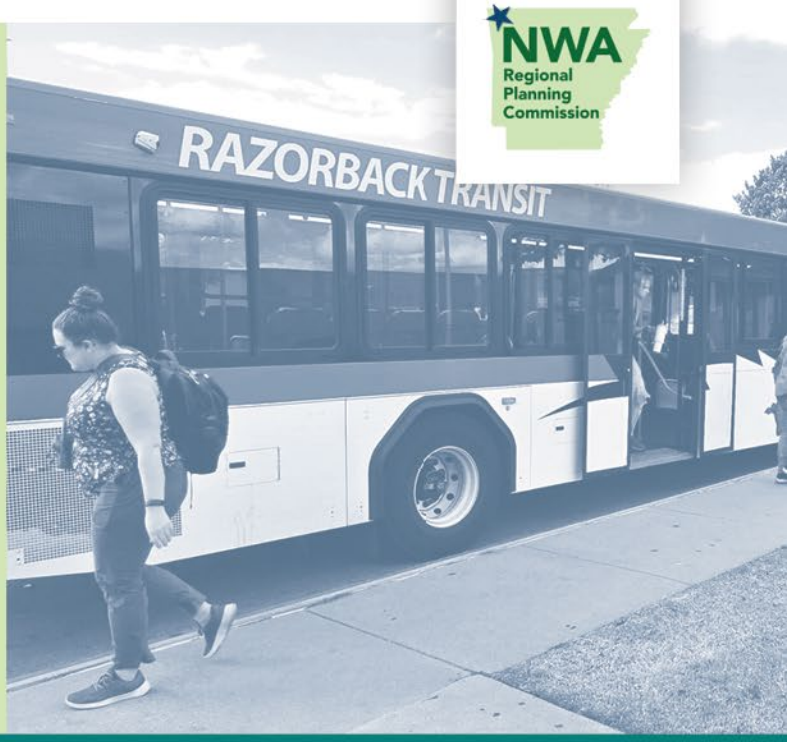

NWA Regional Planning Commission

NWARPC

NORTHWEST ARKANSAS REGIONAL PLANNING COMMISSION

TRANSIT ALTERNATIVES STUDY

2026 Draft

Prepared by:

WSP

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Acronyms and Abbreviations

ACS	Americans Community Survey
ADA	Americans with Disabilities Act
ADT	Average Daily Traffic
AHTD	Arkansas State Highway and Transportation Department
APTA	American Public Transportation Association
AVL	Automatic Vehicle Location
BAT	Business Access and Transit
BEB	Battery Electric Bus
BRT	Bus Rapid Transit
CE	Categorical Exclusion
CIG	Capital Investment Grants
CNG	Compressed Natural Gas
CR	Commuter Rail
DCE	Documented Categorical Exclusion
DMU	Diesel Multiple Unit
EA	Environmental Assessment
EIS	Environmental Impact Statement
FTA	Federal Transit Administration
GCRTA	Greater Cleveland Regional Transit Authority
GIS	Geography Information System
GTC	Growing Transit Communities
HCT	High Capacity Transit
ICE	Intersection Control Evaluation
ITS	Intelligent Transportation System
LCLIP	Landscape Conservation and Local Infrastructure Program
LODES	Longitudinal Employer-Household Dynamics Origin-Destination Employment Statistics
LOS	Level of Service
LID	Local Improvement District
LPA	Locally Preferred Alternative
LRT	Light Rail Transit
MPO	Metropolitan Planning Organization
MPTE	Multifamily Property Tax Exemption Program
MTP	Metropolitan Transportation Plan
NACTO	National Association of City Transportation Officials
NEPA	National Environmental Policy Act
NTD	National Transit Database
NWA	Northwest Arkansas
NWACC	Northwest Arkansas Community College
OEM	Original Equipment Manufacturer
ORT	Ozark Regional Transit
P&R	Park and Ride

PRD	Planned Residential Development
PSM	Parkland-Spanaway-Midland
PSRC	Puget Sound Regional Council
RCW	Revised Code of Washington
ROW	Right-of-Way
RT	Razorback Transit
SEPA	State Environmental Policy Act
SFC	Strategic Freight Corridor
SLM	Shared Lane Markings
TAS	Transit Alternatives Study
TC	Transit Center
TCC	Tacoma Community College
TDM	Travel Demand Model
TDR	Transfer of Development Rights
TMP	Transportation Master Plan
TOD	Transit-Oriented Development
TSP	Transit Signal Priority
TVM	Ticket Vending Machine
TWE	Transit Waiting Environment
TWLTL	Two-Way Left-Turn Lane
UGA	Urban Growth Area
U of A	University of Arkansas
USDOT	United States Department of Transportation
v/c	Volume to Capacity
WSDOT	Washington State Department of Transportation
ZEB	Zero-Emission Bus

1 INTRODUCTION

The Northwest Arkansas Regional Planning Commission (NWARPC) is advancing efforts to improve the future of multimodal transportation for the region. This project will provide NWARPC and its partner communities with an updated regional Travel Demand Model (TDM) that will facilitate sound decision-making for highway, transit, bicycle, and pedestrian projects for years to come and be a necessary component in the development of the upcoming Metropolitan Transportation Plan update for 2050.

This project also includes an assessment of alternative transit improvements to better connect Bentonville, Rogers, Lowell, Springdale, Johnson, and Fayetteville with a rapid transit service. This Transit Alternative Study (TAS) will examine the benefits and costs of Bus Rapid Transit (BRT), Light Rail Transit (LRT), and Commuter Rail (CR) to best meet the needs of residents and visitors of the NWARPC region.

1.1 CORRIDOR DESCRIPTION

The TAS explores new public transit modes and alignments along a general north/south planning area to improve mobility and connectivity, and provides transportation choices in the Bentonville, Rogers, Lowell, Springdale, and Fayetteville areas. The Benton and Washington County areas, which are the primary areas for the TAS, have been experiencing rapid population and employment growth over the last decade. This growth is anticipated to continue in the years ahead. With this growth, increased roadway and highway congestion has occurred in the NWARPC area. One of the key objectives of the TAS will be to develop and assess transit alternatives that can provide more mobility options for residents, employees, and visitors to the region, and to take pressure off existing roadways by shifting some travel trips onto a future high-frequency transit service.

Figure 1 shows the study area for the TAS, which extends from the southern portion of Bella Vista to the southern end of Fayetteville, generally extending in a five-mile radius of the Interstate 49 corridor. As shown in Figure 1 the study area also extends slightly to the west in the northern portion to include the Northwest Arkansas National Airport as an importation connection point and activity center. The region is home to numerous large national and international employers, including Wal-Mart, JB Hunt International, and Tyson Foods. Along with major employers, the area is also a regional hub for higher education with the University of Arkansas (U of A) located in Fayetteville. The university and large employer headquarters are major engines for the region's rapidly growing economy and a driver of population growth. As detailed later in the analysis, the study area's population grew by more than 30% between 2010 and 2020, from approximately 299,000 in 2010 to over 389,000 in 2020, according to US Census data.

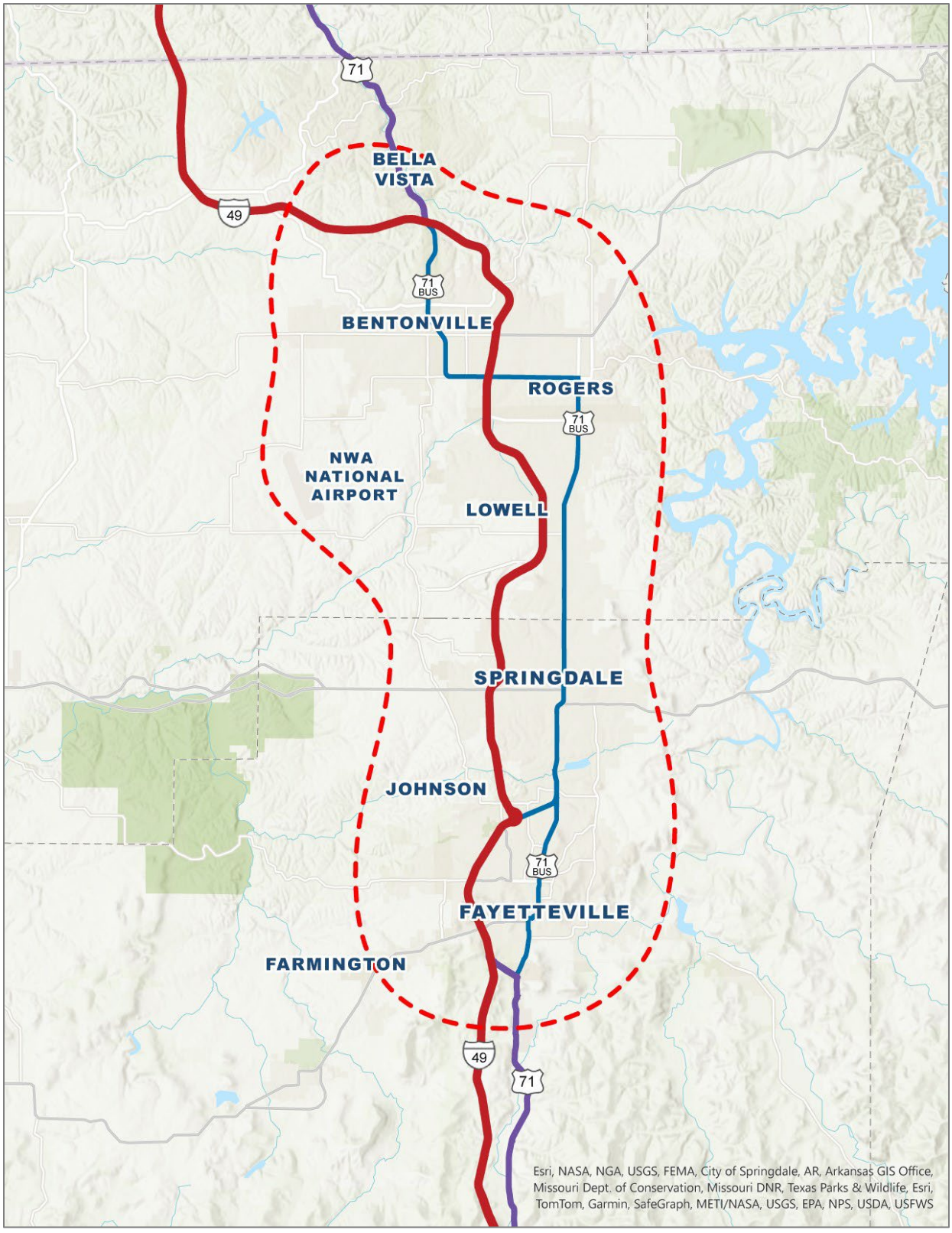

Figure 1 Transit Alternatives Study Area

1.2 Planning Context (Previous Studies/Plans)

Over the past fifteen years, multiple planning studies have been conducted in the NWA region regarding the enhancement of mobility and public transportation. As the TAS begins, it is important to understand what these prior plans have recommended, define the status of past recommendations or projects, and establish the context for transit improvement plans to be developed in this project. For this existing condition assessment, the following plans were reviewed and summarized:

- NWARPC Transit Development Plan (2010)
- Transit Alternatives Analysis (2014)
- Fayetteville Mobility Plan (2018)
- Connect Northwest Arkansas Transit Development Plan (2020)
- Fayetteville City Plan 2040 (2020)
- 2045 Metropolitan Transportation Plan (2021)
- 71B Corridor Project & Plan (2024)

1.2.1 NWARPC Transit Development Plan (2010)

The Transit Development Plan was developed collaboratively between NWARPC, the Arkansas State Highway and Transportation Department (AHTD), Ozark Regional Transit (ORT), and Razorback Transit (RT). The Northwest Arkansas region has experienced tremendous growth in recent years. When this plan was written, the population was estimated to be 450,000. By 2035, the population was projected to be 677,000. The industries and institutions fueling this growth include the University of Arkansas, NWA Community College, several healthcare institutions, Wal-Mart, Tyson Foods, J.B. Hunt, and others.

Figure 2 and Figure 3 below show the population projection and future employment projection for 2030.

County	2010 Population	2030 Population	Change (%)
Benton	219,673	351,109	59.8%
Washington	215,780	326,624	51.4%
Total	**435,453**	**677,733**	**55.6%**

Figure 2 Current, Future, and Percent Change in Population for Counties (NWARPC TDP, 2010)

Current, Future and Percent Change in Employment for Both Counties

County	2010 Employment	2030 Employment	Change (%)
Benton County	113,023	177,651	57.2%
Washington County	117,961	176,597	49.7%
Total	**230,984**	**354,248**	**53.4%**

Figure 3 Current, Future, and Percent Change in Employment for Counties (NWARPC TDP, 2010)

This rapid growth has resulted in increased traffic congestion. Two surveys, one conducted by NWARPC and the other by the University of Arkansas Community and Family Institute, have documented the need for alternative travel modes. An expanded transit system is needed if the region desires to make transit a viable transportation alternative to the single-occupant vehicle.

This plan served as a blueprint for expanding transit service in the region. It identified near-term (1-2 years), short-range (3-5 years), and long-range service recommendations (6-10 years). The plan acknowledged that other planning studies examined the potential for a regional rail line but suggested that any rail system would require a strong background bus network, so the plan only included bus service improvements.

Using the existing and future population and employment data, the plan compared growth with the existing transit network to determine areas for new or expanded transit services. The plan's recommendations incorporate the evaluation of the existing transit network, customer demand, and projected growth in the region.

For ORT, the near-term recommendation included immediate route changes to improve service efficiency. This plan was cost-neutral with no increase in service hours. The short-term plan assumed significant growth and the passage of a dedicated funding source. The long-range service plan continued service expansion and assumed the addition of weekend service plus flex zones and rural connector routes.

For RT, the near-term recommendation assumed a modest amount of growth. Routes were streamlined to provide more direct service where needed, and schedule consistency was improved. The short and long-term plans were identical and assumed a limited amount of growth above what was presented in the near-term plan.

Figure 4 shows the long-range service plan for Ozark Transit. In the study area of this plan, there were several recommended regional routes, including two operating along US 71B, one from Fayetteville to Springdale, the other from Springdale to Bentonville. There were also two routes running along I-540 (I-49), one from Bella Vista to MLK Walmart and the other from NWA Community College to NWA Mall.

Weekday Schedule

	Route #	Route Description	Start of First/ Last Trips	Bus Type	Service Frequency				Daily Trips	Midday Period Cycle Time				One-Way	Average Weekday			Bus Requirements			
					AM	Midday	PM	Eve.		Time (Min.)	Layover Time	% Layover	Cycle Time	Distance (Miles)	In-Serv. Hours	Rev. Hrs.	Rev. Miles	AM	Midday	PM	Evening
Fayetteville Routes	F-1	NE Fayetteville - Mission/Crossover	0600 - 1900	Standard	60	60	60	n/a	26	40	10	11%	90	8.8	17.3	19.5	228.8	1.50	1.50	1.50	0.00
	F-2	Cliffs-Central Fayetteville	0600 - 2200	Standard	60	60	60	60	32	20	5	11%	45	3.8	10.7	12.0	121.6	0.75	0.75	0.75	0.75
	F-3	South Fayetteville - Bus 71	0600 - 1900	Standard	60	60	60	n/a	26	20	5	11%	45	4.0	8.7	9.8	104.0	0.75	0.75	0.75	0.00
	F-4	South Fayetteville - East 15th	0600 - 1900	Standard	60	60	60	n/a	26	20	5	11%	45	4.3	8.7	9.8	111.8	0.75	0.75	0.75	0.00
	F-5	North Fayetteville - Wash. Med. Ctr.	0600 - 2200	Standard	60	60	60	60	32	40	10	11%	90	8.0	21.3	24.0	256.0	1.50	1.50	1.50	1.50
	F-6	Wedington-Central Fayetteville	0600 - 2200	Standard	30	30	30	60	58	30	15	20%	75	6.7	29.0	35.5	388.6	2.50	2.50	2.50	1.00
	F-7	Rupple-Mt. Comfort-Gregg	0600 - 1900	Standard	60	60	60	60	32	45	15	14%	105	9.3	24.0	28.0	297.6	1.75	1.75	1.75	1.75
	F-8	Farmington-U of A-Central Fayett.	0600 - 1900	Standard	60	60	60	n/a	26	35	20	22%	90	6.0	15.2	19.5	156.0	1.50	1.50	1.50	0.00
	F-9	U of A/Central Fayett. Circ.	0600 - 2200	Standard	10	10	10	15	90	15	5	25%	20	2.5	22.5	29.0	225.0	2.00	2.00	2.00	1.00
	F-10	NWA Mall Area Circ.	0600 - 2200	Standard	30	30	30	30	32	45	15	25%	60	9.1	24.0	32.0	291.2	2.00	2.00	2.00	2.00
Fayetteville Route Totals															**181.3**	**219.0**	**2180.6**	**15.00**	**15.00**	**15.00**	**8.00**
Springdale Routes	S-1	S. Springdale-Don Tyson Pkwy	0600 - 1900	Standard	60	60	60	n/a	26	27	6	10%	60	6.6	11.7	13.0	171.6	1.00	1.00	1.00	0.00
	S-2	Garrison-NWAC Springdale	0600 - 2200	Standard	60	60	60	60	32	23	14	23%	60	4.4	12.3	16.0	140.8	1.00	1.00	1.00	1.00
	S-3	N. Fayetteville-E. Springdale	0600 - 1900	Standard	60	60	60	n/a	26	27	6	10%	60	6.9	11.7	13.0	179.4	1.00	1.00	1.00	0.00
	S-4	North Springdale to Backus	0600 - 1900	Cutaway	60	60	60	n/a	26	20	5	11%	45	3.8	8.7	9.8	98.8	0.75	0.75	0.75	0.00
	S-5	NE Springdale to Mountain	0600 - 1900	Cutaway	60	60	60	n/a	26	20	5	11%	45	4.2	8.7	9.8	109.2	0.75	0.75	0.75	0.00
	S-6	Turner St.	0600 - 1900	Cutaway	60	60	60	n/a	26	11	8	27%	30	2.7	4.8	6.5	70.2	0.50	0.50	0.50	0.00
	S-7	Huntsville-Emma	0600 - 2200	Standard	30	30	30	60	58	26	8	13%	60	6.5	25.0	28.5	377.0	2.00	2.00	2.00	0.83
	S-8	Sunset-Robinson	0600 - 2200	Standard	30	30	30	60	58	37	16	18%	90	8.0	35.6	42.5	464.0	3.00	3.00	3.00	1.17
Springdale Route Totals															**118.4**	**139.0**	**1611.0**	**10.00**	**10.00**	**10.00**	**3.00**
Benton Co. Routes	B-1	NWACC to Bentonville Wal-Mart via 8th St.	0600 - 2200	Standard	30	30	30	60	58	15	5	14%	35	3.3	14.5	16.9	191.4	1.17	1.17	1.17	0.58
	B-2	NWACC to Bentonville Wal-Mart via 14th St.	0600 - 1900	Standard	60	60	60	n/a	26	20	5	11%	45	4.6	8.7	9.8	119.6	0.75	0.75	0.75	0.00
	B-3	NWACC to Pinnacle Hills via NW Medical	0600 - 2200	Standard	60	60	60	60	32	25	10	17%	60	6.5	13.3	16.0	208.0	1.00	1.00	1.00	1.00
	B-4	NWACC to Pinnacle Hills via Dixieland	0600 - 1900	Standard	60	60	60	n/a	26	33	10	13%	75	8.2	14.1	16.3	213.2	1.25	1.25	1.25	0.00
	B-5	Bentonville Wal-Mart to Rogers Wal-Mart via 28th/Olive	0600 - 1900	Standard	60	60	60	n/a	26	30	10	14%	70	6.7	13.0	15.2	174.2	1.17	1.17	1.17	0.00
	B-6	Bentonville Wal-Mart to Rogers via Walton/Walnut	0600 - 2200	Standard	30	30	30	60	58	35	15	18%	85	7.9	33.8	41.1	458.2	2.83	2.83	2.83	1.42
	B-7	Pinnacle Hills to Rogers Wal-Mart via W 2nd	0600 - 1900	Standard	60	60	60	n/a	26	45	20	18%	110	9.1	19.5	23.8	236.6	1.83	1.83	1.83	0.00
Benton County Route Totals															**116.9**	**139.0**	**1601.2**	**10.00**	**10.00**	**10.00**	**3.00**
Regional Routes	R-1	US 71 - Fayetteville to Springdale	0600 - 2200	Standard	30	30	30	60	58	51	18	15%	120	11.0	49.3	58.0	638.0	4.00	4.00	4.00	2.00
	R-2	US 71 - Springdale to B'ville	0600 - 2200	Standard	60	60	60	60	32	54	12	10%	120	16.2	28.8	32.0	518.4	2.00	2.00	2.00	2.00
	R-3	I-540 - Bella Vista to MLK Wal-Mart	0600 - 1900	Standard	60	60	60	n/a	26	68	44	24%	180	34.0	29.5	39.0	884.0	3.00	3.00	3.00	0.00
	R-4	I-540 - NWAC to NWA Mall	0600 - 1900	Standard	60	60	60	n/a	26	52	16	13%	120	26.0	22.5	26.0	676.0	2.00	2.00	2.00	0.00
	R-5	Bentonville-XNA-Springdale	0600 - 1900	Standard	60	60	60	n/a	26	52	16	13%	120	30.0	22.5	26.0	780.0	2.00	2.00	2.00	0.00
	R-6	Shiloam Springs	0600 - 1900	Standard	60	60	60	n/a	26	50	20	17%	120	27.6	21.7	26.0	717.6	2.00	2.00	2.00	0.00
Regional Route Totals															**174.3**	**207.0**	**4214.0**	**15.00**	**15.00**	**15.00**	**4.00**
Flex Zone Routes	FZ-1	Siloam Springs	0600 - 1900	Cutaway	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	13.0	13.0	156.0	1.00	1.00	1.00	0.00
	FZ-2	Bella Vista	0600 - 1900	Cutaway	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	13.0	13.0	156.0	1.00	1.00	1.00	0.00
	FZ-3	Centerton	0600 - 1900	Cutaway	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	13.0	13.0	156.0	1.00	1.00	1.00	0.00
	FZ-4	Tontitown	0600 - 1900	Cutaway	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	13.0	13.0	156.0	1.00	1.00	1.00	0.00
Community Route Totals															**52.0**	**52.0**	**624.0**	**4.00**	**4.00**	**4.00**	**0.00**
Rural Connectors	RC-1	West Fork/Greenland	Peaks Only	Cutaway	60	n/a	60	n/a	8	n/a	n/a	n/a	n/a	12.0	3.3	4.0	96.0	1.00	0.00	1.00	0.00
	RC-2	Lincoln/Prairie Grove	Peaks Only	Cutaway	60	n/a	60	n/a	8	n/a	n/a	n/a	n/a	15.5	4.0	4.0	124.0	1.00	0.00	1.00	0.00
	RC-3	Elkins	Peaks Only	Cutaway	60	n/a	60	n/a	8	n/a	n/a	n/a	n/a	10.5	3.3	4.0	84.0	1.00	0.00	1.00	0.00
	RC-4	Pea Ridge	Peaks Only	Cutaway	60	n/a	60	n/a	8	n/a	n/a	n/a	n/a	8.5	2.7	4.0	68.0	1.00	0.00	1.00	0.00
	RC-5	Goshen	Peaks Only	Cutaway	60	n/a	60	n/a	8	n/a	n/a	n/a	n/a	11.5	3.3	4.0	92.0	1.00	0.00	1.00	0.00
Rural Connector Route Totals															**16.7**	**20.0**	**464.0**	**5.00**	**0.00**	**5.00**	**0.00**
TOTALS															**660**	**776**	**10,695**	**59**	**54**	**59**	**18**
Big Bus															**569**	**678**	**9,329**	**48**	**48**	**48**	**18**
Cutaway															**91**	**98**	**1,366**	**11**	**6**	**11**	**0**

Figure 4 Ozark Transit Long Range Service Plan Statistics (NWARPC TDP, 2010)

The plan provided Ozark Transit with service statistics and operating costs for proposed weekday, Saturday, and Sunday service in the near-term, short-and long-range, as shown in Figure 5 below.

Ozark Regional Transit – Current and Projected Fixed-Route Operating Requirements

	Current	Near-Term	Short-Range	Long-Range
Peak Buses	12	11	34	59
Annual Hours	29,116	29,116	122,655	234,032
Annual Miles	496,862	488,788	1,570,137	3,178,511
Annual O&M Costs	$2,600,000	$2,600,000	$10,744,900	$20,201,600

Razorback Transit – Current and Projected Fixed-Route Operating Requirements

	Current	Near-Term	Short-Range	Long-Range
Peak Buses	16	17	18	18
Annual Hours	33,210	33,437	36,426	36,426
Annual Miles	378,622	378,909	394,997	394,997
Annual O&M Costs	$2,350,000	$2,363,6000	$2,542,900	$2,542,900

Figure 5 Current and Projected Fixed Route Operating Requirements for ORT and RT (NWARPC TDP, 2010)

The TDP outlined capital needs, including transfer facilities, vehicles, bus stops, and amenities to support expanded services. The financial analysis included project costs and potential revenue sources of the TDP's 10-year period. Potential revenue sources included farebox revenue, federal funds, state funds, and miscellaneous revenues, including advertising.

1.2.2 Transit Alternatives Analysis (2014)

In the past decade, there has been interest in assessing the feasibility of light rail transit in the Northwest Arkansas region. It has been addressed in the following studies:

1. The Potential for an NWA Regional Light Rail System (Beta Rubicon, 2004)
2. Interstate 540 Improvement Study (Parsons Transportation Group, 2006)
3. NWA Rail: Visioning Rail Transit in Northwest Arkansas (UA Community Design Center, 2007)
4. Northwest Arkansas Razorback Regional Greenway (TIGER II Grant Application, NWARPC, 2010)
5. Northwest Arkansas Transit Development Plan (Connectics, 2010)
6. Northwest Arkansas Western Beltway Feasibility Study (Parsons Brinkerhoff, 2011)
7. Northwest Arkansas Regional Development Strategy (Market Street, 2011)

Responding to this interest, the 2035 Regional Transportation Plan recommended a study of the region's transportation alternatives, which led to the *2014 Transit Alternatives Analysis*. The purpose of this study was to respond to historical and forecast rapid population growth, reduce the region's reliance on single-occupant vehicles, provide additional capacity in a corridor where additional highway capacity is limited due to geography, enhance NWA's livability, promote mixed-use development around stations, provide mobility for those without access to an automobile, and reduce the projected increase in greenhouse gas emissions.

The study focused on an alternatives analysis concentrating on three major alternatives:

- Light Rail (new location in I-49 corridor)
- Commuter Rail (in A&M Railroad corridor)
- Bus Rapid Transit on Hwy. 71B.

Figure 6 provides a map of each alternative alignment, including potential stations.

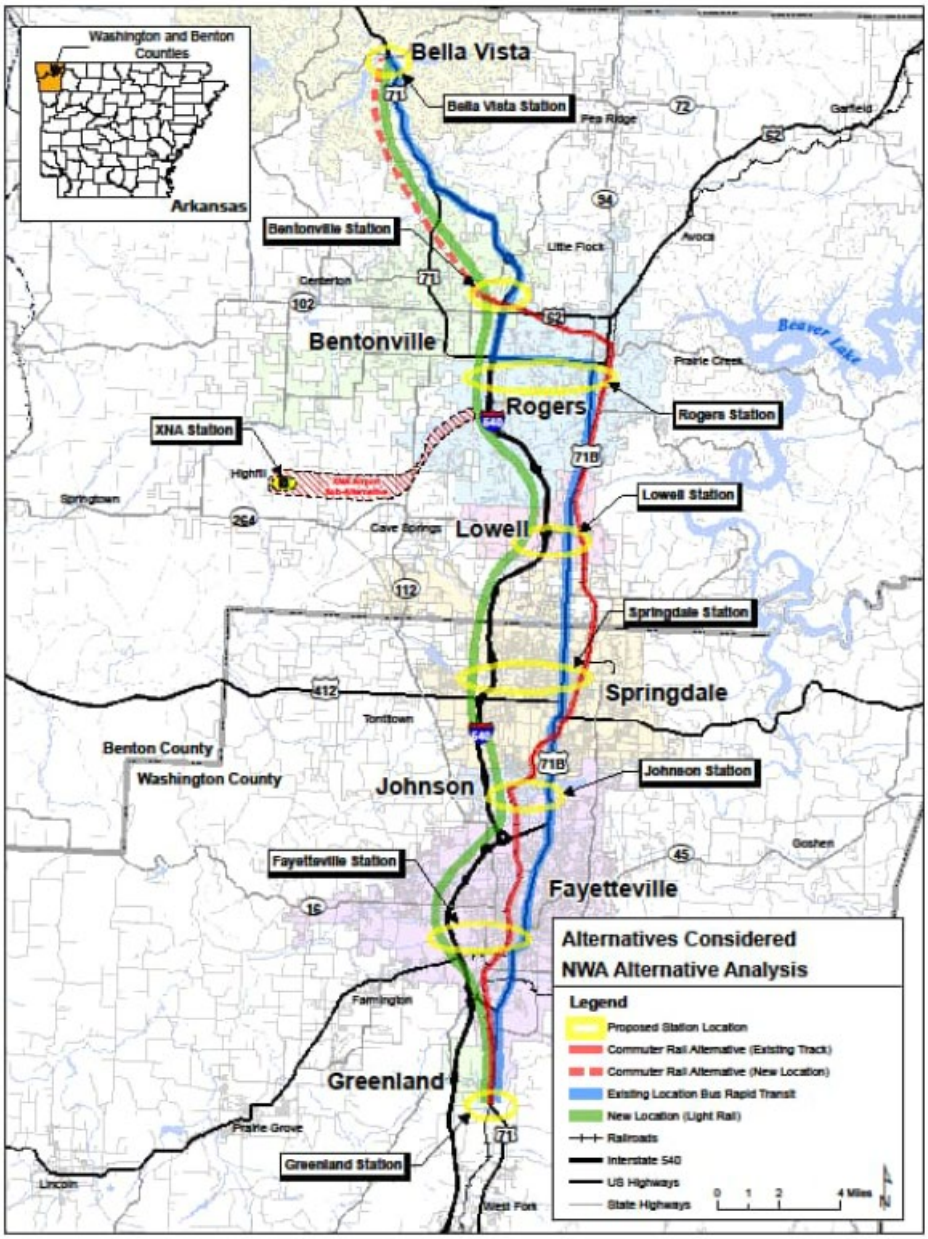

Figure 6 Three Potential Alternative Alignments (NWA Alternatives Analysis, 2014)

The capital costs, in 2014 dollars, are estimated to be:

- New Location Light Rail: $2.286 Billion
- Commuter Rail on A&M railroad ROW: $664.0 Million
- Bus Rapid Transit on US 71B: $97.8 Million

Figure 7 outlines the breakdown of capital costs in 2014 dollars:

Major Cost Categories (FTA Definitions)	*New Location Light Rail*	*Existing Location*	*Existing Location*
	Light Rail	**Commuter Rail**	**Bus Rapid Transit**
Guideway/transit way and structures	$ 1,054,878,000	$ 255,288,768	$ 38,000,000
Stops & stations	$ 6,000,000	$ 6,000,000	$ 800,000
Systems, signals, & communications	$ 35,720,000	$ 48,594,450	$ 1,380,000
Utilities	$ 24,440,000	$ 1,965,000	$ 3,500,000
Vehicles	$ 29,400,000	$ 45,000,000	$ 10,000,000
ROW	$ 96,024,000	$ 6,000,000	$ 3,040,000
Maintenance & Storage Facilities	$ 22,000,000	$ 22,600,000	$ 6,000,000
Special Conditions	$ 72,018,000	$ 25,558,356	$ 3,040,000
Professional and Administrative Design Fees	$ 318,196,200	$ 91,051,643	$ 11,000,000
Contingencies (allocated and Unallocated	$ 627,636,870	$ 162,332,876	$ 21,000,000
TOTAL	**$ 2,286,313,070**	**$ 664,391,093**	**$ 97,760,000**
Length (Miles)	**37.6**	**39.3**	**39.9**
Cost Per Mile	**$ 60,806,199**	**$ 16,905,626**	**$ 2,450,125**

Figure 7 Capital Costs for Build Alternatives (NWA Alternatives Analysis, 2014)

Figure 8 shows the operating and maintenance costs for each build alternative:

Cost/Hours	*New Location Light Rail*	*Existing Location Commuter Rail*	*Existing Location BRT*
Cost Per Hour	$300.00	$350.00	$65.00
Annual Hours	20,600	10,600	38,000
Annual O and M Cost	$6,180,000	$3,710,000	$2,519,000

Figure 8 Operating and Maintenance Costs for Build Alternatives (NWA Alternatives Analysis, 2014)

Operating costs for each alternative are estimated assuming the following service:

Light rail new location:

- Six 2-car train sets in the peak hours (1 spare train set)
- 4 cars in off-peak
- Approximately 20,6000 revenue hours/year
- Operating and maintenance cost range supported by NTD is $300/per hour

Existing Location Commuter rail

- 6 train cars during the peak period, 2 train cars during the off-peak period
- 10,600 revenue vehicle hours
- $350/hour

BRT – existing location

- $20,000 per signalized intersection to establish signal preemption for BRT in selected sections of the corridor
- Peak period: 18 buses
- Off-peak: 8-10 buses
- 38,000 vehicle hours per year
- $65 per vehicle hour

The Commuter Rail Alternative along the existing A&M railroad is identified as the Locally Preferred Alternative (LPA); however, the study concluded that none of the considered alternatives are financially feasible based on low ridership, high capital costs, and not meeting the FTA threshold for federal funding. Additionally, this type of desired LRT is not currently compatible with freight track in the U.S. for regulatory and physical reasons. Despite the financial infeasibility and freight restrictions, the Alternatives Analysis provides several recommendations and "a path forward".

Recommendations

- Northwest Arkansas communities should work with NWARPC to improve existing public transit service to get "transit-ready". A successful guideway project must be developed side by side with a sound bus service expansion plan and an economic redevelopment plan that begins at the station locations and radiates outward into the community.
- The NWA region should create and adopt an integrated land use and transportation plan that is based on the promotion of mixed-use development patterns. This includes key features such as mixed-use development, compact development, and pedestrian infrastructure. The jurisdiction needs to provide a planning framework and zoning that allows for the type, mix, and density of development focused on the corridor to support a fixed guideway system.
- In addition to the LPA along the A&M, begin a staged development of high-quality BRT along US 71B.

1.2.3 Fayetteville Mobility Plan-2018

The Fayetteville Mobility Plan evaluates the existing conditions of the transportation network in Fayetteville. It provides a means to identify opportunities for street and sidewalk improvements that will enhance the city's livability. The goal of this plan is to create a transportation network that is safe for all users, equitable, multimodal, and promotes economic growth and sustainability. The objectives include prioritizing pedestrian connections, considering the needs of diverse populations, enhancing local transit services, and more. The majority of the plan is focused on pedestrian and biking improvements, but there are some transit recommendations.

The plan's transit recommendations are broken into two categories: Planning & Design and Policy & Programming. The Policy & Programming recommendations include partnering with ORT, RT, and ArDOT

to implement Bus Rapid Transit (BRT) along high-ridership corridors, such as Hwy 71 -College Avenue and Gregg Avenue. The map below shows the 7 priority corridors, including two transit-focused corridors.

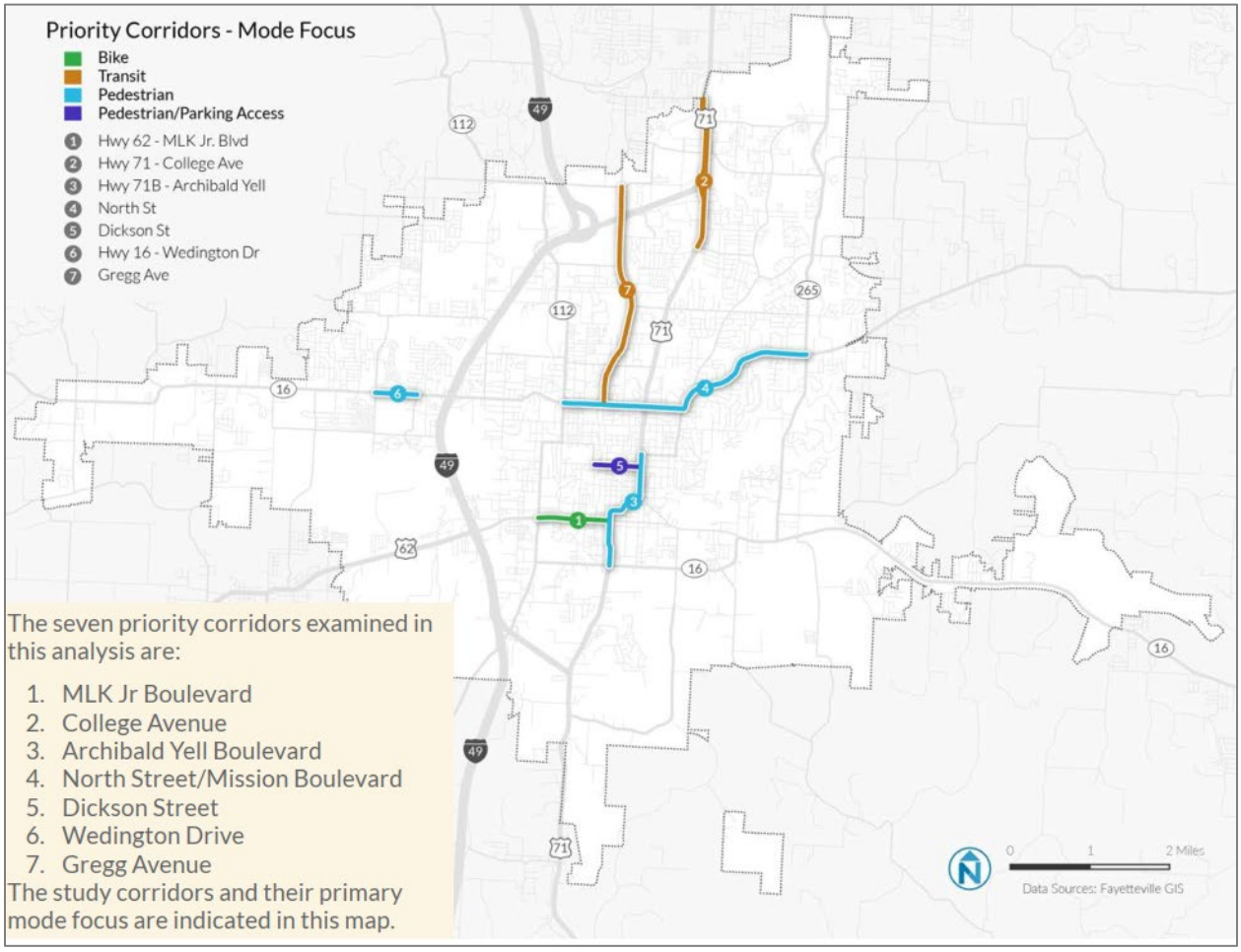

Figure 9 Priority Corridors (Fayetteville Mobility Plan, 2018)

In Figure 9 the orange priority corridors indicate potential roads where transit service and amenities could be enhanced. Suggestions include adding bus stops or, when possible, bus-only lanes. The plan also supports transit signal priority and other design and technology treatments to improve transit services.

1.2.4 Connect Northwest Arkansas Transit Development Plan (2020)

Connect NW Arkansas is a 10-year Transit Development Plan (TDP) that outlines strategies to improve and expand transit in the region. The plan establishes a shared understanding of what successful transit looks like, how to design effective service, and how to implement it regionally and locally.

Successful transit is defined as taking people where they want to go when they want to travel there. It is reliable and efficient, and provides individuals with the freedom to travel around their community.

The study began with a technical analysis examining ridership, travel patterns, travel time, and on-time performance for the entire NWA study area. The study developed a Regional Transit Framework, which included recommendations for regional and local transit solutions with service level and route alignment modifications. The Regional Transit Framework includes customized route and network recommendations (Figure 10). It also identified key transit corridors that could enhance connectivity.

Connect NWA also developed funding recommendations and a phased implementation plan. To achieve the recommendations in this plan, the urbanized region would need to implement a ¼ cent sales tax. As part of the long-term recommendations of the phased implementation plan, the project team used the FTA STOPS model to forecast potential demand in potential high-capacity transit corridors in the region. The STOPS forecast includes an analysis of three potential high-capacity transit corridors based on ridership, land use, development potential, community support, and population and employment densities.

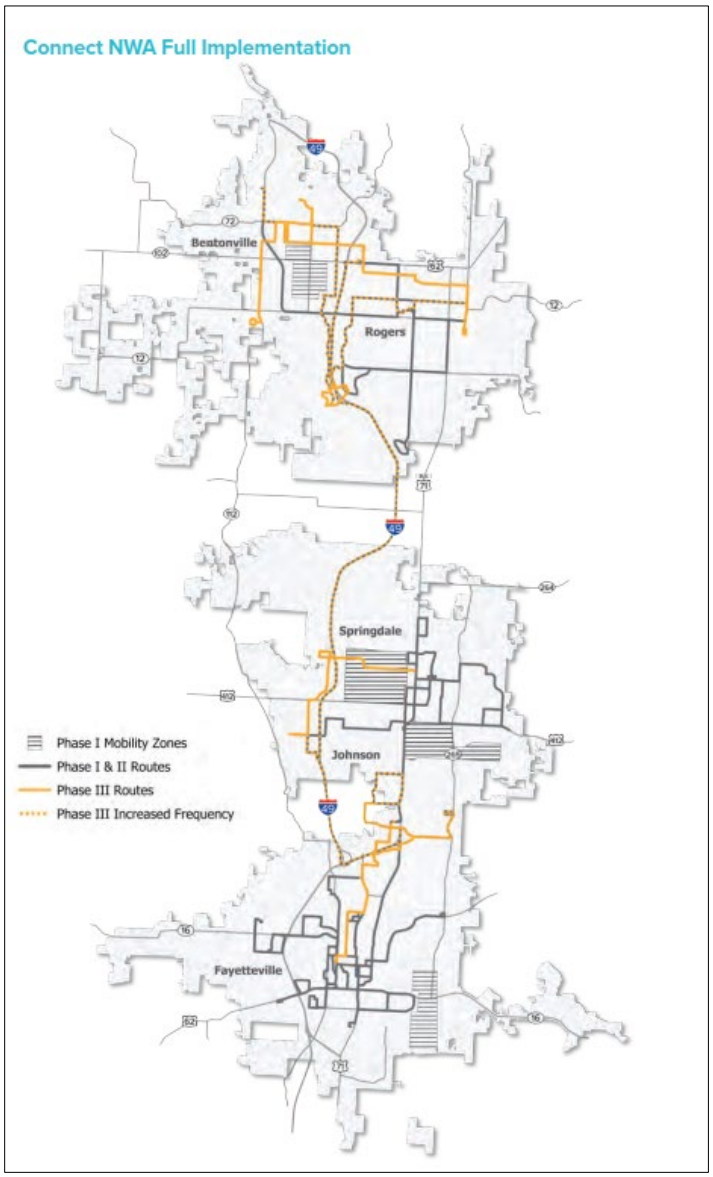

Figure 10 Connect NWA Full Implementation Map (Connect NWA TDP, 2020)

One of the recommended high-capacity corridors is along US 71B. Figure 11 shows a map of the proposed HCT alignment. This corridor would connect the two downtown hubs of Fayetteville and Springdale.

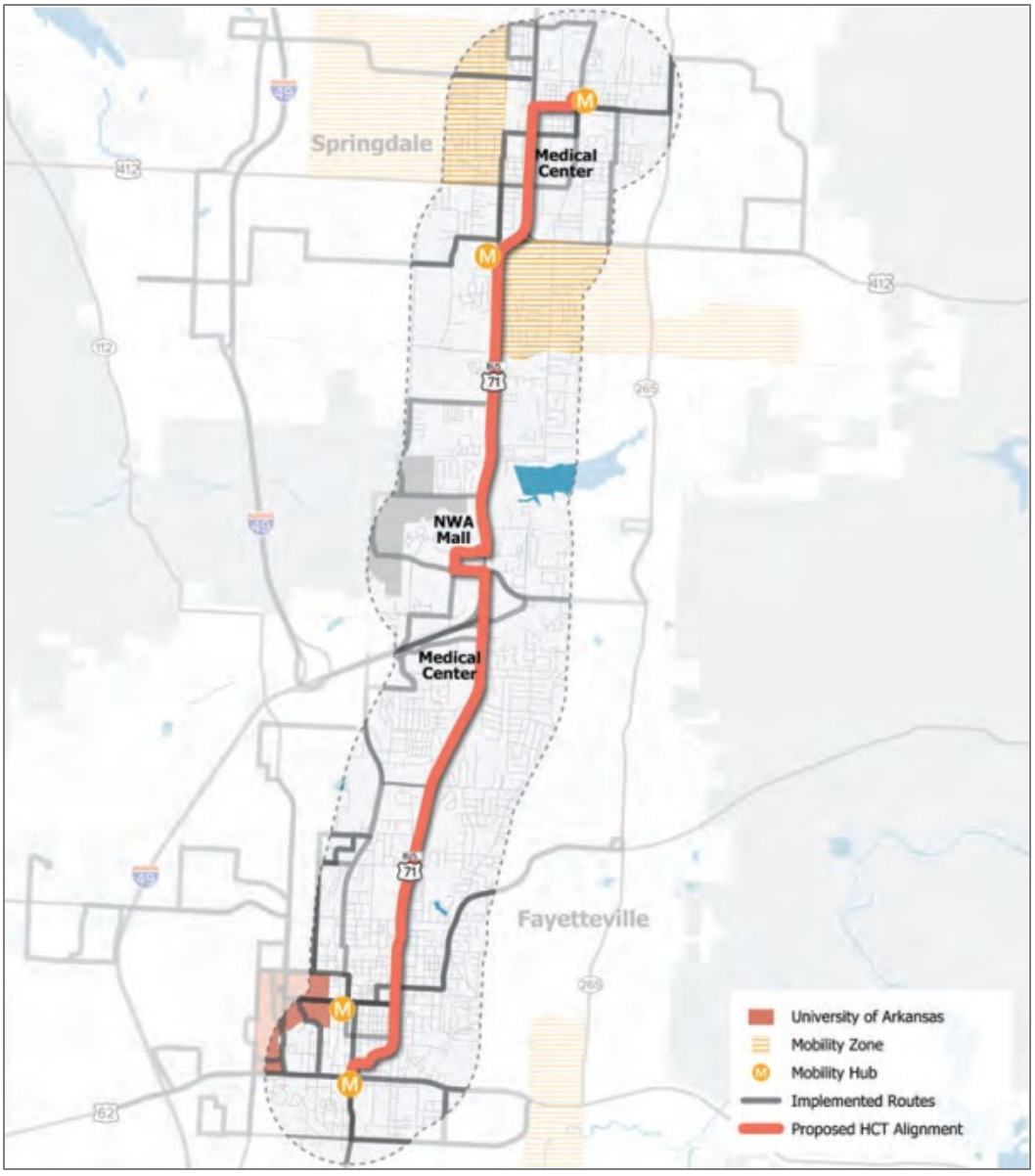

Figure 11 High-Capacity Corridor Alignment along US 71B (Connect NWA TDP, 2020)

1.2.5 Fayetteville City Plan 2040 (2020)

The Fayetteville City Plan 2040 includes sections on Housing, Employment and Income, Natural Environment, Transportation, and Historical and Cultural Resources. The transportation section outlines the goal of growing a livable transportation network. The relevant objectives for this goal include:

- Commit to evolving a rich menu of transit choices, including citywide and regional mass transit
- Develop a partnership with the Arkansas and Missouri railroad
- Plan employment in locations with access to walkable amenities and transit rather than isolated locations
- Community design should precede and outrank traffic planning
- Plan and construct multiple corridors instead of single oversized ones

- Transform existing corridors into great streets: tree-lined, moderate-speed, multi-modal
- Develop context-sensitive corridor plans for major thoroughfares

The plan also provides an Active Transportation Plan Map and a Master Street Plan Map.

1.2.6 2045 NWA Metropolitan Transportation Plan (MTP, 2021)

The goal of the 2045 NWA MTP is to provide a comprehensive multimodal transportation system that most efficiently serves the human and economic needs of the NW Arkansas region. The plan is divided into 12 chapters, each addressing a specific topic such as population, housing, environment, travel forecasting, transportation project funding, public transit, and freight.

The public transit chapter provides an overview of the existing transit providers, ORT and RT. It also includes substantial information about Federal Transit funding. Figure 12 below shows the available FTA programs and local match funds over the next 25 years, including the inflation rate.

2045 MTP Transit Projects 2025 to 2045 (2021 to 2024 projects shown in TIP) Available FTA Federal Funding + Required Local Match + Local Overmatch Inflated at 2% per year Note: The region currently spends approximately $8M per year on transit	2025 to 2030	2031 to 2045	Total
FTA Section 5339 Capital -ORT and Razorback Transit -Fayetteville-Springdale-Rogers Urbanized Area	$ 2,600,000	$ 8,000,000	$ 10,600,000
FTA Section 5307 Capital and Operations - ORT and Razorback Transit - Fayetteville-Springdale-Rogers Urbanized Area	$47,800,000	$ 147,500,000	$195,300,000
FTA Section 5310 Enhanced Mobility of Seniors & Individuals with Disabilities - Fayetteville-Springdale-Rogers Urbanized Area	$ 1,500,000	$ 4,800,000	$ 6,300,000
FTA Section 5311 Formula Grants for Rural Areas - Demand Response Transit - Benton County and Washington County	$ 875,000	$ 2,672,000	$ 3,547,000
Total	**$ 52,775,000**	**$ 162,972,000**	**$ 215,747,000**

Figure 12 Available FTA Programmed and Local Match (2045 MTP, 2020)

The 2045 MTP produced a list of 16 recommendations. The most relevant include exploring funding options for bus and fixed guideway service and continuing to pursue the Connect NWA Transit Development Plan recommendations. It also recommended that local transit agencies work with major employers in the region to explore opportunities to partner in the funding of commuter transit services.

The plan proposes pursuing the Connect NWA TDP recommendations, including using key transit corridors that were identified to provide enhanced connectivity and direct routing focused on moving NWA residents in an intuitive, time-efficient manner that is not restricted by political boundaries. It recommends offering frequent fixed route service, along with coverage service. Based on the 2014 Alternatives Analysis, the 2045 MTP recommends that the region create and adopt an integrated land use and transportation plan based on the promotion of mixed-use development patterns. It encourages the surrounding communities to become "transit-ready" ahead of a system being built and, when feasible, in addition to the LPA commuter rail alternative along the A&M railroad, to implement a phased development of high-quality Bus Rapid Transit along Hwy 71B.

71B Corridor Plan (2024) / 71B Rezoning Project

In 2018, the City of Fayetteville began a community planning process with the intent to develop a plan to revitalize the 71B corridor. The goal was to engage the community to help develop strategies to improve

the corridor's economic vitality, address congestion issues, increase affordable housing, make it safe and convenient for all modes of travel, encourage active and healthy living, and create an attractive front door to Fayetteville's downtown and adjacent neighborhoods.

The 71B Rezoning Project included robust public engagement and was developed to reflect the input and needs of the local community, business owners, and stakeholders. A key outcome of the project was to create a new zoning district along the corridor, termed Urban Corridor. This new zoning district shifts away from a traditional commercial zoning framework to one that enables a mix of residential and commercial uses that align with Fayetteville's 2040 Plan. This change is anticipated to address housing needs, promote economic development, and support diverse land uses along a key city route. The rezoning is expected to create opportunities for more compact, pedestrian-friendly developments with services and amenities accessible to residents.

The Urban Corridor District is designed to provide a mix of commercial uses and housing along corridors that provide multi-modal transportation options. The district encourages walkable commercial, residential, and mixed-use developments in urban form that enhance function, economic vitality, and appearance along major urban thoroughfares.

The initial projects identified for possible bond funding included:

- Alleviating congestion on the northern end of the corridor by constructing parallel north/south connections
- Reconstructing the section between Township and North Streets by adding medians for better traffic control
- Reconstructing sidewalks to make them safer for pedestrians
- Adding bus shelters and transit lanes at key intersections

The 71B Corridor rezoning recommendations were heard by the Planning Commission on September 9, 2024, and were forwarded to the City Council for final consideration. The City Council considered the rezoning at their October 1 and October 15, 2024, meetings and voted 8-0 to approve the rezoning at their October 15 meeting. The rezoning will go into effect on November 15, 2024.

The City is in the process of implementing the 71B Corridor Plan, including the design and construction of public improvements shown in the plan, and rezoning the associated regulating plan to be initiated by the Planning Commission. Plan components are segmented into Short-Term (0-5 years), Medium-Term (5-10 years), and Long-Term (10+ years). This breakdown is advisory only and should be viewed as flexible and able to accommodate and substitute other opportunities as they arise, including private development projects.

IMPLEMENTATION SUMMARY

	Short	Medium	Long
TRANSPORTATION AND STREET ENVIRONMENT	• College Ave redesign, North to Township • South School reconfiguration • Pilot Archibald Yell reconfiguration • College and Rock intersection • Appleby-Plainview collector • Vantage-Sain connection • Resolution of overhead relocation/burial options and timing • Execute a comprehensive transit planning effort as described in Exhibit "A" to the 71B Resolution	• College Ave redesign, Township to Millsap • Continued South Scholl upgrade with redevelopment • Permanent Archibald Yell reconfiguration • East-west grid on North College • Fulbright interchange alternatives study • North College lane consolidation and greenway near Lake • Operational BRT	• Complete Fulbright interchange and regional access plan, with connection to Mall Avenue. • Complete other aspects of transportation program. • Consider future transit needs and options in view of higher density development. • Redesign and funding for Fulbright interchange area
TRAILS/PATHS	• Poplar Bikeway upgrade • South School sidepath • South School to Walker Park connection	• Phase one of North to Township connecting paths • ROW reservations with development, Township to Millsap • Sublett Creek Trail	• Complete shared use system of parallel connecting paths along College Avenue
REGULATORY	• Discuss recommendations/convert to ordinance language	• Evaluate and modify	
DEVELOPMENT FOCUSES	• Major retail centers first stage modifications • Restaurant District • Southgate redevelopment	• Site upgrades to major South School businesses and industries • Research Center area • Continued major centers development	• Evaluate and modify land use and development concepts relative to changing context and conditions.
ATTAINABLE HOUSING	• Fayetteville Housing Authority as major development entity • Moderate-income family housing on "farm" site • Transitional village to the east of Seven Hills Homeless Center • Incentive structure for "missing middle" housing	• Sunbridge development area • Continued transitional development	• Continue and improve development programs and make necessary adjustments

Figure 13 US 71 B Corridor Implementation Summary

The next few sections will assess several topics providing critically needed information and insights assisting the overall TAS in the development of project purpose and need/goals and objectives, the definition of transit improvement alternatives, and eventually the selection of a feasible and implementable locally preferred transit improvement alternative strategy. These analyses include:

- Transit market analysis – overview of demographics and socioeconomic characteristics in the study area
- Current transit services
- Pedestrian and cycling infrastructure
- Land use patterns

Figure 14 ORT Bus Stop Signage

2 TRANSIT MARKET ANALYSIS

This section reviews population, employment, socio-economic, and demographic information to define the transit market in the region and the study corridor. This will be a critical step in identifying unmet transit needs that might be addressed by transit network improvements, including potential high-capacity transit.

2.1.1 US Census Block Group Boundaries

The Transit Market Analysis is the initial phase of the TAS for the NWARPC. To conduct the analysis, the study utilized Block Groups established by the US Census Bureau that closely align with the study area, as previously shown in Figure 1. Census block groups are the smallest geographic area for which the US Census Bureau collects and tabulates American Community Survey (ACS) data. Figure 15 below shows the TAS study area block group analysis for the existing conditions assessment. Along with the project boundary, existing public transit networks are shown that are operated by the region's two fixed-route transit operators, ORT and RT. Further analyses of the existing transit services are included in the next section.

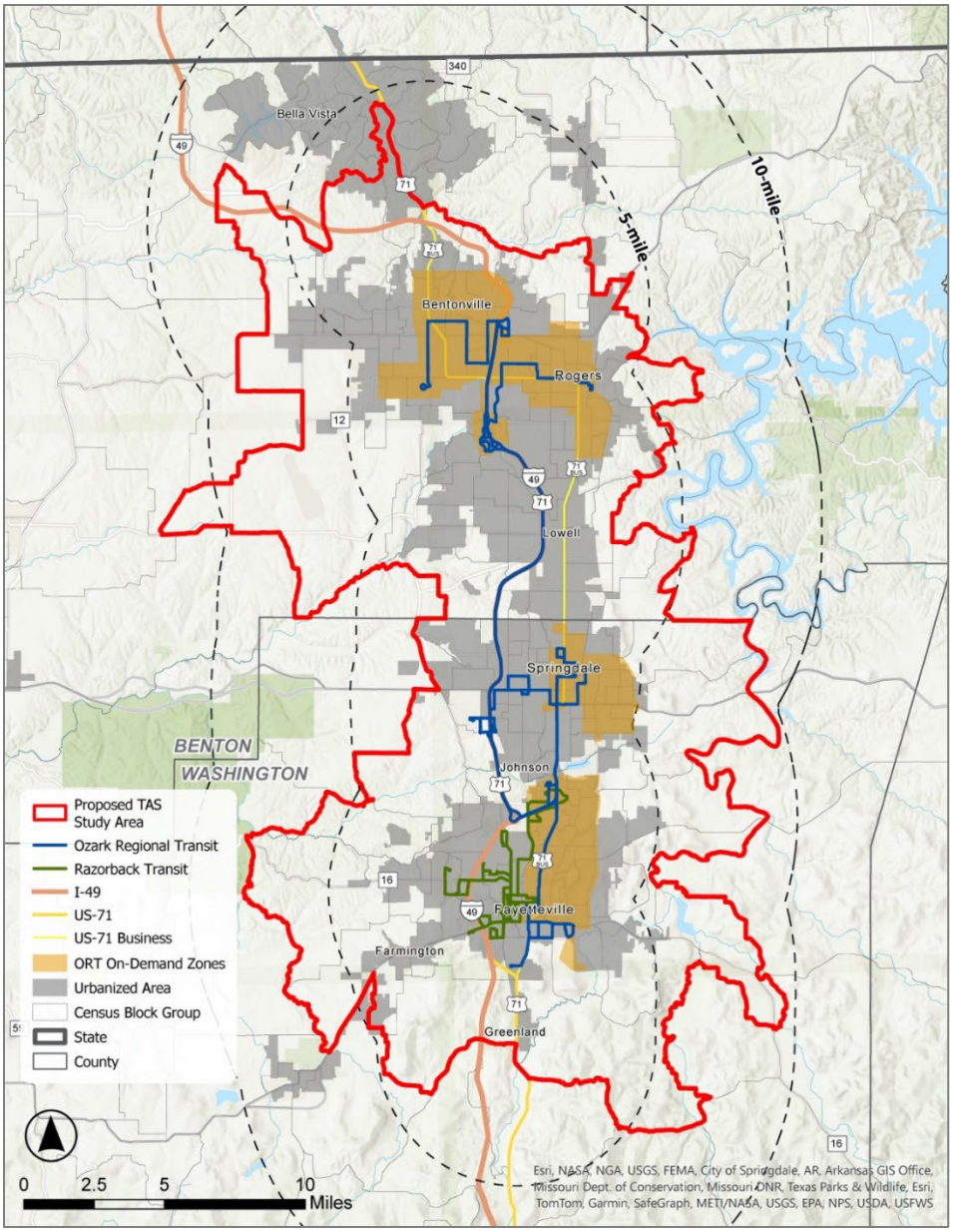

Figure 15 TAS Study Area Census Block Group

2.1.2 Population and Employment

Northwest Arkansas has a rapidly growing population and employment base, owing largely to the growth of Wal-Mart and other large corporate employers and the University of Arkansas. The regional (Benton and Washington County in Arkansas) population grew by 26% between 2010 and 2022. Employment saw faster growth between 2010 and 2018 – the latest from Census Longitudinal Employer-Household Dynamics (LEHD), at over 32% (Table 1).

Source: Population: 2010 & 2020 – US Census, 2022 – ACS; Employment: 2010 & 2018 – LEHD

Year	Population		Year	Employment	
	Number	% Change		Number	% Change
2010	424,404	-	2010	181,067	-
2020	530,207	24.9%	2018	239,843	32.5%
2022	533,859	25.8%			

Table 1 Northwest Arkansas Region Population and Employment, 2010, 2020, and 2022

The population in the block groups that comprise the study area grew by 30% from 2010 to 2022 (Table 2), while the study area employment grew by 42% from 2010 to 2018. About 73% of the regional population lives in the study area, and 89% of jobs in the region are in the study area.

Source: Population: 2010 & 2020 – US Census, 2022 – ACS; Employment: 2010 & 2018 – LEHD

Year	Population		Year	Employment	
	Number	% Change		Number	% Change
2010	299,000	-	2010	150,749	-
2020	389,200	30.2%	2018	214,276	42.1%
2022	389,446	30.2%			

Table 2 Study Area Population and Employment, 2010, 2020 and 2022

While the regional population is growing, it is not growing evenly across the region. Figure 16 and 17 that follow this page show the 2010 – 2020 population change and 2010-2018 employment change by block group for the project study area. As Figure 16 shows, the population is growing in rural and suburban areas and is stable or declining in the core areas of Bentonville, Rogers, Springdale, Johnson, and Fayetteville. The map[1] in 17 shows that job growth (and loss) has been more concentrated than population growth. As the map shows, many zones added thousands of jobs over the 2010 – 2018 period, while others lost thousands of jobs, despite the region having added more than 60,000 jobs over the period.

US Census data shows that population growth is occurring in rural and suburban portions of the study area, while stable or declining in the central area, leading to lower density.

[1] Employment numbers may show drastic change in the same Census block between years. This may be the result of employers reporting their employment numbers from a different location — often happens with large corporations with multiple offices, or missing survey results from the employers or state agencies. Therefore, the maximum values of growth and decline are often unreliable. However, the map should still reflect the overall trend of growth and decline in the larger study area with large number of blocks.

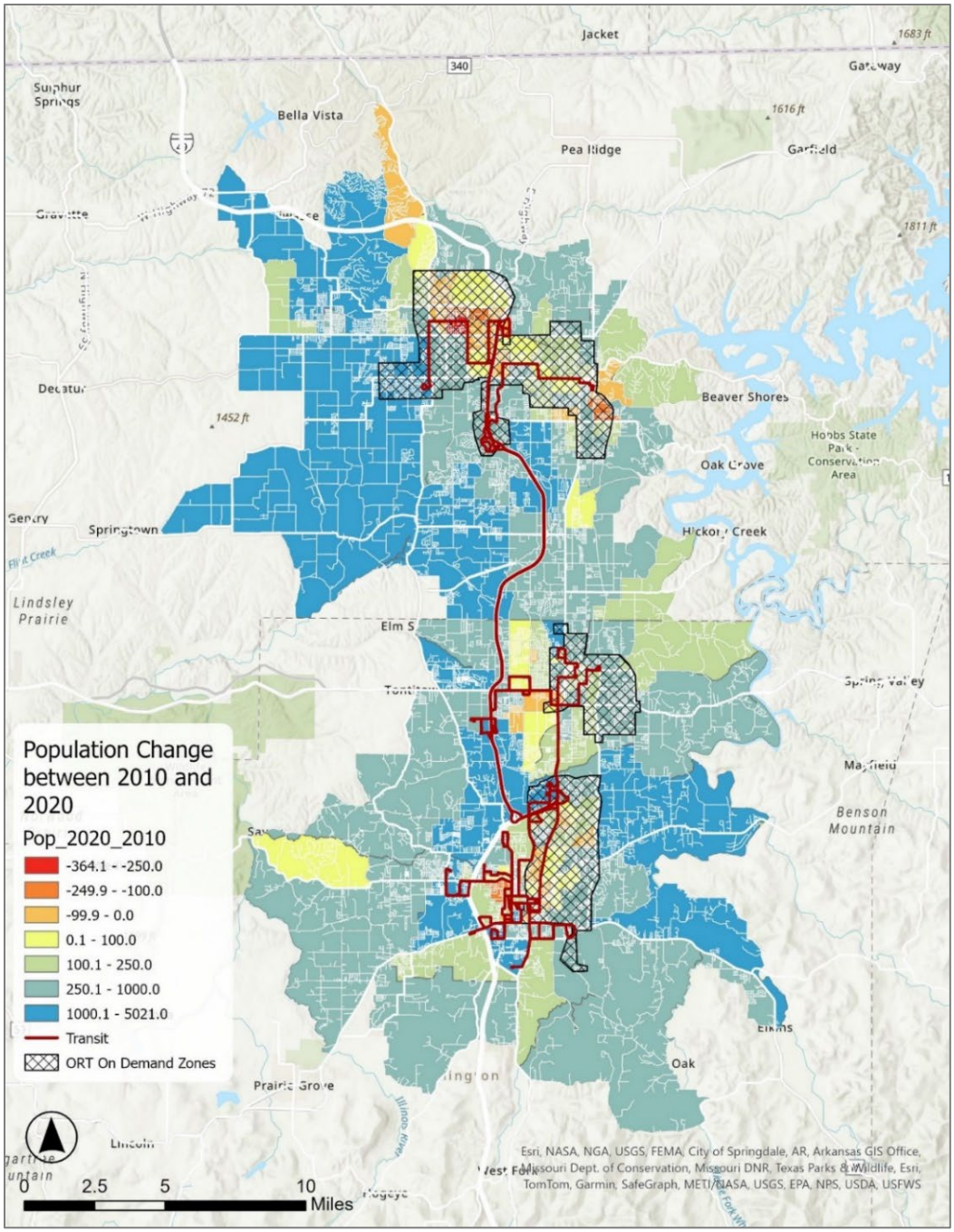

Figure 16 Map of Population Change from 2010-2020

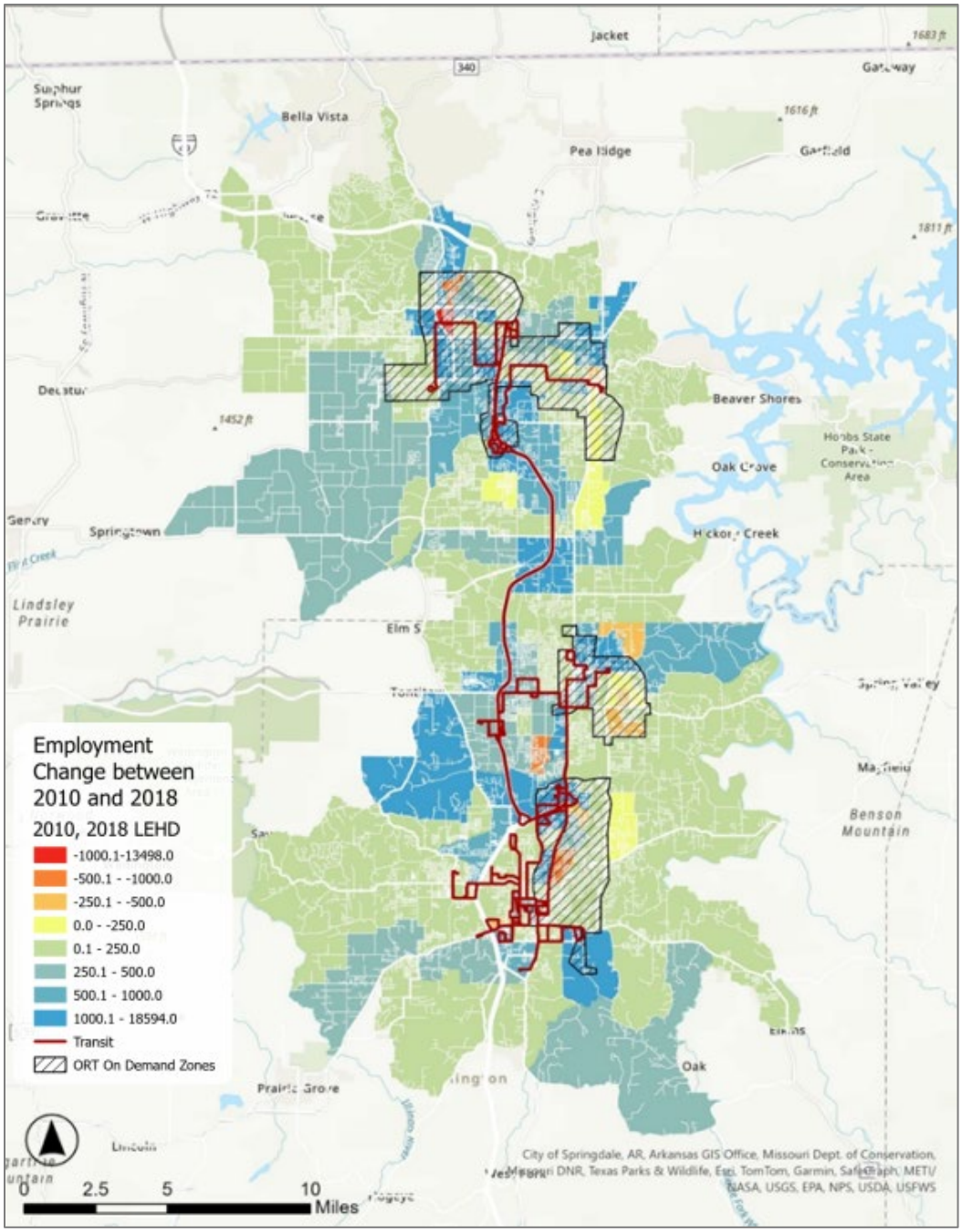

Figure 17 Map of Employment Change from 2010-2018

Population Density

Population and employment density are primary indicators of demand for public transit—the more people living and working within walking distance of transit, the more riders it is likely to attract. Bus routes operating hourly service struggle to operate efficiently when the areas within ¾ mile of the route have a combined population and employment density below twenty residents plus jobs per acre.

As Figure 18 on the next page shows that population density across most of the study area is very low, averaging 1.5 persons per acre. Portions of the study area with higher population density include downtown Fayetteville, Springdale, the area between Rogers and Lowell, and Bentonville. As noted in the previous section, these areas of higher density are the areas with stable or declining populations, while the lower-density areas are absorbing most of the region's population growth. Several places with relatively high population density lack fixed-route transit service today, including neighborhoods on the east side of Springdale, in the south of Rogers, and north of Lowell, east of I-49, and areas west of Bentonville.

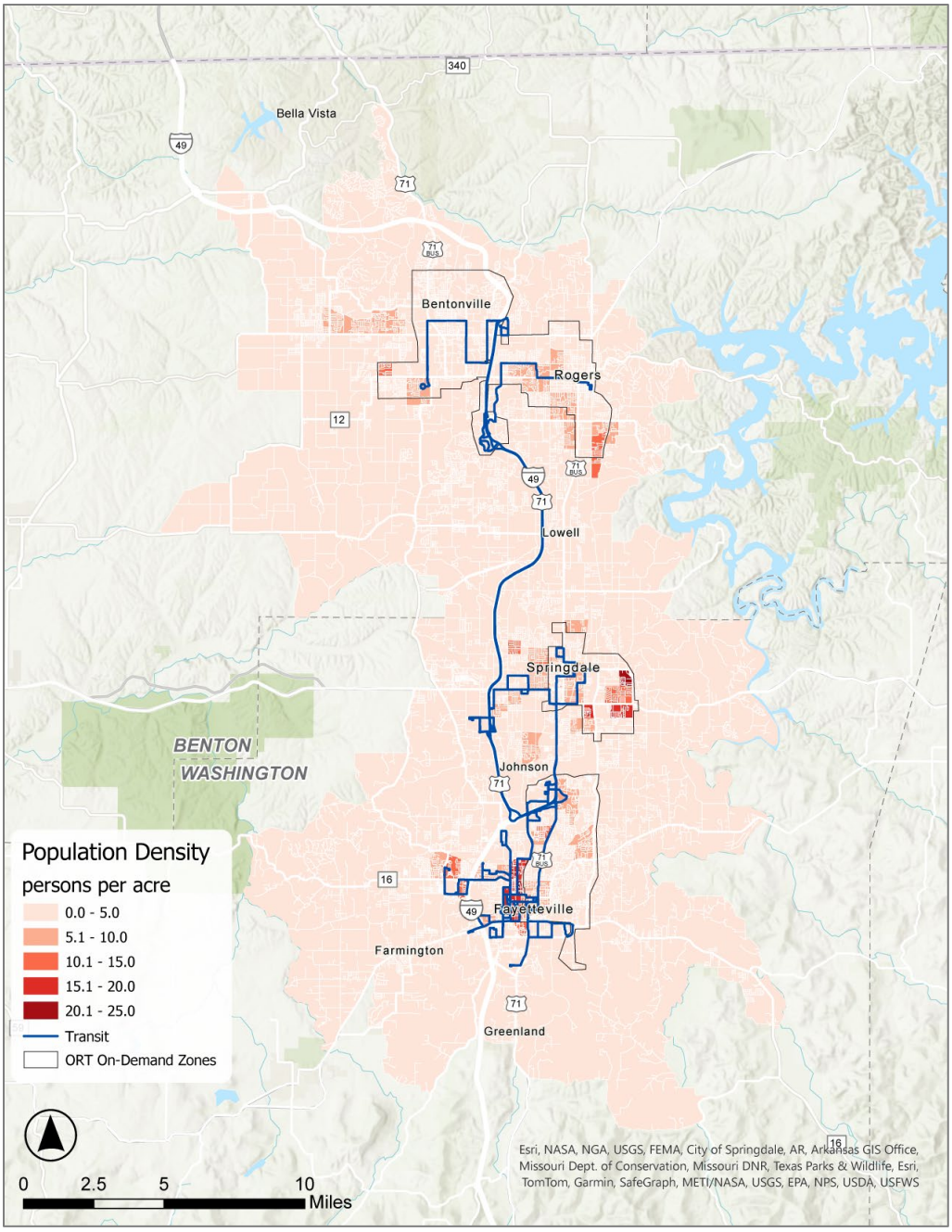

Figure 18 Map of Population Density

Employment Density

Figure 19 on the next page shows, job density across the study area is low, averaging just 1.2 jobs per acre. The job distribution pattern is somewhat like the population distribution, with higher density in the core areas of Bentonville, Rogers, Springdale, Johnson, and Fayetteville. Some areas of relatively high job density (above 10 jobs per acre) lack transit service within walking distance, including the northeast of Springdale, areas east of US 71B in Rogers, and in the northern part of Bentonville.

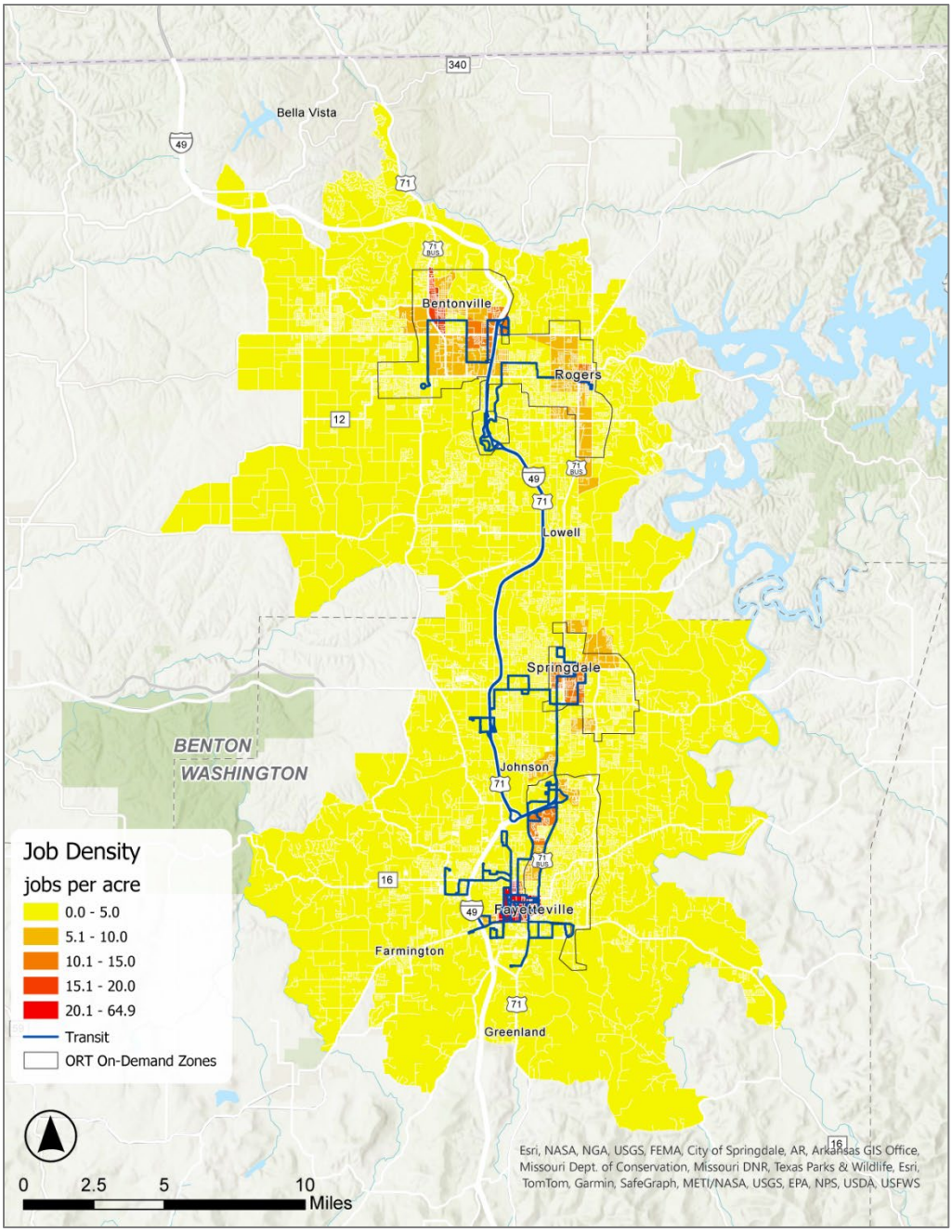

Figure 19 Map of Job Density

Population + Job Density

Combined population and job density is a measure of the propensity of an area to generate riders for regular and commuter transit. As shown in Figure 20, the study area's average combined population and employment density is 2.7 persons + jobs per acre. Fayetteville has by far the highest levels of combined population and employment density, with many parts of the core area around downtown and the university exceeding 40 residents-plus-jobs per acre. Some parts of Bentonville, Rogers, and Springdale also have relatively high combined population and job density. As noted in the separate discussions of

population and employment density, some of these areas of relatively high combined density lack transit service today.

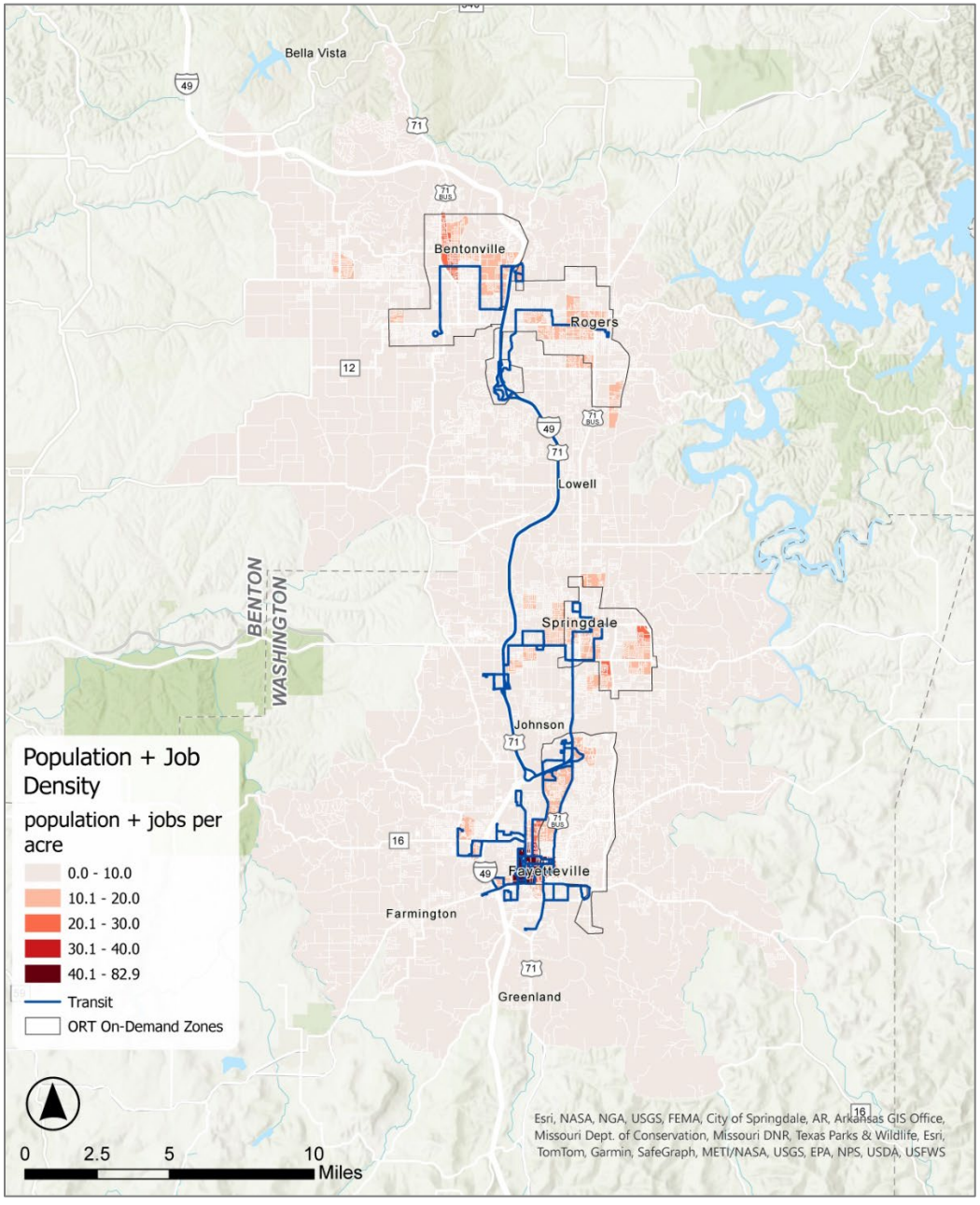

Figure 20 Map of Population and Job Density

2.1.3 Age and Disability

Older and disabled adults are more likely to use paratransit than fixed-route bus or rail, but significant numbers of both groups rely on fixed-route services for their regular travel needs and can represent a significant portion of fixed-route service demand. While the share of seniors and people with disabilities is not high among the study area population, the sprawling distribution of these groups indicates the potential for higher future paratransit costs due to longer travel times and expanded deadhead.

Senior Population

At 10.6%, the percentage of seniors aged 65 or over in the study area population is much smaller than that of the state of Arkansas (17.2%) or the US (16.8 %). As Figure 21 on the next page shows that the percentage of seniors tends to be higher in lower-density suburban and rural areas than in the core town areas. Block groups with higher percentages of senior populations tend to have one or more senior living facilities (retirement communities, subsidized housing, assisted living, or skilled nursing facilities), which explains the higher concentration of seniors in the area.

Population with Disabilities

Census provides disability statistics for the civilian population age 18 years and over for whom poverty status is determined, and at the Census block group level. The map in Figure 22 shows the % of the population with disabilities by Census block group. At 11.9%, the percentage of study area residents with a disability is lower than the average for Arkansas (12. 9%) and for the US (13.5%). Disabled residents are somewhat more likely to live in lower-density suburban and rural areas than in the older core town areas of the region.

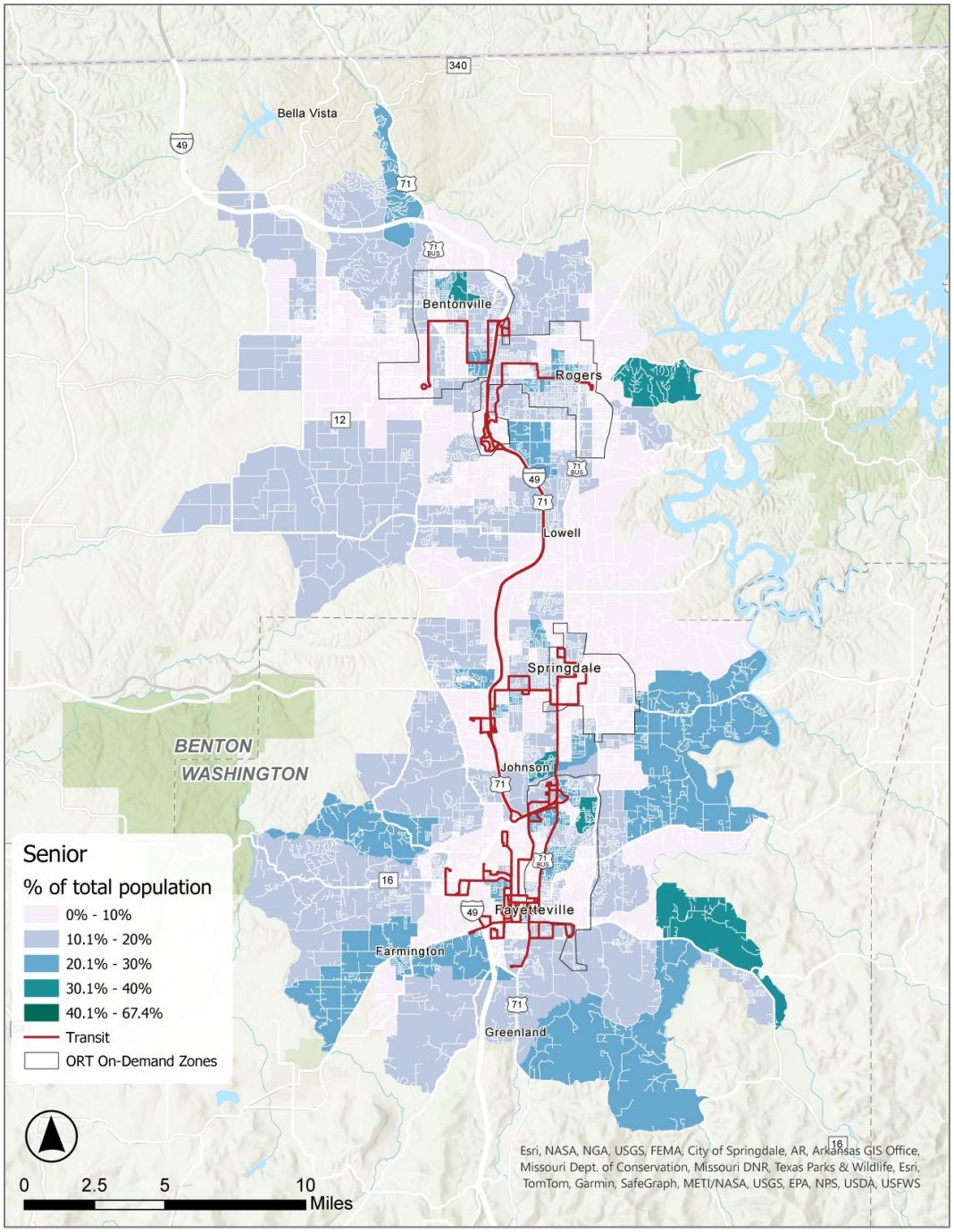

Figure 21 Map of Senior Population

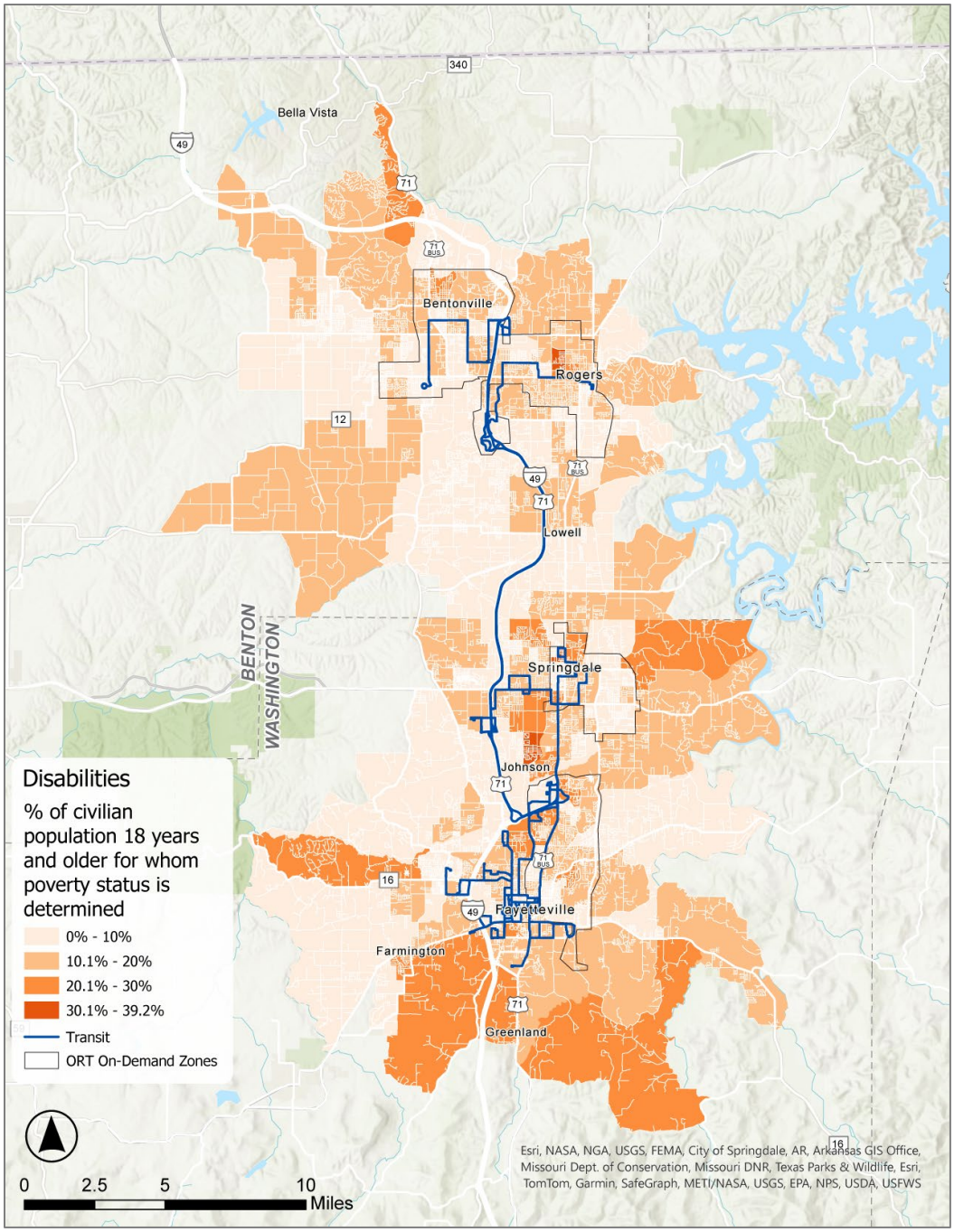

Figure 22 Map of Population with Disabilities

2.1.4 Race and Ethnicities

Transit use varies somewhat by race and ethnicity, regardless of other factors like income or disability. African Americans and—to a lesser extent—Asians are more likely to use public transit, while Hispanics and non-Hispanic whites are somewhat less likely to use transit. People with limited English proficiency are likely to be economically challenged, making them somewhat more likely to use transit services.

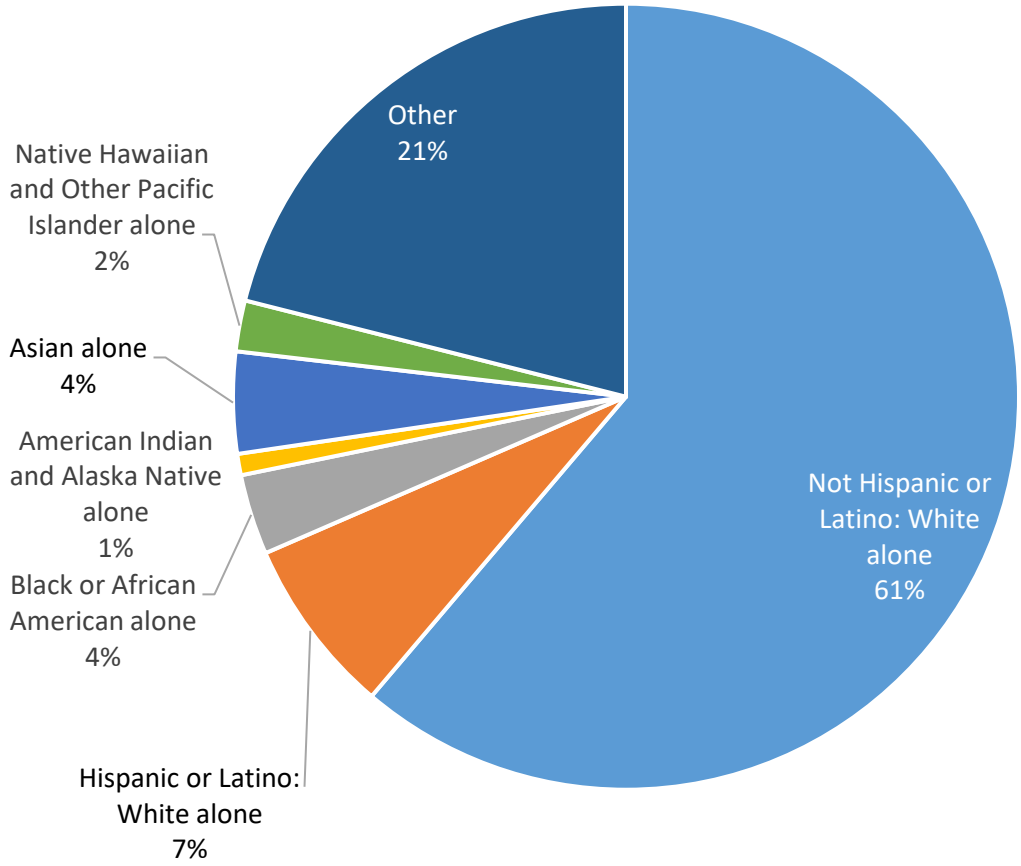

Figure 23 Demographic Pie Chart

Minority population

As the pie chart in Figure 23 shows that 39% of the study area population self-identified as a group of minority race/ethnicity, which is slightly lower than the 42% national average. Hispanics are the largest minority group, but at 7% are much less concentrated than in the national population. Both African Americans and Asians are underrepresented when compared to the national population. As the map in Figure 24 shows that higher concentrations of minorities live between Johnson and Bentonville, roughly following US 71 Business, and to the southeast of Fayetteville/Greenland. Minority population concentrations loosely correlate with population density.

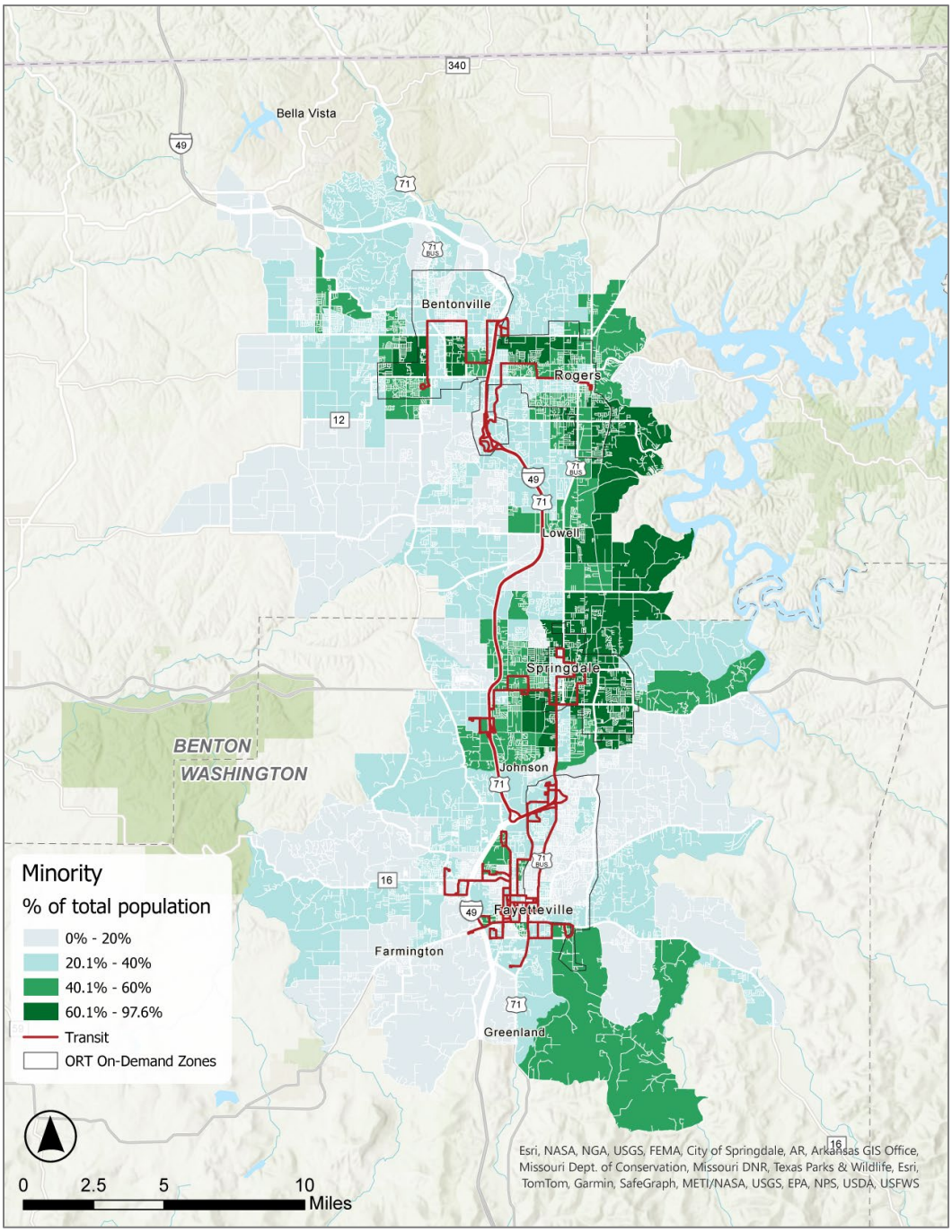

Figure 24 Map of Minority Population

Workplaces of Minority Workers

While minorities made up nearly 40% of the study area population, just 23% of study area jobs were held by minority workers in 2020. The map in Figure 25 shows the distribution of these minority-held jobs. Jobs held by minorities in the study area tend to be located in block groups with higher minority populations, along major thoroughfares, and in the core areas of the towns.

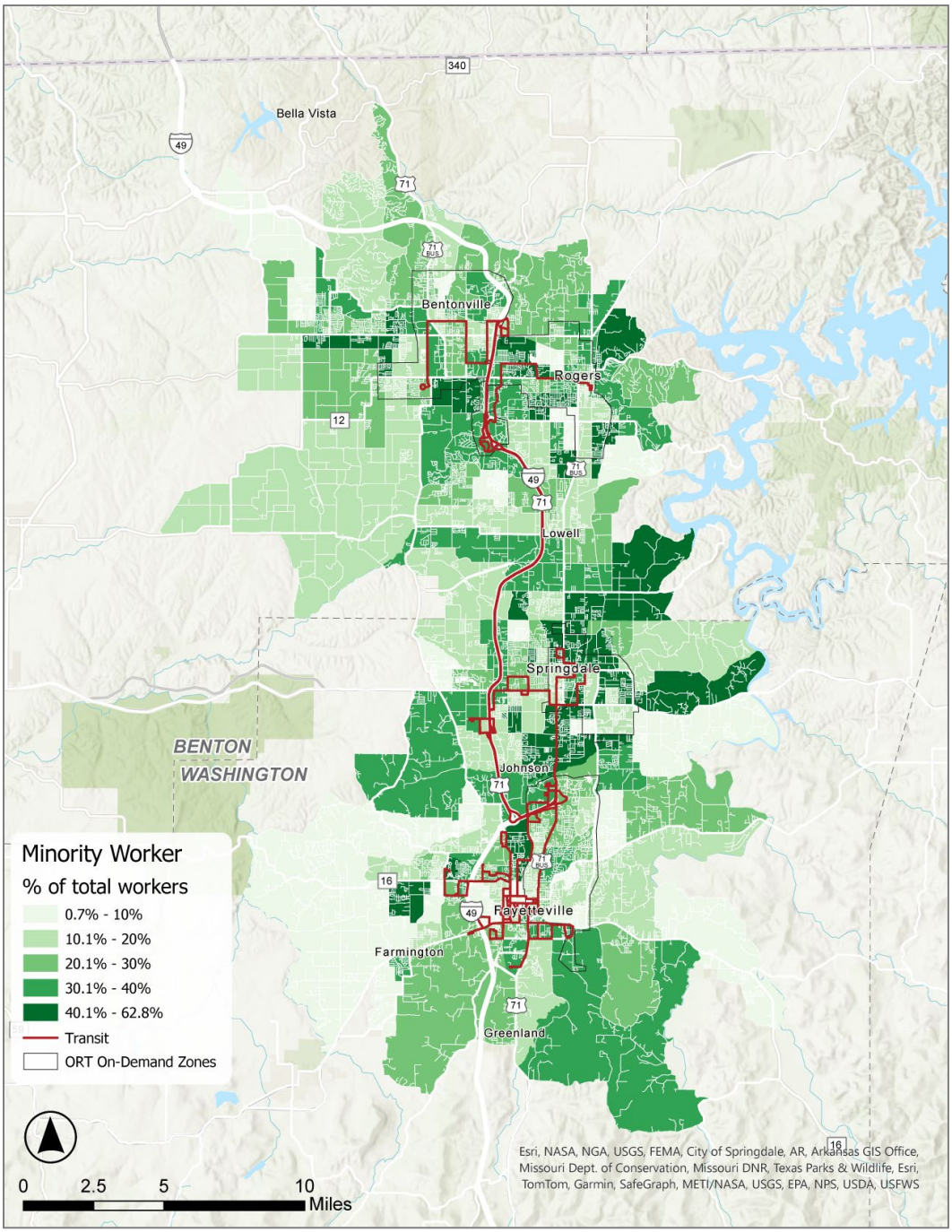

Figure 25 Map of Minority Worker Population

Limited English Proficiency

Residents with limited English proficiency (LEP) make up about 8.6% of the study area population, somewhat less than the national average of 9%. As the map in Figure 26 shows, LEP residents are highly concentrated in Springdale, and to a lesser extent in Rogers. According to the 2020 Census, 74% of the LEP population speaks Spanish.

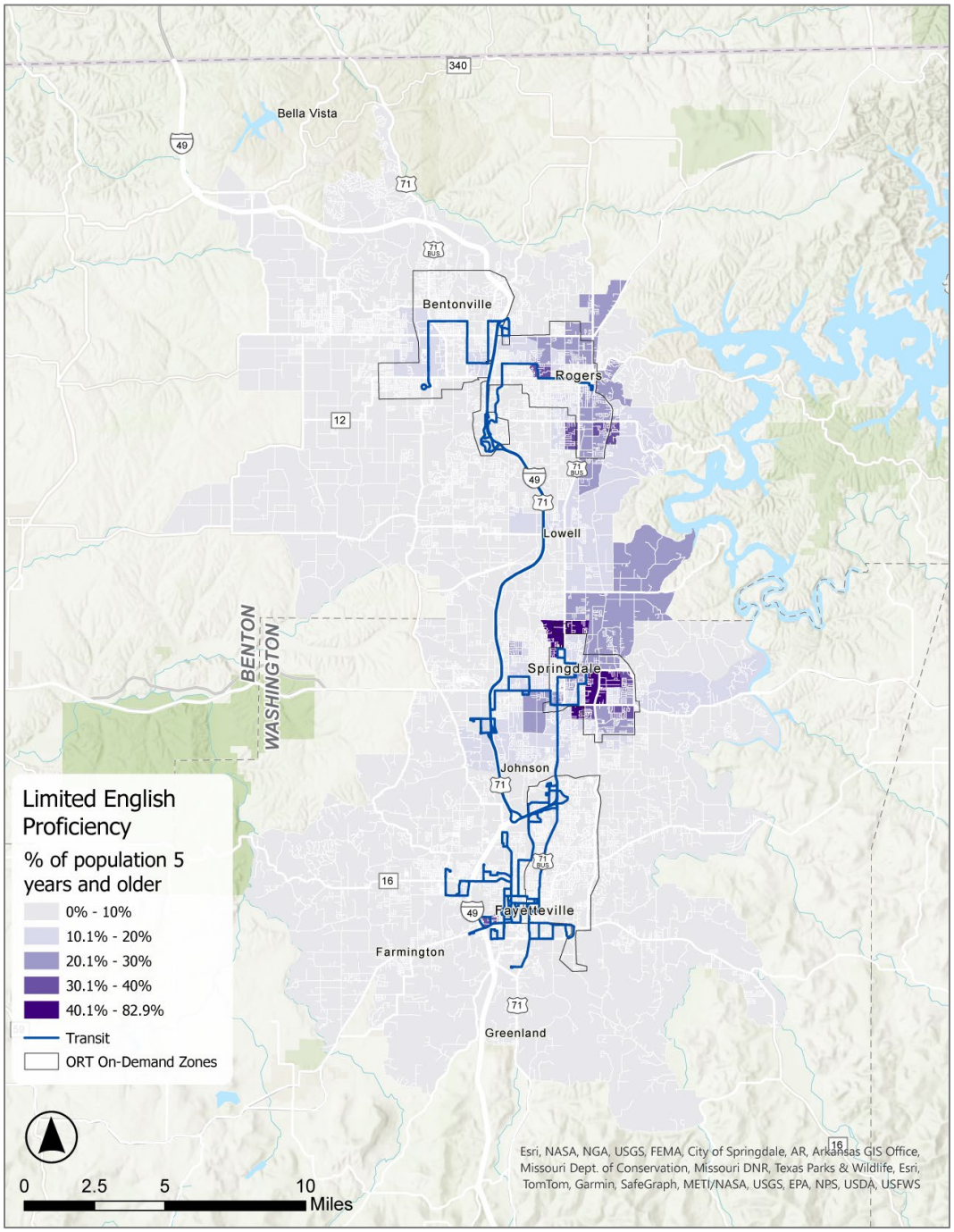

Figure 26 Map of Limited English Proficiency Population

2.1.5 Income and Poverty

People with lower incomes, particularly very low, poverty-level incomes, are less likely to own cars and more likely to use public transportation than the general population. Areas with higher concentrations of lower-income people tend to generate higher transit demand.

Median household income

The study area's annual median household income of $86,000[2]– buoyed by the significant number of upper-and mid-level corporate executives and university faculty and staff who live in the area – is significantly higher than that of the State of Arkansas ($66,100[1]) or the US ($80,610[3]). Figure 27 shows the distribution of income in the region. Each income range represented on the map represents one-fifth of Arkansas households, which have incomes in that range. Most block groups in the study area are in the upper fourth or fifth quintiles, representing incomes equal to those of the upper 40%, or 20%, of Arkansas residents. Lower incomes are found in the core and other areas of Fayetteville, as well as parts of Springdale and Rogers. Most peripheral block groups in the study area are in the highest income quintile.

[2] Replica, 2023 Fall

[3] US Census, https://www.census.gov/library/publications/2024/demo/p60-282.html

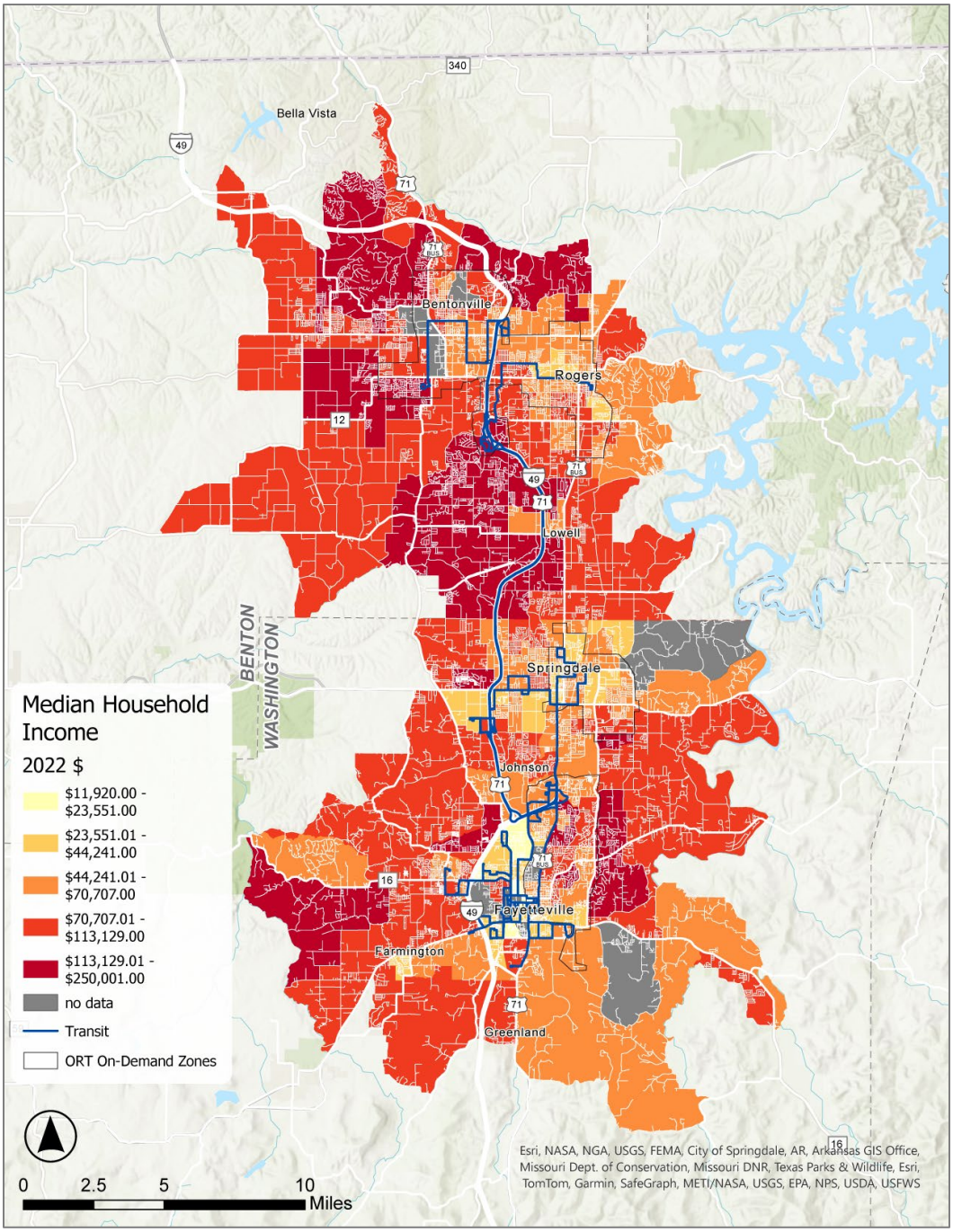

Figure 27 Map of Median Household Income

Poverty

Analysis of poverty in the study area essentially is the inverse of the analysis of income. The percentage of households in the study area living in poverty, at 12%, is lower than the average for the State of Arkansas and for the US. As shown in Figure 28, households living in poverty tend to be concentrated above all in Fayetteville (some of these "households" may consist of single students, many of whom are not dependent on their nominal incomes) and, to a lesser extent, in Springdale and Johnson, though

Bentonville also has some areas with significant percentages of households with poverty level income. Lower-density areas have low percentages of poverty households.

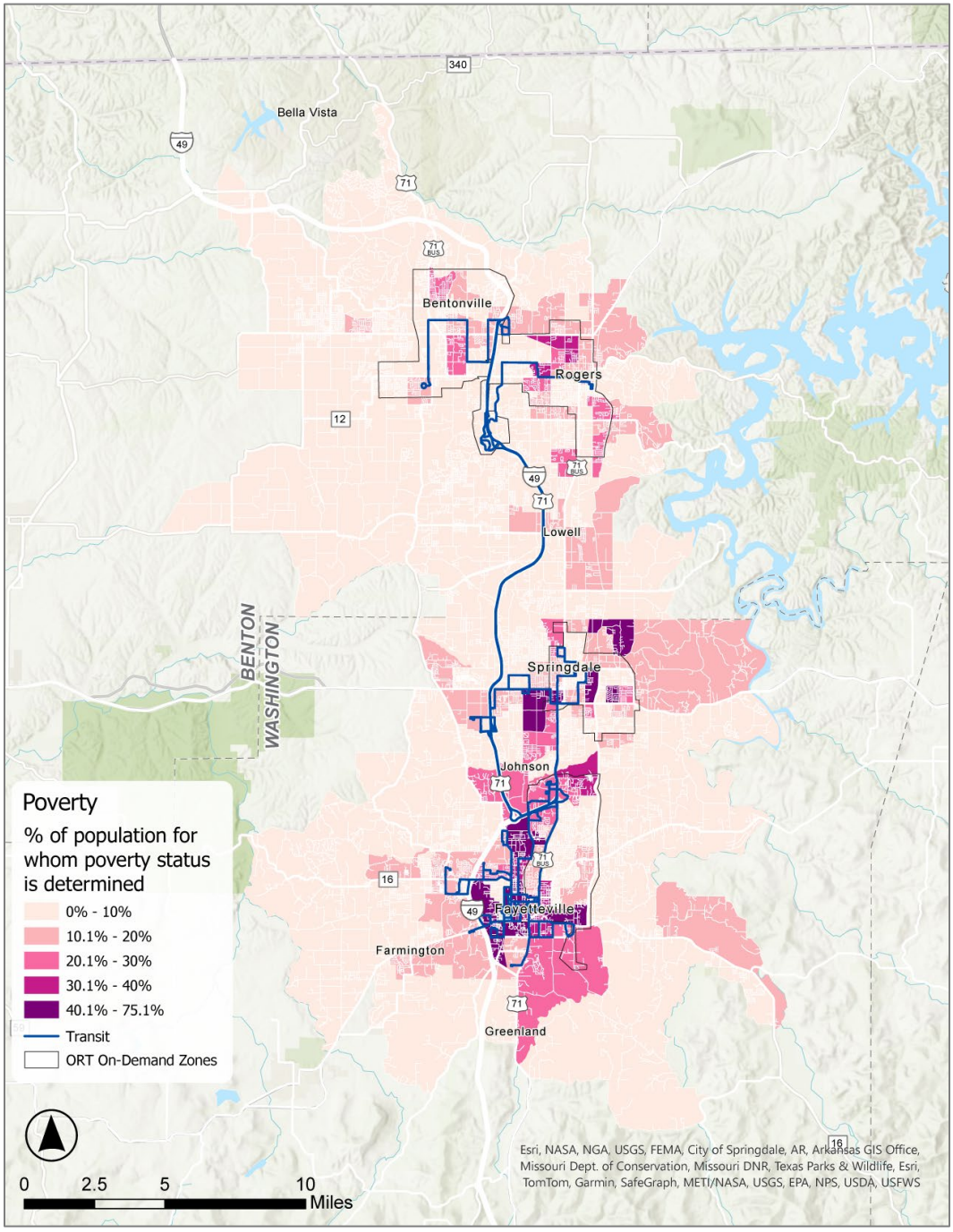

Figure 28 Map of Population in Poverty

Low-wage jobs

Low-wage jobs – jobs that pay $1,333 monthly or less- made up 11% of the total jobs in the study area. These jobs are more likely to be in the retail, accommodation, transportation, and warehousing industry sectors. Relying on such jobs as the sole source of income would likely result in the worker being near or below the poverty line. However, the map in Figure 29 suggests that those who are likely to work at these

jobs often live far away from their workplaces, which, considering the status of current transit networks, would likely require the workers to have reliable access to personal vehicles.

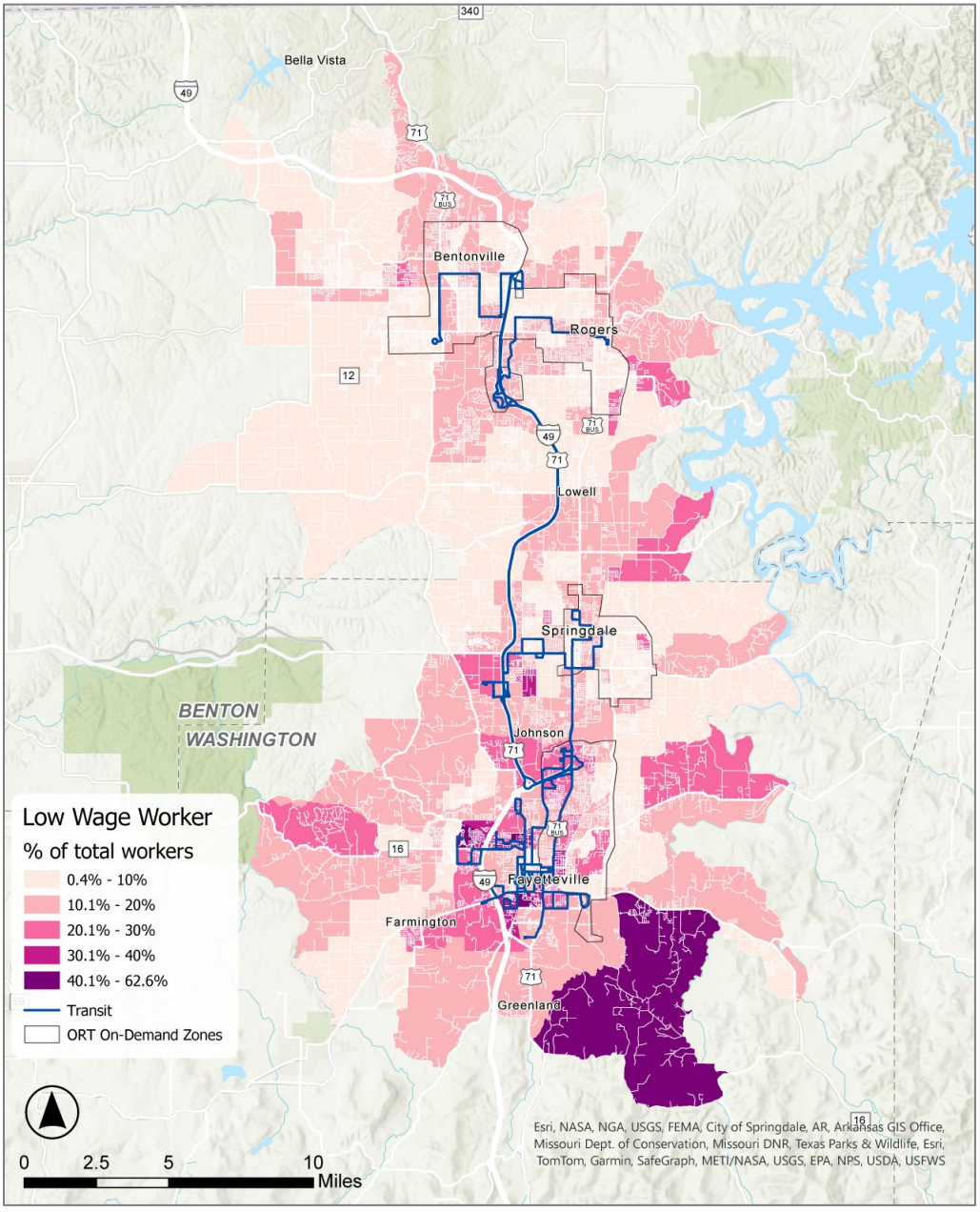

Figure 29 Map of Low-Wage Worker Population

Rent-burdened household

A rent-burdened household is defined as renter households that spend 30% or more of its income on rent. By that standard, 36% of renter-occupied households in the study area were rent-burdened. As shown in Figure 30, block groups with high percentages of rent-burdened households span across the entire study area in both low- and high-density areas. High rent-burdened household block groups also overlap with most of the high poverty rate block groups. Higher rent often has a disproportionate impact on lower-

income households as it'd be a much higher percentage of their income. Without external assistance, the rent increase would send many at or near poverty into a downward spiral.

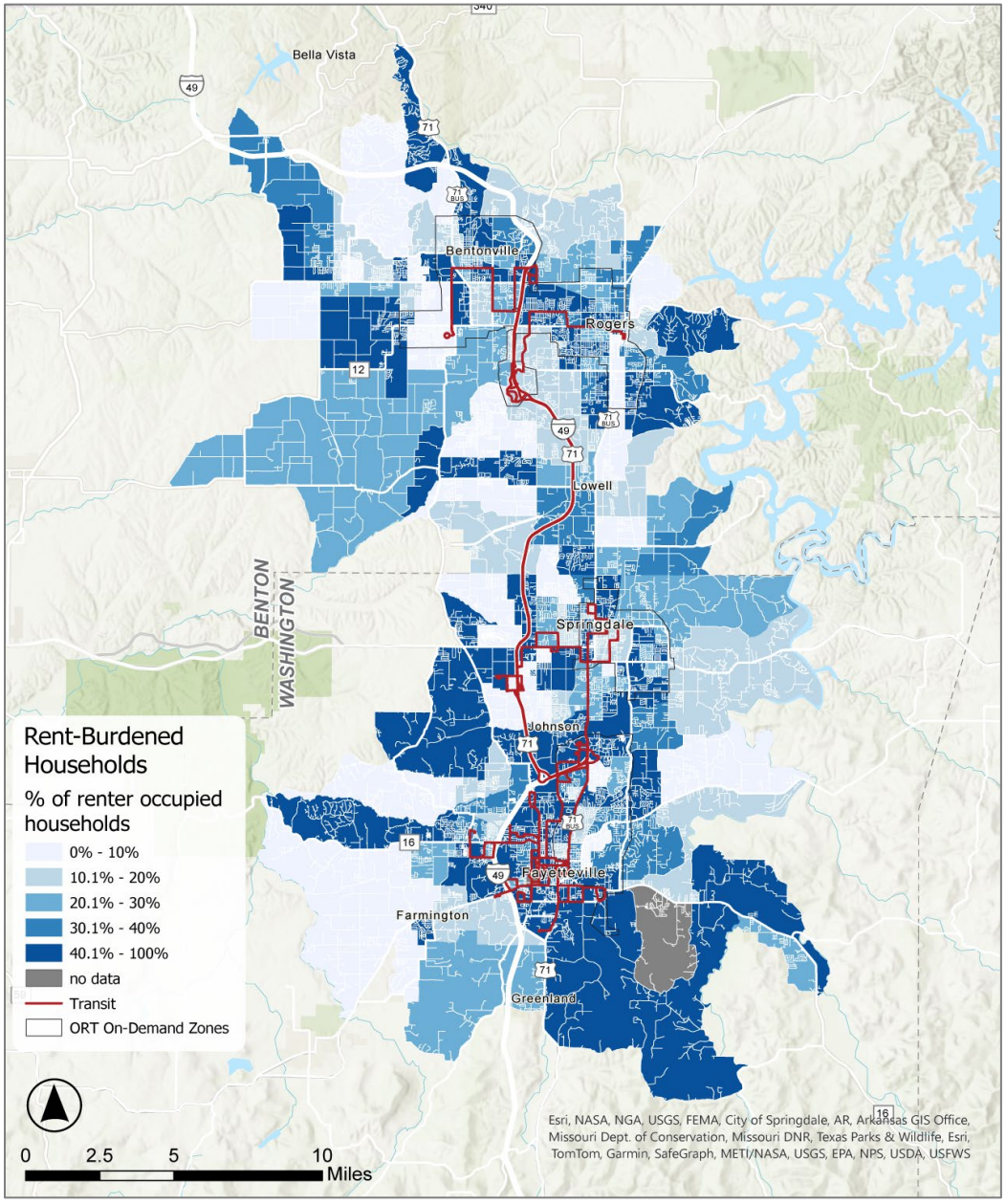

Figure 30 Map of Rent-Burdened Households

2.1.6 Vehicle Ownership

Zero-car households

Very few households do not have access to at least one personal vehicle (4% of occupied households) in the study area. The relatively high concentrations are in Bentonville, Springdale, and between Fayetteville and Johnson, as shown in Figure 31. A large portion of these households likely form the main customer base for ORT services, and to a lesser extent, RT services, due to the lack of transportation alternatives. This group of the population is also potentially shrinking, as the economy is trending upward, and those

who can afford a vehicle would often do so as soon as possible. This presents a challenge for ORT and RT as their customer base, particularly for their fixed route services, will likely keep shrinking, making efficient operations much more difficult.

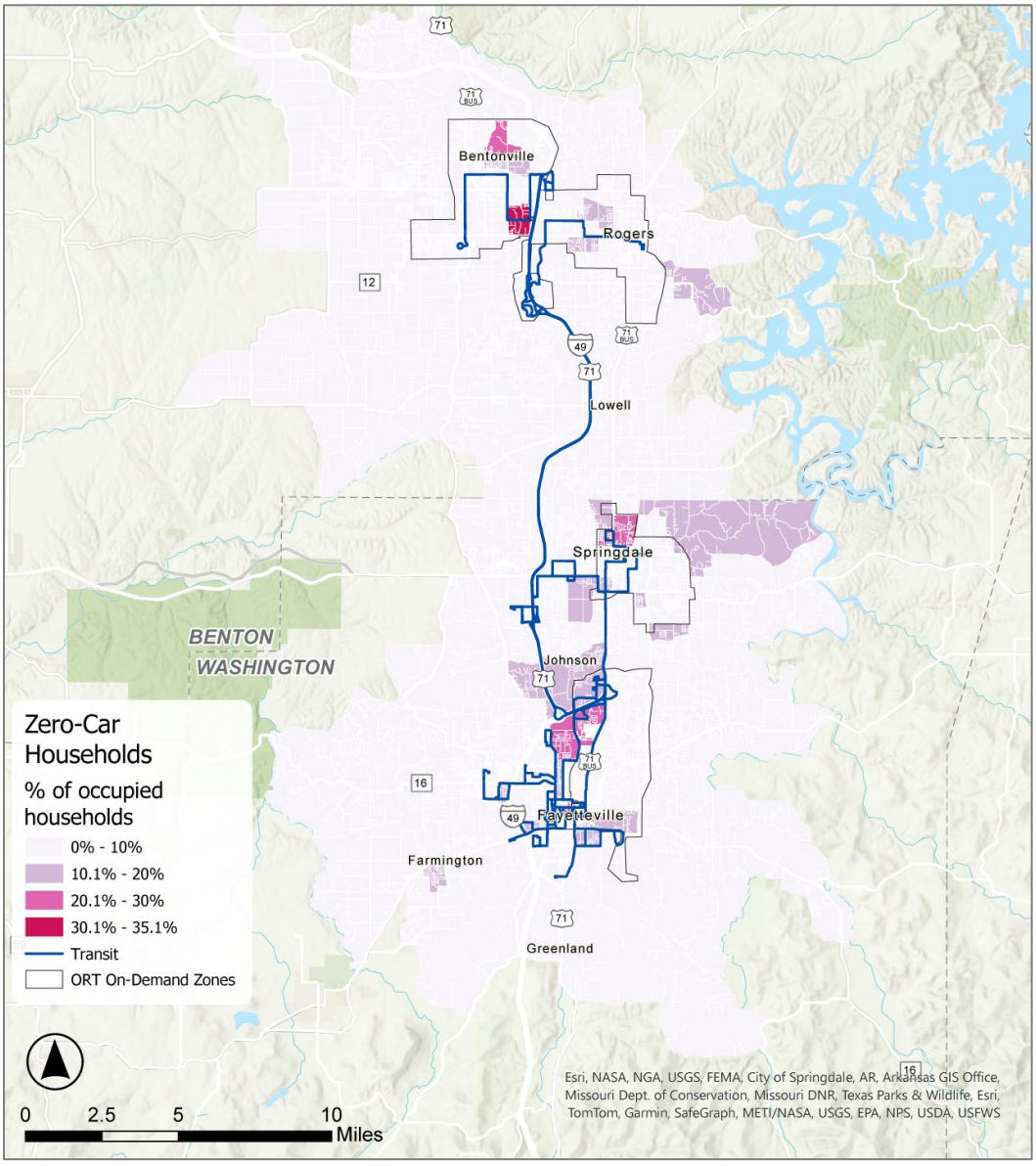

Figure 31 Map of Zero-Car Households

One-car households

One of the potential customer bases that ORT and Razorback can tap into is one-car households with two or more members. Figure 32 below shows the distribution of one-car households in the study area. While almost every municipality in the study area has at least one block group with a high percentage of one-car households, the higher percentage block groups tend to be located in the higher-density areas, particularly in Fayetteville, Springdale, and Bentonville. Unfortunately, the US Census does not release crosstab of household size and vehicle ownership at the block group level, but some rough estimates can be made by comparing average household size and vehicle ownership.

- About 1/3 of households have access to one vehicle
- The average household size in the study area is 2.7 persons
- The average household size in block groups with over 40% one-car households is slightly lower at 2.3 persons

This suggests that while one-car households tend to have fewer members, it is likely that such households would still have at least two members. Transit may fulfill the needs of transportation for those without access to a vehicle, who are more likely to be women who take up homemaking duties. This group of the population, however, tends to have different priorities when it comes to transit – for example, service needs to serve multiple grocery stores and daycare centers, and first- and last-mile travel needs to be short and safe for small children. Often, these desires are in direct conflict with services designed to serve commuters.

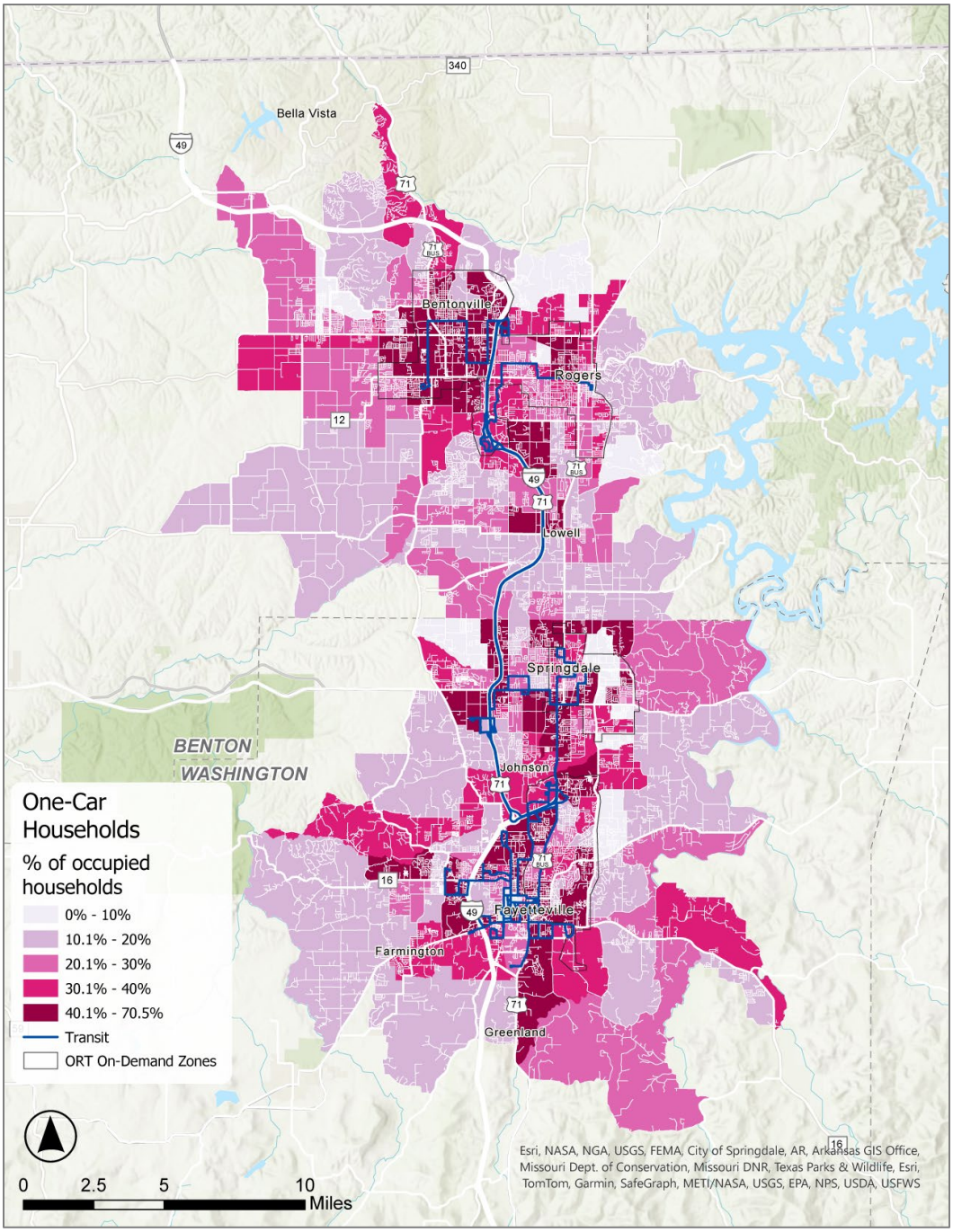

Figure 32 Map of One-Car Households

2.1.7 Activity Centers

Important destinations

Throughout the TAS area, there are numerous significant activity centers and destinations. These include major employment centers, retail centers, medical facilities, sporting facilities, higher education campuses, entertainment districts, and many others. These activity centers are important to identify in the TAS as they can serve current and future sources of daily transit trip generation.

As seen in Figure 33 below, there is a wide variety of activity center typologies identified, but mainly these centers are clustered near the central business areas of Bentonville, Rogers, Springdale, and Fayetteville. Activity centers also tend to cluster along many of the regional highways and thoroughfares, such as the U.S. 71 Business highway corridor and adjacent to Interstate 49.

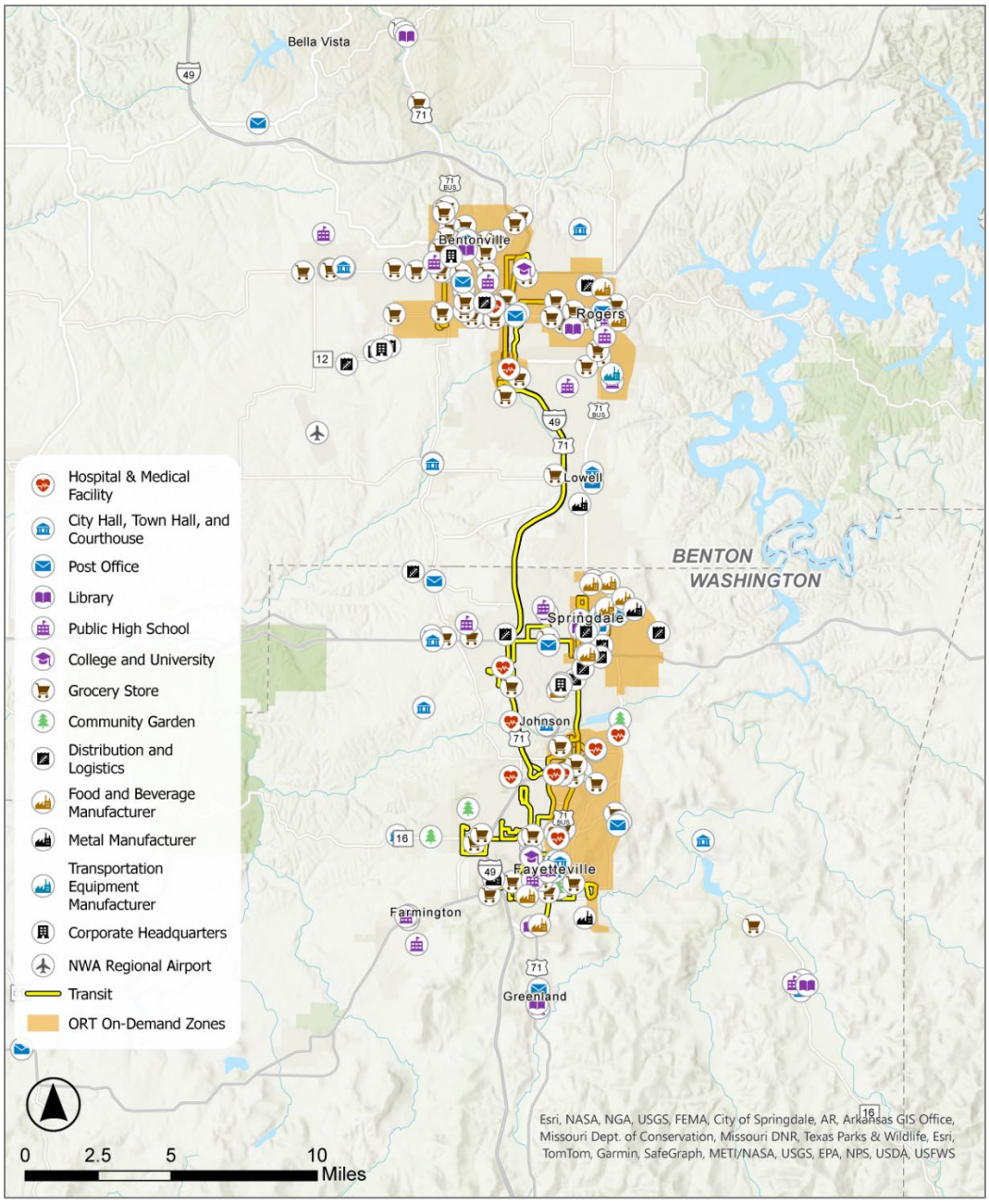

Figure 33 Map of Activity Centers

Employment Activity Centers

Major employment centers can be of the most importance when considering a future enhanced fixed-route transit corridor and network, as they can be consistent destinations for thousands of daily trips. The Northwest Arkansas region is home to the corporate headquarters of several national and international corporations, including Walmart, JB Hunt International, and Tyson Foods.

In 2017, Walmart announced plans to construct a new 350-acre corporate headquarters campus in Bentonville, located along SE 5th Street and bounded by J Street on the west, Martin Luther King Jr. Boulevard to the west, and SE 14th Street to the south. The campus envisions upwards of twelve office buildings, hotels, a fitness center, an auditorium, on-site childcare, two lakes, and connecting trails. When completed, Walmart anticipates the new campus will be home to approximately 15,000 employees. The new campus plans to begin opening office buildings in phases beginning in 2025. Walmart has set a goal to have 10% of its Bentonville-based employees at the new campus use alternative transportation (biking, walking, transit) to access the area[4].

As the TAS develops alternative options for enhanced transit in the study area, activity centers, like the new Walmart campus, will be critical anchor destinations that will be considered for improved transit connectivity locally and regionally.

(Image Credit: Walmart)

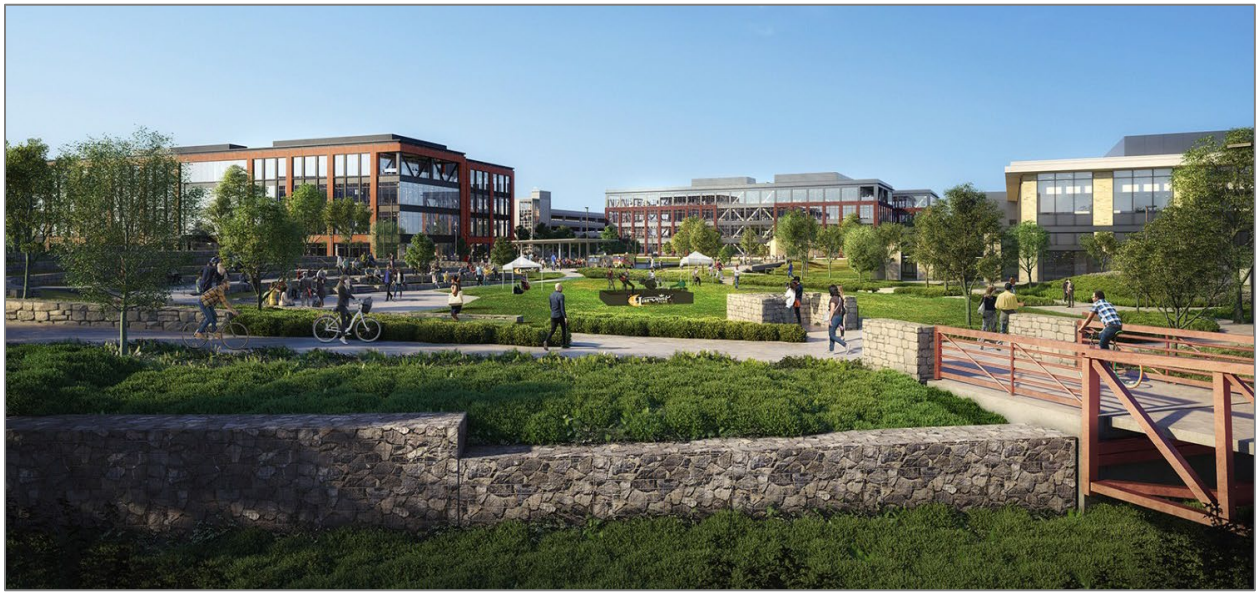

Figure 34 Rendering of Walmart Campus

Along with Walmart, JB Hunt International has two adjacent office campuses located along the east side of I-49, south of Monroe Avenue in Lowell. These multiple office tower campuses are home to thousands of employees in the greater northwest Arkansas region.

[4] Walmart: New Home Office. Frequently Asked Questions. https://corporate.walmart.com/about/newhomeoffice/faq-new-home-office.

Beyond office parks, there are multiple large manufacturing areas in the region, with a concentration on the southern edge of the Fayetteville area, with Tyson Foods and Conagra Foods processing and distribution plants, amongst other manufacturing facilities located nearby.

Retail

Commercial retail and grocery stores are also important trip generators for public transit services, and there are several of these centers disbursed throughout the study area, many located along or near major highways or arterial corridors.

The Northwest Arkansas Mall is the region's largest traditional indoor shopping center, located on the west side of US 71, south of Main Drive, in northern Fayetteville. This shopping center houses many national retailers and is currently a transit hub where routes from ORT and RT meet and allow passengers to transfer between systems. This is both a location for transit riders to access shopping and a destination for employment opportunities.

Pinnacle Hills Promenade is another major retail center located along the east side of I-49 and Whitaker Parkway. This newer, outdoor shopping center provides many national brands and is also surrounded by multiple 'big box' retailers. This commercial center is also experiencing further growth on the west side of I-49 with additional restaurants and entertainment destinations.

The US 71B corridor stretches the length of the study area from north to south and is a major travel arterial for daily traffic in the NW Arkansas region. Land use along this corridor varies from rural to urbanized, but in many instances, the US 71B corridor has many commercial and retail uses along its alignment, especially in western Bentonville, Rogers, Lowell, Springdale, and Fayetteville.

Healthcare

Hospitals and large medical centers are important destinations for transit riders, providing access to critical medical care and also serving as significant employment locations. In the northwest Arkansas region, there are five major hospitals in the region, many of which are served by transit service from ORT or RT (Table 3).

Figure 35 Washington Regional Medical Center

The Washington Regional Medical Center, located in Fayetteville, is the largest hospital in the region with over four hundred beds and more than three thousand employees, with an emergency/trauma center, and numerous other medical services and specialties, making this a major destination in the northwest Arkansas region.

Hospital	Number of Beds	Transit Connectivity
NW Arkansas Medical Center - Bentonville	128	Route: Brx (ORT)
NW Arkansas Medical Center - Springdale	222	Route: 62 (ORT)
Mercy Hospital of Northwest Arkansas	245	Route: Brx (ORT)
VA Medical Center – Fayetteville	127	Route: 10 (ORT)
Washington Regional Medical Center – Fayetteville	425	Route: 26 (ORT)

Table 3 Medical Centers and Transit Connectivity

Education

The Northwest Arkansas region is a hub for regional, national, and international higher education with a major state university and local community college institutions.

University of Arkansas

The University of Arkansas (U of A), with its main campus in Fayetteville, is the largest university in the state with more than 30,000 students. U of A has ten colleges providing bachelor's and advanced degrees in more than 200 academic programs.

As noted earlier, RT provides mobility and public transportation services focused on U of A students, largely around the main campus with connectivity to large student housing developments and retail centers in the area.

Figure 36 University of Arkansas Campus

The U of A is also a major employer and economic engine for the region, drawing hundreds of thousands of visitors for football, basketball, and other Razorback sporting events each year, which injects millions of dollars into the local economy.

Northwest Arkansas Community College

The Northwest Arkansas Community College (NWACC) is located in Bentonville near I-49 and SE 14th Street and is the largest community college in Arkansas. NWACC offers certificate programs, two-year degree programs, job training, and general education classes that are transferable to four-year institutions. NWACC generally serves more than 14,000 students in an academic year[5] across all educational programs. The NWACC campus is currently served with public transit by ORT's BRX route.

Student Housing

The planning team attempted to identify potential student housing locations for the U of A, as shown in Figure 37 on the right. An apartment complex is assumed to be student housing if a campus shuttle stop is nearby. As shown in the map, most of the housing is concentrated toward the north of the campus.

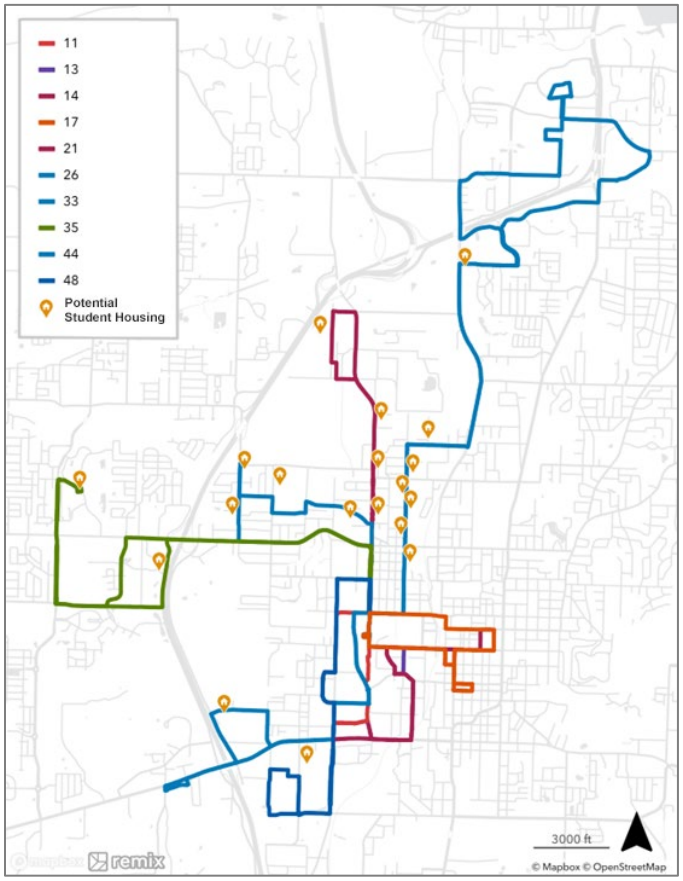

Figure 37 Fixed Route Razorback Transit and Student Housing

2.1.8 Transit Market Analysis Summary

Unlike many larger metropolitan areas in the country, population and employment saw explosive growth over the past decade in the region, and much of the growth occurred in the study area. However, population and employment density in the region are low, and the most recent population and employment growth is located in lower-density areas where the development patterns largely favor the use of single-occupancy vehicles. Higher-density areas, particularly in and near downtown Fayetteville, Springdale, Rogers, and Bentonville, have lost population over the past decade, while areas that gained population tend to be low-density and are further away from the major corridors.

Employment and activity centers are similarly dispersed. Large employers in the region tend to be headquarters campuses, factories, and warehouses, none of which tend to be located in high-density areas. Lower-wage jobs, specifically in the food service, hospitality, and retail industry sectors, have been moving to lower-density areas over the past decade. These types of development are designed for vehicular access and often lack sidewalks and crosswalks that provide safe access for transit users and pedestrians, making it difficult for public transit to serve effectively or efficiently. This incentivizes workers to own a private vehicle even when their incomes are insufficient to maintain it over the long term. This is indicated by the fact that while 12% of the region's households have incomes below the poverty level,

[5] https://www.nwacc.edu/aboutus/aboutus/quickfactsabout.aspx

only 4% lack access to a car, and these car-less households include older people in nursing facilities and people with disabilities that preclude driving.

The region's socioeconomic and demographic characteristics include higher-than-average median incomes and high rates of car ownership, and lower-than-average levels of poverty, all of which indicate lower demand for public transit services. However, the 2022 ACS shows that there were over 46,000 residents in the study area living in poverty, and there is some mismatch between the areas where lower-income people and minorities live and where they work. In addition, many areas where lower-income people and minorities live and work, and many concentrations of jobs, are not currently served by fixed-route transit.

While the percentage of lower-income people in the region is not large, it is significant. Combined with the large number of students in the region, the lower-income population should provide a significant market for public transit, one that is sure to grow as the region's population and employment levels continue to rapidly grow. In addition, the high rate of employment and job growth in the region will generate worsening traffic congestion on the region's roads that will send many middle-income residents – and their employers – searching for public transit alternatives to driving. This suggests a future need for growth not only for conventional public transit but for high-capacity transit options that offer travel time competitive with—or faster than—driving.

3 EXISTING TRANSIT SERVICES

The Northwest Arkansas region is served by two transit providers –ORT, the region's primary public transit agency that operates a range of transit services throughout much of the region, and RT, operated by the University of Arkansas, which provides connections to the campus in Fayetteville and nearby communities.

3.1.1 Ozark Regional Transit (ORT)

Service Overview

ORT began operation in 1979 under the direction of the Community Resources Group (CRG), a local nonprofit organization. In 1990, the Fayetteville/Springdale metropolitan area became an Urbanized Area with over 50,000 in population. In 2001, First Transit was hired to manage the transit system. In 2002, the Urbanized Area FTA funding increased from $750,000 to $1.7 million, which is split with RT. In 2002, ORT began its first fixed route in South Fayetteville. In 2005, it began six new fixed routes, two in Fayetteville, Rogers, Springdale, and one in Bentonville. Figure 38 on the right shows an ORT bus in service to the NWA Mall.

Figure 38 Ozark Regional Transit Bus

Today, ORT operates fixed route, on-demand, and ADA paratransit services in Northwest Arkansas. ORT has 110 square miles of urbanized service area. The following sections will provide additional details about ORT's transit service.

Fixed route

ORT operates six fixed routes: the 10, 20, 61, 62, 490, and BRX. Fixed route service is currently fare-free. Figure 39 shows the transit system map. As of November 2024, ORT added route 12 in Bentonville as a pilot route to connect the Walmart Transportation building on N Walton Blvd and the Walmart Home Office on SW 8th St. The route operates on a 15-minute loop.

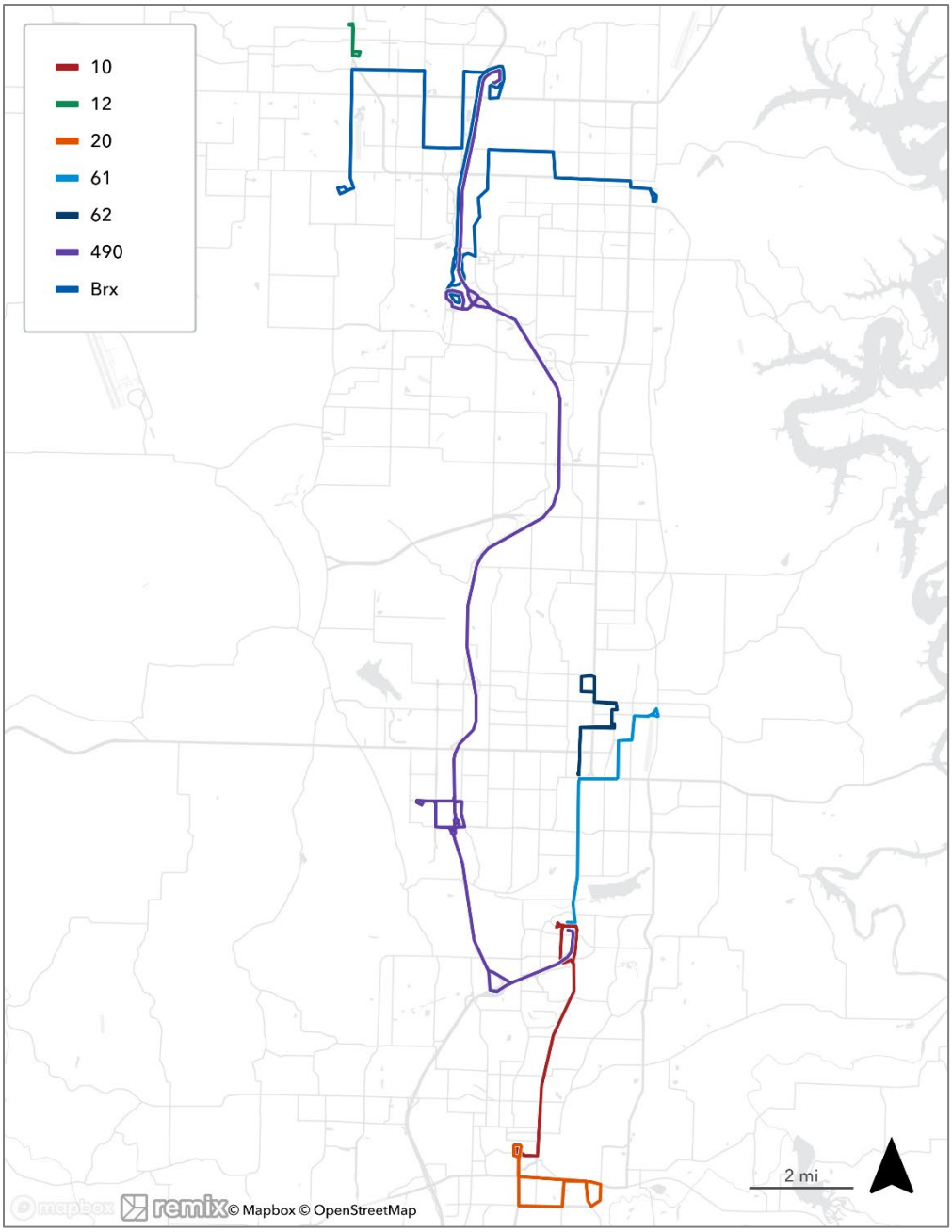

Figure 39 Remix Map of ORT Fixed Routes

Routes 10 and 20 primarily serve Fayetteville. Route 10 connects Hillcrest Towers to the NWA Mall while connecting other key points of interest, including Whole Foods, Fiesta Square, Hobby Lobby, VA Medical Center, Evelyn Hills Shopping Center, Ozark Natural Foods Co-op, Walton Arts Center, and Fayetteville Library. Route 20 connects Hillcrest Towers, Curtis Ave & 15 St, and Washington County Operations. Other key destinations include the Fayetteville Library, Adult Education Center, Cooperative Emergency Outreach, Walker Park, Fayetteville Square, U of A Research Center, Tyson Foods- Fayetteville Complex, Fayetteville Senior Center, Theatre Squared, and Walton Arts Center. Route 20 is the only route that operates on Saturdays.

Routes 61 and 62 primarily serve Springdale. Route 61 connects the NWA Mall with the Walmart Supercenter and the Jones Center, a community recreation center. Other points along the route include Springdale Senior Center and Downtown Springdale. Route 62 connects Arisa Health, Walmart Supercenter on Pleasant Street, and Christian Ave & Thompson Street. Points of interest include the Springdale Library, Aquatic Center, Northwest Medical Center, downtown Springdale, Springdale Post Office, Springdale City Hall, and Shiloh Museum.

Route BRX primarily serves Rogers and Bentonville. The route connects the Bentonville Community Center, Hunt Tower, and Downtown Rogers. Other points of interest in Bentonville include Walmart Home Office, 8th Street Market, Bentonville High School, Northwest Medical Center, Sam's Club Home Office, and David Glass Technology Center. In Rogers, it connects the Arkansas Music Pavilion, Rogers Convention Center, Mercy Medical Center, Pinnacle Hills Promenade, Scottsdale Center, Frisco Station Mall, and Railyard Park.

Officially introduced on November 4, 2024, Route 12 connects the Walmart Culinary Center on the south and Walmart Logistics and Supply Chain facilities on the north via S Walton Boulevard. The southern terminal is in the same business area as Walmart Home Office, which is served by Route BRX on SW 8th Street. However, Route 12 and BRX aren't directly connected. At a 15-minute headway all day, Route 12 is also the most frequent ORT fixed route service.

Route 490 provides express connections between Fayetteville/ Springdale and Bentonville/Rogers. The route runs from the NWA mall to the NWACC Center for Health Professionals in Bentonville, while stopping at the NWACC Washington County Campus and Hunt Tower.

Routes 10, 61, and 490 all meet at the NWA mall. RT's Route 26 also connects to the NWA Mall. Table 4 below summarizes ORT's fixed route operation

Route	Primary Service Area	Days of Operation	Loop	Avg Weekday Daily Ridership (Jan – Jul 2024)	Avg Weekday Ridership per Hour (Jan – Jul 2024)	Service Span		Headway (minutes)			
						Start	End	6:00-8:59 AM Peak	9:00-14:59 Mid-day	15:00-18:59 PM Peak	19:00-21:59 Evening
10	Fayetteville	Mon-Fri	No	186.5	14.9	6:30	18:30	60	60	60	
20	Fayetteville	Mon-Sat	Yes	257	21.1	6:00	19:00	30	30	30	30
61	Springdale	Mon-Fri	No	133.8	10.7	6:30	18:30	60	60	60	
62	Springdale	Mon-Fri	Yes	91	7.1	6:30	19:15	40	40	40	40

Route	Primary Service Area	Days of Operation	Loop	Avg Weekday Daily Ridership (Jan – Jul 2024)	Avg Weekday Ridership per Hour (Jan – Jul 2024)	Service Span		Headway (minutes)			
						Start	End	6:00-8:59 AM Peak	9:00-14:59 Mid-day	15:00-18:59 PM Peak	19:00-21:59 Evening
490	Fayetteville-Rogers Express	Mon-Fri	No	23	3	7:00	17:00	120		120	
BRX	Bentonville & Rogers	Mon-Fri	No	61.4	0.9	6:00	17:30	30	30	30	
12	Bentonville	Mon-Fri	Yes	-	-	7:30	17:30	15	15	15	

Table 4 Summary of Fixed Route Operations for ORT

On-Demand Transit

Ozark Transit provides four On-Demand Zones, one each in Bentonville, Rogers, Springdale, and Fayetteville. There are two transfer points between the Bentonville and Rogers zones. There is no direct transfer point between the Springdale and Fayetteville zones; passengers must use the fixed routes to connect between these locations. On-Demand service costs are $1.25 per trip.

Table 5 below summarizes the On-Demand service operations.

On-Demand Zone	Days of Operation	Service Span					
		Mon-Thursday		Friday		Saturday	
		Start	End	Start	End	Start	End
Fayetteville	Mon-Sat	6:30	19:00	6:30	23:00	10:00	20:00
Springdale	Mon-Sat	7:00	19:30	7:00	21:00	11:00	23:00
Rogers	Mon-Sat	7:00	18:30	7:00	20:00	16:00	22:00
Bentonville	Mon-Sat	7:00	18:30	7:00	24:00	12:00	24:00

Table 5 Summary of Operations for ORT On-Demand Transit

Table 6 shows a summary of ORT's On-Demand operating statistics from July 2024. Notably, Fayetteville has the highest average weekday daily ridership, while Bentonville has the highest average Saturday daily ridership. Rogers and Bentonville have higher average weekday rejections (seat unavailable), with Rogers at 34% and Bentonville at 48%.

On-Demand Zone	Avg Weekday Daily Ridership (Jul 2024)	Avg Weekday Ridership per (Revenue) Hour* (Jul 2024)	Avg Weekday Rejection (seat unavailable) (Jul 2024)	Avg Saturday Daily Ridership (Jul 2024)	Avg Saturday Ridership per (Revenue) Hour* (Jul 2024)	Avg Saturday Rejection (seat unavailable) (Jul 2024)
Fayetteville	96.5	3.0	7%	57.5	2.9	11%
Springdale	62.5	2.4	3%	52.3	2.2	1%
Rogers	32.9	2.8	34%	18.0	1.8	7%
Bentonville	40.0	3.2	48%	70.0	3.5	8%

Table 6 Summary of Operating Statistics for ORT On-Demand Transit

ADA Paratransit

ORT's ADA Paratransit Service is available in Washington and Benton counties to those who have applied and qualified for Paratransit eligibility with ORT under the Americans with Disabilities Act, and only within 3/4 mile of any ORT fixed or commuter route.

The service is available during the same hours as fixed route service, and it is fare-free. Riders must call to schedule trips at least one day in advance but no more than seven days in advance of a trip. Cancellation and alteration may be made 2 or more hours in advance without penalty.

National Transit Database (NTD) Trends

Figure 40 through Figure 42 show trends of annual total Unlinked Passenger Trips (UPT), revenue hour, revenue miles, and operating expenses between 2010 and 2022, obtained from the National Transit Database (NTD).

According to NTD filings, ORT appears to have had a peak in revenue miles and hours in the 2016-2017 time frame. It appears there have been service reductions from that time forward, with a subtle increase in service from 2021 to 2022. Figure 40 and Figure 41 each illustrates this with a subtle uptick in revenue miles and hours, perhaps related to COVID funding.

Ozark Transit- Fixed Route

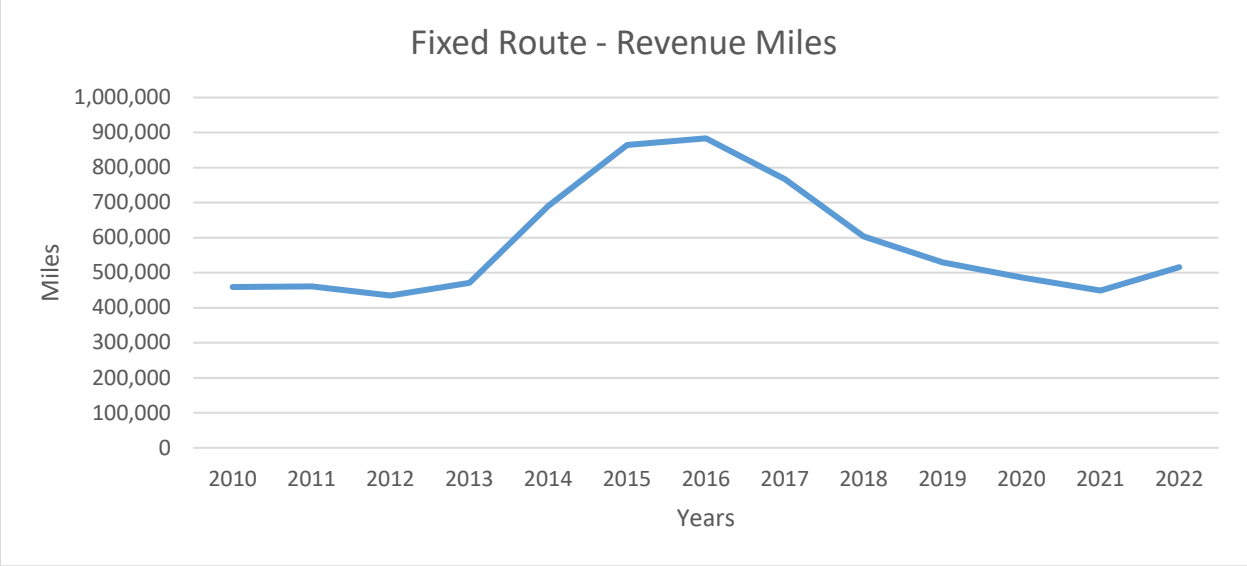

Figure 40 ORT Fixed Route Revenue Miles (2010-2022)

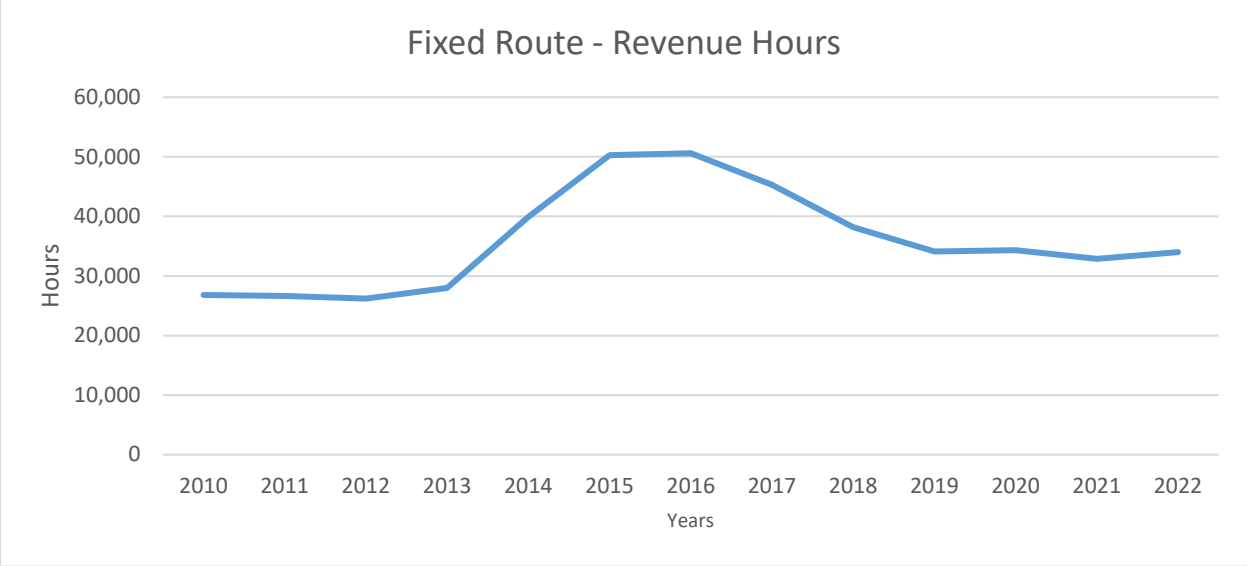

Figure 41 ORT Fixed Route Revenue Hours (2010-2022)

Starting in 2010, unlinked passenger trips (UPT) were on a gradual increase through 2016 and then dipped until 2018. This indicates a service change in 2016, and then the 2019-2020 dip is most likely due to the Covid Pandemic. Figure 42 and Figure 43 depict the challenging realities of operating transit in the post-Covid era. Ridership is still generally down while operating costs continue to escalate. This trend of increasing costs makes it difficult for ORT to provide higher levels of service to attract greater ridership levels.

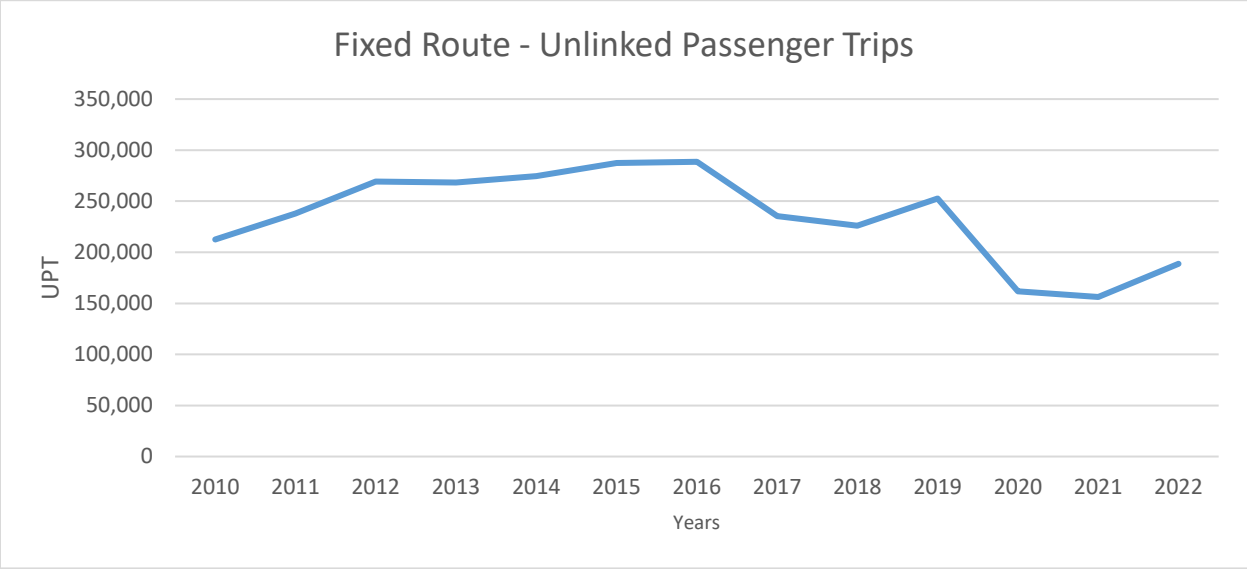

Figure 42 ORT Fixed Route Unlinked Passenger Trips (2010-2022)

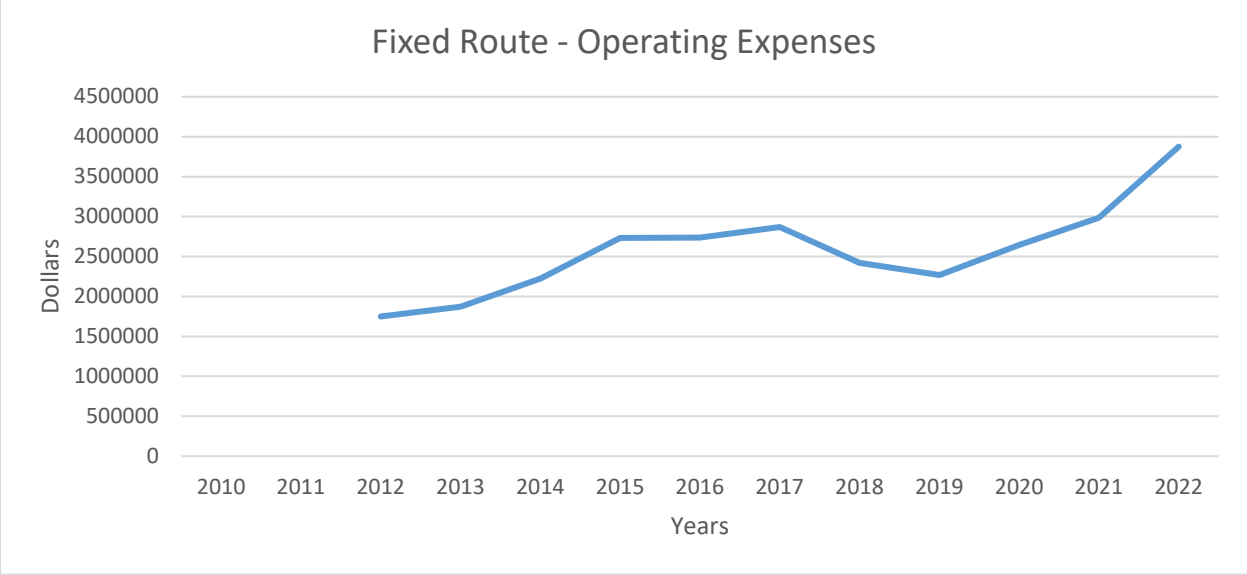

Figure 43 ORT Fixed Route Operating Expenses (2010-2022)

Ozark Transit- Demand Response

Within the scope of time evaluated in this study (2010-2022), ORT's Demand Response service has dramatically dwindled since 2016, including from 2020 to 2022. Figure 44 and Figure 45 show diminishing ridership based on both a lessening of miles and hours.

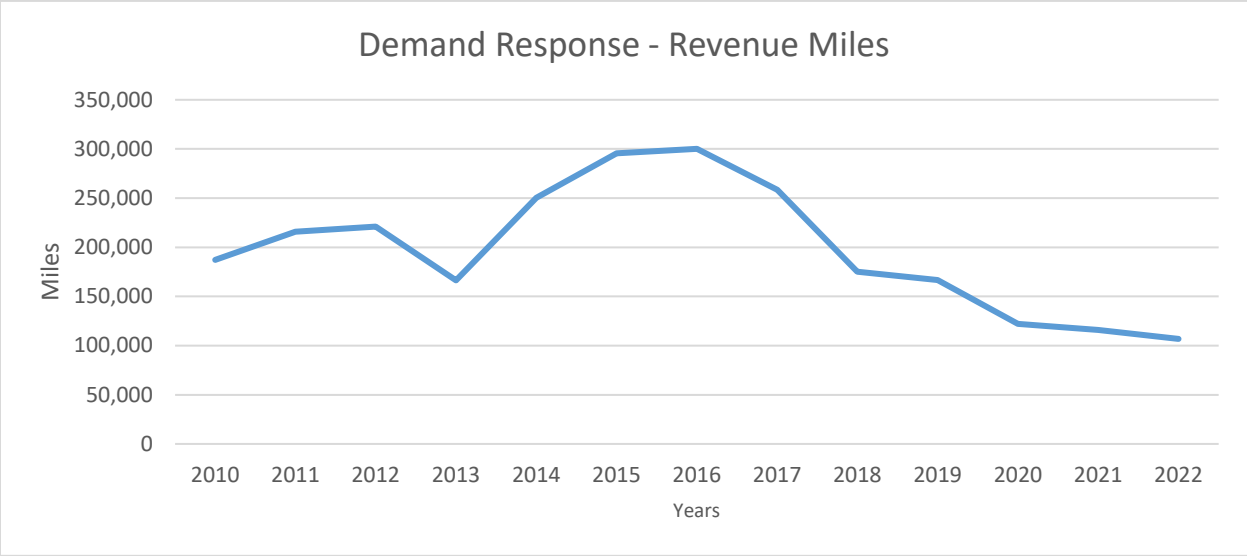

Figure 44 ORT Demand Response Revenue Miles (2010-2022)

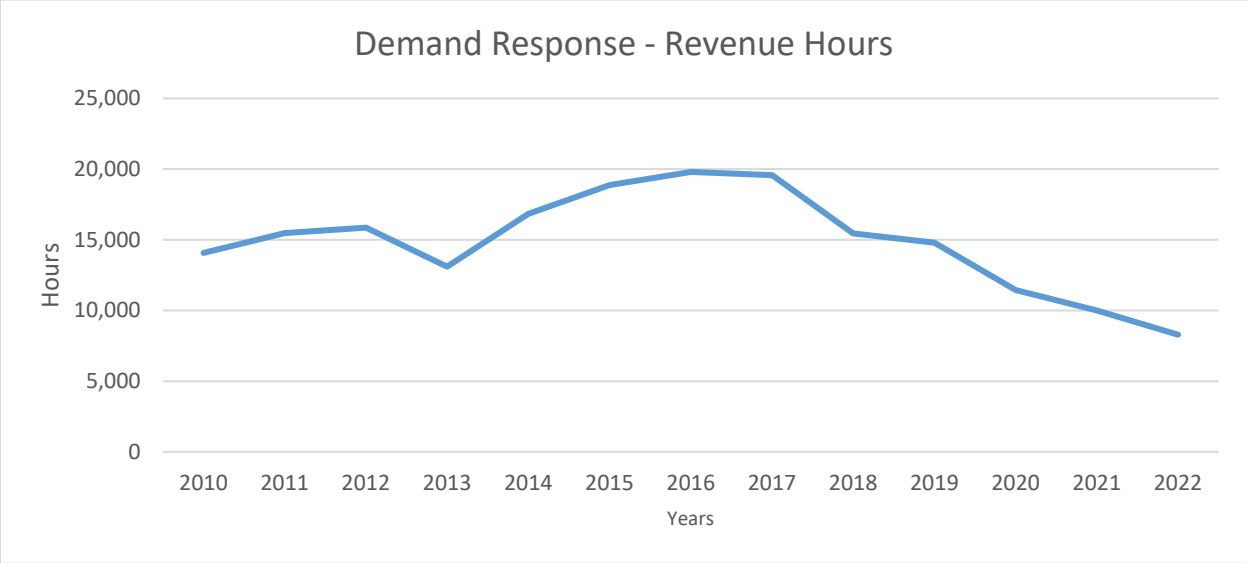

Figure 45 ORT Demand Response Revenue Hours (2010-2022)

It is notable to compare Figure 46 and Figure 47 that depicts a drop in ridership, with consistent operating costs. This indicates that the cost per trip has been increasing over the 2015 to 2022 time period. This trend does not offer great opportunities to expand transit services.

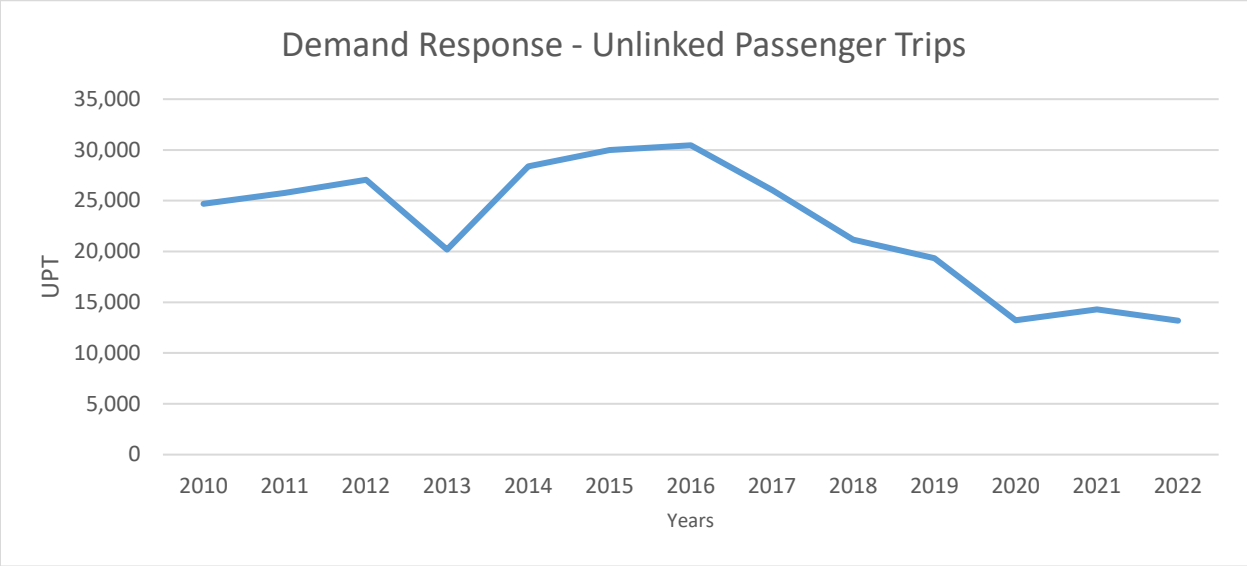

Figure 46 ORT Demand Response Unlinked Passenger Trips (2010-2022)

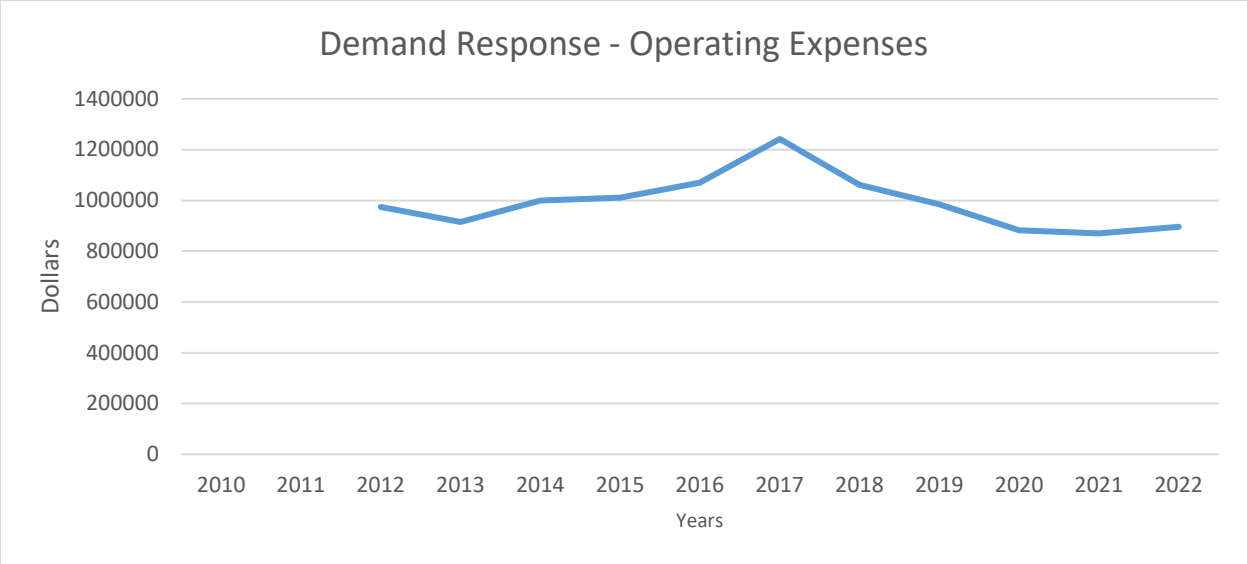

Figure 47 ORT Demand Response Operating Expenses (2010-2022)

Local fixed route

Serving multiple communities, ORT's routes in Fayetteville recorded much higher ridership than the rest of the routes in the system. Figure 49 shows the focus on higher average rides per hour in Fayetteville versus other parts of the Northwest Arkansas region. One potential basis for this could be the local university ridership. Route 490 recorded the lowest average weekday daily ridership at 23 boardings per day, followed by BRX at just over 61 boardings per day.

BRX recorded the lowest productivity in the system with less than 1 boarding per hour. The route operates every 30 minutes with a round-trip cycle time of 180 minutes, while the route needs 6 vehicles to sustain the schedule. It appears that a variation on the frequency, ride time, or other factors of the BRX needs to be varied to iterate towards a more effective route performance.

Only the Fayetteville routes recorded 15 boardings per hour or better. This is in addition to Fayetteville also being served in tandem with RT. Figure 48 illustrates how significant the Fayetteville ridership is in comparison with other ORT ridership performance. Further coordination of the ORT and RT system in Fayetteville might continue to grow the ridership in this area.

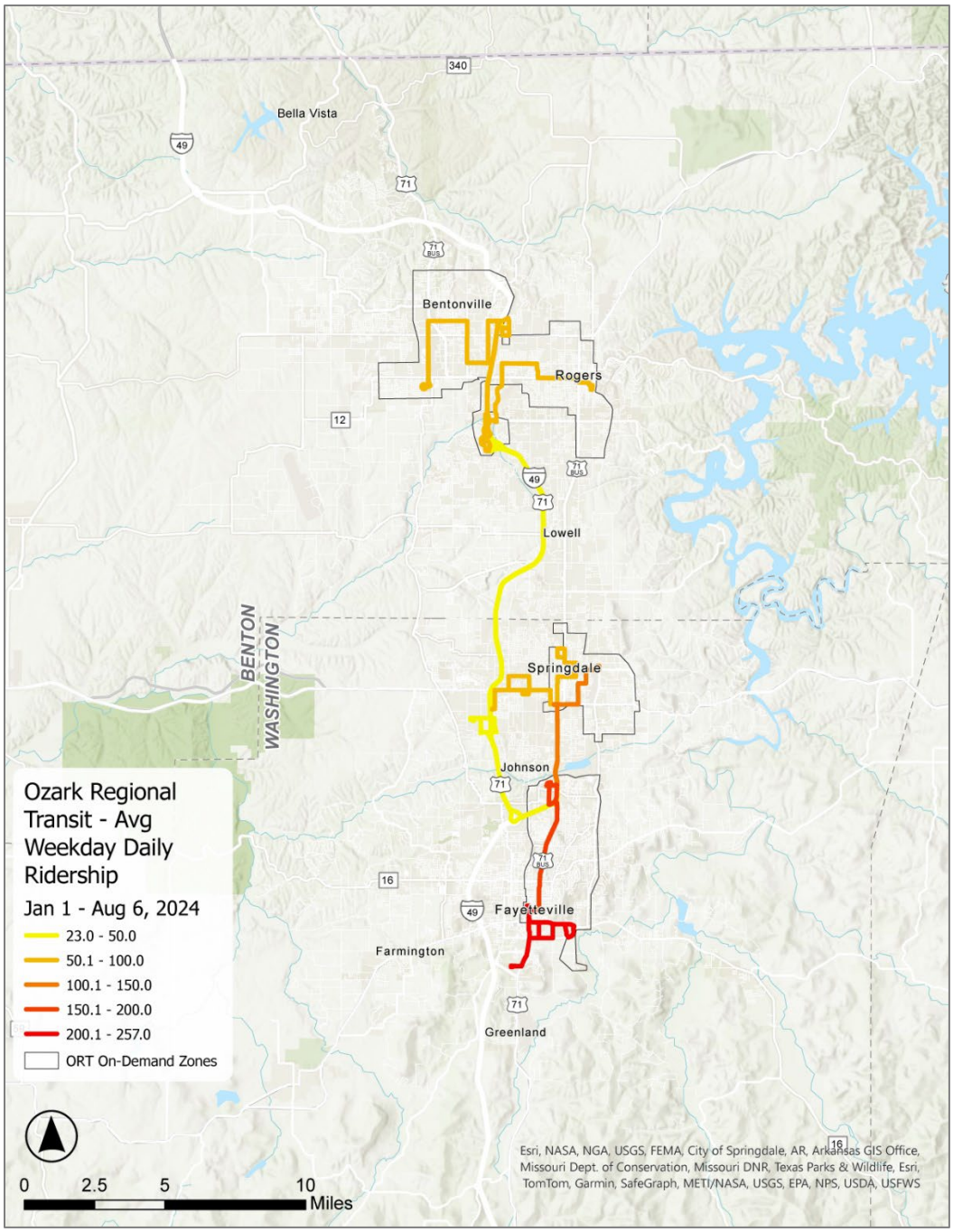

Figure 48 ORT Average Weekday Daily Ridership

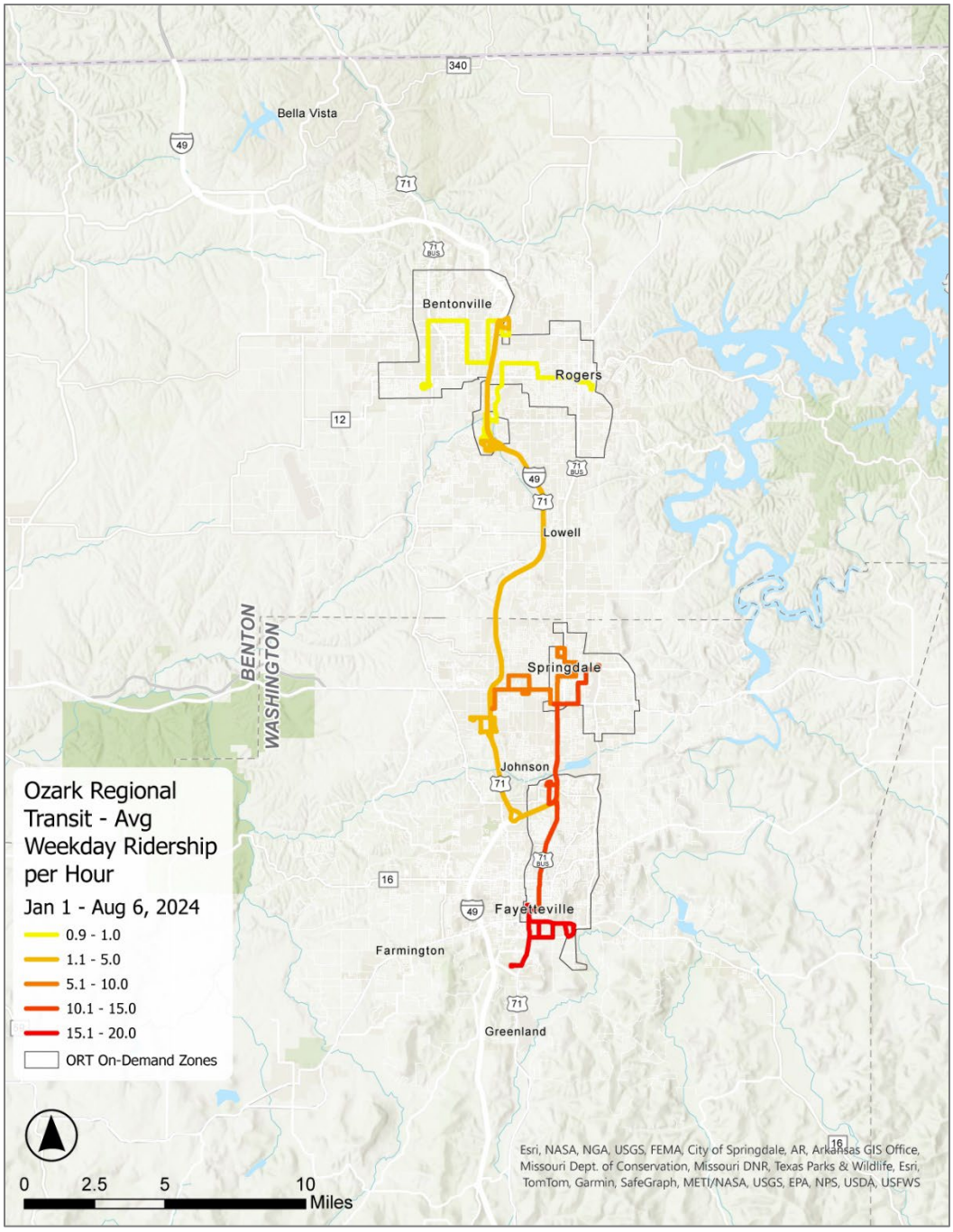

Figure 49 ORT Average Weekday Ridership per Hour

Route 490

Route 490 operates four round-trips per day between the Northwest Arkansas (NWA) Mall and Northwest Arkansas Community College (NWACC). Table 7 illustrates how Route 490 travels through less developed parts of the region as a commuter connection. Figure 50 captures the routing of Route 490. Only transit option connecting Fayetteville and the Bentonville/Rogers area. With this minimal frequency, the ridership of the 490 reflects typical commuter service performance. The five stops along the 490 are as follows:

- NWA Mall (Fayetteville/Johnson)
- NWACC Washington County (Springdale)
- Two stops in The District at Pinnacle Hills (Rogers)
- NWACC (Bentonville)

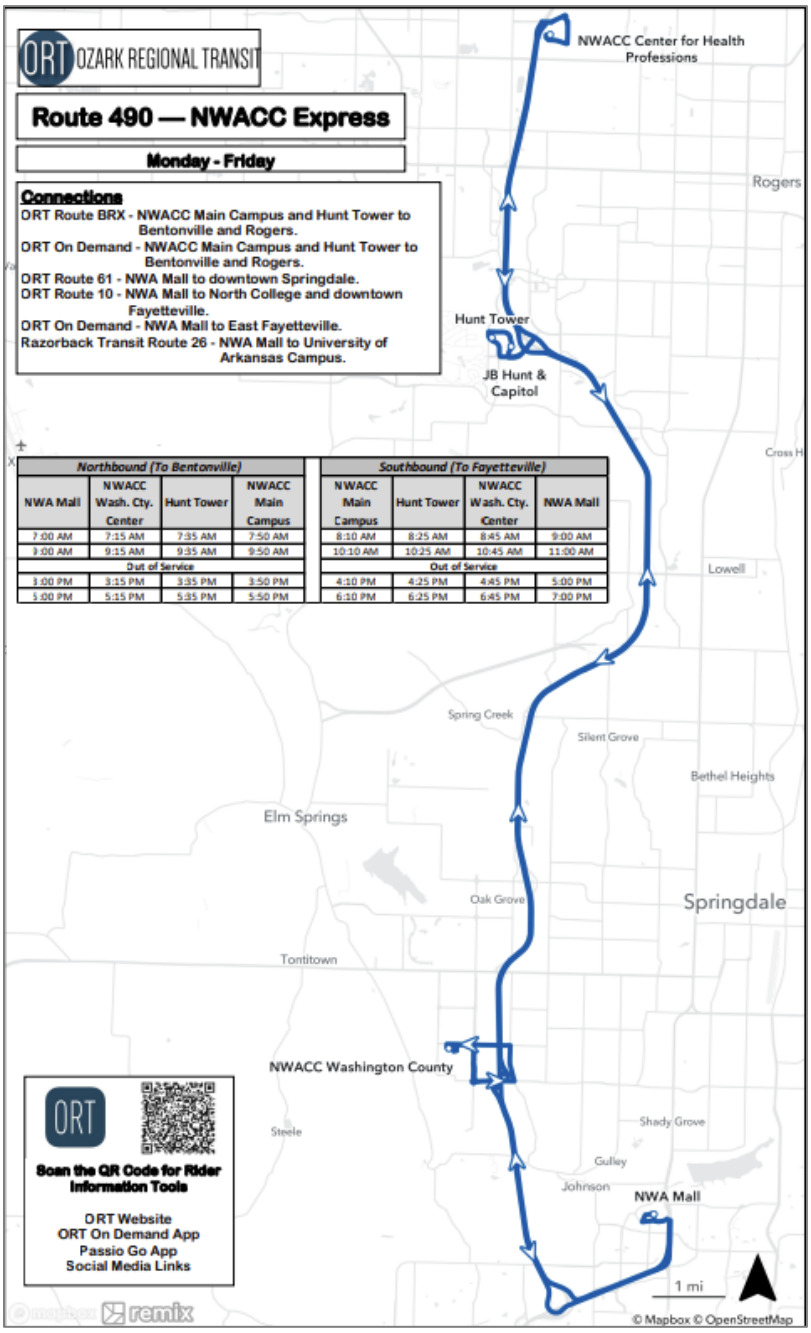

Figure 50 Snapshot of Route 490

Table 7 summarizes some key demographic characteristics within 0.5mi buffer of ORT fixed route stops.

		Route 10	Route 20	Route 490	Route 61	Route 62	Route BRX
2018-2022 5-Year ACS	Total Population	17,737	12,400	4,281	13,754	18,686	29,183
	Density (persons/acre)	*4.71*	*3.56*	*1.96*	*3.62*	*4.03*	*3.08*
	Senior Population	2,232	1,033	491	1,090	2,220	3,169
	% of total	*13%*	*8%*	*11%*	*8%*	*12%*	*11%*
	Disabled Population	1,676	1,081	389	1,372	1,960	2,582
	% of total	*12%*	*12%*	*12%*	*14%*	*15%*	*12%*
	Minority Population	3,844	3,548	1,174	8,437	10,943	12,111
	% of total	*22%*	*29%*	*27%*	*61%*	*59%*	*41%*
	Poverty	4,329	4,457	442	2,696	2,962	2,976
	% of total	*27%*	*43%*	*10%*	*20%*	*16%*	*10%*
	Limited English Proficiency	320	222	161	2,909	3,017	2,413
	% of total	*2%*	*2%*	*4%*	*23%*	*17%*	*9%*
	Zero Car Household	571	471	116	340	474	678
	% of total	*7%*	*10%*	*6%*	*6%*	*7%*	*6%*
	One Car Household	3,392	2,247	832	2,356	2,347	5,096
	% of total	*44%*	*47%*	*44%*	*43%*	*35%*	*43%*
	Rent Burdened Household	2,168	2,104	493	1,063	1,216	2,087
	% of total	*43%*	*57%*	*45%*	*27%*	*32%*	*33%*
Replica 2023 Fall	Total Jobs	29,333	20,377	8,262	18,734	22,018	54,549
	density (jobs/acre)	*7.79*	*5.84*	*3.79*	*4.93*	*4.75*	*5.76*
	Low-wage Jobs	4,796	3,110	964	2,498	2,557	5,250
	% of total	*16%*	*15%*	*12%*	*13%*	*12%*	*10%*
	Minority Occupied Jobs	5,619	3,300	2,059	7,607	6,470	14,201
	% of total	*19%*	*16%*	*25%*	*41%*	*29%*	*26%*

Table 7 Demographics Within 0.5mi of Fixed Route Stops

On-Demand Services

Figures 51 through 53 show operating statistics of ORT On-demand Transit services as a whole between 8/1 and 8/28. The average ride distance is relatively consistent. The time to pick up is more variable from day to day. It appears to vary based on the day of the week.

- Avg trip duration: 11.3 minutes
- Avg trip length: 3.3 miles
- Avg wait time: 17.3 minutes

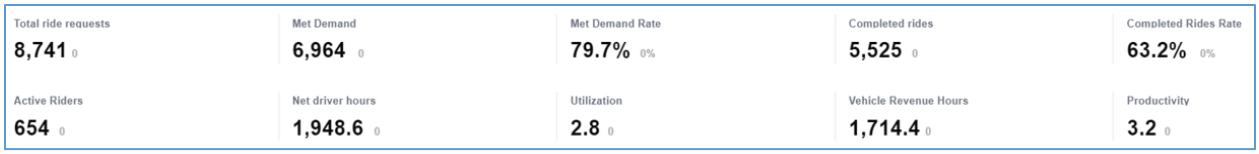

Figure 51 Snapshot of On-Demand Service

Figure 52 Average Ride Distance

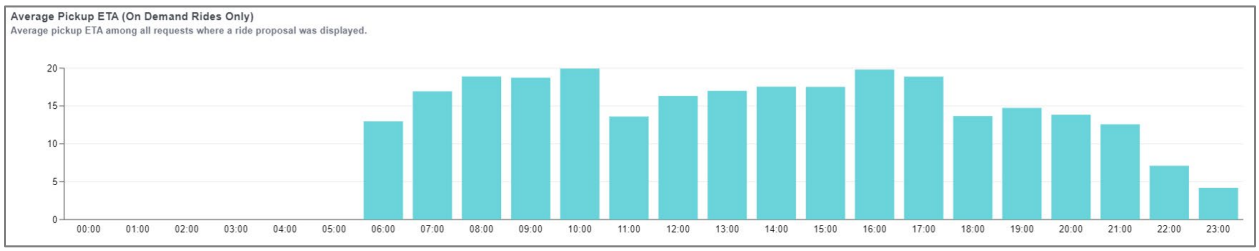

Figure 53 Average Pickup ETA

Table 8 summarizes some key demographic characteristics within each ORT On-demand transit zones.

		Rogers ODT	Bentonville ODT	Fayetteville ODT	Springdale ODT
2018-2022 5-Year ACS	Total Population	31,386	25,540	29,631	30,025
	Density (persons/acre)	*3.72*	*2.73*	*3.41*	*5.55*
	Senior Population	3,668	2,429	4,349	1,987
	% of total	*12%*	*10%*	*15%*	*7%*
	Disabled Population	2,985	1,911	3,164	2,322
	% of total	*13%*	*10%*	*13%*	*11%*
	Minority Population	16,341	10,495	5,492	23,435
	% of total	*52%*	*41%*	*19%*	*78%*
	Poverty	4,627	2,348	5,162	5,727
	% of total	*15%*	*9%*	*18%*	*19%*
	Limited English Proficiency	4,483	1,229	537	7,907
	% of total	*15%*	*5%*	*2%*	*29%*
	Zero Car Household	535	621	711	580
	% of total	*5%*	*6%*	*5%*	*6%*
	One Car Household	3,732	4,888	5,810	3,336
	% of total	*33%*	*47%*	*42%*	*34%*

		Rogers ODT	Bentonville ODT	Fayetteville ODT	Springdale ODT
	Rent Burdened Household	2,116	1,813	3,179	2,243
	% of total	*40%*	*29%*	*40%*	*34%*
Replica 2023 Fall	Total Jobs	33,559	50,295	32,677	26,632
	Density (jobs/acre)	*3.98*	*5.38*	*3.76*	*4.93*
	Low-wage Jobs	3,256	4,150	5,854	2,746
	% of total	*10%*	*8%*	*18%*	*10%*
	Minority Occupied Jobs	9,600	11,008	7,271	9,047
	% of total	*29%*	*22%*	*22%*	*34%*
	Area (sq mi)	13.2	14.6	13.6	8.4

Table 8 Summary of Socio-Economic Characteristics within Each ORT On-Demand Transit Zone

3.1.2 Razorback Transit (RT)

Service Overview

RT originated in 1979 through the joint efforts of the University of Arkansas-Fayetteville (UA), ARDOT, and the NWARPC (the MPO for Northwest Arkansas). In July 2004, RT became a direct recipient of Federal Transportation Administration (FTA) funds. Their transit service is free for students and the general public. Peak service during fall and spring semesters, non-peak service during summer and winter semesters. Figure 54 to the right shows passengers boarding an RT bus.

Figure 54 Razorback Transit Bus

"Game day" service is offered on days with football/basketball games several days a year. The station at the University of Arkansas is located in close proximity to the football field. The station allows a convenient game-day transit drop-off point for transit. The facility allows passengers to take the elevator down to stadium level below the grade that the station serves transit service.

NTD trends

RT has shown consistent growth in revenue miles and hours up until 2020. As would be expected, Figure 55 and Figure 56 reflect the common Covid transit narrative of service reductions due to Covid concerns and changes in public commuting habits.

RT- Fixed Routes

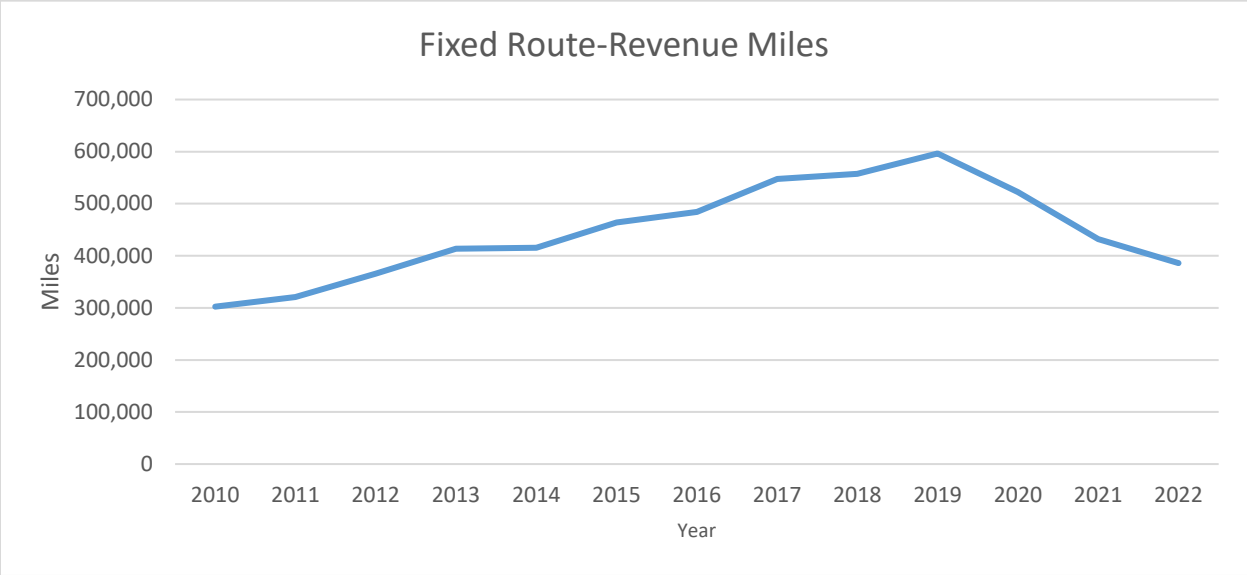

Figure 55 RT Fixed Route Revenue Miles (2010-2022)

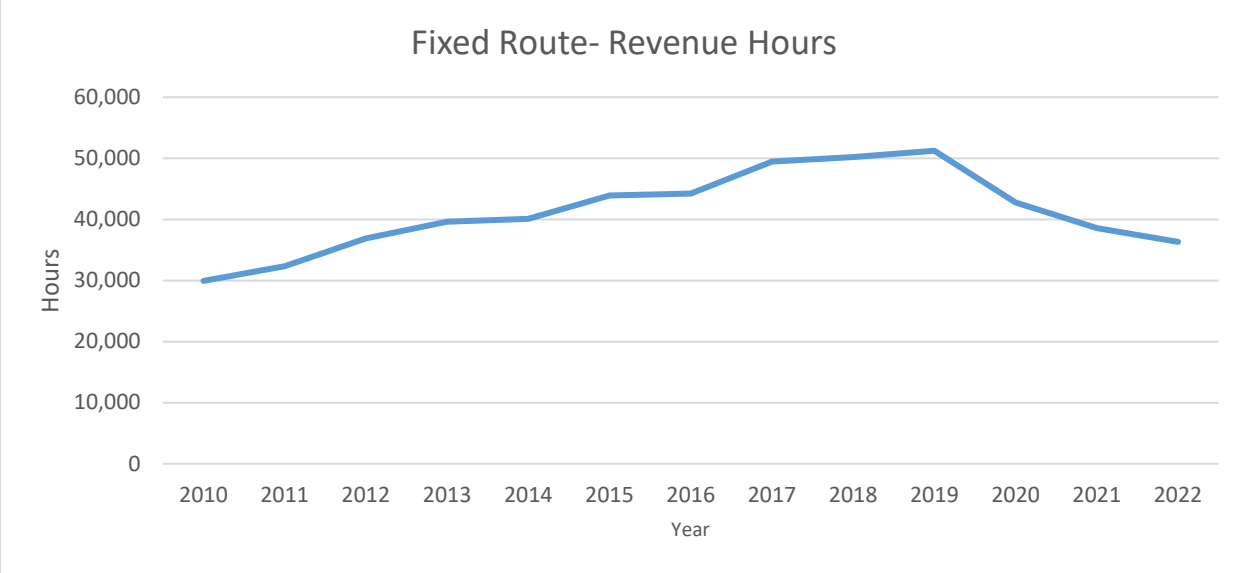

Figure 56 RT Fixed Route Revenue Hours (2010-2022)

RT ridership from 2010 to 2020 was relatively consistent with an average of 1.75 million trips per year. Ridership was impacted by impacts to university attendance during Covid impacts. All the while, Figure 57 suggests that operating costs continued to increase until 2020. The resulting service decrease impacted the expenses in 2021 and 2022.

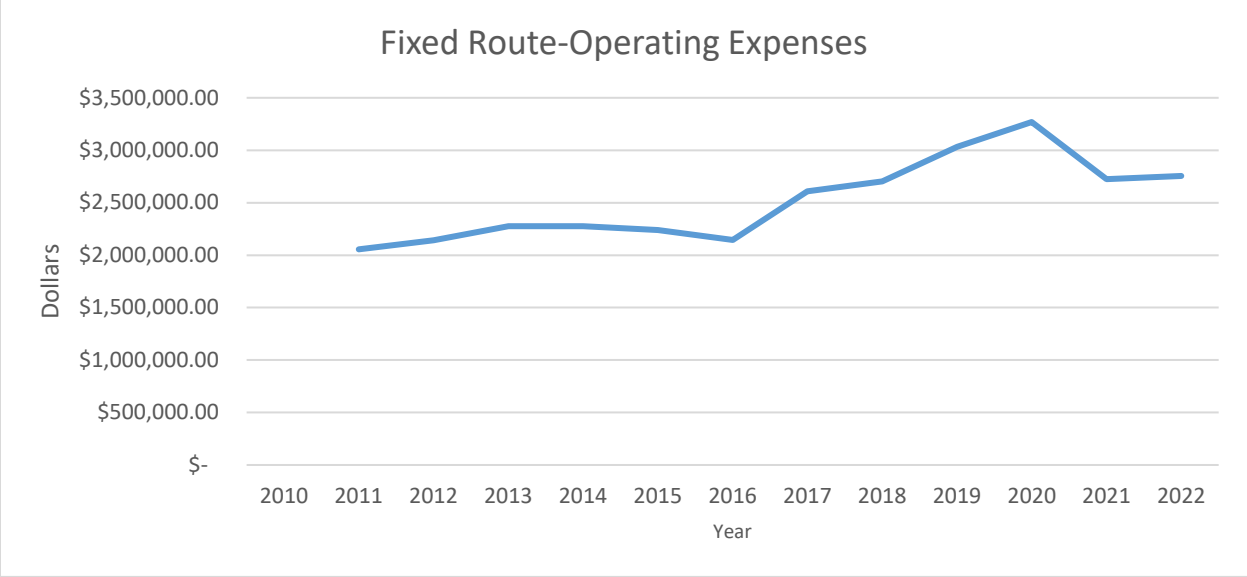

Figure 57 RT Fixed Route Operating Expenses (2010-2022)

Figure 58 indicates that RT's Unlinked Passenger Trips dipped sharply in 2020-2021. Based on 2022 data, unlinked passenger trips may be recovering.

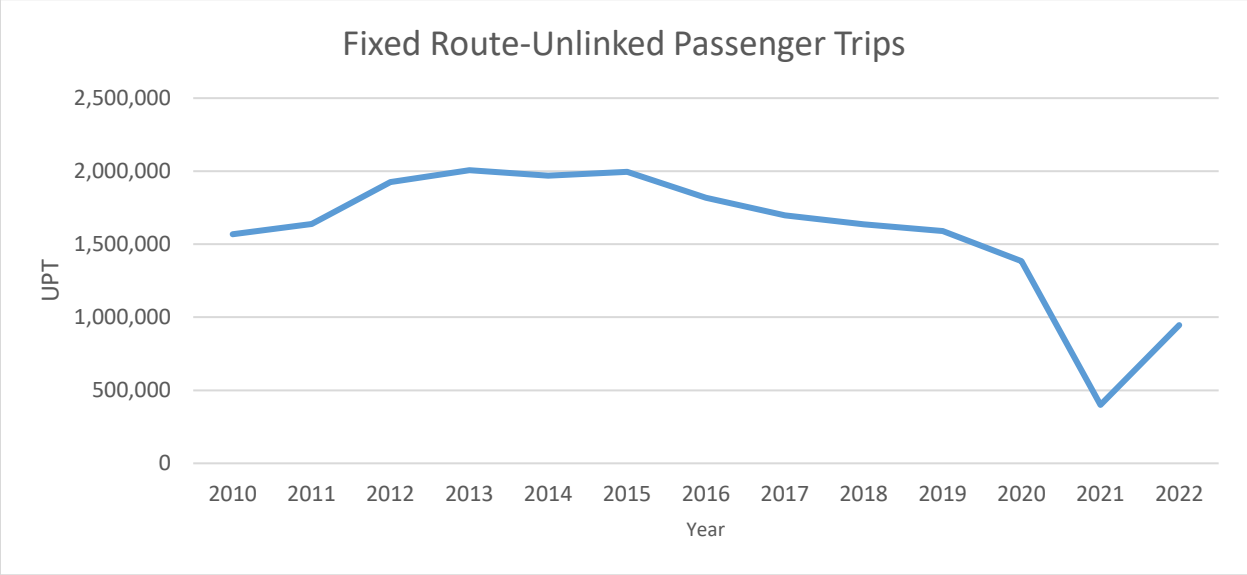

Figure 58 RT Fixed Route Unlinked Passenger Trips (2010-2022)

RT- Demand Response

Razorback Demand Response revenue miles, hours, and trips all trended upward until 2020. After 2020, each of these NTD metrics decreased. The operating costs across this time frame were relatively consistent. This suggests this service has decent potential to continue recovering.

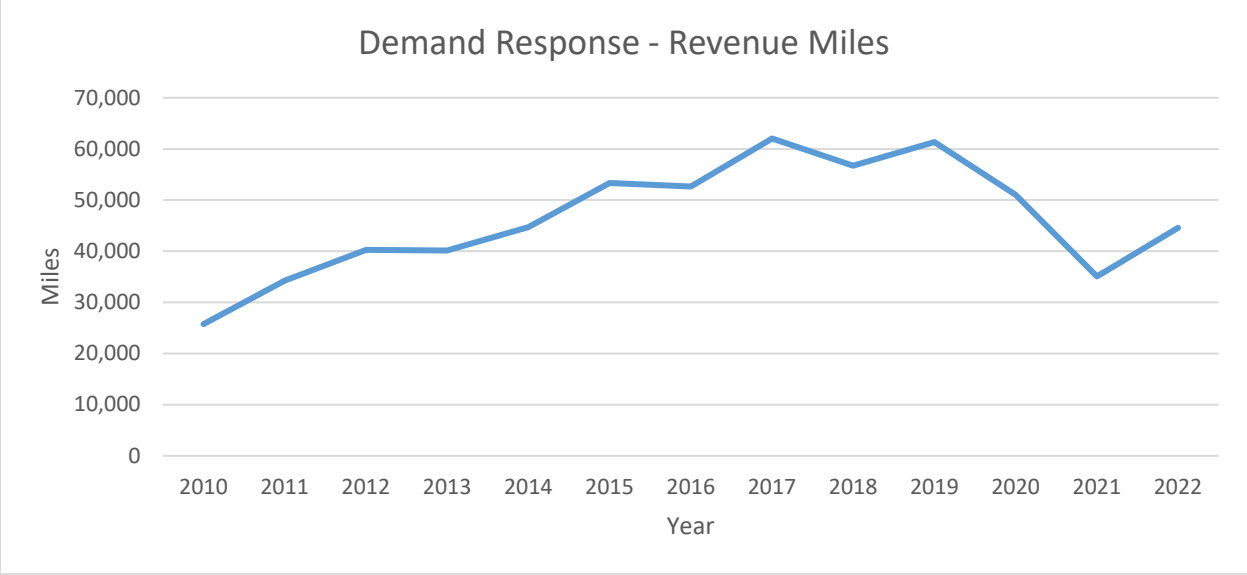

Figure 59 RT Demand Response Revenue Miles (2010-2022)

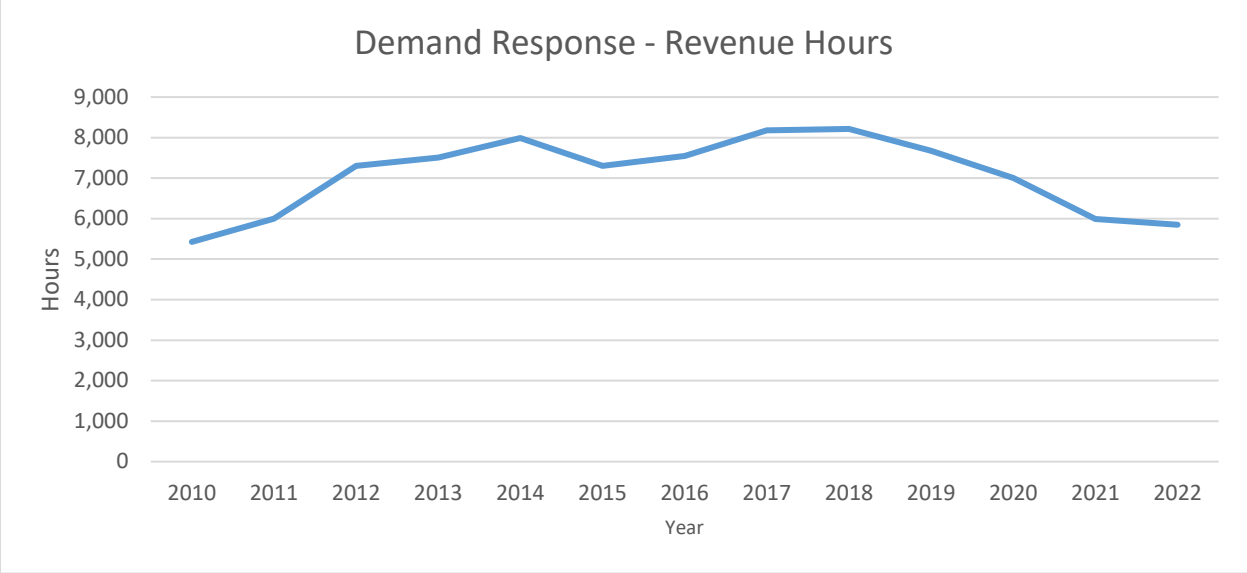

Figure 60 RT Demand Response Revenue Hours (2010-2022)

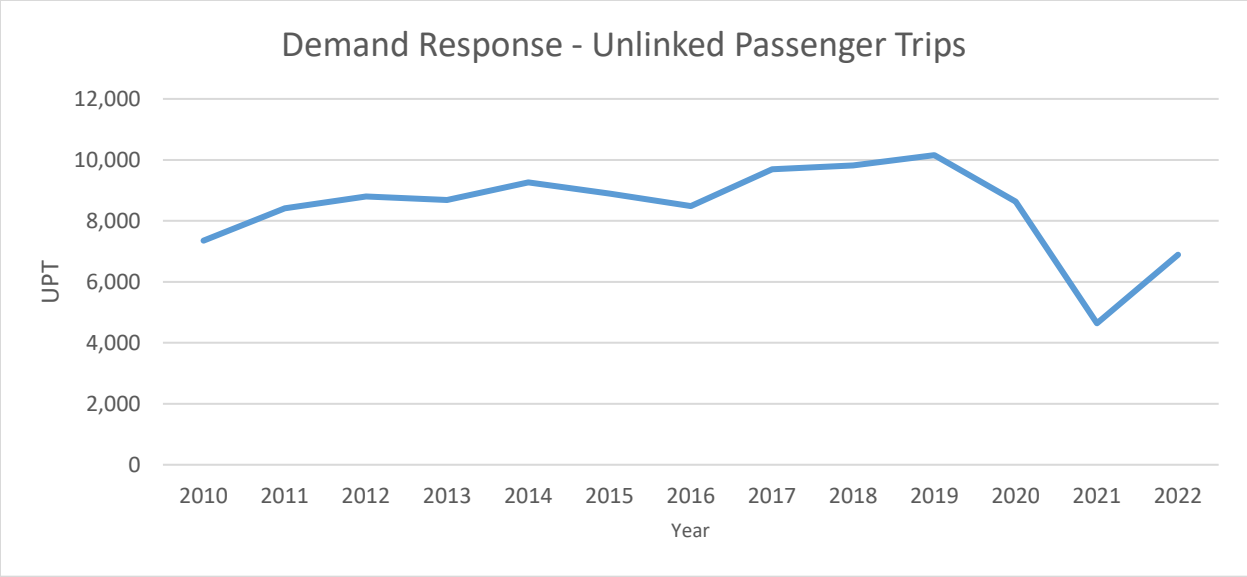

Figure 61 RT Demand Response Unlinked Passenger Trips (2010-2022)

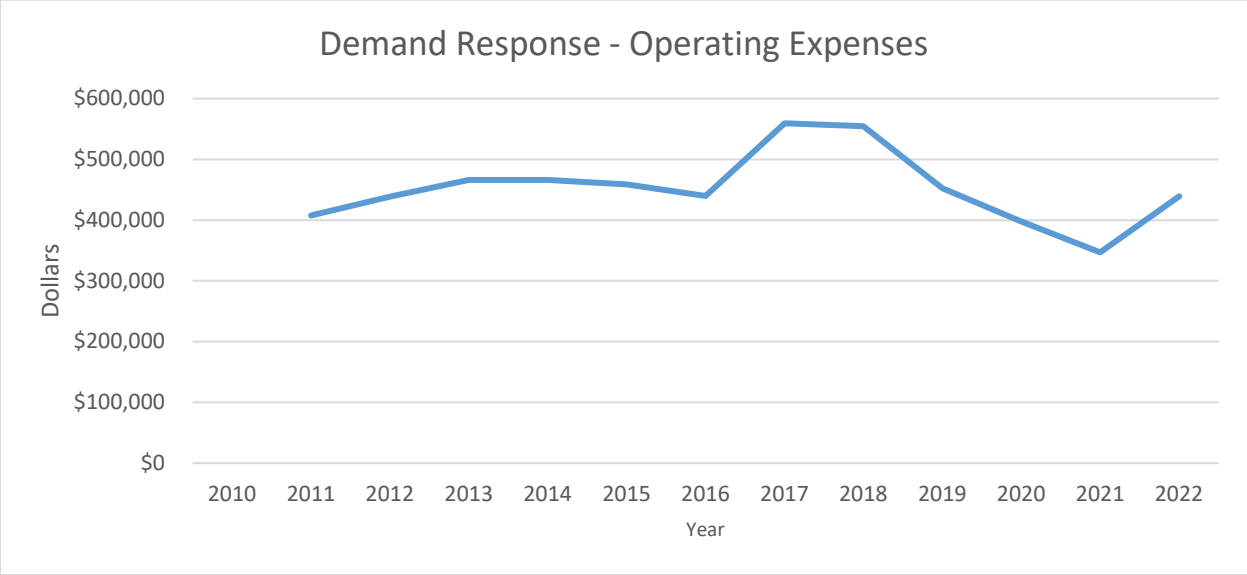

Figure 62 RT Demand Response Operating Expenses (2010-2022)

Peak schedule

The peak schedule consists of higher frequency and more routes compared to the non-peak schedule. Most of the routes only operate on weekdays. It is also worth noting that it is common in these routes to have loops, rather than out-and-back routing. Figure 63 illustrates the looped nature of many of the routes.

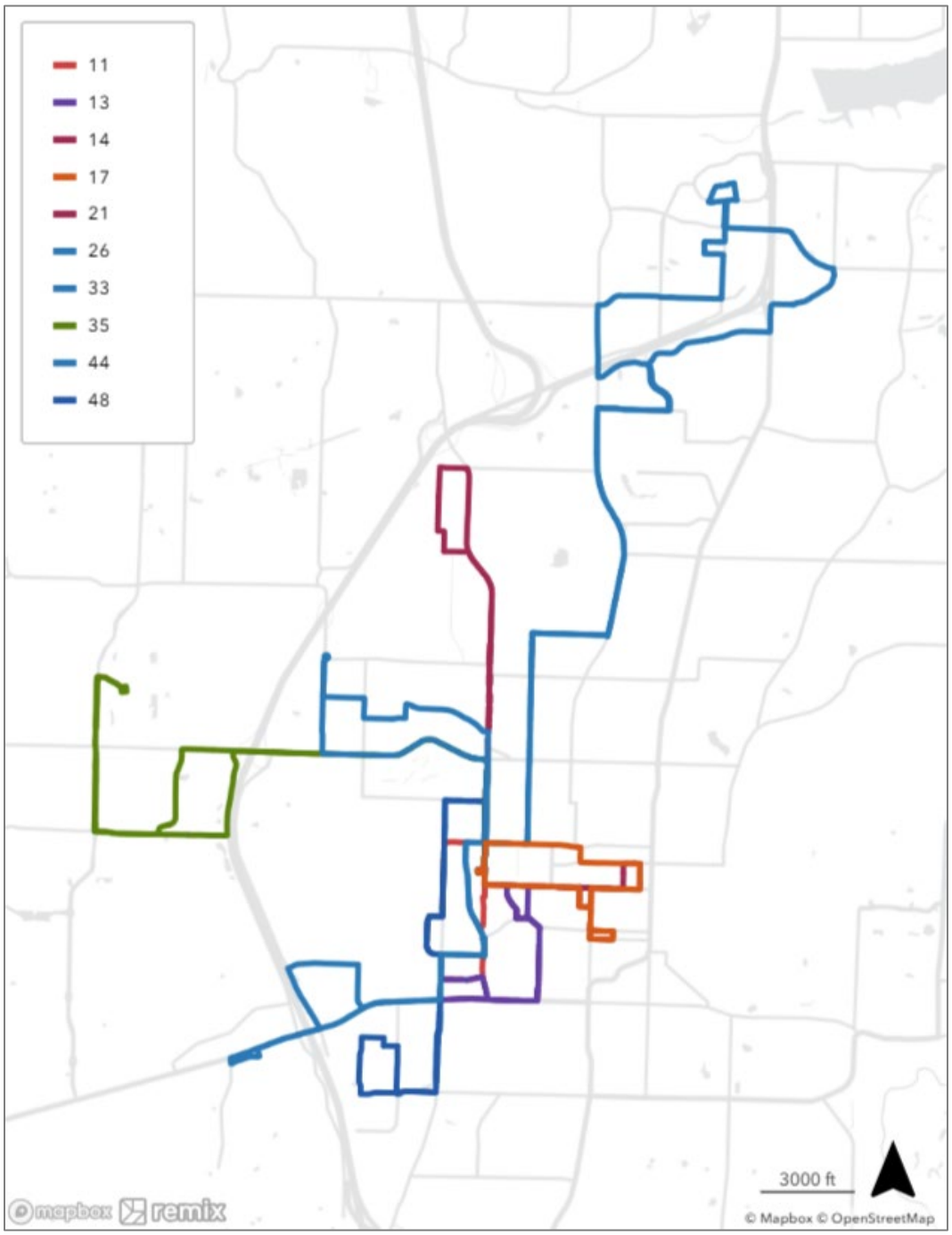

Figure 63 RT Remix Map

Table 9 summarizes the service characteristics of RT peak schedule routes.

Route	Terminals		Days of Operation	Loop	Service Span		Headway				
							6:00-8:59	9:00-14:59	15:00-18:59	19:00-21:59	22:00-2:59
					Start	End	AM Peak	Mid-day	PM Peak	Evening	Overnight
11	Union Station		Mon-Fri	Yes	7:00	17:58	7	7	7		
13	Lot 56 West		Mon-Fri	Yes	7:00	18:00	~15	15	15		
14	Union Station		Mon-Fri	Yes	18:30	22:10				55	55
17	Union Station		Mon-Fri	Yes	7:00	17:50	25	25	25		
21	Union Station		Mon-Fri	Yes	6:45	22:10	30	30	30	60	60
26	Union Station	NWA Mall	Mon-Sun	No	6:40	22:20	20	20	30	60	70
33	Union Station		Mon-Sun	Yes	7:00	22:10	~30	60	60	60	60
35	Union Station		Mon-Fri	Yes	7:00	22:45	40	40	40	60	35
44	Union Station		Mon-Fri	Yes	7:00	22:10	40	40	40	~35	40
48	Econ. Parking	Union Station	Mon-Fri	Yes	7:04	22:10	7	~10	~15	37	37

Table 9 RT Peak Schedule Route Operation

Non-Peak Schedule

The non-peak routes operate from Monday to Saturday. These routes serve the mid-day ridership. All routes originate and terminate at Union Transit Center – the transit hub for the University of Arkansas (Figure 64).

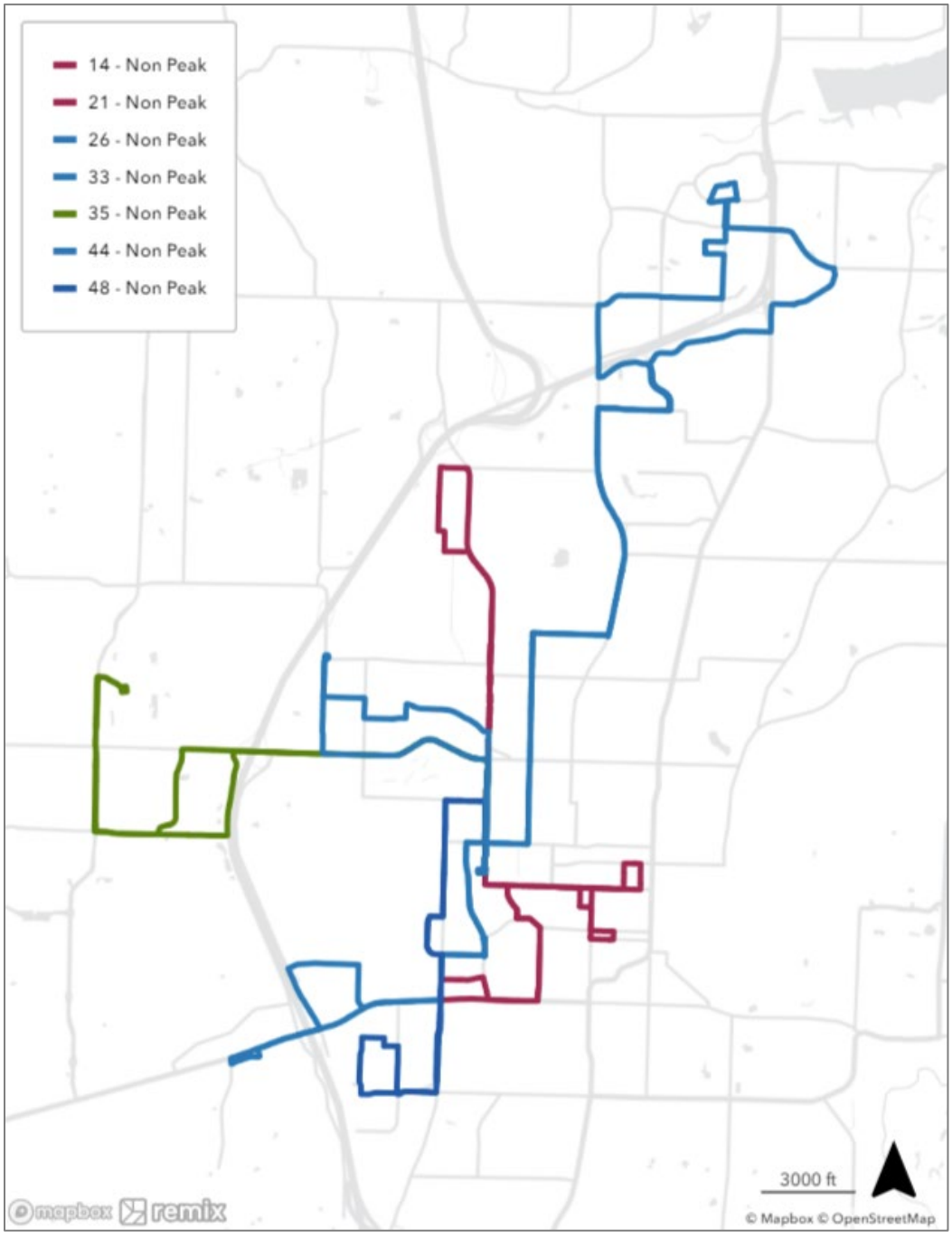

Figure 64 RT Non-Peak Service

Table 10 below summarizes the service characteristics of RT's non-peak schedule routes.

Route	Terminals		Days of Operation	Loop	Service Span		Headway		
							6:00-8:59	9:00-14:59	15:00-18:59
					Start	End	AM Peak	Mid-day	PM Peak
14	Union Station		Mon-Sat	Yes	7:00	18:05	35	35	35
21	Union Station		Mon-Sat	Yes	7:00	18:10	40*	40*	40*
26	Union Station	NWA Mall	Mon-Sat	No	7:00	17:00	30	30	30
33	Union Station		Mon-Sat	Yes	7:00	18:10	40*	40*	40*
35	Union Station		Mon-Sat	Yes	7:00	18:05	40*	40*	40*
44	Union Station		Mon-Sat	Yes	7:00	18:05	40*	40*	40*
48	Economy Parking	Union Station	Mon-Sat	Yes	7:00	18:05	35	35	35

Table 10 RT Non-Peak Route Operation

Game day Service

Figure 65 below shows the alignment of Razorback's football game day service, which operates just a few days each year before and during football games. The schedules for this service are unknown, but they typically begin operation at least 2-4 hours before the game and 1-2 hours after, running service most intensely 60-90 minutes before the game and from 30 minutes before the game is expected to end until about 60 minutes after the game ends or when all attendees have been cleared from the stadium area.

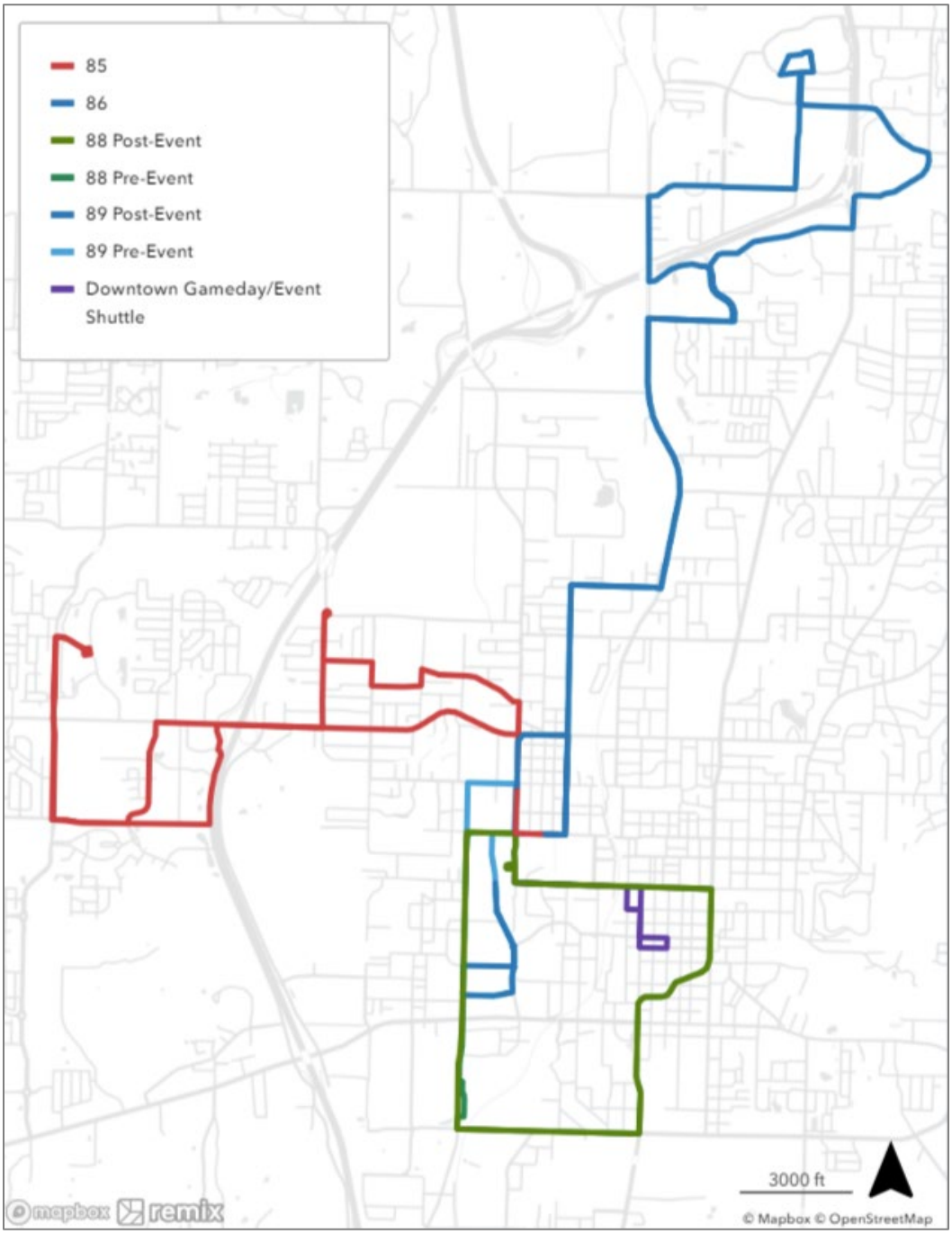

Figure 65 Football Gameday Service Map

Figure 66 below is the alignment for the basketball game day service, which operates only on days when home basketball games are played. Like the football game day service, the basketball game day service schedule is unknown, but its operation is similar to that of the football game service.

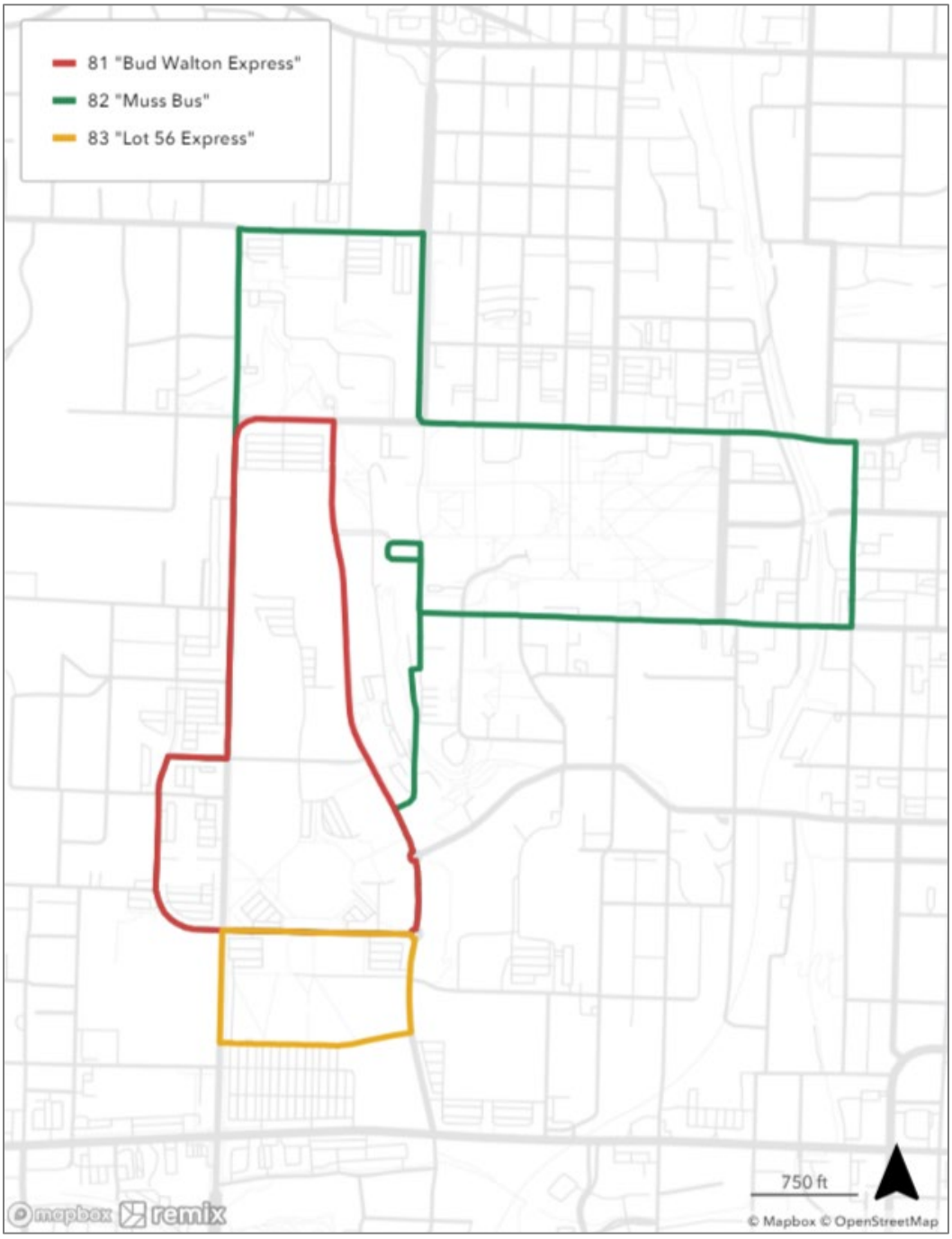

Figure 66 Basketball Gameday Service Map

Table 11 summarizes some key demographic characteristics within 0.5 mi buffer of RT peak schedule fixed route stops.

Demographics around 0.5mi Buffer of Stops

		Route 11	Route 13	Route 14	Route 17	Route 21	Route 26	Route 33	Route 35	Route 44	Route 48
2018-2022 5-Year ACS	Total Population	11,779	12,720	16,430	14,843	15,174	23,120	15,630	21,684	13,545	15,048
	Density (persons/acre)	*9.35*	*10.01*	*8.74*	*10.28*	*7.52*	*5.64*	*8.13*	*7.19*	*6.41*	*7.20*
	Senior Population	282	362	820	751	400	1,592	554	856	326	431
	% of total	*2%*	*3%*	*5%*	*5%*	*3%*	*7%*	*4%*	*4%*	*2%*	*3%*
	Disabled Population	662	852	1,138	878	1,126	2,287	1,254	1,466	820	1,030
	% of total	*12%*	*12%*	*12%*	*11%*	*14%*	*16%*	*14%*	*11%*	*11%*	*12%*
	Minority Population	3,052	3,437	4,336	3,637	4,738	6,411	4,254	5,720	3,679	4,168
	% of total	*26%*	*27%*	*26%*	*25%*	*31%*	*28%*	*27%*	*26%*	*27%*	*28%*
	Poverty	3,087	4,049	4,948	3,855	3,704	5,813	3,613	4,319	3,903	4,354
	% of total	*50%*	*53%*	*47%*	*44%*	*38%*	*34%*	*36%*	*27%*	*49%*	*47%*
	Limited English Proficiency	313	298	330	127	326	541	265	470	588	535
	% of total	*3%*	*2%*	*2%*	*1%*	*2%*	*2%*	*2%*	*2%*	*4%*	*4%*
	Zero Car Household	286	367	440	432	528	1,031	719	740	346	421
	% of total	*10%*	*11%*	*9%*	*10%*	*11%*	*12%*	*14%*	*10%*	*10%*	*10%*
	One Car Household	1,199	1,514	2,309	2,281	2,560	4,442	2,458	3,402	1,487	1,839
	% of total	*43%*	*45%*	*46%*	*52%*	*53%*	*51%*	*48%*	*45%*	*42%*	*44%*
	Rent Burdened Household	1,569	1,831	2,266	2,093	2,571	3,870	2,632	3,235	1,829	2,261
	% of total	*63%*	*59%*	*55%*	*59%*	*61%*	*53%*	*58%*	*51%*	*58%*	*60%*
Replica 2023 Fall	Total Jobs	32,305	33,470	38,736	35,450	26,182	41,839	26,249	26,928	33,377	32,480
	density (jobs/acre)	*25.63*	*26.34*	*20.60*	*24.56*	*12.97*	*10.21*	*13.66*	*8.93*	*15.80*	*15.53*
	Low-wage Jobs	1,505	2,364	3,245	2,910	1,242	3,985	1,292	1,354	1,698	1,567
	% of total	*5%*	*7%*	*8%*	*8%*	*5%*	*10%*	*5%*	*5%*	*5%*	*5%*
	Minority Occupied Jobs	1,428	2,191	3,115	2,845	1,332	5,027	1,266	1,310	1,597	1,487
	% of total	*4%*	*7%*	*8%*	*8%*	*5%*	*12%*	*5%*	*5%*	*5%*	*5%*

Table 11 Demographics Within 0.5mi Buffer of RT Stops

3.1.3 Existing Transit Services Summary

Generally, ORT's service offerings are largely designed to fulfill the basic needs of transit-dependent people. ORT is trying to cover a vast geography, from Bentonville to Fayetteville and beyond, on a limited budget. The fixed route alignments consist of one-way loops and deviations, a typical way to maximize coverage and serve car-oriented development with a limited budget. Headways are relatively long on

many routes, the shortest being 30 minutes, and the service day is short, with most service off the street before 7:00 PM. This combination of service characteristics has allowed ORT to operate service with respectable levels of productivity (over 10 trips per revenue hour on most routes). However, this service leaves many gaps. One-way loop routes increase two-way travel time for users by up to 100%. The current service day is too short for many low-income workers, including those working in warehouses, retail, and medical care. Even more fundamentally, the network, including both fixed-route and on-demand services, fails to serve many areas where lower-income people live and work. The region's long, narrow development area has resulted in a network with few connections between services that operate within each municipality. ORT attempted to connect these transit silos with Route 490 – a limited stop service between the mid-point of Fayetteville / Springdale and the mid-point of Bentonville / Rogers. However, the limited number of trips operated on the route and I-49 being distant and inaccessible from most of the development limited the route to use by those who have few other choices. These factors drastically limit the appeal of ORT's services.

There is a significant overlap between ORT's fixed route and on-demand transit (ODT) services, which results in competition between the two services. The most obvious one is Route BRX and the Bentonville & Rogers ODT zones – almost the entire BRX alignment is within the two ODT zones. As a result, the ODT practically eats into the ridership of BRX, with the two ODT services—incredibly—generating two to three times the passenger trips per revenue hour as the fixed-route BRX service.

RT's service, on the other hand, is designed largely to fulfill the needs of U of A students – moving from one classroom to another, traveling between parking lots and campus buildings, or traveling to and from residence halls and apartments that are just off the campus. While the alignments are also one-way loops and deviations, like the ORT routes, the relatively concentrated service area and the compact nature of the campus mean taking impromptu transit trips is a lot easier. There is, however, not much interaction between RT and ORT services – most of RT's services start and end at Union Station, the transit center of the campus, while only a handful connect to ORT routes in downtown Fayetteville and Northwest Arkansas Mall. While RT does not restrict the service to only U of A students, the lack of connections with regional transit networks limits its usefulness for non-student residents, particularly for those traveling outside Fayetteville.

4 Existing Transportation Infrastructure and Land Use

Existing and future transit services will use and interact with the region's roadway network, which is being improved and expanded to handle the increasing volumes of traffic generated by the region's rapid growth.

4.1.1 Road Network

Figure 67, Figure 68, and Figure 69 show road function class, average daily traffic volume, and number of lanes on the road network in the study area. I-49 is a well-developed highway corridor that connects much of the Northwest Arkansas region. It has many industrial and warehouse uses adjacent to it. As with many more modern highway corridors, I-49 does not run through a densely developed portion of the communities along it. There is significant traffic along I-49 throughout the week. The corridor is wide enough to impact localized vehicular, bicycle, and pedestrian movement across it. Most roads, except for interstate and a handful of arterials, are 2-lane roads in the region.

US-71B offers a localized, continuous connector throughout the Northwest Arkansas region. Generally, an arterial throughout, there are efforts underway to provide more continuous walking and biking amenities adjacent to the corridor, as well as make sure the roadway is safe for all users, given the local and embedded nature of this road facility, within the heart of these communities. In Fayetteville in particular, there are efforts underway to provide non-vehicular users with a sidepath throughout that community. The goal in providing this is to have safer, more direct connections for these users, where today there is an incomplete sidewalk network and a risk of a crash trying to access some of these areas along the US-71 corridor if you're not in a car or larger vehicle. Figure 70 shows a sidewalk and transit coverage map of the study area. In October 2024, Fayetteville adopted the 71B Corridor rezoning plan, which established a new zone termed Urban Corridor. This new zoning district shifts away from a traditional commercial zoning framework to one that enables a mix of residential and commercial uses along corridors that provide multi-modal transportation options. The rezoning is expected to create opportunities for housing development and more compact, pedestrian-friendly developments with services and amenities accessible to residents. This rezoning makes the corridor a great option for transit-oriented development, as it is one of the more densely developed corridors in the Northwest Arkansas region.

US-71, which has an AADT of roughly 30,000 vehicles, passes through Fayetteville. US-71 is a highly used corridor, so there is not much potential for transit use with exclusive transit lane use.

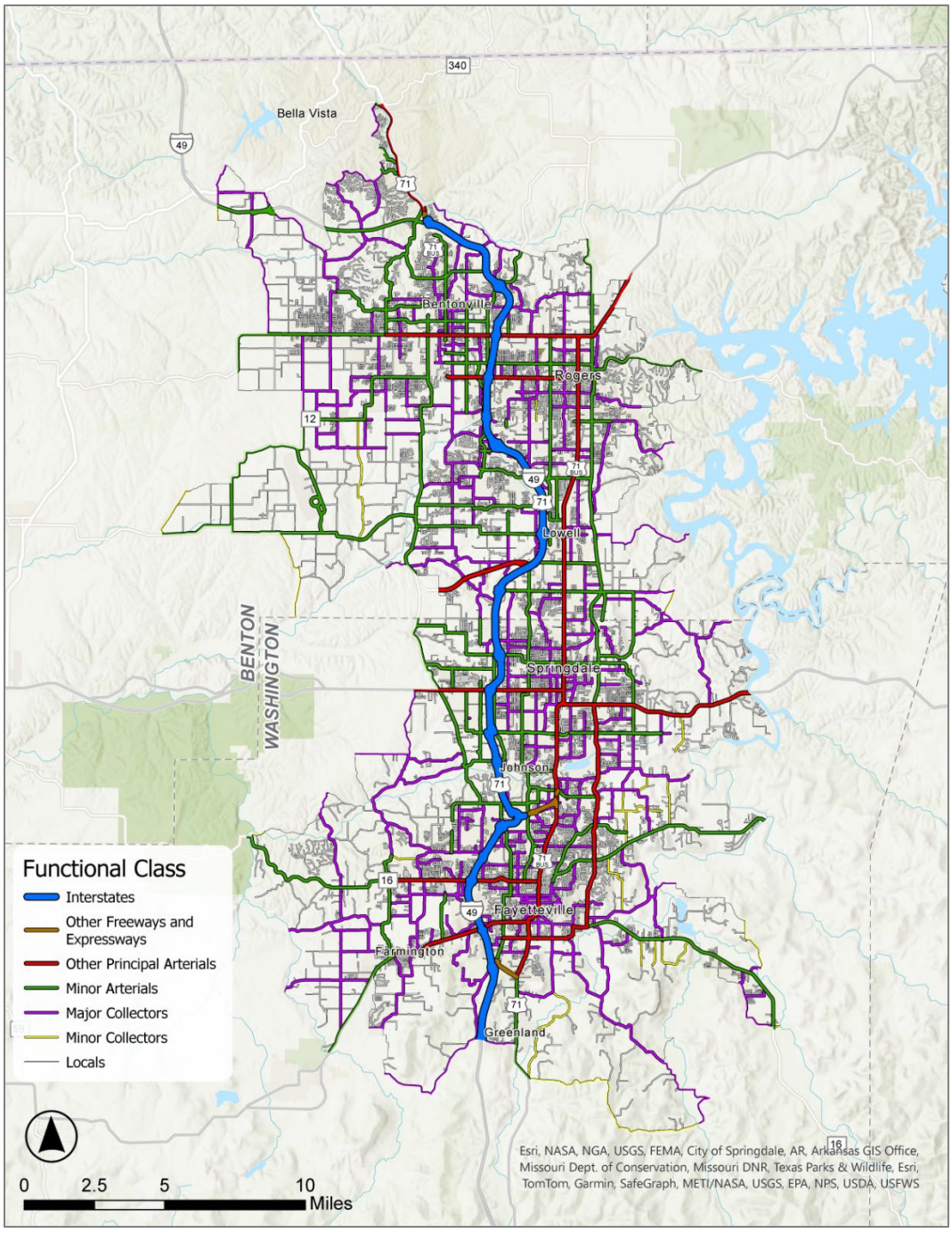

Figure 67 Functional Class Map

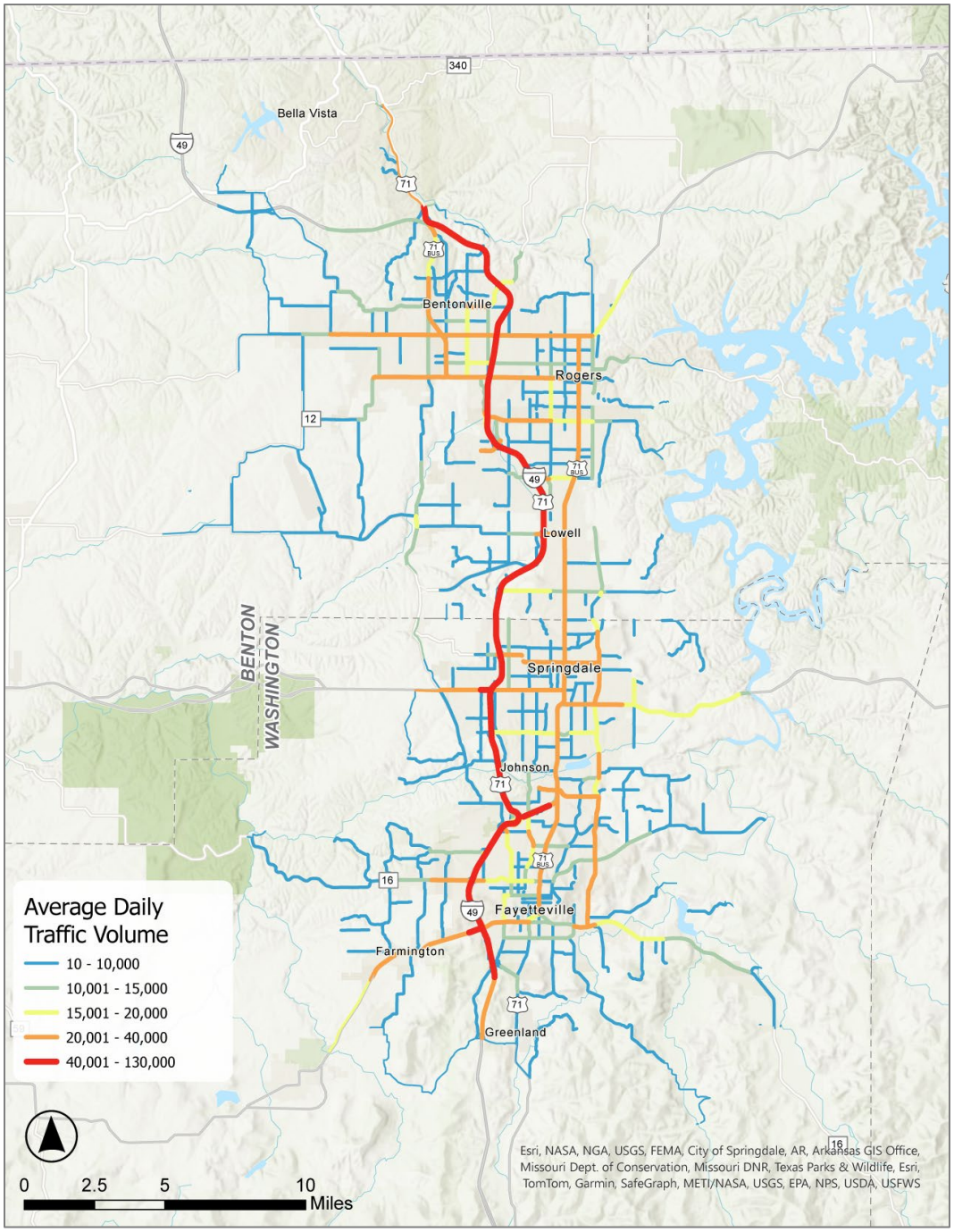

Figure 68 Average Daily Traffic Volume Map

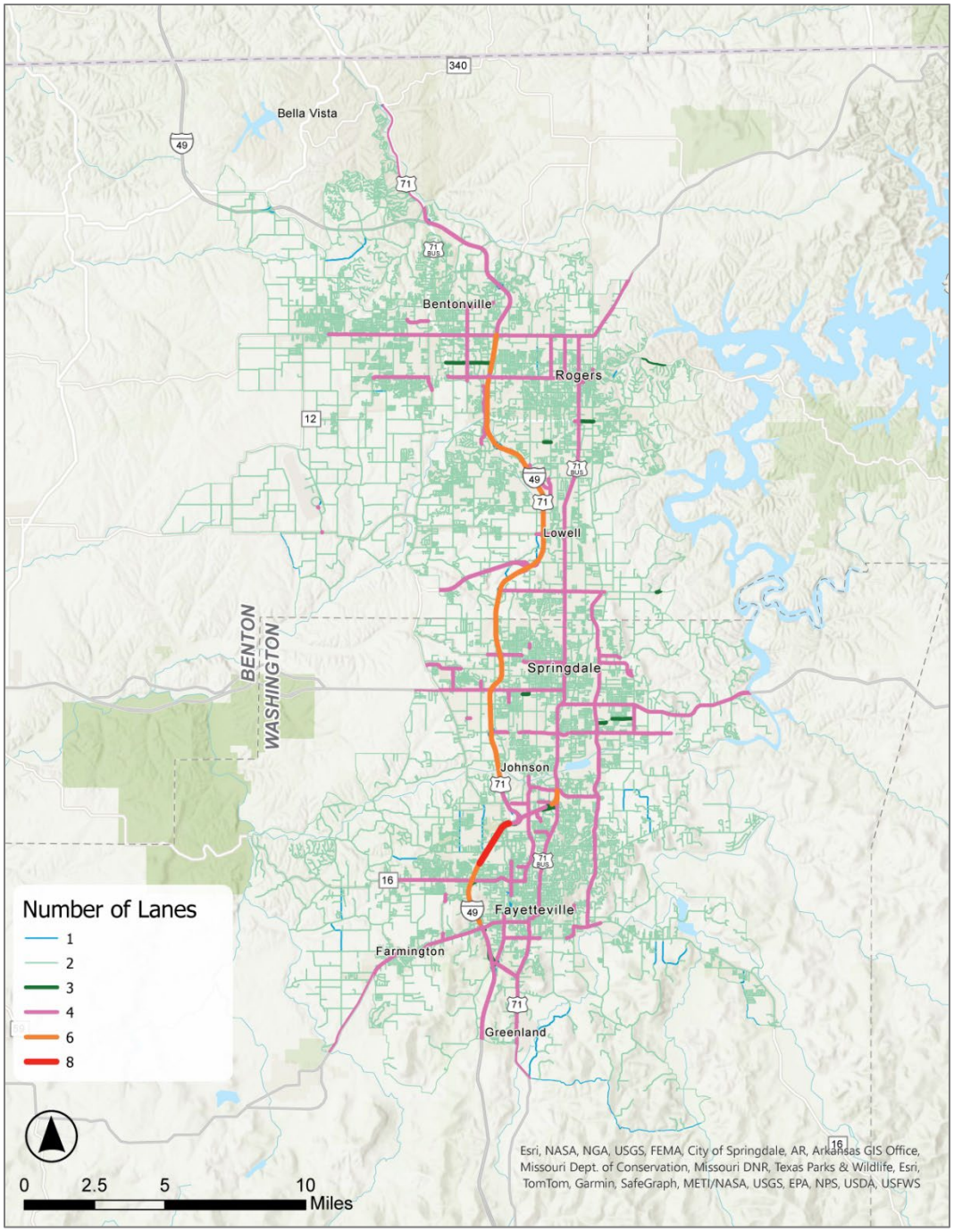

Figure 69 Number of Lanes Map

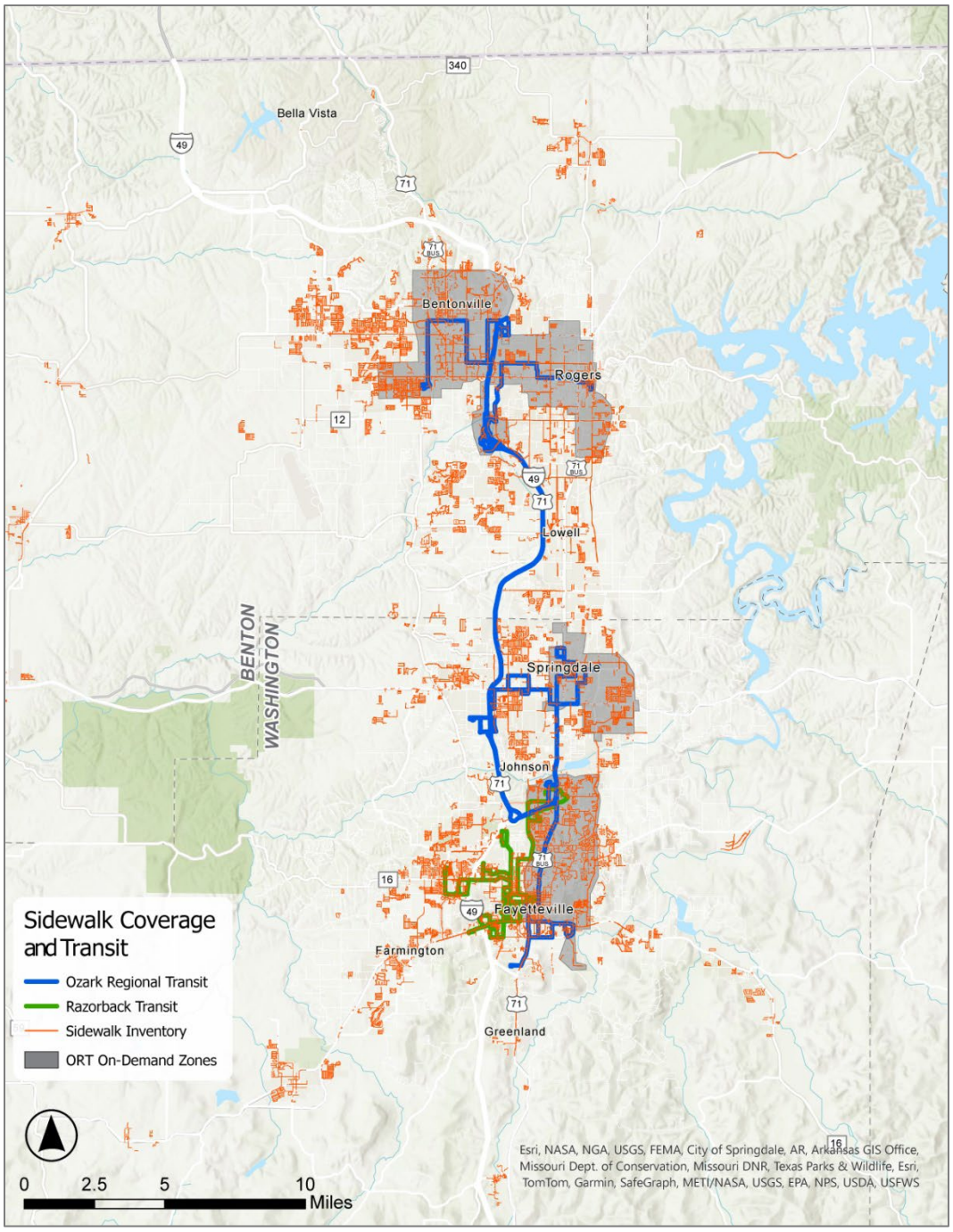

Figure 70 Sidewalk and Transit Coverage Map

4.1.2 Regional Trail Network

Shown in Figure 71, the Northwest Arkansas region has one of the United States' premier urban trail corridors connecting 40 miles of communities through Fayetteville, Johnson, Springdale, Lowell, Rogers, Bentonville, and Bella Vista. This serves to offer a primary spine of active transportation throughout the region. The Razorback Greenway is a bidirectional trail that weaves in between public right-of-way sections amongst residential, commercial, and industrial properties. There are extensive connections to other surface-level streets, destinations, and campuses. The Greenway is very developed and includes benches, wayfinding signs, artworks, periodic lighting, tunnels, and event spaces along this scenic connector. There is frequently a creek or low-water tributary adjacent that is most likely the impetus for the use of the right-of-way space as a trail connection. The Razorback Greenway offers a great amenity for localized traffic. Commutes are highly viable for those adjacent to this facility, but the coordination of this facility with transit service could make intercity travel more effective, with 20 miles for a bicycle commute being greater than an hour.

The Razorback Greenway could support commuter trips by bicycle, and there may be future potential to leverage this trail connection with transit services.

Numerous trails spur from the Razorback Greenway. There are also a growing number of side paths, bi-directional cycle tracks, and on-street bicycle facilities that are being added in the region to make bicycle connectivity in the region more robust. In Fayetteville, for example, a recent Safe Streets for All grant from the Federal Highway Administration will provide a cycle-track connection between the Razorback Greenway [6]and the transportation demand hub of the University of Arkansas.

Because of the Razorback Greenway's extensive connections throughout the region, Northwest Arkansas is known as a destination for trail connectivity for commuting and recreation. The trail connections have also been acknowledged as a system to study and learn from by others developing trail communities. The trail connections generally across Northwest Arkansas, in concert with the street-adjacent bicycle and pedestrian amenities, are rapidly becoming a more viable daily transportation option in the region. The temperate winter weather of the region allows for a broader spectrum of active transportation use throughout the year.

[6] https://www.fayetteville-ar.gov/3581/Maple-Street-Redesign

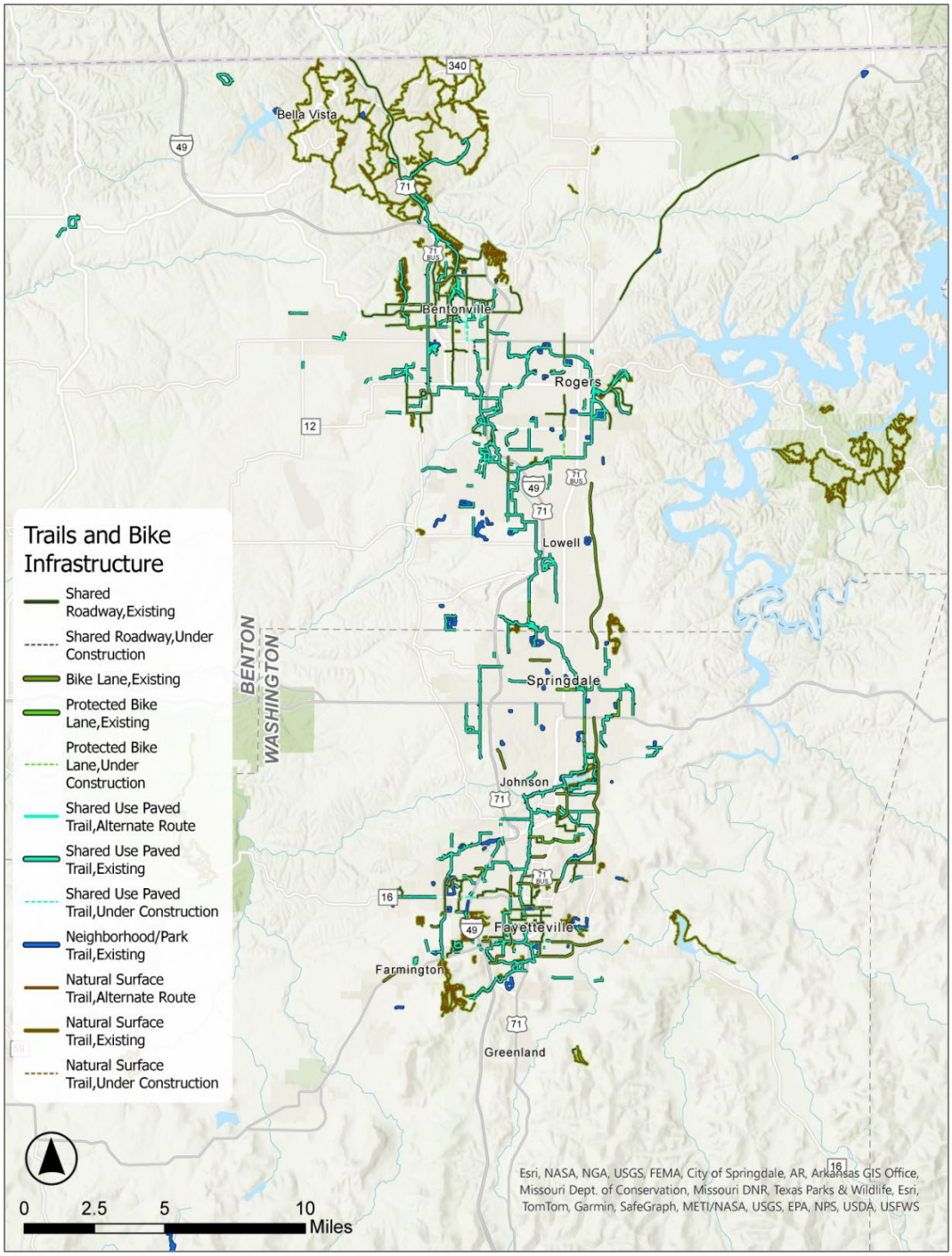

Figure 71 Trails and Bike Infrastructure Map

Figure 72 Photo of Razorback Greenway

Figure 72 showing a segment of the Razorback Greenway that passes through Fayetteville, AR, near the University of Arkansas, features lighting and convenient connectivity to community businesses and resources to users.

The trail networks of Northwest Arkansas are rapidly becoming a resource not only for those walking and biking, but also for the use of electrified micro-mobility devices, which are rapidly developing to become commonplace. Electric bicycles are a frequent choice of users to overcome hills, as well as aid in hauling daily work items and children. Further, there is the use of electric bicycles and scooters in shared micromobility devices throughout the region. Fayetteville has two vendors of electric micromobility devices, including bicycles and standing and sitting scooters. Springdale has recently considered bicycle and scooter sharing[7] as recently as February 2024. There is also a growing use of one-wheel devices as well as electric unicycles, on the Razorback Greenways and trails. This opens up trail use to new demographics for longer, more substantial distances.

[7] https://www.arkansasonline.com/news/2024/feb/06/springdale-council-considering-pilot-program-for/#:~:text=SPRINGDALE%20%2D%2D%20Springdale%20residents%20may%20soon%20have,and%20scooters%20to%20operate%20in%20the%20city.

Another notable commitment to active transportation networks in the region is the Walmart Corporation's commitment to have 10% of its home office associates ride bicycles as part of their commute to work.[8] As a part of this, Walmart offers a bicycle share at its "Home Office" campus in Bentonville. A bicycle share program has been available to employees (not the general public) since at least 2014.[9] This bicycle share is not only for commuting but to allow employees to run errands on breaks or during lunch hour. This sort of business-based encouragement to seek other modes in the region encourages both regional and local governments to partake in furthering these networks, but also peer companies to support staff and customers in walking and riding bicycles.

Figure 73 illustrates the significant commitment Walmart and other corporations have made to bicycle and pedestrian improvements in the Northwest Arkansas region.

Figure 73 Active Transportation Signage Sponsored by Walmart

4.1.3 Existing Railroad Infrastructure

Northwest Arkansas is served by two railroads. The Arkansas and Missouri Railroad (A&M), Figure 74, and the Kansas City Southern (KSC).

The KSC offers that foundational rail route between the industrial heartlands of the US and Mexico and is just one interchange away from every major market in North America. It offers seamless transportation throughout North America through strategic partnerships with all Class 1 railroads, short-line partners, transload centers, and ports. The KSC operates along a route north and south of Kansas City, through Siloam Springs on the western edge of Benton County[10].

The A&M was established in 1986 as a Class III Railroad operating a 150-mile route from Monett, Missouri to Fort Smith, Arkansas. A large section of this route runs roughly parallel to US 71B through the study area. Figure 75 shows a map of this alignment.

[8] https://corporate.walmart.com/news/2019/07/19/we-have-a-goal-for-10-of-home-office-associates-to-commute-to-work-on-bicycles-by-2023-lets-ride

[9]https://www.nwaonline.com/news/2014/may/31/walmart-adds-to-bikeshare-program-20140/#:~:text=%22Parking's%20not%20good%20anywhere%2C%22,been%20before%2C%22%20he%20said.

[10] NWA MTP 2045 Chapter 12: Freight

Their corporate headquarters are located in Springdale, Arkansas, with major operations based there and in Fort Smith[11]. The company provides freight service to customers along its route and excursion passenger service between Springdale and Van Buren/Fort Smith. The A&M interchanges traffic with three Class I railroads: Burlington Northern Santa Fe (BNSF), Kansas City Southern (KCS), and the Union Pacific Railroad (UP). All lines are rated at 286,000 lbs. and cleared for double-stack rail cars, and main lines feature continuous welded rail[12].

Source: A&M Railroad

Figure 74 A&M Railroad Train

[11] Passenger & Freight Train | Real Estate | Arkansas Missouri Railroad | (amrailroad.com)
[12] NWA MTP 2045 Chapter 12: Freight

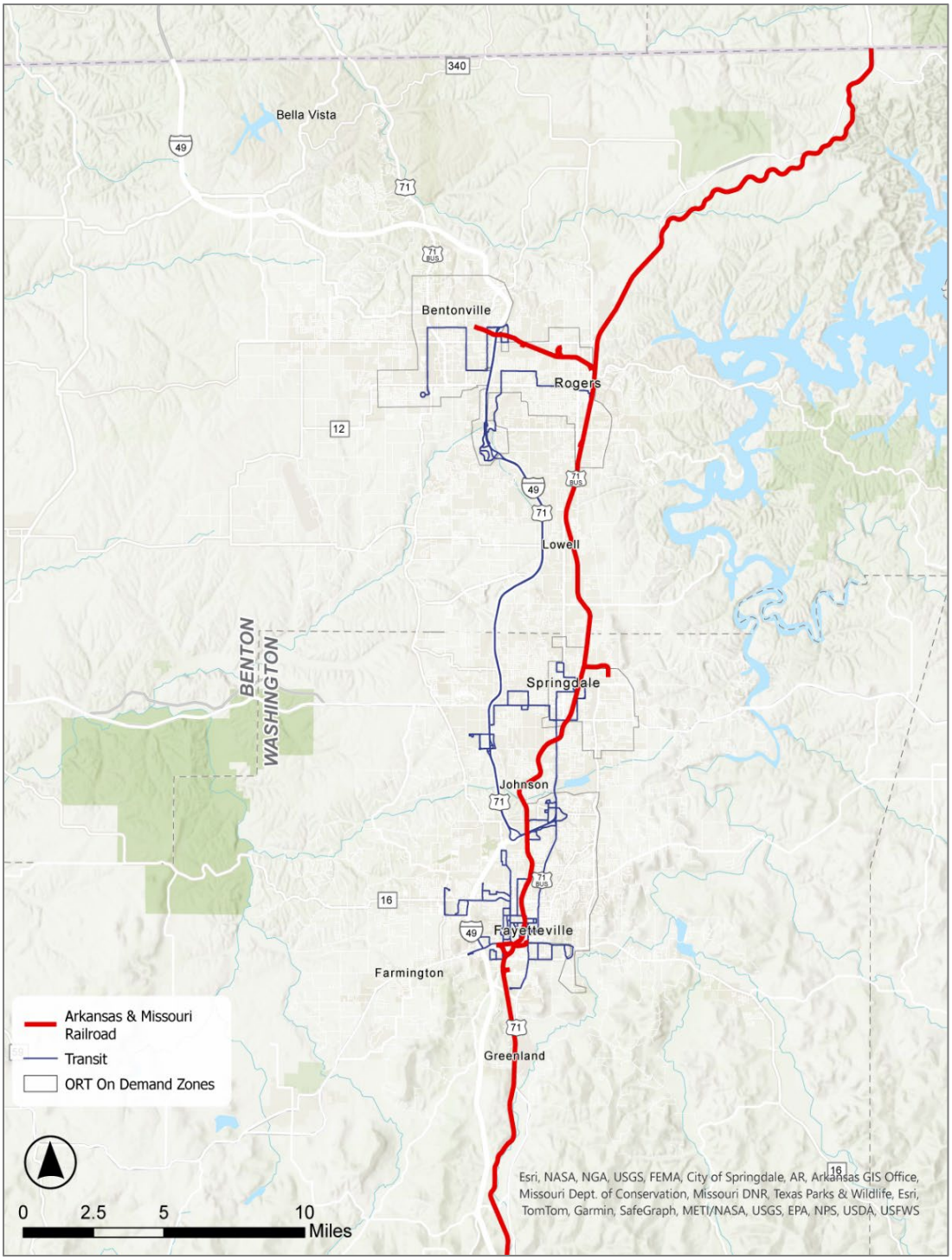

Figure 75 Arkansas and Missouri Railroad Alignment

4.1.4 Land Use

The Northwest Arkansas Region is a mixture of residential, commercial, and agricultural land uses, as illustrated in Figure 76. There are also large swathes of exempt land uses. Figure 77 breaks down how a large portion of the spaces are classified as agricultural or vacant. This makes providing transit connectivity across such areas a challenge if there is minimal dense development. The transit services seem to focus primarily on residential and commercial land uses, but there are large sections of the residential and commercial land uses that are not very directly served by transit. Figure 76 illustrates the current inaccessibility of transit in areas such as Rogers and others.

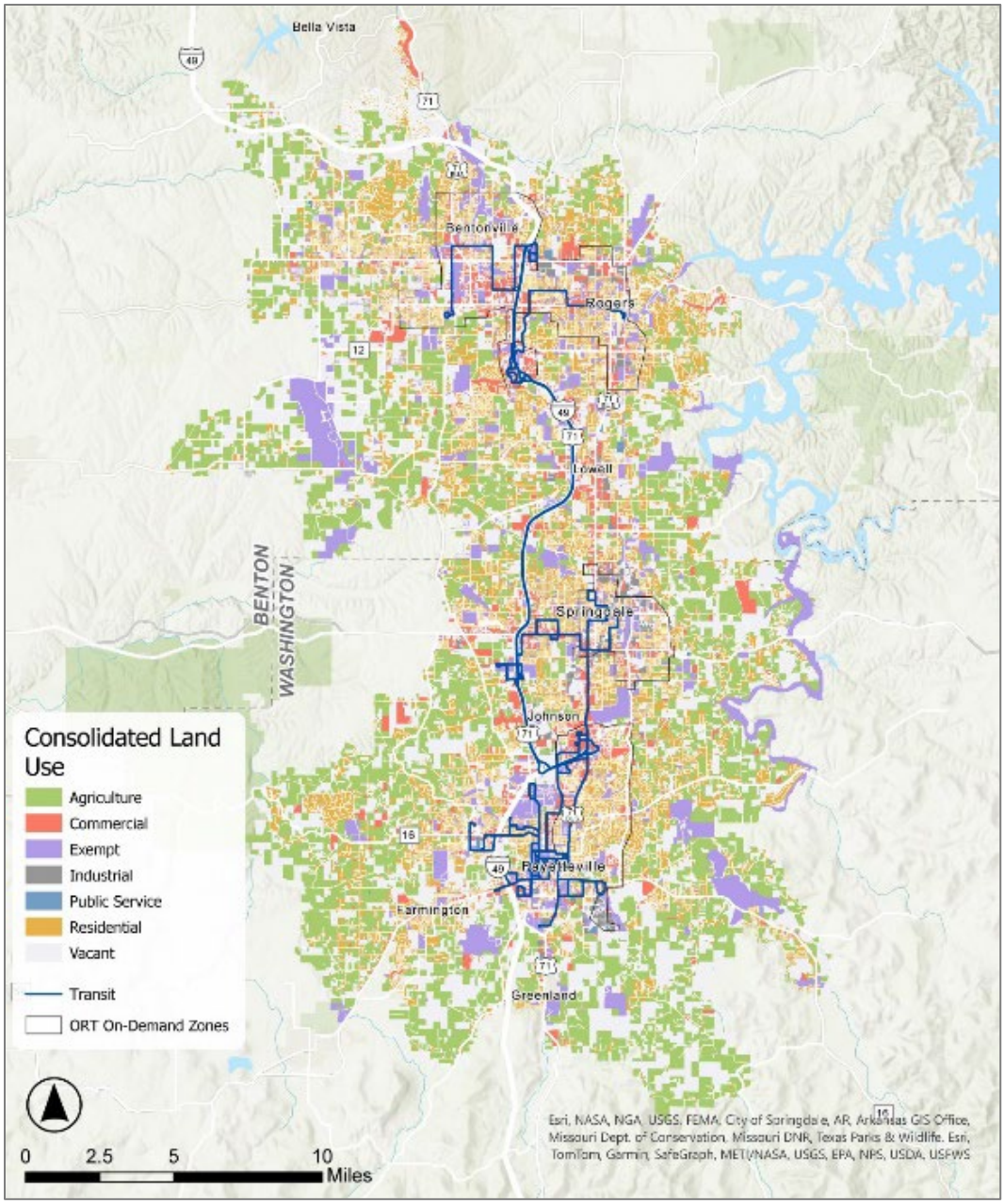

Figure 76 Land Use Map, Parcel Polygon, Arkansas GIS Office

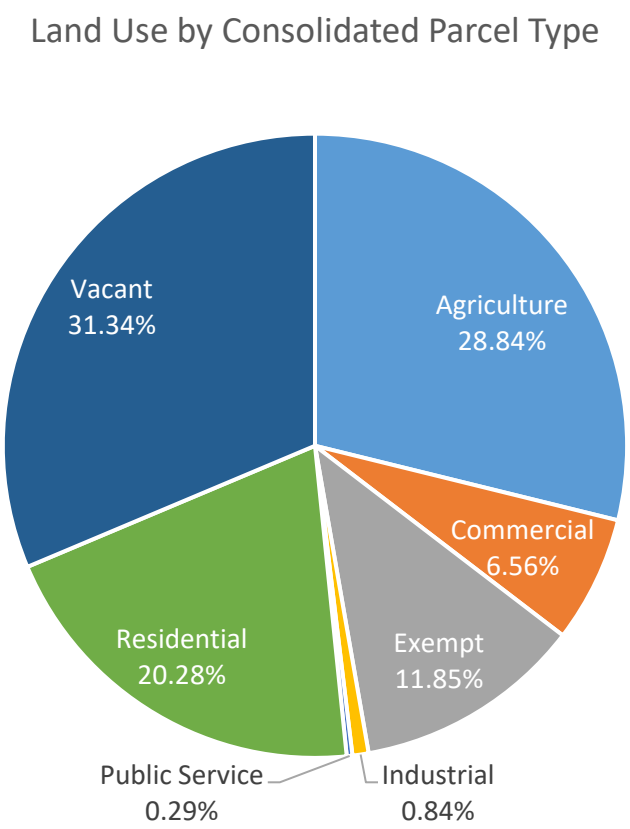

Figure 77 Land Use Type in Northwest Arkansas Region, Parcel Polygon, Arkansas GIS Office

5 EXISTING CONDITIONS FINDINGS

The NWARPC region's total population and employment are growing rapidly. Both grew by more than 25% (on average, more than 2% annually) from 2010 to 2020 and are forecast to continue through 2030. This accelerated growth will increase demand for public transit of all types and generate increasing traffic congestion on the region's roads. As travel times increase, some travelers and employers will seek alternatives to commuting in congested traffic. This will provide an opportunity to expand public transit, particularly with improvements that make transit faster and more reliable, and thus travel-time competitive with driving.

While population and employment have grown and continue to grow rapidly, population and employment density in the NWARPC region are low. Population and employment growth generally have tended to occur in lower-density areas. Higher-density areas – mostly in the core areas of Bentonville, Fayetteville, and the other town areas – have seen lower growth or, in some cases, have lost population and employment. Several areas of higher population and/or employment density are not currently served by fixed-route transit.

The socio-economic and demographic characteristics of NWARPC region residents are somewhat challenging for public transit. From a national average, people with lower incomes, disabilities, minorities (especially African Americans), and people living in households that lack access to a private vehicle tend to have a higher propensity to use public transit. Thanks to the presence of Wal-Mart and other corporate

headquarters and the University of Arkansas, the NWARPC region has a lower poverty rate, higher median incomes, and higher rates of vehicle ownership than the Arkansas or national average. The area also has lower percentages of people with disabilities and members of racial and ethnic minority groups than the state or national averages. Minorities tend to be concentrated in areas east of Business 71 in Springdale and Lowell and in parts of Rogers and Bentonville. Many of these areas are not currently served by fixed-route transit. Members of minority groups are under-represented in the regional workforce, and there is something of a mismatch between where minorities work and where they live. The lack of fixed-route transit in some areas where minorities live and work could partially explain their under-representation in the workforce.

Existing transit services have characteristics typical of under-funded transit systems. ORT's fixed-route and on-demand services operate relatively productively. Fixed route carries more than ten passenger trips per revenue vehicle hour, with one route carrying more than 20 trips per revenue vehicle hour. However, this is achieved by operating single-direction loops, which expand coverage at the expense of convenience, and by operating relatively low frequencies, with headways of 30 and 60 minutes, and a short service day, with most service shutting down before 7 PM. These factors combine to make the service unusable for many lower-income workers, effectively limiting the market to transit-dependent customers. ORT also operates an on-demand transit (ORT) service, which is highly productive by the standards of this type of service, carrying significantly more than 2 passenger trips per revenue hour. However, the ORT service areas overlap with the fixed routes in many places – particularly in the area served by the BRX route – competing for trips with the potentially more efficient fixed-route service.

RT's service primarily serves the needs of university student transportation in and around Fayetteville. While the service is open to the public and—like ORT's service—fare-free, its limited service area and poor connections with ORT's services limit its usefulness for regional travel.

Several past studies analyzed the potential for fixed-guideway transit – including LRT, commuter rail, and BRT – in the NWARPC were conducted in the 2000s and early 2010s. These studies found fixed-guideway transit financially infeasible at that time but recommended continuing to develop the region's transit capacity and adapting its land use to channel its growth into areas and corridors that could support fixed-guideway transit. Other plans have mostly proposed modest improvements to transit to provide service improvements with limited funding increases or within existing budgets.

6 PURPOSE AND NEED

Defining the Purpose and Need for a project is a critical step as it guides the development and evaluation of alternatives to select a Locally Preferred Alternative (LPA). The statement of Purpose and Need, based on local input, lays the foundation for federal review of the project as part of the National Environmental Policy Act (NEPA) and entry into the Federal Transit Administration (FTA) project development process in the Capital Investment Grants program (New Starts/Small Starts). This program can provide needed capital funding for fixed guideway, BRT, or other high-frequency transit investments.

According to FTA, the purpose and need statement should be a statement of a transportation problem, not a specific solution. However, the purpose and need statement should be specific enough to generate alternatives that may potentially yield real solutions to the problem at hand. A purpose and need

statement that yields only one alternative solution may indicate a purpose and need that is too narrowly defined[13].

6.1 Background

The Northwest Arkansas Regional Planning Commission (NWARPC) is advancing efforts to improve the future of multimodal transportation for the region. This project will provide NWARPC and its partner communities with an updated regional Travel Demand Model (TDM) that will facilitate sound decision-making for highway, transit, bicycle, and pedestrian projects for years to come and be a necessary component in the development of the upcoming Metropolitan Transportation Plan update for 2050.

This project will also include an assessment of alternative transit improvements to better connect the Bentonville, Rogers, Lowell, Springdale, Johnson, and Fayetteville transportation corridor with a rapid transit service. This Transit Alternative Study (TAS) will examine the benefits and costs of commuter rail, light rail, and bus rapid transit to best meet the needs of residents and visitors of the NWARPC region.

6.2 2014 Transportation Alternatives Analysis (TAA)

For many years, there has been continued public interest in the potential development of transit alternatives to better serve the transportation network in Northwest Arkansas. In 2014, NWARPC commissioned a study to analyze the feasibility of alternatives, including LRT, CR, streetcar, and BRT options for a 40-mile north-south corridor stretching south of Fayetteville and north to Bella Vista.

The 2014 TAA consulted the public and other stakeholders to develop several project purpose statements that address a variety of north-south transportation corridor concerns. It was identified that there is a need to reduce the current and forecasted vehicular traffic on I-49, US 71B, and connecting routes. The statements below were summarized into an overarching purpose statement for the study: *providing capacity for increased travel demand while fostering economic development and sustainable urban redevelopment that radiates from station areas.*

2014 Project Purpose Statements

- Respond to the forecasted rapid population and travel growth in a proactive manner
- Reduce the area's heavy reliance on the single-occupant automobile
- Provide additional capacity in a corridor in which additional highway capacity is limited by topography and environmental issues
- Reduce the projected use of fossil fuels and reduce the projected increase in harmful emissions of greenhouse gases
- Enhance NWA's livability and the use of supportive modes such as bicycling and walking
- Promote mixed-use developments at stations to enhance livability and sustainability
- Provide mobility to those without access to automobiles

The outreach and analysis in 2014 identified a strong interest in a locally preferred rail alternative along the existing A&M rail line, but it also noted that the study's goal was to provide a common ground and baseline of information to continue efforts for a fixed-guideway transit project in the region. The path

[13] Federal Transit Administration: https://www.transit.dot.gov/regulations-and-guidance/environmental-programs/purpose-and-need

forward from 2014 included several recommendations for both rail and BRT in the corridor. These included:

- Create an integrated land use and transportation plan that promotes compact, mixed-use
- Improve and expand existing bus service and become "transit-ready" for a large-scale project like a fixed guideway system
- Explore opportunities for BRT service along US-71B
- Focus on new employment, commercial, and housing development in the corridor and around transit-oriented development strategies
- Focus regional coordination efforts on a unified development strategy to qualify for federal funding in the future

6.3 2025 TAS Relationship with the 2045 Regional LRTP

Completing the federally mandated 3C (comprehensive, continuing, and cooperative) planning process in 2021, the NWARPC published the 2045 NWA Transportation Plan, which provides recommendations for a safe, efficient, sustainable, and multimodal transportation system in the region. Several goals were established in the LRTP that also complement and inform the development of this corridor-based transportation alternatives study's purpose, including:

Goal 1: Increase transportation safety for all modes of travel by providing safe and secure travel for all modes of transportation, including walking, bicycling, transit, and vehicular

Goal 2: Maintain the existing and planned transportation system through ongoing maintenance, habitation, reconstruction, and/or preservation of identifying and protecting corridors needed for future highway, transit, freight, or other transportation system requirements

Goal 3: Maximize the capacity and reliability of existing road and transit facilities on regionally significant routes and minimize the need for new roadways

Goal 4: Increase transportation mobility and accessibility for both persons and freight, thus promoting economic vitality in the region

Goal 5: Provide a transportation system that protects and enhances the environment, promotes energy conservation, and improves quality of life.

6.4 2025 TAS Need and Purpose Statement Considerations

Identifying the purpose for a transit alternative analysis is driven by Northwest Arkansas's goal of increasing the efficiency of the transportation network by providing transportation choice. The project's purpose and need help to concisely answer several foundational questions for the project:

Why is NWARPC conducting this study? What issue or challenge is the project trying to solve? Who is this project targeting? What are the desired outcomes of the project?

There are several key concepts to be considered in developing the purpose of a transit alternatives study, such as how the project will:

- Alleviate travel congestion and delays
- Improve access to key destinations and services

- Minimize GHG emissions and improve travel safety
- Plan for increased population projections
- Enhance denser community growth and development
- Connect urban areas along the corridor
- Improve quality of life

6.5 2025 TAS Project Purpose and Need Statement

The need for the Transit Alternatives Study is evident. The region has and is projected to continue to experience rapid population and housing growth, as well as strong, large employer investment that is helping determine where people live and where they need to go. With no competitive alternative to private vehicle transportation, the major arterials in the corridor are more congested, and travel times are less reliable. Land use patterns are making the transportation network less accessible and less connected to key destinations.

The purpose of the TAS is to address the identified transportation challenges of rapid population, business, and land use growth through a multimodal analysis that leads to the development of a locally preferred alternative (LPA) for public transportation in the corridor. To meet this purpose, the project will focus its analysis on transit concepts that:

- Provide direct and accessible connections between major activity centers
- Provide safe, affordable, and competitive schedules and reliable travel times for the commuting workforce
- Expand access to healthcare, education, and employment centers
- Strengthen transit linkages between high-density housing areas and large employers
- Support future housing and economic development plans
- Support achievable construction, operational, and fiscal responsibilities

7 Public Engagement

7.1 Engagement Overview

The Transit Alternatives Study utilized multiple methods throughout the project to inform stakeholders and the public about the study and to solicit valuable feedback on the proposed transit alternatives, helping inform the outcomes and the eventual preferred alternative for future transit enhancements in the study area. The TAS conducted a general public survey, engaged with a stakeholder advisory committee, participated in pubic open house meetings, and presented to various committees and city councils.

7.2 Public Survey

The Northwest Arkansas Regional Planning Commission hosted an online survey for the TAS from May 20 through July 30, 2025. It yielded:

- **1,942 views:** The number of times the survey was accessed.

- **699 participants:** Unique individuals who interacted with the survey in one of several ways:
  - Answering at least 1 survey question
  - Submitting at least 1 open-ended comment
  - Responded to a location and/or contact question, e.g., zip code
- **9,588 responses:** Any answer provided by a participant. The metric combines the total number of individual question responses and open-ended (comment) responses.
- **1,116 comments:** Answers to open-ended questions.

The survey questions covered several topics, including transit use, access, appeal, amenities, alternatives, funding, and more.

7.2.1 Detailed Survey Results

Public Transit Use

Survey Question: *How would you use public transportation services in the Northwest Arkansas region? Select 1 response.*

A total of 690 respondents answered the question. Seventy-five percent (75%) of them commented, "I do not use them".

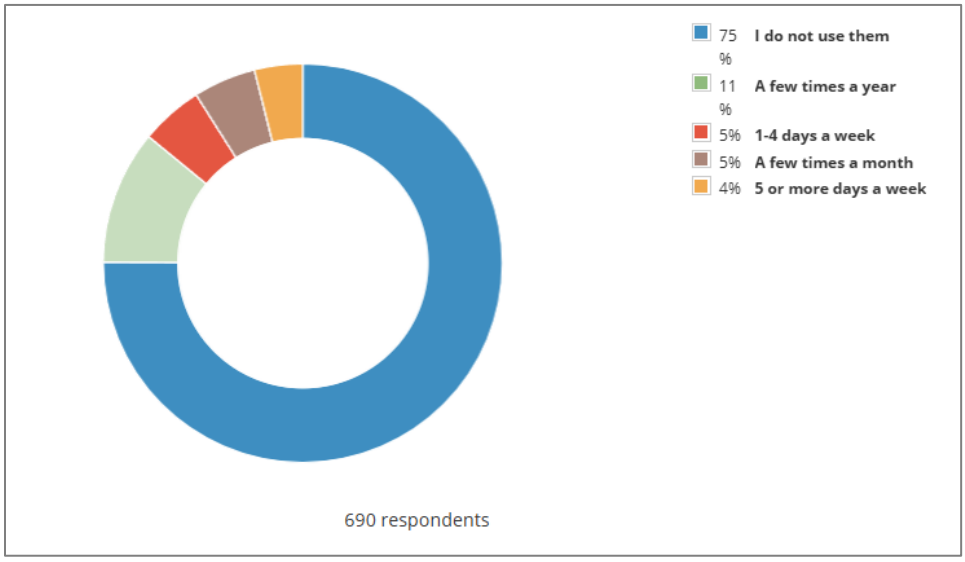

Figure 78 Transit Use Survey Question Responses

Public Transit Appeal

Survey Question: *What would entice you to use transit at least once per week?*

A total of 483 respondents answered the question. Overall, their responses were concerned:

- **Regional Connectivity**
  - Strong desire for transit options between Fayetteville, Springdale, Rogers, and Bentonville.
  - Many support a light rail or commuter train along the I-49 corridor.
- **Convenience and Proximity**
  - Stops close to home and work were frequently cited.
  - Park-and-ride options for suburban/rural residents.
- **Frequency and Reliability**
  - More frequent service (every 10-15 minutes).
  - Expanded operating hours, including nights and weekends.

  - Improved schedule reliability and better real-time tracking apps.
- **Access to Popular Destinations**
  - Direct routes to the airport (XNA), universities, stadiums, concert venues (AMP), farmer's markets, downtowns, and trails/parks.
- **Safety, Cleanliness, and Comfort**
  - Comments stating that transit must be clean, safe, and well-maintained.
  - Concerns about crime, homelessness, and unsanitary conditions on existing buses.
- **Alternative Modes of Transit**
  - High interest in light rail, express buses, trolleys, and autonomous vehicles.
  - Buses were often seen as slow and inefficient.
- **Affordability and Incentives**
  - Requests for affordable annual passes, subsidized transit, or integration with vehicle registration fees.
- **Walkability and Infrastructure**
  - Need for sidewalks, bike lanes, and bus shelters to reach transit safely.
  - First/last mile solutions, including scooters or shuttles.
- **Environmental and Social Impact**
  - Some respondents emphasized reducing traffic, carbon emissions, and drunk driving.
  - Public transit is seen as a social equity tool, especially for those without cars.
- **Public Awareness and Education**
  - Many didn't know transit existed or how to use it.
  - Better advertising, maps, and signage are needed.

Bus Stop Access

Survey Question: *How do you typically access your bus stop? Select all that apply.*

A total of 172 respondents answered the question. Seventy-three percent (73%) responded they walk to bus stops.

Figure 79 Bus Stop Access Survey Responses

Transit Stop Amenities

Survey Question: *How important are the following amenities at a transit stop? Rank your responses from Very Unimportant to Very Important.*

A total of 371 respondents answered the question. Bus stop schedules/maps, lighting, and sidewalks to bus stops were the top three amenities respondents described as "very important". Detailed responses are shown in the following table.

How important are the following amenities at a transit stop?

	Very unimportant	Somewhat unimportant	Neutral	Somewhat important	Very important
Shelter	7% Very unimportant	3% Somewhat unimportant	6% Neutral	29% Somewhat important	55% Very important
Bench	6% Very unimportant	5% Somewhat unimportant	13% Neutral	31% Somewhat important	46% Very important
Trash can	8% Very unimportant	5% Somewhat unimportant	19% Neutral	29% Somewhat important	38% Very important
Bicycle rack	10% Very unimportant	9% Somewhat unimportant	30% Neutral	27% Somewhat important	23% Very important
Lighting	6% Very unimportant	2% Somewhat unimportant	4% Neutral	20% Somewhat important	67% Very important
Route schedule / map	6% Very unimportant	2% Somewhat unimportant	4% Neutral	16% Somewhat important	72% Very important
Real-time signs	6% Very unimportant	5% Somewhat unimportant	16% Neutral	29% Somewhat important	44% Very important
Concrete landing pad	6% Very unimportant	6% Somewhat unimportant	32% Neutral	26% Somewhat important	31% Very important
Sidewalk to bus stop	6% Very unimportant	2% Somewhat unimportant	8% Neutral	18% Somewhat important	65% Very important
Improved security	6% Very unimportant	5% Somewhat unimportant	21% Neutral	35% Somewhat important	33% Very important
Shade trees	5% Very unimportant	6% Somewhat unimportant	20% Neutral	35% Somewhat important	34% Very important

371 responses

Figure 80 Transit Amenity Importance Survey Responses

Funding for Transit Improvements

Survey Question: *Please select the transit improvements that you would like funded while staying within budget.*

A total of 361 respondents answered the question. Stops with lighting, multiple transfers, and route/schedule information were the top three transit improvements selected for funding.

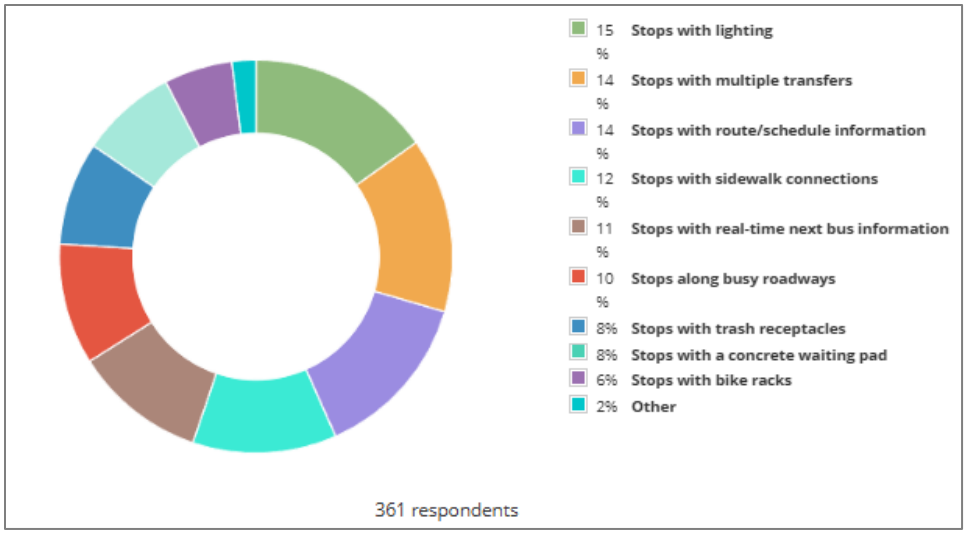

Figure 81 Transit Amenities Priority Survey Question Responses

Transit Service Alternatives

Survey Question: *How likely are you to prefer these high-capacity transit service alternatives, given the operational considerations and annual operating costs? For context, the current annual operating cost for all transit options provided by ORT and RT is approximately $9 million. Rank your responses from Not at All likely to Extremely Likely.*

Each alternative had approximately 350 respondents. Specific results included:

- **Commuter Rail: 356 responses**
  - Not at all likely – 7%
  - Not very likely – 9%
  - Somewhat likely – 13%
  - Very Likely – 19%
  - Extremely Likely – 51%
- **Light Rail: 355 responses**
  - Not at all likely – 4%
  - Not very likely – 5%
  - Somewhat likely – 11%
  - Very Likely – 19%
  - Extremely Likely – 61%
- **Bus Rapid Transit: 356 responses**
  - Not at all likely – 10%
  - Not very likely – 22%
  - Somewhat likely – 25%
  - Very Likely – 21%
  - Extremely Likely – 22%
- **Other High-Capacity Transit: 345 responses**
  - Not at all likely – 10%
  - Not very likely – 17%
  - Somewhat likely – 38%
  - Very Likely – 15%
  - Extremely Likely – 20%

New Transit Revenues

Survey Question: *Would you support some form of a new tax or fee to generate the revenues needed to build, operate, and maintain a rapid transit improvement project connecting Bentonville, Rogers, Springdale, and Fayetteville largely along the US-71 B corridor?*

A total of 353 respondents answered the question. Ninety percent (90%) were in favor of a new tax or fee to fund a rapid transit improvement project connecting the cities.

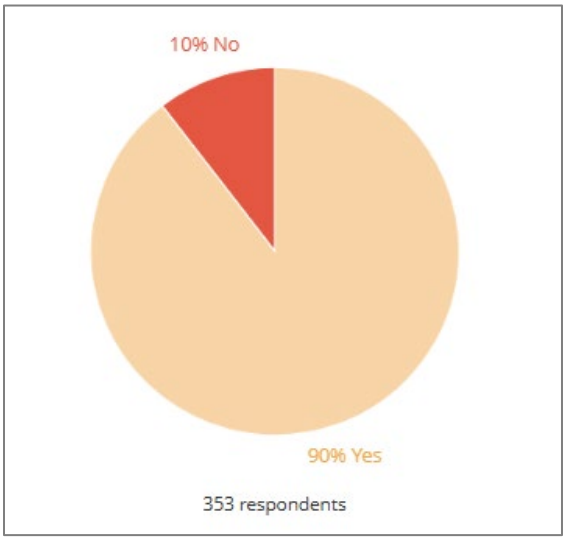

Figure 82 New Revenues for Transit Service Survey Response

Respondent Demographics

Survey Question: *What is your employment status? Select 1 response.*

A total of 352 respondents answered the question. Seventy-eight percent (78%) responded that they were employed full-time (40 hours per week).

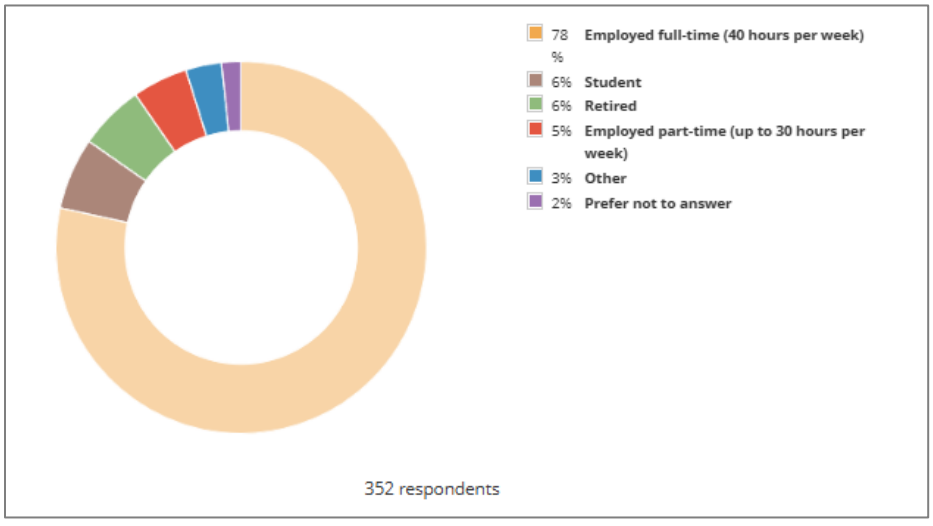

Figure 83 Employment Status Survey Responses

Survey Question: *What is your annual household income? Select 1 response.*

A total of 356 respondents answered the question. Half responded that their incomes were $100,000 or more.

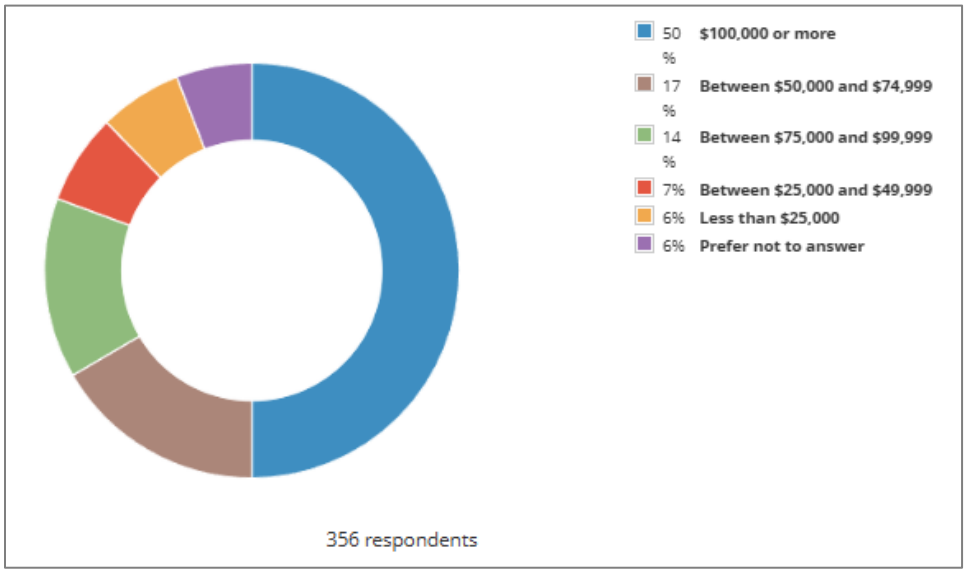

Figure 84 Annual Household Income Survey Responses

Survey Question: *What is your age? Select 1 response.*

A total of 354 respondents answered the question. Two-thirds (66%) responded that they were 25 to 44 years of age.

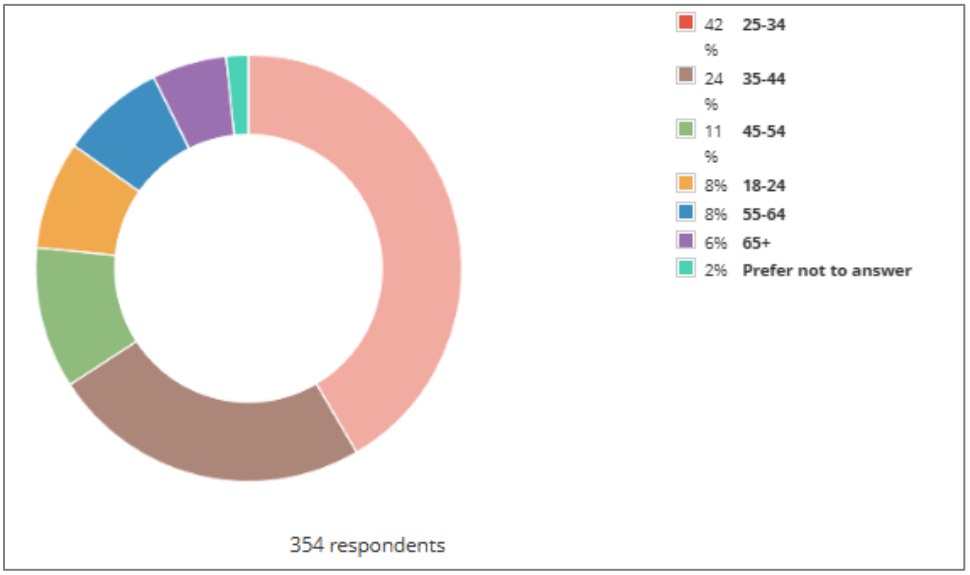

Figure 85 Age Survey Responses

Survey Question: *What is your home zip code?*

A total of 331 respondents answered the question. The greatest concentrations were from the Bentonville and Fayetteville areas.

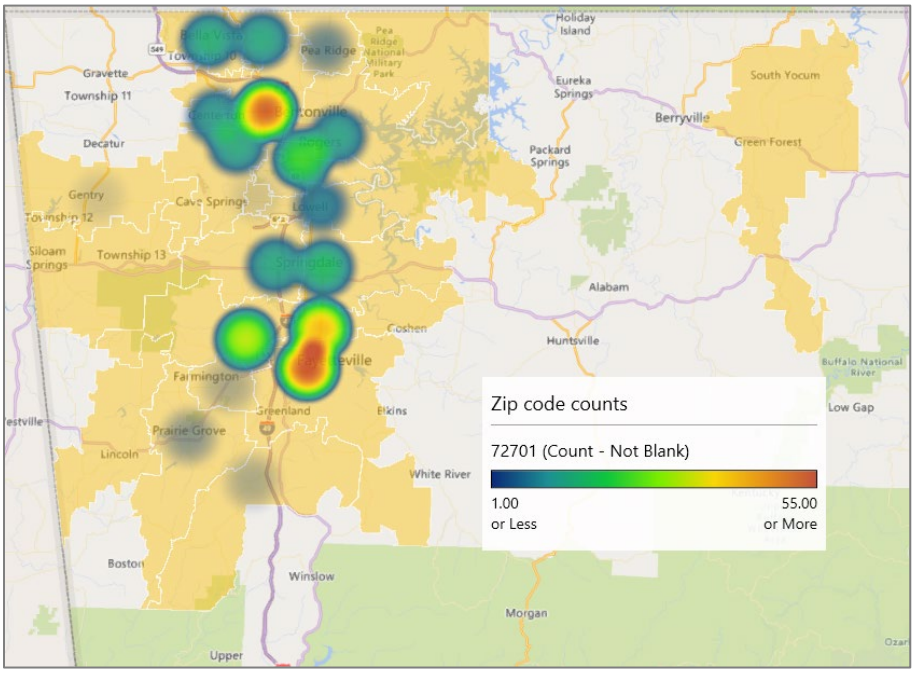

Figure 86 Home Zip Code Survey Responses

Other Comments

Survey Question: *What other comments would you like to share about potential transit improvements in the Northwest Arkansas region?*

A total of 188 respondents answered the question. Their responses involved:

- **Enhancing Safety:** Add surveillance cameras and emergency call stations at transit facilities.
- **Improving Connectivity:** Link cities (e.g., Fayetteville to Bentonville) with light rail and connect stops to bike/walk paths.
- **Affordable Fares:** Support for free or low-cost transit, especially for students and low-income riders.
- **More Frequent and Reliable Service:** Especially during peak hours, weekends, and evenings.
- **Weekend and Late-Night Options:** Essential for workers, nightlife, and general accessibility.
- **Eco-Friendly Transit:** Invest in electric/hybrid buses to reduce emissions.
- **Bike Integration:** Allow bikes on transit and provide secure storage at stops.
- **Better Accessibility:** Ensure stops are walkable, ADA-compliant, and well-marked.
- **Public Education:** Provide clear signage, route maps, and user-friendly apps.
- **Strong Public Support:** Broad desire for a modern, effective transit system

7.3 Public Meetings

The study team for the TAS engaged with transit riders, members of the public, and various stakeholders throughout the project to solicit feedback on transit enhancement alternatives, provide input on the project's goals and objectives, and keep the region informed on the project's analysis and outcomes as they developed.

Open House Meetings

Two open house public meetings were hosted by the NWARPC. These meetings combined information from the TAS as well as Forward 2050, NWA's next Metropolitan Transportation Plan (MTP).

Meeting 1 was held on April 9, 2025, from 4:00 p.m. to 7:00 p.m. at the Fayetteville Public Library. Meeting 2 was the following day, April 10, 2025, and hosted at the Bentonville Public Library. Each meeting presented the same information regarding the MTP and TAS. Display boards were positioned in the meeting rooms, providing information on each plan's goals and objectives, process and methodologies, existing conditions analysis, and preliminary transit/transportation improvement alternatives, shown in Figure 87. Along with informational displays, several engagement activities were available for attendees to interact with, including a regional mapping exercise and a simulated transportation mode budgeting/prioritization activity that allowed participants to allocate a set number of 'coins' into containers for Transit, Roadway, and Bicycle/Pedestrian modes. Between both meetings, approximately 70 people attended.

Figure 87 Public Meeting for the Transit Alternatives Study and Forward 2025 Metropolitan Transportation Plan. April 2025. (Bentonville Public Library)

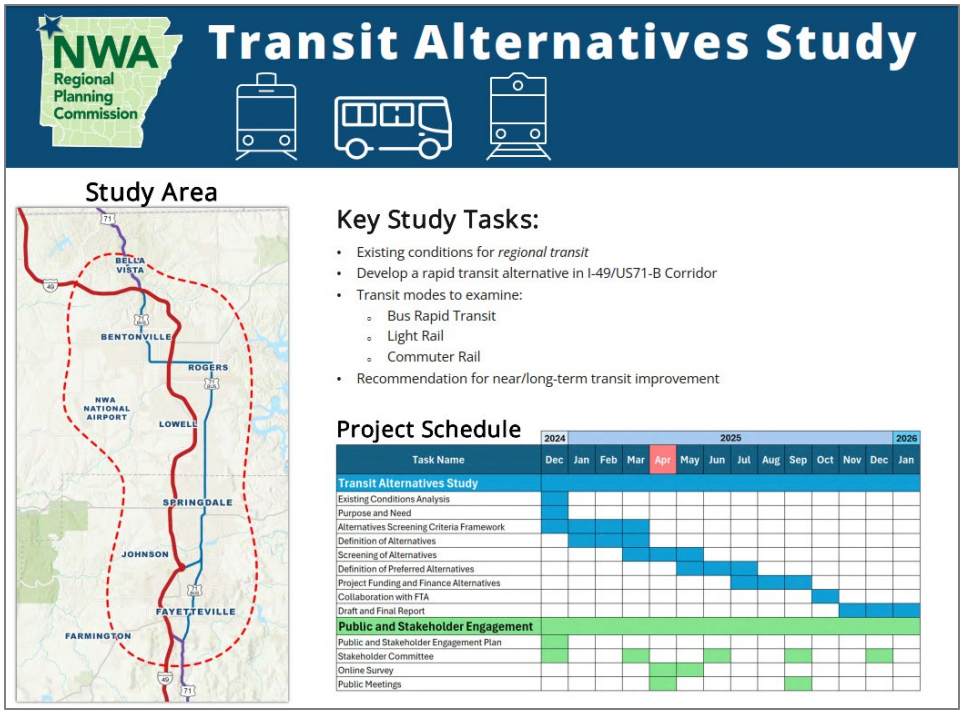

Figure 88 TAS Project Summary Display

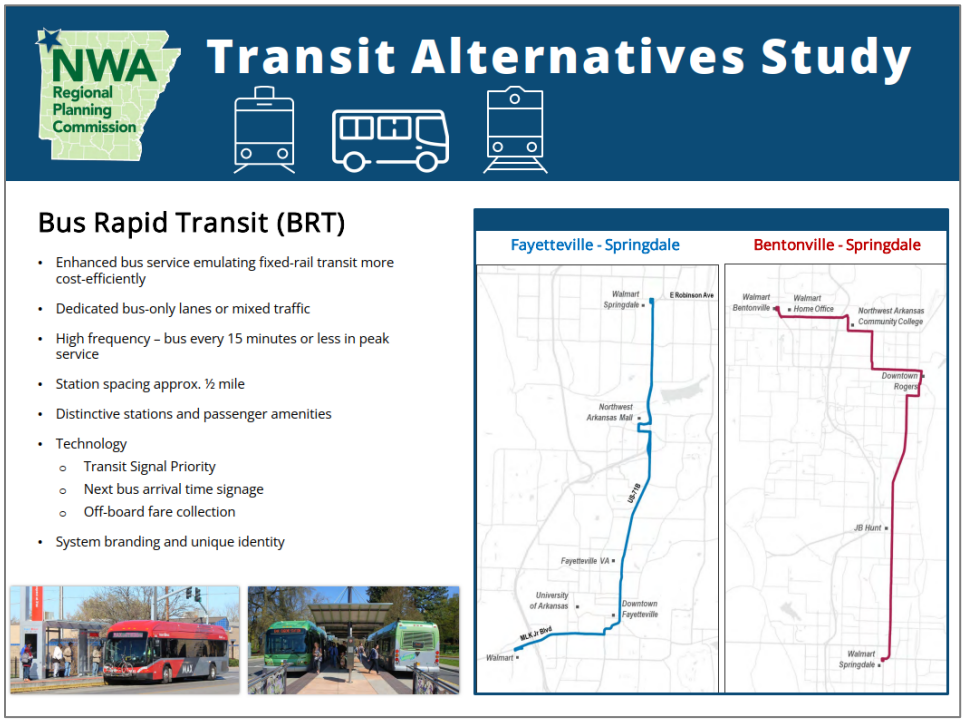

Figure 89 BRT Alternative Display

Figure 90 Light Rail Alternative Display

Figure 91 Commuter Rail Alternative Display

General feedback received from attendees at the two public open house meetings was very positive regarding public transit improvements. Many individuals discuss a desire for rail transit in the future. Others noted the rapidly increasing levels of auto congestion in the NWA region and expressed a need for

urgency in developing and implementing a high-capacity public transit corridor that could help relieve congestion along major corridors.

Beyond public open house meetings and digital surveys, the project team met with or presented to several stakeholder groups on the TAS, including:

- Ozark Region Transit Authority Board of Commissioners
- NWARPC Policy Board
- Fayetteville City Council Transportation Committee
- Federal Transit Administration Region 6 Office
- Arkansas Department of Transportation

7.4 Stakeholder Engagement

To assist in guiding the TAS and providing feedback from a diverse range of perspectives from across the Northwest Arkansas region, a Stakeholder Committee was formed and engaged five times in the course of the project. The TAS Stakeholder Committee provided critical input in the formation and finalization of the goals and objectives of the project, purpose and need statement, and alternative selection criteria. The members and organizations that comprise the Stakeholder committee are listed in Table 12 below.

Stakeholder Committee Member	Organization
Summy Farmahan	Arkansas Department of Transportation
Lane Crider	Beaver Water
Josh Beam	Benton County
Debbie Jones	Bentonville School District
Brandom Gengelbach	Bentonville Chamber
Arthur Hulbert	Siloam Springs Chamber
Taylor Robertson	City of Bella Vista
Tyler Overstreet	City of Bentonville
Tom Adler	City of Bentonville
Lorene Burns	City of Centerton
Melissa McCarville	City of Farmington
Chris Brown	City of Fayetteville
Jonathan Curth	City of Fayetteville
Mayor Jim Renfrow	City of Greenland
Karen Davis	City of Lowell
Mayor Nathan See	City of Pea Ridge
John McCurdy	City of Rogers
Ben Peters	City of Springdale
Ryan Carr	City of Springdale
Mark Latham	City of Tontitown
Bradley Neal	JB Hunt
Greg Sutherland	McKee Foods
Justin White	Northwest Arkansas Community College
Grady Spann	Northwest Arkansas Land Trust
Rob Smith	NWA Council

Stakeholder Committee Member	Organization
Richard Billingsley	NWA Go
Joel Gardner	Ozark Regional Transit
Adam Waddell	Razorback Transit
Tyler Dees	Simmons Foods
Bill Rogers	Springdale Chamber
Heith Ward	Springdale Water
Eric Boles	University of Arkansas
Steve Luoni	University of Arkansas
Wes Craiglow	Urban Land Institute
Aaron Burkes	XNA Airport

Table 12 Transit Alternatives Study Stakeholder Advisory Committee

8 Screening Criteria Framework

8.1 Screening Criteria

The screening criteria that will be used to identify the project's preferred alternative are based on a combination of project goals, ideas expressed in public input, and criteria related to potential Federal and state funding programs. These include criteria that account for potential benefits and impacts in the areas of mobility and traffic congestion mitigation, environmental and land use, and sensitive demographic and socioeconomic groups. The cost-effectiveness and cost-efficiency of the various transit modes and their capacity for generating economic development were critical elements of the screening.

8.1.1 Mobility Improvements and Impacts

Number of stops and/or stations – more stations typically equate to better coverage for residents, employment, and other destinations. Alternatives with more stations would receive higher scores.

Number of stops and/or stations with safety-security improvements, including lighting, shelters, and raised curbs/platforms – more stations with better transit waiting environment (TWE) amenities typically improve the likelihood of transit use. However, better (and more) TWE amenities would result in higher capital costs. For the BRT alternative, some stations located in low-density or undeveloped areas would not feature these TWE amenities to reduce initial capital costs. For LRT and CR alternatives, all stations are assumed to be equipped with these TWE amenities, especially raised platforms, as passengers would have trouble boarding the train without them. Alternatives with more stations with better amenities would receive higher scores.

Percentage of stops and/or stations with safety-security improvements, including lighting, shelters, and raised curbs/platforms – a higher percentage of stations with better TWE amenities typically means the transit riding experience would be more consistent throughout the entire service corridor. Alternatives with higher percentages of stations with better amenities would receive higher scores.

Transit running on exclusive lane – exclusive transit lanes can improve reliability and increase speed on transit services, making it more competitive against driving personal vehicles. However, exclusive transit

lanes often are either converted from existing travel lanes or from taking new right-of-way alongside existing roadway/right-of-way. The former may negatively impact existing traffic operations, while the latter often incurs additional acquisition costs. Alternatives with more exclusive transit lanes would receive higher scores.

8.1.2 Congestion Benefits and Impacts

Miles of guideway on new roadway or right-of-way – new right-of-way for transit use typically means transit services are less likely to have to compete with existing traffic, and thus likely to be faster and more reliable. Transit services on new roadway or right-of-way also often mean the transit services are less likely to negatively impact the existing traffic operations. Alternatives with longer alignments on new roadways or right-of-way would receive higher scores.

Miles of existing roadway converted to transit use – converting existing roadway would likely result in reducing the capacity for general traffic, which may or may not be compensated for by the addition of transit services. Thus, alternatives with longer alignments that would require converting existing roadways would receive lower scores.

8.1.3 Environmental Benefits and Impacts

Potential environmental impacts to undeveloped areas – measured as the length of alignment (for LRT and CR) or length of the stations (BRT) through, or at least one side is immediately adjacent to undeveloped areas as indicated by land use data from the counties, on the assumption that the construction activities for guideways and stations would negatively impact the environment. Alternatives with longer alignments through or immediately adjacent to undeveloped areas would receive lower scores.

Potential construction impacts to developed areas – measured as the length of alignment (for LRT and CR) or length of the stations (BRT) through, or at least one side is immediately adjacent to developed areas as indicated by land use data from the counties, on the assumption that the construction activities for guideways and stations would negatively impact the existing development. Alternatives with longer alignments through or immediately adjacent to developed areas would receive lower scores.

8.1.4 Land Use Impacts

This section examines some of the specific land uses that may receive disproportionate damage, either mentally or physically, from accidents during construction activities. The following land uses within the immediate vicinity (0.1mi) of stations (BRT) or alignment (LRT and CR) were counted for each alternative:

- Number of parks
- Number of cemeteries
- Number of underground gas/diesel storage tanks

Alternatives with higher numbers of potentially high-risk land uses within the immediate vicinity would receive lower scores.

8.1.5 Demographics and Socioeconomic Benefits

This section examines the potential demographics and socioeconomic benefits each alternative could bring to the region by measuring the following statistics within 0.5 mi of station locations. These statistics were also measured within 1 mi of CR stations, as riders are more likely to drive to the CR stations as

opposed to BRT or LRT, and 1 mi represents a typical driving time range from 5 to 10 minutes, depending on the road network and traffic. Alternatives with higher values in the following statistics would receive higher scores.

- Number of key regional attractions
- Population
- Number of jobs
- Population density (persons per square mile)
- Employment density (jobs per square mile)
- Population in poverty
- Minority population
- Population with disabilities
- Zero-car household

The last two measures in this section gauge the potential to spur high-density development along transit alternatives. These often vary significantly depending on the development environment and local (housing) market, and political will/desire for higher density. In general, higher-investment modes such as LRT often inspire more confidence in developers as there would be more incentives for the operators to continue operating the service for years to come, and the infrastructure, such as guideways and tracks, cannot be easily moved to another corridor.

In comparison, BRT is more flexible in terms of route alignment, as buses can be operated on almost any road. However, the flexible nature also means that services can be diverted from a set "BRT" corridor, much easier than LRT, and thus is less attractive for developers looking for transit-oriented development opportunities.

While CR stations are often surrounded by parking infrastructure, they can also attract high-density developments, as shown in New Jersey and Metro Boston. However, their development potential is limited by the number of stations.

The measures include the following. Alternatives were given scores based on past experiences of the planning team:

- Potential to attract development near proposed stations
- Potential to encourage transit-oriented development near proposed stations

8.1.6 Cost Effectiveness

This section measures the cost effectiveness of the alternatives, including both the initial capital to enable the services and the annual operating and maintenance costs to keep the service running, as well as the cost per estimated passenger trip[14]. Overall, lower capital costs often suggest fewer components to build, which means the service is easier to fund and often faster to build, and lower operating costs mean the

[14] Passenger trips were estimated using the 2050 regional travel demand model, updated in 2025. The model estimated the weekday daily passenger trips for each alternative overlaid on top of existing transit services operated by ORT and Razorback Transit. The weekday daily passenger trips were then multiplied by 300 – to account for holidays and potentially lower ridership on weekends – to estimate annual total passenger trips. The model provided a range of estimates for each alternative depending on the level of congestion that may impact the operation – higher congestion leads to lower estimates, and vice versa. Only the lower estimates were used to evaluate the efficiency in this analysis.

service is easier to operate. Lower costs combined with high ridership result in more cost-efficient service, meaning the service can serve more people with limited funding. Thus, alternatives with lower capital costs, lower operating & maintenance costs, and lower costs per passenger trip would receive higher scores. These measures include:

- Total capital costs
- Annualized capital costs based on useful lifespan
- Capital costs per mile
- Total annual operating & maintenance costs
- Operating & maintenance costs per vehicle (train) revenue hour
- Operating & maintenance costs per vehicle (train) revenue mile
- Operating & maintenance costs per estimated passenger trip

The following two measures gauge how likely the alternatives are to attract funding from local, state, and Federal sources, and attract political support from local and regional organizations and institutions. These measures were gauged based on interactions with the stakeholders through regular stakeholder engagement meetings, and from studies and reports that various organizations and institutions have conducted in the past.

- Potential to attract discretionary funding from public and private sources
- Potential to attract regional and local political support

The next measure in this section is economic development benefits. This measure estimates the potential economic growth from the amount of external investment (e.g., Federal funding) spent on local businesses, as well as the potential developments that would be spurred by the investment and the potential new transit services. Thus, an accurate estimate requires the knowledge of the exact amount of the funding, where it comes from, and how it's spent, none of which is available at this stage of the evaluation. Currently, the transit alternatives analysis cannot accurately estimate the economic benefits for each alternative, but can compare each alternative based on the total capital spending, assuming part of the capital spending would come from external sources and remain within the local economy. 10% of the total capital spending was used to calculate this measure. While Federal funding often contributes as much as 50% of the capital spending, most of the funding would be used to purchase goods, materials, and equipment from manufacturers and vendors, and hire skilled labor from outside the region; therefore, it does not participate in the local economy.

- Economic development benefits

8.2 DATA

This section lists the various datasets, along with their sources, used in the evaluation. These data are split into four main categories – service design, land use and development, demographics and socioeconomic, and costs. Details of each category and its datasets are explained in the following paragraphs.

8.2.1 Service Design Data

This includes operations and service characteristics data, developed based on the descriptions of each alternative, provided in the Definition of Alternatives memo. Data includes:

- Number of stops and/or stations
    - Number of stops or stations with safety-security improvements
- Location of stops and/or stations
- Route alignments
- Operating plan
    - Revenue hours and miles
    - Peak vehicle requirements

8.2.2 Land Use and Development Data

These data are used to evaluate the potential impact, negative or positive, from constructions and subsequent operations of proposed transit alternatives. These data are mostly sourced from county and state GIS repositories. Data used in the evaluation include:

- Land use data collected from Benton and Washington Counties
- Attractions and destinations data from the Arkansas GIS Office
- Location of parks from each city's GIS site
- Location of underground petroleum/diesel storage tanks from the Arkansas Energy and Environment Department

8.2.3 Demographics and Socioeconomic Data

These data help us understand how the proposed transit alternatives affect residents and workers, especially those who would likely need transit services the most – people with lower income, households that cannot afford cars, or workers who work at low-wage jobs, etc. These data include:

- Demographics data collected from the Census Bureau's 2023 5-year ACS
- Employment data collected from the Census Bureau's Longitudinal Employer-Household Dynamics Origin-Destination Employment Statistics (LODES)

8.2.4 Cost Data

Cost data are split into two parts – operation costs and capital costs. Operation costs are incurred from operating the service and will continue to be incurred as long as the service is being operated. It often includes labor costs such as wages and benefits, maintenance and repair costs to keep the vehicles, stations, and tracks in good condition, and administrative costs for managing and supporting the operations. Capital costs, on the other hand, are often incurred before service starts operating – to purchase equipment and build necessary infrastructure to support the operation. Due to its nature, capital costs are weighted more heavily toward the start (or even before the start) of the service, with relatively little during the operation to maintain a state of good repair.

Operation costs are developed based on vehicle revenue hours determined by the operating plan for each alternative. A fully loaded operating costs per revenue hour value was calculated based on data collected from the 2023 National Transit Database (NTD), as shown below:

- BRT: calculated from ORT's 2023 NTD report - $114 per vehicle revenue hour
- LR: calculated from Kansas City Streetcar's 2023 NTD report - $342.7 per train revenue hour

- CR: calculated from the average of five agencies that operate commuter rail services serving areas with fewer than 1 million population, collected from their 2023 NTD reports - $2,699.5 per train revenue hour
    - Northern New England Passenger Rail Authority, Portland, ME
    - Sonoma-Marin Area Rail Transit District, Santa Rosa, CA
    - Altamont Corridor Express, Stockton, CA
    - RioMetro Regional Transit District, Albuquerque, NM
    - Connecticut Department of Transportation, Hartford, CT

Operation costs were estimated in 2023 US Dollars, inflated to 2025 US Dollars using Consumer Price Index data from the Bureau of Labor Statistics, then inflated to 2031 US Dollars.

Capital costs are developed based on service design elements – route alignment, number of stops and/or stations, the amenities provided at the stops and/or stations, and the number of vehicles required to maintain peak service. Each alternative includes an estimate for building a new maintenance facility capable of housing/maintaining the number of vehicles required to maintain peak service, plus 20% more, rounded to the nearest integer, as spares. Capital costs are sourced from WSP data from recent similar projects and averaged to inform the estimation of rough-order-of-magnitude costs.

There are no guideway-related costs for BRT, and amenities for the stops located in less populated areas would be greatly reduced, as these infrastructure elements can often be added easily later when needed and would not significantly affect the usability of the BRT service. All LRT and CR stations are assumed to have raised platforms, lighting, and shelters, as they are often much more difficult to add after the service is in operation. BRT is envisioned to use standard 40-foot buses.

For LRT, guideway and track types were determined by available space along US-71 Business, assuming a 30-foot minimum width to accommodate a double-track guideway and double direct fixation tracks. If the segment is deemed not to have enough space to accommodate a double-track guideway, either in the center or on the sides, LRT is considered to take up the outside lanes with single embedded tracks on the existing roadway in both directions, which would also incur additional utility relocation, environmental, and roadway modification costs. The cost of acquiring additional right-of-way is added for the segment outside of the existing roadway. LRT is envisioned to use Siemens S70 or equivalent and operate as a single-car consist.

For CR, guideway work is considered necessary only for phase 2 alignment between Northwest Arkansas Community College (NWACC) and Bella Vista. Single ballasted track was considered for phase 1 alignment between Fayetteville and NWACC to account for the need for a second track to allow bi-directional 30-minute service, and double ballasted track was considered for phase 2 alignment. Both rail modes also require additional work to install/configure train control systems and train communications systems for the entire corridors. CR is envisioned to use diesel multiple units and operate as a two-car consist.

Capital costs were estimated in 2025 US Dollars and then inflated to 2031 US Dollars.

Table 13 below provides a summary of service characteristics, estimated annual total operating costs, total capital costs, and annualized capital costs based on useful life for each capital cost item, for each of the three alternatives. The detailed calculation of capital costs and the expected useful life are included in Appendix A.

	Bus Rapid Transit	Light Rail	Commuter Rail
Route Length (mi)	32	30	33
Number of Stations	142	98	8
Number of Stations with Safety-Security Improvements	90	98	8
Length of Exclusive Transit Lanes	0	13	33
Miles of Guideway on New Roadway or Right-of-Way	0	13	33
Miles of Existing Roadway Converted to Exclusive Transit Use	0	16	0
Estimated Annual Total Vehicle (Car) Revenue Hours	43,168	30,210	30,600
Estimated Annual Total Vehicle (Car) Revenue Miles	637,586	604,200	750,720
Estimated Peak Vehicles (Cars)	17	6	10
Estimated Total Vehicles (Cars) Including Spares	20	7	12
Total Capital Costs	**$ 209,960,685**	**$5,787,797,658**	**$1,130,021,188**
Annualized Capital Costs	$ 7,292,563	$211,577,371	$44,920,041
Total Annual Operating Costs	**$ 6,429,677**	**$11,797,877**	**$46,905,222**
Operating Costs per Vehicle (Train) Revenue Hour	$ 136.59	$390.65	$1,532.55
Operating Costs per Vehicle (Train) Revenue Mile	$ 10.69	$19.53	$62.48

Table 13 Summary of Service Costs

9 Definition of Alternatives

9.1 Purpose of the Definition of Transit Alternatives

This technical memo documents the definition of transit alternatives for the Northwest Arkansas Regional Planning Commission's Transit Alternatives Study. The memo is divided into two sections. The first describes the general definitions, including passenger capacity, infrastructure, vehicles, and cost implications, for different types of BRT, LRT, and CR; the second defines three primary transit modes – Bus Rapid Transit, Light Rail Transit, and Commuter Rail appropriate for the current and projected development and travel patterns in Northwest Arkansas.

9.2 Transit Mode Alternatives General Description

This section provides a general description of the various transit modes that were considered for potential implementation, describing the guideway treatment and types of vehicles used, and the typical application of the mode.

9.2.1 Bus Rapid Transit (BRT)

BRT is a system of improvements that combine to simulate aspects of rail transit using bus technology. The primary goals of BRT are to reduce transit travel time, increase service reliability, and add corridor capacity through larger vehicles and/or increased frequencies. This application concept is a flexible one that encompasses a range of physical, technological, operational, and marketing improvements in response to traffic congestion, operational needs, opportunities, available capital funding, and market demand. Greater Cleveland Regional Transit Authority (GCRTA)'s Healthline is an example of a bus rapid transit system.

The Federal Transit Administration (FTA) has two definitions of BRT systems – corridor-based BRT and fixed guideway BRT, used to evaluate the eligibility of grant applications for the FTA Capital Investment Grants (CIG) program. Projects that meet the definitions of corridor-based BRT may qualify for Small Starts grants, and projects that meet the definitions of fixed guideway BRT may qualify for New Starts or Small Starts grants. The implementation of BRT service within a transportation corridor is sometimes an evolutionary process, in which transit amenities and infrastructure improvements are phased in over time as conditions and demand warrant them, and as funding becomes available.

For this document, the elements of Initial and Full bus rapid transit improvements are categorized into four distinct areas of improvement: vehicles, stations, service, and infrastructure.

Corridor-based BRT

FTA defines Corridor-based BRT[15] as follows:

1. The route must have defined stations that comply with United States Department of Transportation (USDOT) standards for buildings and other facilities under the Americans with Disabilities Act and Section 504 of the Rehabilitation Act of 1973, offer shelter from the weather, and provide information on schedules and routes.
2. The route must provide faster passenger travel times through congested intersections by using active signal priority in a separated guideway, if it exists, and either queue-jump lanes or active signal priority in the non-separated guideway.
3. The route must provide short headway and bidirectional service for at least a fourteen-hour span of service on weekdays. Short headway service on weekdays consists of either (a) fifteen-minute maximum headways throughout the day or (b) ten-minute maximum headways during peak periods and twenty-minute maximum headways at all other times.
4. The provider must apply a separate and consistent brand identity to stations and vehicles.

Corridor-based BRT prescribes minimal improvements for service to be considered bus rapid transit. Corridor-based BRT includes a potential increase in service frequency, a decrease in transit travel time, and the implementation of passenger amenities for the purposes of developing a distinct mode of transportation. The MAX service in Kansas City, Missouri, is an example of Corridor-based BRT, shown in Figure 92.

[15] Federal Transit Administration Capital Investment Grants Policy Guidance, December 2024: 2024 CIG Policy Guidance - December 2024

Figure 92 Kansas City Area Transportation Authority Main Street MAX BRT

Vehicles

For Corridor-based BRT, vehicle improvements range from a branding and color scheme different from existing conventional buses to higher-quality vehicles that provide more comfortable seating and other passenger amenities.

Stations

Passenger stations for Corridor-based BRT are typically upgraded to include curbside concrete hard stands with covered seating areas, upgraded lighting, highly visible signage coordinated with a BRT branding and color scheme, and route information.

Service

Corridor-based BRT generally includes an increase in service frequencies from what previously existed in a corridor. This typically means the operation has a 15-minute minimum peak period headway and a 20-minute minimum off-peak headway.

Infrastructure

Corridor-based BRT service operates in mixed traffic on urban or suburban streets with some level of preferential treatment for operations to expedite the trip. Preferential treatments can be achieved by designating lanes for bus use only, either during peak periods or throughout the day, through striping and signage. Further time savings can be achieved through the deployment of Intelligent Transportation Systems (ITS) technology, such as signal priority. Not to be confused with signal pre-emption systems sometimes used by fire departments and other emergency services, signal priority systems analyze data on traffic volumes and bus travel speeds to subtly adjust traffic signal timings along a corridor to help

buses remain on schedule. The components of the signal priority system include a bus-mounted transponder that utilizes an electronic signal to correspond with an intersection's traffic signalization system. Signal priority reduces transit travel delays and improves bus schedule adherence and may even reduce travel time and the number of buses required to operate on existing schedules, potentially reducing both capital and operating costs.

Fixed Guideway BRT

FTA defines Fixed Guideway BRT[16] as follows:

1. Over 50 percent of the route must operate in a separated right-of-way dedicated for transit use during peak periods. Other traffic can make turning movements through the separated right-of-way.
2. The route must have defined stations that are accessible for persons with disabilities, offer shelter from the weather, and provide information on schedules and routes.
3. The route must provide faster passenger travel times through congested intersections by using active signal priority in a separated guideway, and either queue-jump lanes or active signal priority in a non-separated guideway.
4. The route must provide short headway, bidirectional service for at least a fourteen-hour span of service on weekdays and a ten-hour span of service on weekends. Short headway service on weekdays consists of either (a) fifteen-minute maximum headways throughout the day or (b) ten-minute maximum headways during peak periods and twenty-minute maximum headways at all other times. Short headway service on weekends consists of thirty-minute maximum headways for at least ten hours a day.
5. The service must have a separate and consistent brand identity for stations and vehicles.

Fixed Guideway BRT service builds on the service improvements of Corridor-based BRT but includes more infrastructure and technology improvements designed to further reduce dwell times at stations and overall transit travel times within a corridor. The Cleveland portion of the Healthline (from downtown to University Circle) is an example of Corridor-based BRT, shown in Figure 93.

[16] Federal Transit Administration Capital Investment Grants Policy Guidance, December 2024: 2024 CIG Policy Guidance - December 2024

Figure 93 Greater Cleveland Regional Transit Authority HealthLine, www.riderta.com

As with Corridor-based BRT, the four key improvements for Corridor-based BRT are listed below.

Vehicles

Vehicles for Fixed Guideway BRT can be the same used in Corridor-based BRT, but are more likely to include a higher degree of amenities to distinguish BRT from regular bus service. They may include wider and/or multiple doors that allow for faster boarding and alighting at stations.

Stations

Station amenities are similar to those found for Corridor-based BRT, with upgrades to lighting, shelters, signage, and benches. Additionally, Fixed Guideway BRT stations oftentimes include raised platforms for level boarding, which can reduce station dwell times. Signage and information system upgrades at Fixed Guideway BRT stations typically utilize the deployment of ITS infrastructure, such as passenger information systems, to provide riders at bus stops with real-time route and schedule information. Off-board fare collection and ticketing systems speed up passenger boarding and further reduce dwell times.

Fixed Guideway BRT guideway and station are often located in the center of the roadway, where riders board buses in both directions from a single platform.

Service

Fixed Guideway BRT service is typically more frequent than Corridor-based BRT and corresponds to the greater potential for higher ridership that corresponds to higher capital investment. Fixed Guideway BRT generally operates at 5-10 minute peak period headways and 10-15 minute off-peak headways.

Infrastructure

Fixed Guideway BRT includes many upgrades to the right-of-way, as addressed here. Areas of improvement include streetscape and landscaping that facilitate connections to properties and land uses adjacent to stops. These improvements can promote the development and redevelopment of surrounding properties, which, in turn, supports ridership on the BRT service.

The construction of a barrier-separated bus-only lane reduces interference from automobile traffic and improves transit operational efficiency. Barrier-separated bus lanes have a physical barrier, typically a curb or rumble strip, to prevent other vehicles from entering the bus lane. Lanes with barriers are more costly and require more right-of-way to fit within a corridor, as shown in Figure 94.

Figure 94 IndyGo Red Line BRT Station and Bus-Only Guideway, Indygo.net

Another issue in BRT design is the location of the bus lane in either the median or the curbside. Each corridor has its own characteristics, which can affect this decision. Lanes located in the center median allow for an offset station design (like the Midtown Cleveland portion of the Healthline) and can be designed to fit in a narrower right of way than is possible with curbside lanes. As a drawback, median lanes result in pedestrians crossing the busway and traffic lanes when boarding and alighting from the station. Traffic turning left at intersections is complicated by the center-running guideway. Special signals are usually installed to direct left-turning auto traffic and through-routed transit vehicles.

Curbside lanes may require more right-of-way and interfere with on-street parking and access to driveways, which can be controversial in some communities. However, curbside lanes operate through

intersections with less conflict than median lanes. Side drop-offs of passengers also reduce the volume of pedestrians crossing traffic lanes.

Fixed Guideway BRT can feature queue jump lanes, shown in Figure 95. These are typically employed on corridors that suffer from heavy traffic congestion but do not have sufficient, continuous right-of-way available to allow for the development of a full bus lane. Queue jump lanes are constructed as non-barrier lanes at intersections and allow vehicles to bypass automobile traffic waiting at the intersection by receiving a green signal before the rest of the waiting traffic. The physical and traffic conditions at local intersections within the Blue Line study area are such that queue jump lanes are not considered to be a realistic option for this project.

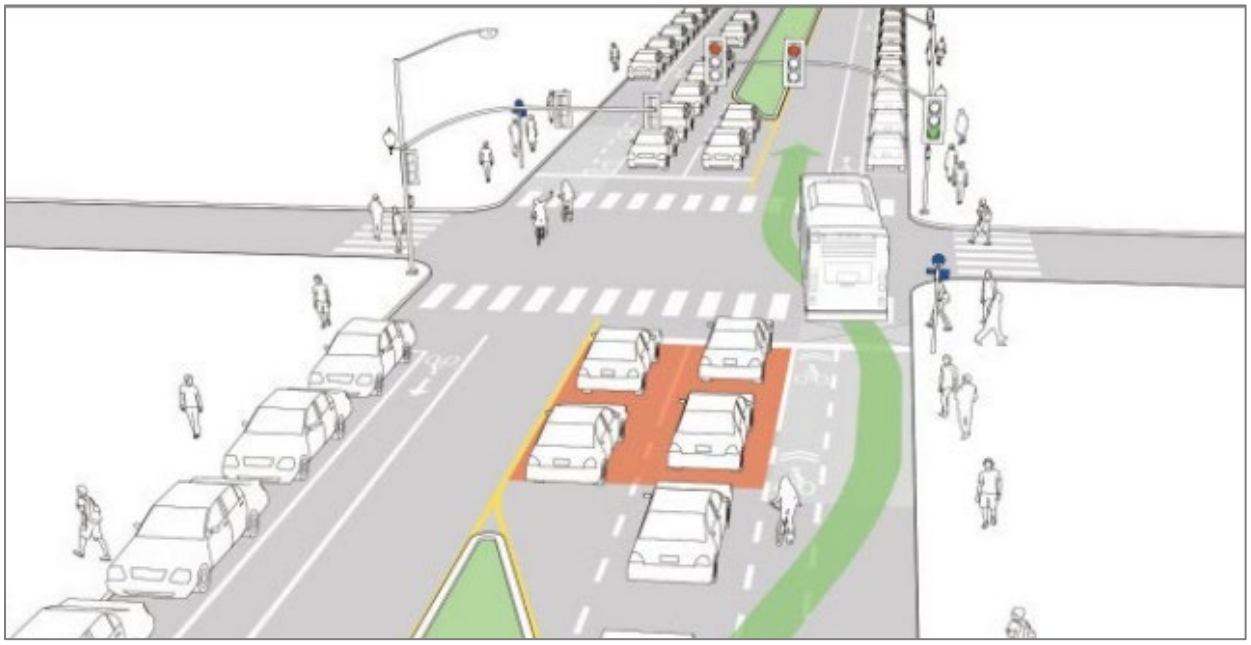

Figure 95 Bus Queue Jump Lane Example, NACTO

Table 14 below summarizes the differences between Corridor-based BRT and Fixed Guideway BRT.

		Corridor-based BRT	Fixed Guideway BRT
Passenger Volumes		Serves medium to high passenger volumes	Serves medium to high passenger volumes
Passenger Capacity		4,000 to 6,000 passengers per hour per lane, one-way	4,000 to 6,000 passengers per hour per lane, one-way
Average Vehicle Speed		12-15 mph	15-20 mph
Type of Trips		Serves medium to long trips	Serves medium to long trips
Stop Spacing		0.25-0.5 miles	0.25-0.5 miles
Capital Costs		Moderate	High
Operations Cost		Moderate operating costs per vehicle mile or passenger mile basis.	Moderate operating costs per vehicle mile or passenger mile basis.
Maintenance Costs		High vehicle maintenance costs.	High vehicle maintenance costs.
Right-of-Way Requirements		Uses existing ROW	May require new ROW depending on infrastructure chosen
Improvements specific to BRT			
Vehicles		Branding, color, and comfort improvements over the local bus	Branding, color, and comfort improvements over the local bus
Stations	Lighting	Y	Y
	Improved shelters and benches	Y	Y
	Signage/branding	Y	Y
	Real-time passenger information	Sometimes	Y
	On-site fare vending machines	Sometimes	Y
Service	Peak	10-15 min	5-10 min
	Off-peak	15-20 min	10-15 min
Infrastructure	ITS	Signal priority	Signal Priority
	Lanes	Operating in mixed traffic	Bus-only lanes operating with or without barriers
	Queue Jump Facilities	N	Sometimes
	Station Platforms	Curbside	Curbside or median

Table 14 Corridor-based BRT vs. Fixed Guideway BRT

9.2.2 Rail Transit

Rail transit is the term used to describe conventional fixed guideway transit systems that use a dual rail track, as historically used by railroads, for both support and guidance. Rail transit categories include light rail transit operating in mixed traffic (LRT Mixed), light rail transit operating separate from traffic (LRT Separated), and commuter rail.

LRT Mixed

LRT Mixed systems are defined by their operation on rails embedded in the street pavement, powered electrically by overhead catenary wires, and operating in mixed traffic. These systems are also known as streetcars. The vehicles used in LRT Mixed systems are generally shorter and narrower and have lower passenger capacities than vehicles used in LRT Separated systems.

Modern Streetcars are gaining in appeal as a means to offer the high-quality transit experience often associated with guideway-separated rail systems while using existing right-of-way and having a lower capital cost. Streetcar systems typically integrate into existing neighborhoods with compact development patterns.

Average operating speeds on LRT systems in mixed traffic are typically 12 to 15 miles per hour, with stops spaced 0.25 to 0.5 miles apart. Stations are usually curbside, with low platform boarding. Generally, LRT Mixed systems are used for shorter-distance trips or distribution in a downtown area. The streetcar in Kansas City, Missouri, shown in Figure 96, and in Cincinnati, Ohio are examples of streetcar systems constructed recently in the US.

Figure 96 Kansas City Streetcar, kcstreetcar.org

LRT Separated

LRT Separated systems are those that operate on rails on an exclusive right-of-way, powered by overhead catenary wire. The exclusive lane for LRT Separated systems is typically not grade-separated, so there is some interaction between the system and local traffic. Metro Transit Blue Line in Minneapolis, MN, is an example of an LRT Separated system, shown in Figure 97.

Light rail stations are usually as large or larger than BRT stations. LRT cars are often longer than buses and can operate in trains of up to three or more cars, requiring longer platforms than are typical for BRT stations. The platform height is dependent on the type of vehicle used, with lane separation aiding the potential for high-boarding platforms.

LRT Separated systems, often with a top speed of 45-55 mph, tend to operate faster than LRT Mixed systems because there is less interaction between transit and auto traffic. Stations tend to be spaced between 0.5 and 1 miles.

The capital cost of LRT Separated systems is higher than LRT Mixed, but still relatively low compared to other rail transit systems. Upgrades to barrier-separated right-of-way and station improvements can drive up capital costs. Operations and maintenance costs are considered medium, especially if demand is high.

Figure 97 Minneapolis Metro Transit Blue Line, www.metrotransit.org

Commuter Rail

Commuter rail is generally applied to longer-distance regional rail trips. Typically, these systems are operated by a railroad on its own tracks, under agreement with a transit agency, or operated by a contractor through a leased track usage agreement. A major advantage of commuter rail is its ability to use existing tracks in conjunction with freight trains and/or Amtrak service.

Due to federal regulations that require an automatic train control system for speeds above 79 miles per hour, commuter rail generally operates below this speed. Commuter rail stations tend to be located 3 to 5 miles apart because of the distance required for acceleration and deceleration. The vehicles and stations can use high or low platform boarding. Commuter rail trains can consist of self-powered vehicles or cars pushed/pulled by a locomotive, operating in trains of six or more cars with a capacity of more than 500

passengers per train (Figure 98). Because of their higher cost of operation and higher capacity, commuter trains often operate at lower frequencies than BRT or LRT vehicles, often at headways of 30 minutes or more.

Initial capital costs for commuter rail can vary widely depending on the availability of an existing rail corridor that can be used for the service, the condition of rails and associated infrastructure of the corridor, the availability of used rolling stock, and the size and level of amenities at stations. Due to the high passenger capacity potential and the long distances traveled, the cost per passenger mile for commuter rail is in the middle range for rail transit alternatives.

Figure 98 San Francisco Bay Area Metropolitan Transportation Commission Caltrain, mtc.ca.gov

Table 15 below summarizes the differences between LRT Mixed, LRT Separated, and Commuter Rail.

		LRT Mixed	LRT Separated	Commuter Rail
Passenger Volume		Medium	Medium	High
Capacity		3,600 - 22,000 per hour one-way	3,600 - 22,000 per hour one-way	Typically, 8,000 to 25,000 per hour one-way
Operating Speed		12-15 mph	45-55 mph	79 mph
Average trip distance		0 - 5 miles	5 - 10 miles	15 - 60 miles
Station Spacing		0.25 – 0.5 miles	0.5 - 1 miles	3 - 5 miles
Capital Costs		Medium	Medium	Low to high, depending on the use of the existing RR corridor
Operations Cost		Medium	Medium	Medium
Maintenance Costs		Medium	Medium	Medium
Lanes	Barrier Separated	N	Y	Y (Gates)
	Right-of-Way Requirements	At-grade	At-grade	Both
Platform boarding		Low	Low or High	High
Service Frequencies		5-15 min	5-15 min	30-60 min
Power system		Overhead catenary	Overhead catenary	Diesel or overhead catenary

Table 15 LRT Mixed vs. LRT Separated vs. Commuter Rail

9.3 Modal Alternatives Defined for Transit Alternatives Study

This section summarizes the definition of each proposed transit alternative in detail. The alternatives include BRT, LRT, and R. For each alternative, the existing local bus network operated by ORT, and to a certain extent, RT, would need to be reviewed and redesigned to work in conjunction with the new transit mode to maximize connectivity and the ridership potential for each mode.

9.3.1 Bus Rapid Transit (BRT)

The BRT alternative chosen for the TAS is a corridor-based BRT operating primarily on local streets and US-71B, between Fayetteville and Bentonville. The BRT alternative will be split into three separate services to keep the length of each service in control. These services are:

1. Between Fayetteville and Springdale
2. Between Bentonville and Rogers
3. Between Rogers and Springdale

Figure 99 on the next page shows the alignment of these services. A phased approach is recommended for implementing these services in the order they are listed, based on the current ORT routes' performance and ridership potential. The initial phase would implement BRT services connecting Bentonville and Rogers, as well as Fayetteville and Springdale. A later second phase would be implemented to connect Rogers and Springdale, as ridership demand and density of employment and population justified the expansion of service.

The BRT services are envisioned to operate in mixed traffic with TSP enabled at most intersections. Dedicated bus lanes may be added in areas where ROW permits and where traffic congestion may otherwise prohibit the service from achieving reasonable on-time performance. The service would have unique branding to separate it from the existing local bus services. Stop spacing is assumed to be around 0.25 mi in dense urban areas and may be stretched to around 0.5 mi in lower-density suburban areas. Each stop would feature a raised platform for level boarding, a reinforced concrete bus stopping pad in the street (to avoid the wear and tear that buses often place on asphalt streets), pylons and signs to visually identify the BRT service, real-time information display for arrivals, lighting, shelters, benches, and trash receptacles. Vehicles used for operations are assumed to be 40-foot hybrid electric or clean diesel transit buses due to the length of the alignments and the anticipated passenger volumes. Articulated buses may be assessed for additional passenger capacity if needed.

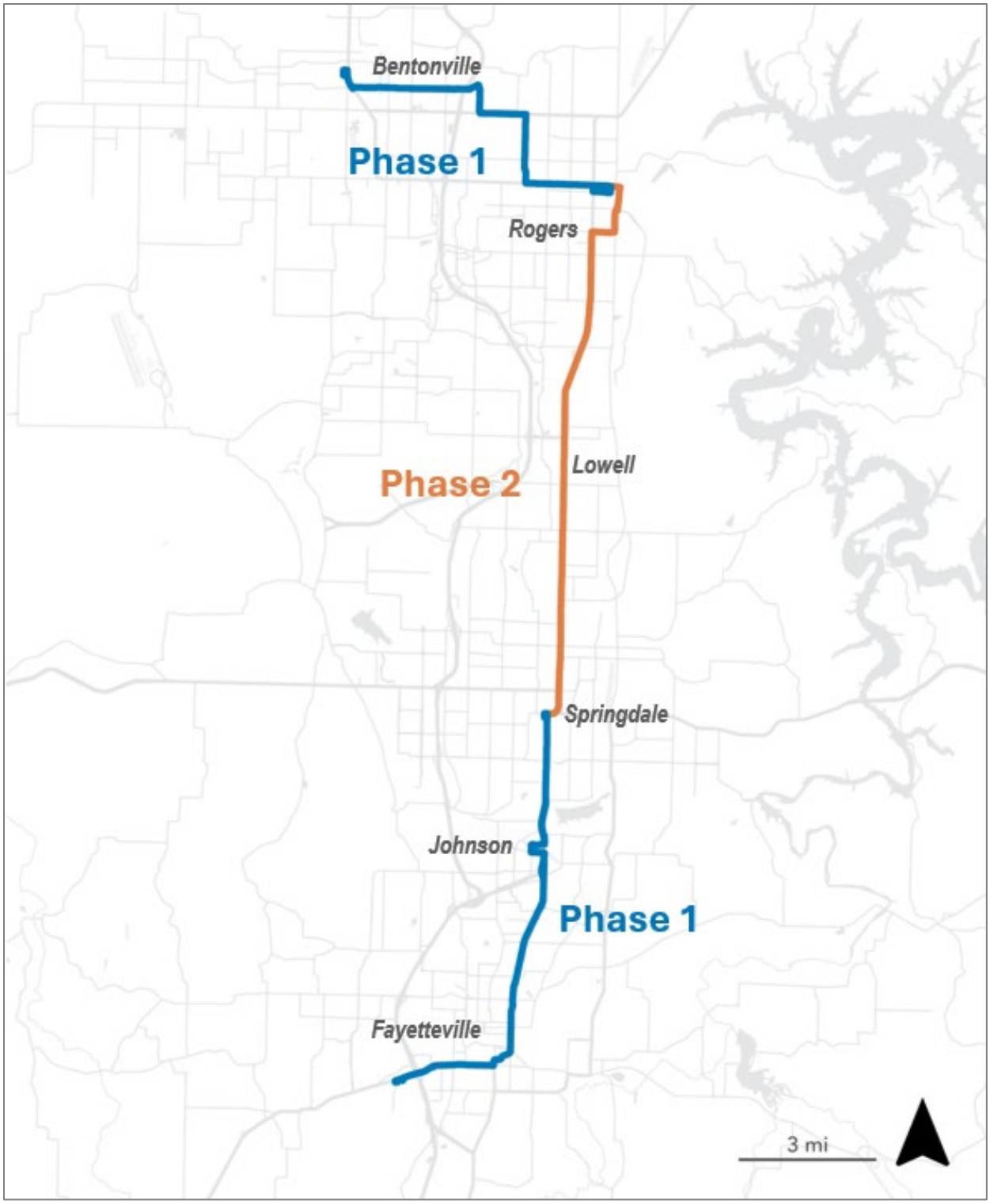

Figure 99 BRT Service Alternatives

Fayetteville – Springdale

Figure 100 below shows the alignment of the Fayetteville-Springdale service.

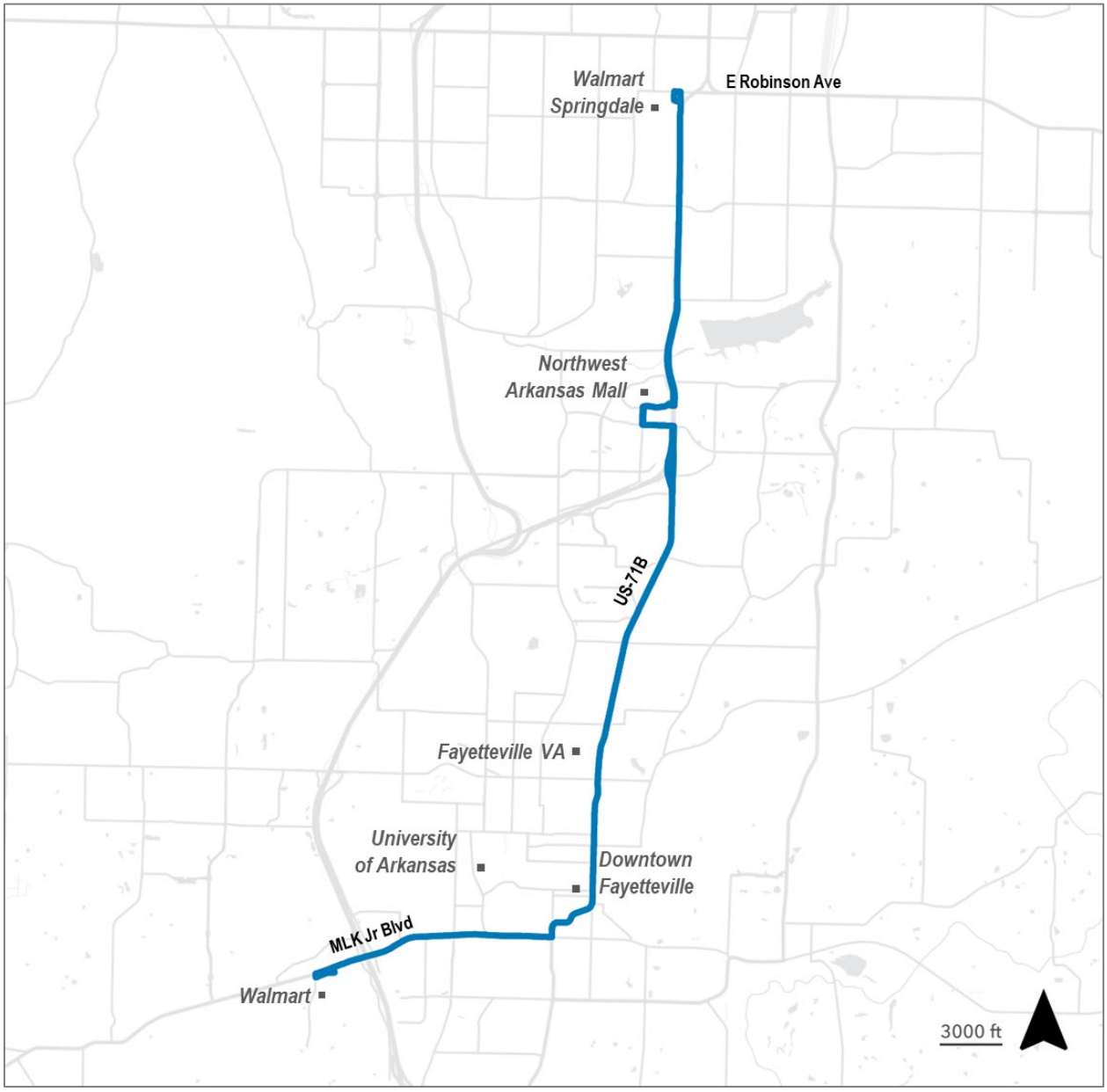

Figure 100 BRT Service Alternative: Fayetteville-Springdale Service

Table 16 below summarizes the service span and frequencies proposed for the Fayetteville-Springdale BRT service.

Day of Week	Service Span	Headway (Minutes)			
		AM Peak	Midday	PM Peak	Evening
Weekday	6AM – 10PM	15	30	15	30
Saturday	8AM – 7PM	60			
Sunday	8AM – 7PM	60			

Table 16 Service Span and Frequencies for Fayetteville-Springdale BRT Alternative

Figure 101 below shows a short-turn option to terminate at NWA Mall and Springdale. The operator may choose to alternate trips terminating at the NWA Mall and Springdale Walmart. This would not reduce the requirement for peak vehicles but would reduce the annual operating costs from around $2.3 million to around $2.0 million.

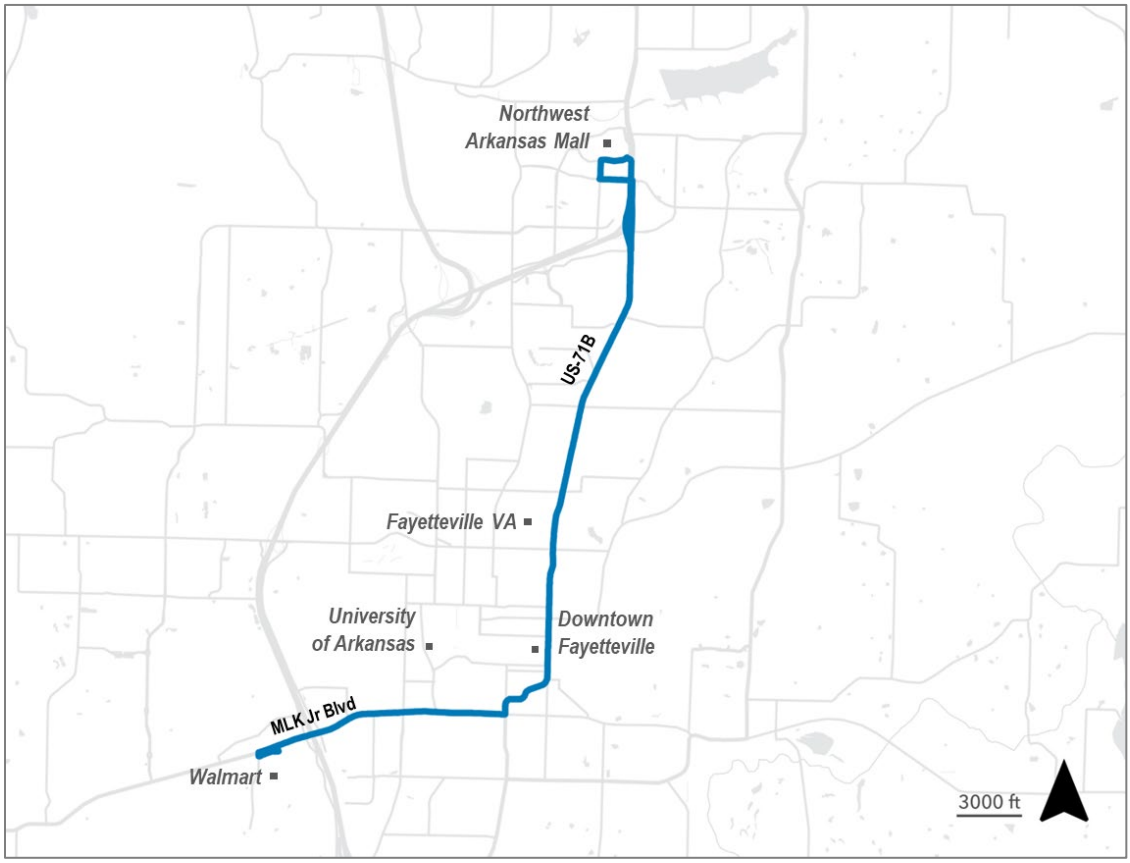

Figure 101 Short-turn Option for Operating Fayetteville-Springdale BRT Service

Bentonville-Rogers

Figure 102 below shows the alignment of the Bentonville-Rogers service.

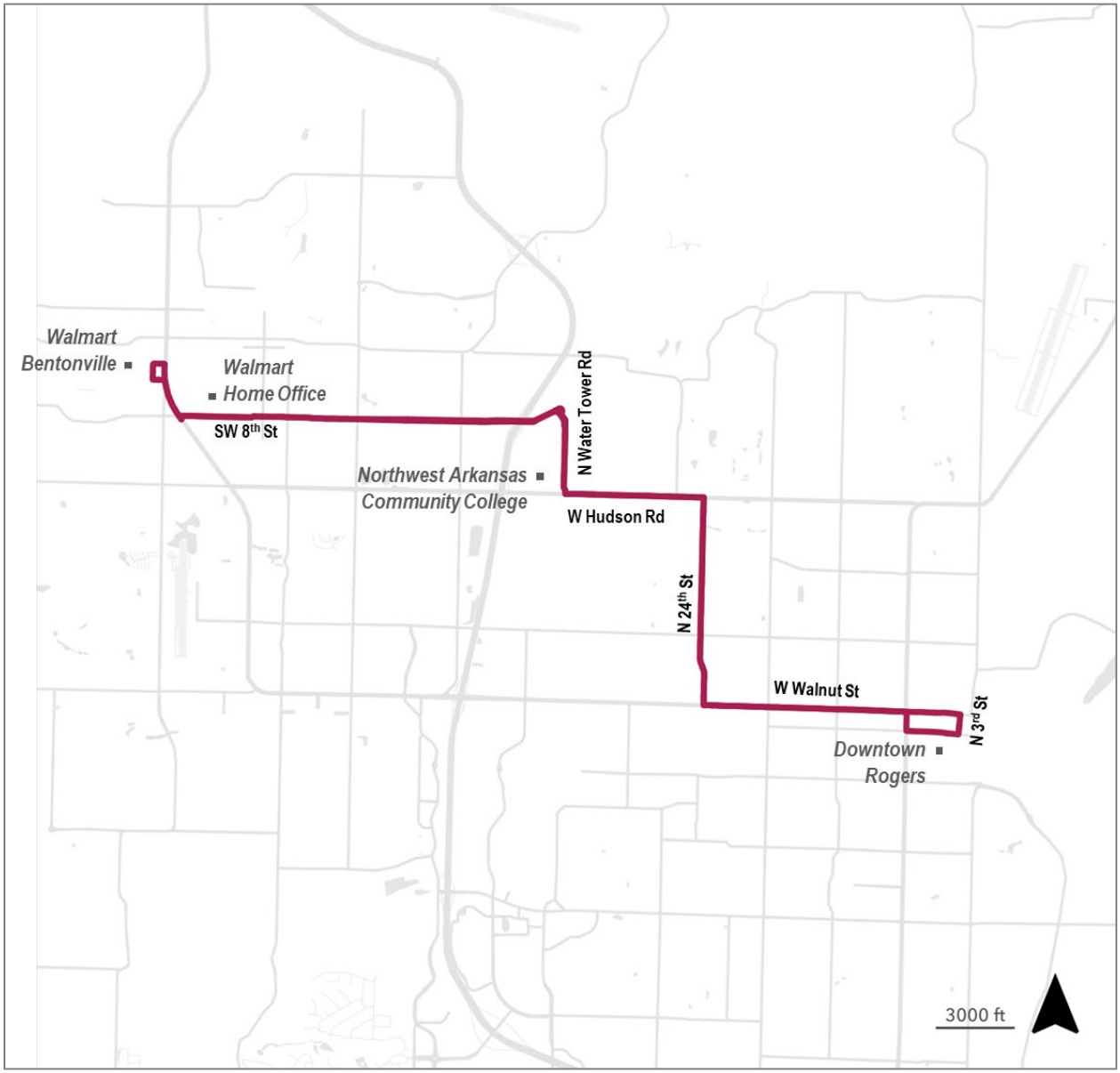

Figure 102 BRT Service Alternative: Bentonville-Rogers Service

Table 17 below summarizes the service span and proposed service frequencies for the Bentonville-Rogers service.

Day of Week	Service Span	Headway (Minutes)			
		AM Peak	Midday	PM Peak	Evening
Weekday	6AM – 10PM	15	30	15	30
Saturday	8AM – 7PM	60			
Sunday	8AM – 7PM	60			

Table 17 Service Span and Frequencies for Bentonville-Rogers BRT Alternative

Figure 103 below shows the alignment extending the Bentonville-Rogers service to Springdale to connect with the Fayetteville-Springdale service.

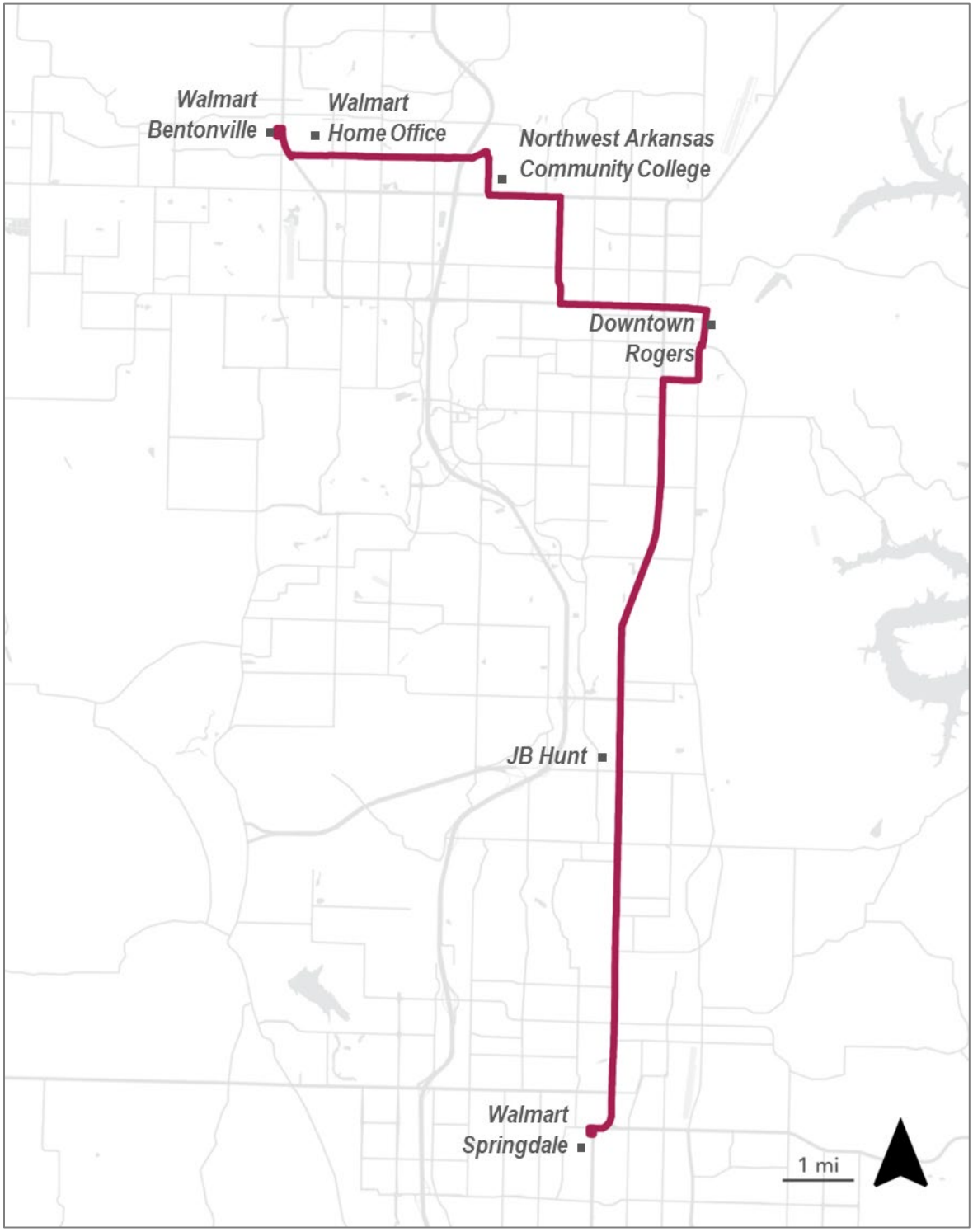

Figure 103 BRT Service Alternative: Bentonville-Springdale Service

Table 18 below summarizes the service span and service frequencies proposed for the Bentonville-Springdale service.

Day of Week	Service Span	Headway (Minutes)			
		AM Peak	Midday	PM Peak	Evening
Weekday	6AM – 10PM	20	60	20	60
Saturday	8AM – 7PM	60			
Sunday	8AM – 7PM	60			

Table 18 Service Span and Frequencies for Bentonville-Springdale BRT Alternative

9.3.2 Light Rail

Light rail service is envisioned to be primarily an LRT-mixed service with segments of separated tracks when possible. The alignment, shown in Figure 104 below, closely follows US-71B between Fayetteville, Rogers, and the NWACC, and uses SE 8th Street to access downtown Bentonville. The length of a one-way trip is 29.7 miles. In areas with few existing developments or where ROW permits, LRT may operate on tracks separated from general traffic at higher speeds. In denser areas where ROW is limited, LRT would operate in mixed traffic, similar to the streetcar in Kansas City, Missouri. This would provide a faster transit experience than buses operating purely in mixed traffic, while still providing access to as many businesses and residents as possible between Fayetteville and Bentonville.

The LRT service is assumed to feature no traffic gate at intersections, but with transit signal priority installed, to reduce initial capital investment. Most of the tracks would be embedded in the street to maintain compatibility with general traffic. Station spacing is assumed to be roughly 0.5 mi apart but may be slightly closer in dense urban areas. These stations would be covered to shield riders from elements and feature high platforms for level-boarding, off-board fare collection, real-time arrival displays, benches, and trash receptacles. Selected stations on the periphery of dense urban areas may also feature park-and-ride lots for long-distance commuting.

There are various vehicle options for the LRT service – such as CAF Urbos used in Kansas City or Siemens S70 used in Minneapolis. These LRT vehicles are typically around 75 to 95 feet in length with 1, 2, or 3 articulated sections to facilitate turning. Multiple vehicles can also be linked together to operate as a set to increase capacity, though this is often determined by the development and the station. They are generally powered by 600 to 750 V DC overhead catenary systems and are usually limited to 50 to 55mph.

Other capital investment needs for the LRT service include additional substations to provide traction power, and a dedicated vehicle maintenance and storage facility, preferably close to one of the ends to minimize deadhead movement.

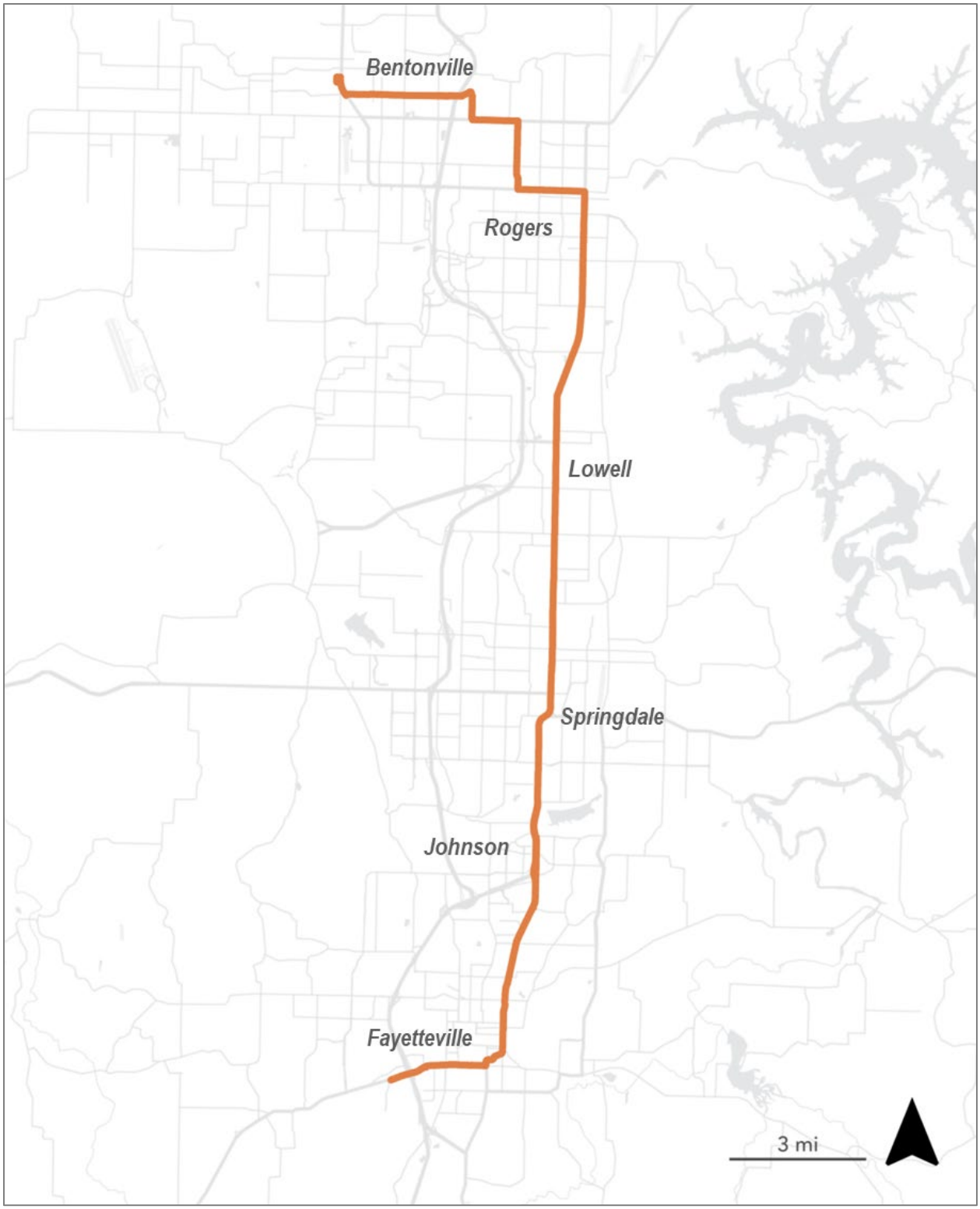

Figure 104 Light Rail Transit Alternative

Table 19 below summarizes the proposed service span and frequency for the LRT alternative.

Day of Week	Service Span	Headway (Minutes)			
		AM Peak	Midday	PM Peak	Evening
Weekday	5AM – 8PM	30	30	30	30
Saturday	8AM – 7PM	30			
Sunday	8AM – 7PM	30			

Table 19 Service Span and Frequencies for the Light Rail Transit Alternative

9.3.3 Commuter Rail

The commuter rail alternative is envisioned to operate between Bella Vista and Fayetteville, mainly using A&M Railroad tracks. It is envisioned to be completed in two phases – phase one would initiate the operation between Fayetteville and Northwest Arkansas Community College using the existing A&M mainline and the Bentonville spur tracks; phase two would extend service to include downtown Bentonville and Bella Vista via all-new tracks. Eight stations are included in this analysis, listed below from north to south. All stations would feature park-and-ride lots, raised platforms for level boarding, seating, and trash receptacles.

- Bella Vista (Phase 2)
- Bentonville (Phase 2)
- NWACC
- Rogers
- Lowell
- Springdale
- Johnson
- Fayetteville

The map in Figure 105 shows the alignment and stations. The Phase 1 service would operate on the A&M mainline track from Fayetteville, just north of W Center Street, until the wye junction just north of downtown Rogers before turning west onto an A&M spur toward NWACC. The station would be on the east side of Water Tower Road, right at the end of the existing track. Phase 2 alignment would extend the service from NWACC through Bentonville to Sugar Creek Center in Bella Vista. The exact Phase 2 alignment is to be determined. Most of the existing alignment is single-track. The exceptions are locations where there are sidings or rail yards present at a few locations east of NWACC, mostly in Rogers and Springdale. However, it's unknown if these sidings and yard tracks are capable of supporting the same speeds as on the mainline track, and more sidings may be needed for trains operating in opposite directions to safely pass each other with minimum delays. According to A&M staff members, the top speed of the mainline track between Fayetteville and Rogers is 35 mph.

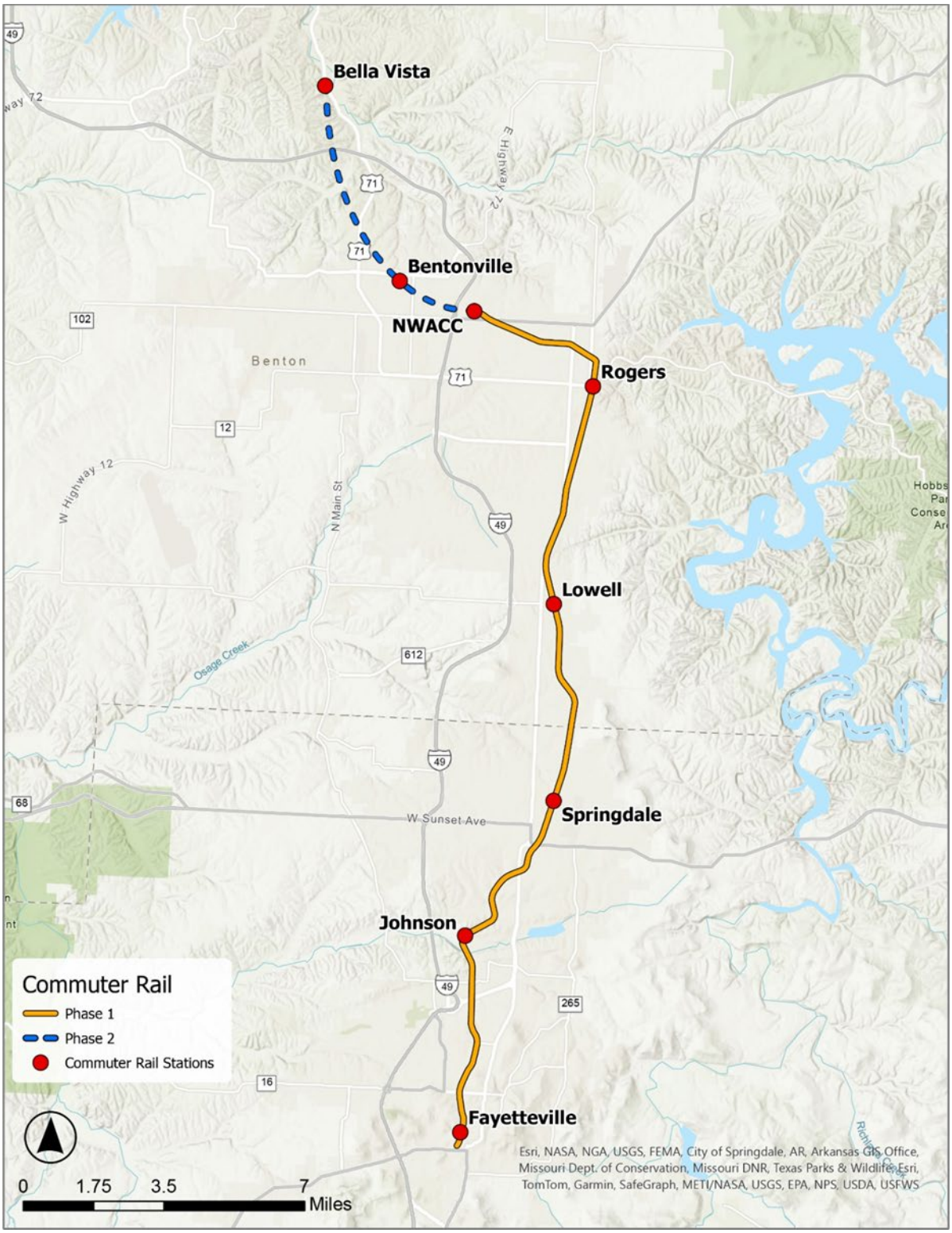

Figure 105 Commuter Rail Alternative

To maintain compatibility with existing A&M freight operations, the rolling stock for the commuter rail is envisioned to be either diesel or diesel-electric locomotives known as diesel multiple units (DMU) (Figure 106) that are self-powered passenger rail vehicles such as Stadler FLIRT.

Figure 106 Diesel Multiple Unit Vehicle in Oceanside, CA

In addition to track improvements, new track installations, rolling stock, and stations, other capital improvements needed to operate the commuter rail include traffic signals and gates at at-grade intersections, a signal system for train control, and a maintenance and storage facility, preferably near one of the ends to minimize deadhead movements.

Table 20 below summarizes the proposed service span and frequencies for the commuter rail alternative.

Day of Week	Service Span	Headway (Minutes)			
		AM Peak	Midday	PM Peak	Evening
Weekday	5AM – 7PM	30	60	30	-
Saturday	-	-			
Sunday	-	-			

Table 20 Service Span and Frequencies for the Commuter Rail Alternative

10 SCREENING OF ALTERNATIVES

Table 21 summarizes the final scores for each alternative. A detailed breakdown is included in Appendix C. BRT scores the highest, followed by Light Rail and Commuter Rail.

Bus Rapid Transit scores the highest overall, scoring particularly well in mobility improvements, environmental benefits, land use benefits, and cost effectiveness. Light Rail performs strongly in mobility improvements, environmental benefits, and demographic/socioeconomic benefits. However, it falls short in congestion benefits, land use benefits, and cost-effectiveness. Commuter Rail scores well in congestion benefits and land use benefits, but scores poorly in the remaining categories.

Scoring Criteria	Total Points Per Criteria	Bus Rapid Transit	Light Rail	Commuter Rail
Mobility Improvements/Impacts	20	14	14	12
Congestion Benefits/Impacts	10	6	2	10
Environmental Benefits/Impacts	10	6	6	6
Land Use Benefits	15	11	7	9
Demographics & Socioeconomics Benefits	55	47	51	40
Cost-Effectiveness	50	42	32	26
Total Score	**160**	**126**	**112**	**103**

Table 21 Scoring Results for Transportation Alternatives

Of the three alternatives, BRT emerges as the most balanced and practical option for the region, scoring highest overall and outperforming the other alternatives in several critical areas:

- **Mobility Improvements:** BRT scores 14 out of 20, matching the Light Rail alternative (14), both outperforming Commuter Rail (12).
- **Congestion Benefits:** BRT scores 6 out of 10, higher than Light Rail (2) but below Commuter Rail (10). While the Commuter Rail alternative scores highest in this category, BRT will still provide meaningful congestion relief and is more adaptable to NWA's current traffic patterns.
- **Environmental Benefits:** BRT scores 6 out of 10, equal to the scores for Light Rail and Commuter Rail.
- **Land Use Benefits**: BRT scores 11 out of 15, outperforming both Light Rail (7) and Commuter Rail (9). The BRT alternative will support land use and development goals effectively.
- **Demographic/Socioeconomic Benefits**: BRT scores 47 out of 55, slightly below Light Rail (51) but significantly higher than Commuter Rail (40). The BRT alternative is strongly aligned with equity and accessibility goals, making it a socially responsible transportation option.
- **Cost Effectiveness**: BRT scores 37 out of 45, significantly higher than Light Rail (27) and Commuter Rail (25), making it the most financially viable option.

11 DEFINITION OF PREFERRED ALTERNATIVES

Based on the evaluations, the BRT alternative was chosen as the preferred alternative.

The BRT alternative chosen for the TAS is a corridor-based BRT operating primarily on local streets and US-71B, between Fayetteville and Bentonville. Some examples of branded BRT buses and their station designs are shown in Figure 107 on the next page. The BRT alternative will be split into three separate services to keep the length of each service manageable. These services are:

4. Fayetteville to Springdale
5. Bentonville to Rogers
6. Connecting Rogers and Springdale

The following Figure 108 shows the alignment of these services. A phased approach is recommended for implementing these services in the order they are listed, based on the current ORT routes' performance and ridership potential. The initial phase would implement BRT services connecting Bentonville and Rogers, as well as Fayetteville and Springdale. A later second phase would be implemented to connect Rogers and Springdale, as ridership demand and density of employment and population justified the expansion of service.

BRT services are envisioned to operate in mixed traffic with TSP enabled at most intersections. Dedicated bus lanes may be added in areas where ROW permits and where traffic congestion may otherwise prohibit the service from achieving reasonable on-time performance. The service would have unique branding to separate it from the existing local bus services. Stop spacing is assumed to be around 0.25 mi in dense urban areas and may be stretched to around 0.5 mi in lower-density suburban areas. Each stop would feature a raised platform for level boarding, a reinforced concrete bus stopping pad in the street (to avoid the wear and tear that buses often place on asphalt streets), pylons and signs to visually identify the BRT service, real-time information display for arrivals, lighting, shelters, benches, and trash receptacles. Vehicles used for operations are assumed to be 40-foot hybrid electric or clean diesel transit buses due to the length of the alignments and the anticipated passenger volumes. Articulated buses may be assessed for additional passenger capacity if needed.

Figure 107 Example BRT System in Peer Cities

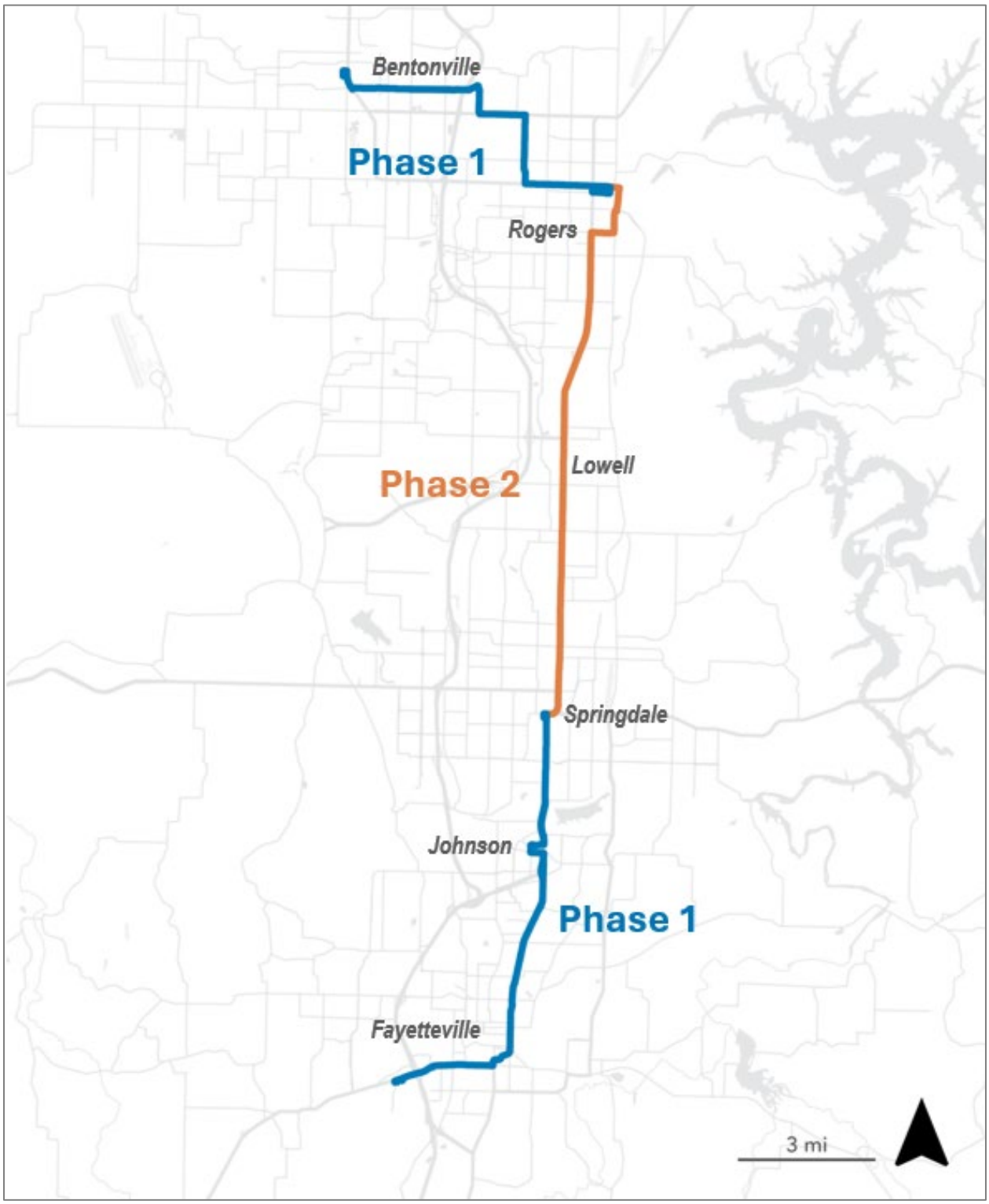

Figure 108 Preferred Alternative Alignment

Fayetteville – Springdale

Figure 109 below shows the alignment of the Fayetteville-Springdale service.

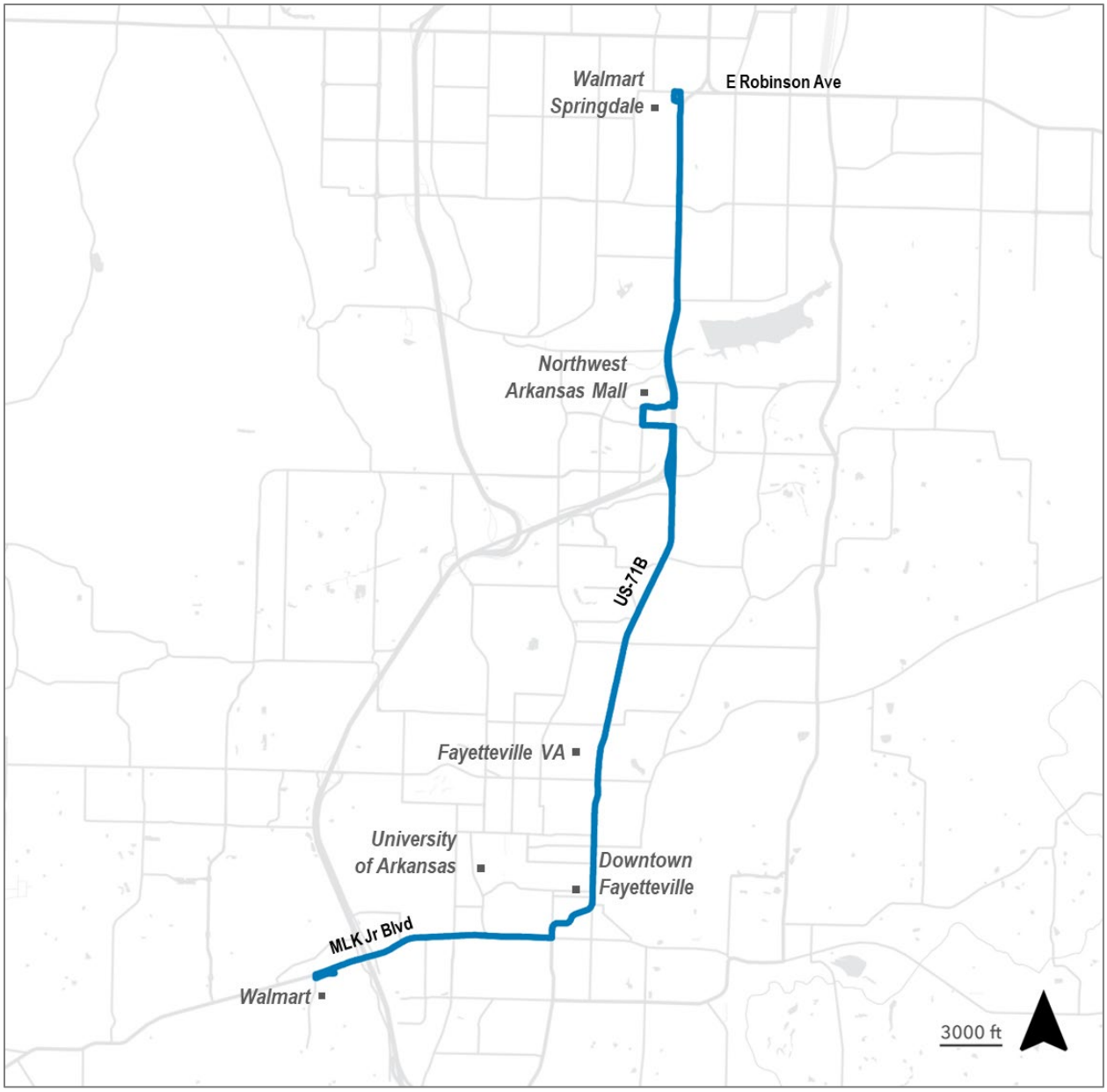

Figure 109 BRT Service Alternative: Fayetteville-Springdale Service

Table 22 below summarizes the service span and frequencies proposed for the Fayetteville-Springdale BRT service.

Day of Week	Service Span	Headway (Minutes)			
		AM Peak	Midday	PM Peak	Evening
Weekday	6 AM – 10 PM	15	30	15	30
Saturday	8 AM – 7 PM	60			
Sunday	8 AM – 7 PM	60			

Table 22 Service Span and Frequencies for Fayetteville-Springdale BRT Alternative

Bentonville-Rogers

Figure 110 shows the alignment of the Bentonville-Rogers service.

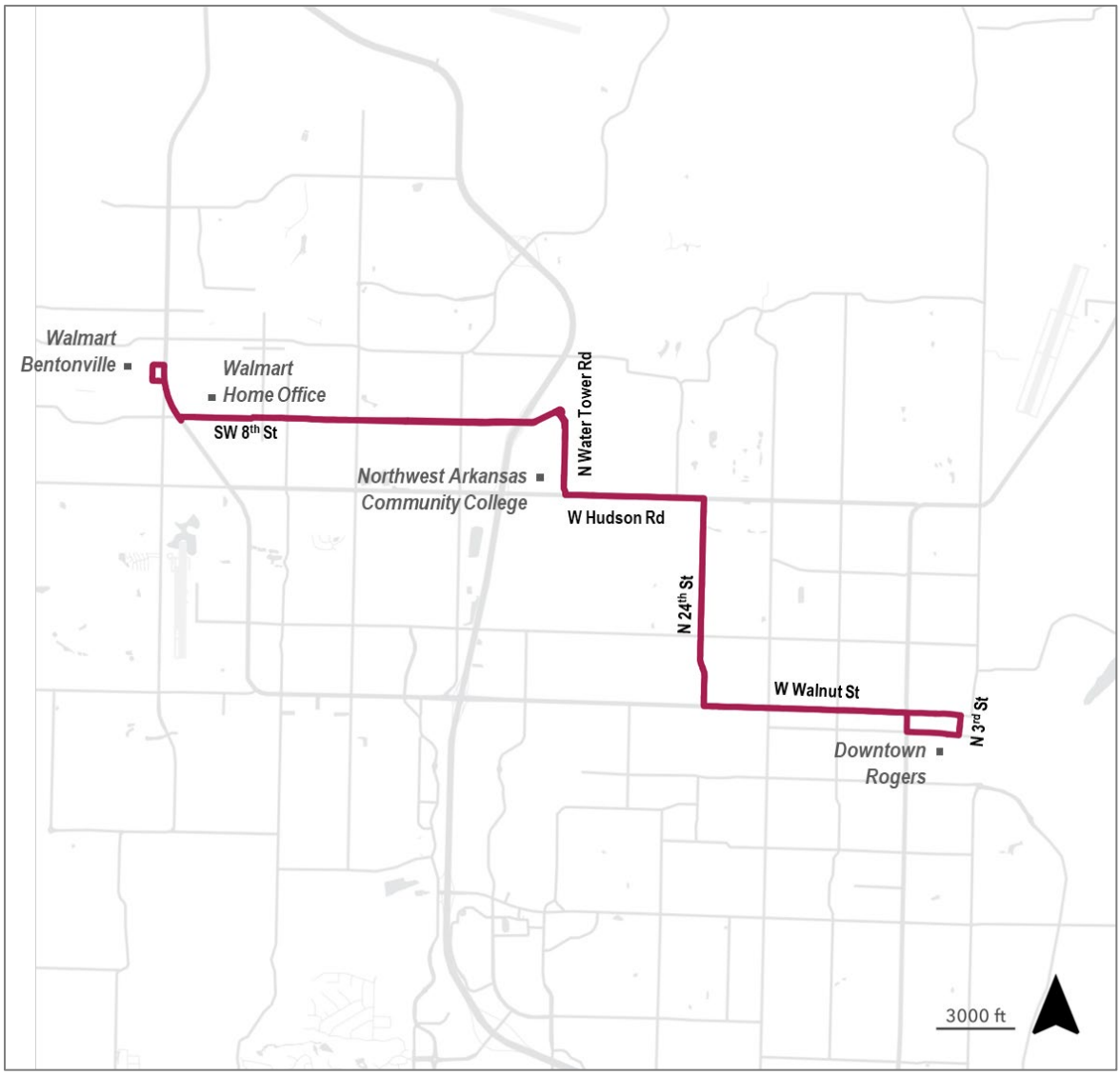

Figure 110 BRT Service Alternative: Bentonville-Rogers Service

Table 23 below summarizes the service span and proposed service frequencies for the Bentonville-Rogers service.

Day of Week	Service Span	Headway (Minutes)			
		AM Peak	Midday	PM Peak	Evening
Weekday	6 AM – 10 PM	15	30	15	30
Saturday	8 AM – 7 PM	60			
Sunday	8 AM – 7 PM	60			

Table 23 Service Span and Frequencies for Bentonville-Rogers BRT Alternative

Figure 111 below shows the alignment extending the Bentonville-Rogers service to Springdale to connect with the Fayetteville-Springdale service.

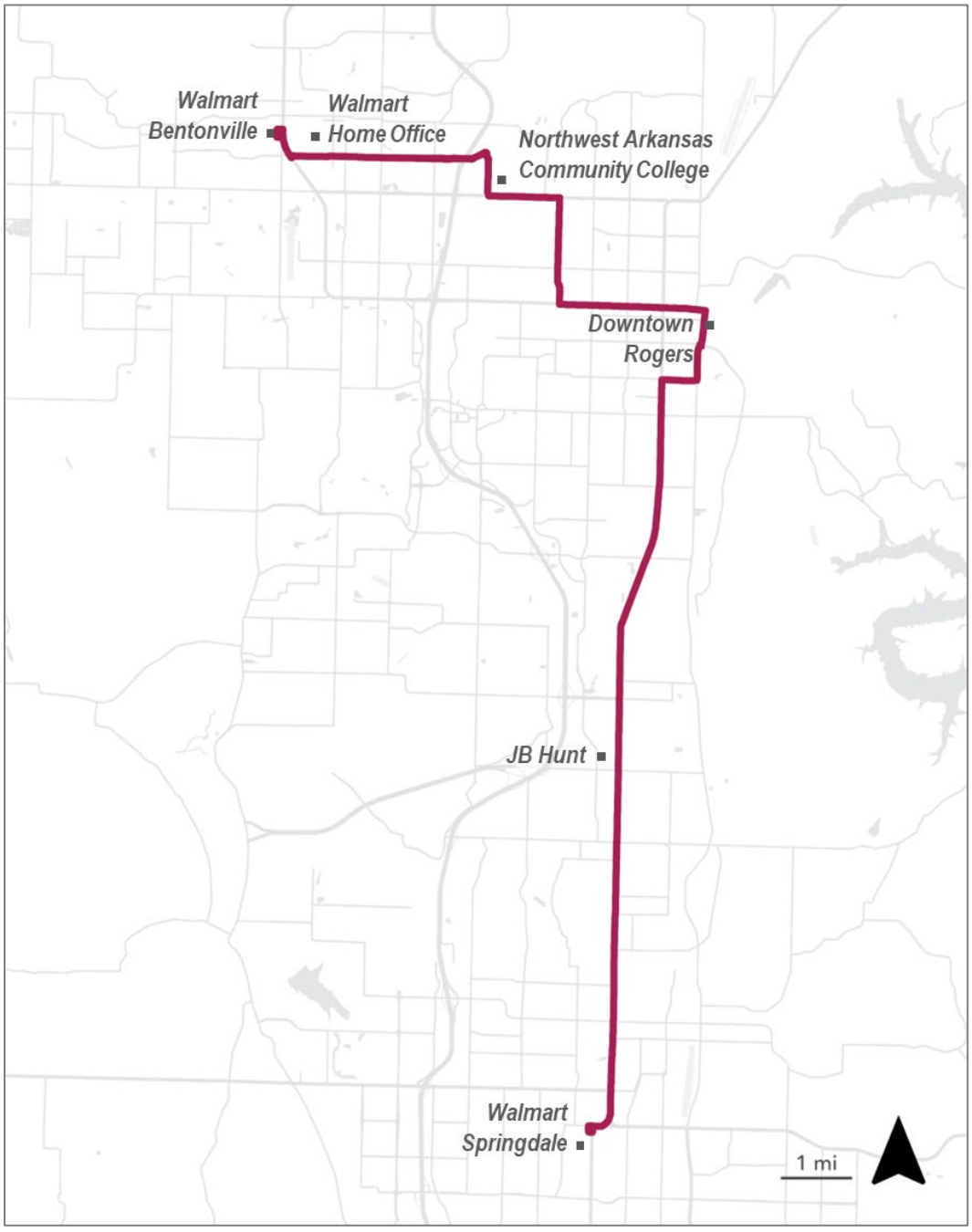

Figure 111 BRT Service Alternative: Bentonville-Springdale Service

The following Table 24 summarizes the service span and service frequencies proposed for the Bentonville-Springdale service.

Day of Week	Service Span	Headway (Minutes)			
		AM Peak	Midday	PM Peak	Evening
Weekday	6 AM – 10 PM	20	60	20	60
Saturday	8 AM – 7 PM	60			
Sunday	8 AM – 7 PM	60			

Table 24 Service Span and Frequencies for Bentonville-Springdale BRT Alternative

Table 25 below summarizes the total capital costs, the annualized capital costs, and annual operating & maintenance costs (total, per revenue mile, and per revenue hour) for Phase 1 operations, in 2031 US dollars. Capital costs include 31% contingency for future project development unknowns.

	US71-B Bus Rapid Transit – Phase 1
Total Capital Costs	$177,000,000
Annualized Capital Costs	$6,200,000
Total Annual Operating & Maintenance Costs	$6,100,000
Operating & Maintenance Costs per Vehicle Revenue Hour	$133
Operating & Maintenance Costs per Vehicle Revenue Mile	$13

Table 25 Total Costs for BRT Phase 1

Table 26 below summarizes the incremental change in total capital costs, the annualized capital costs, and annual total operating & maintenance costs (total, per revenue mile, and per revenue hour) for Phase 2 operations, in 2031 US dollars.

	US71-B Bus Rapid Transit – Phase 2
Total Capital Costs	$33,300,000
Annualized Capital Costs	$1,100,000
Total Annual Operating & Maintenance Costs	$350,000
Operating & Maintenance Costs per Vehicle Revenue Hour	$4
Operating & Maintenance Costs per Vehicle Revenue Mile	-$2

Table 26 Total Costs for BRT Phase 2

12 PROJECT FINANCE AND FUNDING ALTERNATIVES

This section presents a review of potential funding strategies for the implementation of the Preferred Alternative. The strategy includes the following components:

- A review of project financial needs, including capital, operating, and maintenance costs
- An assessment of potential funding sources to finance capital expenditure, operations, and maintenance for the proposed BRT services
- An assessment of funding scenarios using combinations of several potential funding sources

The BRT alternative chosen for the TAS is a corridor-based BRT operating primarily on local streets and US-71B, between Fayetteville and Bentonville. The BRT alternative will be split into three separate services to keep the length of each service manageable. These services are:

- Fayetteville to Springdale
- Bentonville to Rogers
- Connecting Rogers and Springdale

A phased approach is recommended for implementing these services in the order they are listed, based on Ozark Regional Transit (ORT) and Razorback Transit (RT)'s current routes' performance and ridership potential. The initial phase would implement BRT services in two segments, one connecting Bentonville and Rogers, and the other connecting Fayetteville and Springdale. A later second phase would be implemented to connect Rogers and Springdale, as ridership demand and density of employment and population justified the additional investment to connect the two segments.

12.1 PROJECT FINANCIAL NEEDS

The project's financial needs include capital and operating/maintenance costs. Capital investment would be made over a relatively short period of 5-7 years for Phase 1, probably fewer for Phase 2, during which land would be acquired for right-of-way, stations, and other facilities, and the project would be designed and constructed. The costs of operating the proposed BRT service and maintaining the BRT vehicles and infrastructure are an ongoing expense that, on average, will increase annually based on inflation and other factors. Assuming the project development starts in 2026 with a target of the start of service for Phase 1 in 2031 and Phase 2 in 2037, this section explores a high-level, hypothetical scenario to estimate annual costs between 2026 and 2040. Implementation will require a combination of Federal and other grants to help cover the large upfront capital costs of the project and a small portion of the ongoing operating costs. A stable source of local funding also will be required to cover the local match portion of the capital costs—possibly through bonded debt financing—and the annual operating & maintenance costs.

12.1.1 Total Operating & Maintenance (O&M) and Capital Costs

Estimated annual operating & maintenance expenses for Phase 1 of the BRT project are about $5.2 million in 2025 dollars. Phase 2 would add an estimated additional $300,000 in annual operating & maintenance expenses in 2025 dollars. Capital costs for implementing US71-B BRT – Phase 1 were estimated to be about $152 million in 2025 dollars, and Phase 2 implementation would cost approximately $29 million in 2025 dollars.

12.1.2 Inflation Expectations

Inflation expectations developed by the Federal Reserve Bank of Cleveland[17] were obtained to estimate the costs in year of expenditure (YOE) dollars. The expected inflation rates from 2026 to 2040 are shown in Table 27.

Year	Expected Inflation
2026	2.79%
2027	2.56%
2028	2.45%
2029	2.40%
2030	2.37%
2031	2.35%
2032	2.34%
2033	2.33%
2034	2.33%
2035	2.33%
2036	2.33%
2037	2.34%
2038	2.34%
2039	2.35%
2040	2.35%

Table 27 Yearly Expected Inflation

12.1.3 Annual O&M Costs

O&M costs for operating the proposed BRT service were estimated to be $5.2 million in phase 1 and an additional $300,000 in phase 2, in 2025 US dollars. Table 28 on the next page presents the annual total O&M costs in year of expenditure dollars assuming a start of service for Phase 1 operation in 2031 and Phase 2 operation in 2037.

[17] Federal Reserve Bank of Cleveland, Indicators and Data, Inflation Expectations: https://www.clevelandfed.org/indicators-and-data/inflation-expectations. Last updated on July 15, 2025. Data retrieved on July 30, 2025.

Year	Phase	O&M Costs
2031	Phase 1	$5.59 million
2032		$5.72 million
2033		$5.86 million
2034		$5.99 million
2035		$6.13 million
2036		$6.27 million
2037	Phase 1+ 2	$6.65 million
2038		$6.81 million
2039		$6.97 million
2040		$7.13 million

Table 28 Estimated O&M Costs in Year-or-Expenditure Dollars between 2031 and 2040

12.1.4 Total Capital Costs

Total capital costs for phases 1 and 2 are shown in Table 29 below in 2025 Dollars. Phase 1 capital costs include the full costs of the maintenance facility, large enough to support phase 1 and phase 2 operations. Details can be found in the Definition of Alternative Chapter in the Alternative Evaluation memo.

	Phase 1	Phase 2	Total
Professional Services	$33.72 million	$6.42 million	$40.14 million
Constructions	$96.33 million	$18.34 million	$114.68 million
Vehicles	$22.44 million	$3.96 million	$26.40 million
Total	**$152.49 million**	**$28.72 million**	**$181.21 million**

Table 29 Total Capital Costs in 2025 Dollars

12.1.5 Annual Capital Expenditures

Capital expenditures previously estimated were further split into three categories – professional services, construction, and rolling stock.

Professional services can include various services that spread out over the entire course of the project development cycle. Table 30 below presents a high-level, hypothetical scenario of the start and end year for each of these services for Phase 1 (2026-2031) and Phase 2 (2032-2037), and their total costs in 2025 US dollars.

Professional Services	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037
Project Development	$3.85 million						$0.73 million					
Engineering		$11.56 million						$2.20 million				
Project Management for Design and Construction		$7.71 million						$1.47 million				
Construction Administration & Management			$5.78 million						$1.10 million			
Insurance			$1.44 million						$0.28 million			
Legal; Permits; Review Fees by other agencies, cities, etc.			$0.48 million						$0.09 million			
Surveys, Testing, Investigation, Inspection					$1.93 million						$0.37 million	
Start up						$0.96 million						$0.18 million

Table 30 Total Professional Services Costs and Estimated Span

Table 31 below summarizes the annual total costs for all professional services, assuming costs for each service will be spread out evenly across the years, and inflated to the year of expenditure dollars.

Year	Phase	Professional Services Costs
2026	Phase 1	$2.18 million
2027		$11.16 million
2028		$12.18 million
2029		$5.45 million
2030		$6.76 million
2031		$2.44 million
2032	Phase 2	$0.47 million
2033		$2.41 million
2034		$2.62 million
2035		$1.17 million
2036		$1.45 million
2037		$0.52 million

Table 31 Total Professional Services Costs in Year-or-Expenditure Dollars between 2026 and 2037

Construction activities are typically spread over a span of three years before the start of the service, along with their associated costs. Table 32 below summarizes the expected annual total construction costs.

Year	Phase	Construction Costs
2028	Phase 1	$34.62 million
2029		$35.39 million
2030		$36.14 million
2031	-	
2032		
2033		
2034	Phase 2	$7.45 million
2035		$7.60 million
2036		$7.74 million

Table 32 Total Construction Costs in Year-or-Expenditure Dollars between 2031 and 2040

Vehicles used in service operation are typically purchased around two years prior to the start of the service. Table 33 below summarizes the expected annual total vehicle purchasing costs.

Year	Phase	Vehicle Costs
2030	Phase 1	$12.63 million
2031		$12.89 million
2032	-	
2033		
2034		
2035	Phase 2	$2.46 million
2036		$2.51 million

Table 33 Total Vehicles Costs in Year-or-Expenditure Dollars between 2030 and 2036

12.1.6 Annual Total O&M and Capital Costs

Table 34 below summarizes the expected annual total costs by cost category. These costs vary from just over 1 million in 2026 to upwards of over 36 million in 2030. Various funding mechanisms can spread the costs over a number of years and smooth out the annual costs, though often with additional costs, such as interest. This is explored further in the next section.

Year	O&M Costs	Professional Services Costs	Construction Costs	Vehicle Costs	Total Costs
2026		$2.18 million			$2.18 million
2027		$11.16 million			$11.16 million
2028		$12.18 million	$34.62 million		$46.80 million
2029		$5.45 million	$35.39 million		$40.83 million
2030		$6.76 million	$36.14 million	$12.63 million	$55.53 million
2031	$5.59 million	$2.44 million		$12.89 million	$20.92 million
2032	$5.72 million	$0.47 million			$6.20 million
2033	$5.86 million	$2.41 million			$8.27 million

Year	O&M Costs	Professional Services Costs	Construction Costs	Vehicle Costs	Total Costs
2034	$5.99 million	$2.62 million	$7.45 million		$16.07 million
2035	$6.13 million	$1.17 million	$7.60 million	$2.46 million	$17.36 million
2036	$6.27 million	$1.45 million	$7.74 million	$2.51 million	$17.97 million
2037	$6.65 million	$0.52 million			$7.17 million
2038	$6.81 million				$6.81 million
2039	$6.97 million				$6.97 million
2040	$7.13 million				$7.13 million

Table 34 Annual Total O&M and Capital Costs in Year-or-Expenditure Dollars between 2026 and 2040

12.2 Potential Project Funding Sources

Federal (FTA) funding often requires recipients to source funding locally, often up to 50% for O&M and 20% for capital. The Capital Investment Grants (CIG) program also requires the recipients to demonstrate their ability to maintain the proposed project in operation for an extended period, often the same as the useful life span of capital investments. Table 35 below summarizes the various funding sources potentially available to fund the transit alternative.

Name	Category	Agency	Description
Capital Investment Grants (CIG)	Federal	FTA	This FTA discretionary grant program funds transit capital investments, including heavy rail, commuter rail, light rail, streetcars, and bus rapid transit. Federal transit law requires transit agencies seeking CIG funding to complete a series of steps over several years[18].
Urbanized Area Formula Grants (§5307)	Federal	FTA	The Urbanized Area Formula Funding program makes federal resources available to governors and other recipients for transit capital and operating assistance and transportation-related planning in urbanized areas[19].
Bus & Bus Facilities Program (§5339)	Federal	FTA	Provides funding to states and transit agencies through a statutory formula to replace, rehabilitate, and purchase buses and related equipment and to construct bus-related facilities[20].
Metropolitan & Statewide Planning (§5303 / §5304)	Federal	FTA	Provides funding and procedural requirements for multimodal transportation planning in metropolitan areas and states. Metropolitan and statewide transportation planning processes adhere to a cooperative, continuous, and comprehensive framework for the development of long-range plans and short-range programs reflecting transportation investment priorities[21].
Pilot Program for TOD Planning (§5309 TOD)	Federal	FTA	TOD planning grants support community efforts to improve access to public transportation. The grants help organizations plan for transportation projects that connect communities and improve access to transit and affordable housing[22].
Low-No Emission/Bus Discretionary	Federal	FTA	The Low or No Emission competitive program provides funding to state and local governmental authorities for the purchase or lease of zero-emission and low-emission transit buses as well as acquisition, construction, and leasing of required supporting facilities[23].

[18] *Capital Investment Grants Program | FTA*
[19] *Urbanized Area Formula Grants - 5307 | FTA*
[20] *Grants for Buses and Bus Facilities Formula Program - 5339(a) | FTA*
[21] *Metropolitan & Statewide Planning and NonMetropolitan Transportation Planning - 5303, 5304, 5305 | FTA*
[22] *Pilot Program for Transit-Oriented Development Planning – Section 20005(b) | FTA*
[23] Low or No Emission Grant Program - 5339(c) | FTA

Name	Category	Agency	Description
Congestion Mitigation and Air Quality (CMAQ)	Federal	FHWA	The Congestion Mitigation and Air Quality Improvement Program (CMAQ) provides a flexible funding source to State and local governments for transportation projects and programs to help meet the requirements of the Clean Air Act[24].
Surface Transportation Block Grant (STBG)	Federal	FHWA	The Surface Transportation Block Grant Program (STBG) promotes flexibility in State and local transportation decisions and provides flexible funding to best address State and local transportation needs[25].
Transportation Alternatives (TA) Set-Aside	Federal	FHWA	The Transportation Alternatives set-aside from the Surface Transportation Block Grant (STBG) program includes a variety of smaller-scale transportation projects such as pedestrian and bicycle facilities, recreational trails, safe routes to school projects, community improvements such as historic preservation and vegetation management, and environmental mitigation related to stormwater and habitat connectivity[26].
Better Utilizing Investments to Leverage Development (BUILD) Grants	Federal	Multi-modal	Better Utilizing Investments to Leverage Development (BUILD) grant program provides grants for surface transportation infrastructure projects with significant local or regional impact. The eligibility requirements of BUILD allow project sponsors to pursue multi-modal and multi-jurisdictional projects that are more difficult to fund through other grant programs[27].
Carbon Reduction Program (CRP)	Federal	FHWA	The Carbon Reduction Program (CRP) provides funds for projects designed to reduce transportation emissions, defined as carbon dioxide (CO2) emissions from on-road highway sources[28].
Transportation Infrastructure Finance and Innovation Act (TIFIA Loans)	Federal	USDOT	The Transportation Infrastructure Finance and Innovation Act (TIFIA) program provides credit assistance for qualified projects of regional and national significance. Many large-scale, surface transportation projects - highway, transit, railroad, intermodal freight, and port access are eligible for assistance[29]
Tolls/Congestion Pricing	State	ARDOT	Tolling refers to charging drivers a fee for use of a highway and using the collected fees to build, maintain, and improve the highway. Arkansas currently has no toll roads statewide.[30] Congestion pricing is a way of harnessing the power of the market to reduce the waste associated with traffic congestion.[31]
Fuel Tax	State	ARDOT	A fuel tax is a tax imposed on the sale of motor fuels, such as gasoline and diesel. Arkansas Code of 1987 states that no city, village, town, county, township, or other subdivision or municipal corporation of this state shall levy or collect any excise tax upon or measured by the sale, receipt, or distribution of motor fuel.[32]
Vehicle Registration Fees	State	ARDOT	Vehicle registration fees are mandatory payments required by government authorities to legally operate a vehicle on public roads. In Arkansas, vehicle registration fees are collected by the Arkansas Department of Finance and Administration, Office of Motor Vehicle.
Arkansas Public Transit Trust Fund	State	ARDOT	This Program distributes State funds from the rental tax on short-term rentals of vehicles. Funds are distributed to non-urban, urbanized, and human service organizations for operating and capital assistance[33].

[24] Infrastructure Investment and Jobs Act - Congestion Mitigation and Air Quality (CMAQ) Improvement Program Fact Sheet | Federal Highway Administration
[25] *Infrastructure Investment and Jobs Act - Surface Transportation Block Grant (STBG) Fact Sheet | Federal Highway Administration*
[26] *Infrastructure Investment and Jobs Act - Transportation Alternatives (TA) Fact Sheet | Federal Highway Administration*
[27] *Better Utilizing Investments to Leverage Development (BUILD) Grant Program | US Department of Transportation*
[28] Infrastructure Investment and Jobs Act - Carbon Reduction Program (CRP) Fact Sheet | Federal Highway Administration
[29] TIFIA Program Overview | Build America
[30] CONSUMER ALERT: Toll Road Scam Resurfaces - Arkansas Attorney General
[31] Welcome to the FHWA Congestion Pricing Web Site - Congestion Pricing - FHWA Office of Operations
[32] ARCODE
[33] State Programs / Applications - Arkansas Department of Transportation

Name	Category	Agency	Description
Arkansas State Half-Cent Sales Tax Turnback Funding	State	Arkansas Treasurer of State	A statewide 0.5% sales tax dedicated to transportation infrastructure. Revenue is distributed to cities and counties as "turnback funds." The tax was renewed and made permanent by voter approval in 2020[34].
Rental Vehicle Tax (ACA 26-63-302)	State	Arkansas Treasurer of State	A tax on short-term motor vehicle rentals, levied at 10% plus applicable local rates. 75% of net revenue from the additional 5% rental tax is deposited into the Arkansas Public Transit Trust Fund, which provides matching funds for purchasing buses, equipment, and facilities[35].
Regional Mobility Authority Act (ACA 27-26-101)	State/ Local	NWA RMA	The Northwest Arkansas Regional Mobility Authority (RMA) was formed in 2008 to plan, fund, and operate transportation projects, including transit. The NWA RMA is made up of Washington County and Benton County, Arkansas and municipalities within the jurisdictional boundaries of the Authority[36]. RMAs may receive funding from[37]: • Tolls – if approved by voters • County and/or city sales taxes can be levied and bonded on behalf of the RMA – if approved by voters • Motor vehicle fees – if approved by voters • Turnback funds – from member cities and counties • Bus and parking fares • State funding • Federal funding
Property Taxes	Local	County/ City	Property taxes are a primary source of local revenue for general government services. Cities and counties can allocate a portion to transportation infrastructure such as roads and transit facilities[38].
Regional Sales Tax	Local	County/ City	A regional sales tax is a voter-approved tax applied to retail sales within a defined geographic area, such as a county or metropolitan region, to fund transportation projects.
Employee Levy	Local	County/ City	Employee levy is a payroll-based tax or charge applied to employers or employees within a specific jurisdiction to generate revenue for public services.
Parking Surcharge	Local	County/ City	A parking surcharge is an additional fee applied to parking transactions, such as hourly or daily rates in garages, lots, or metered spaces.
Non-residential Parking Levy	Local	County/ City	A non-residential parking levy is a tax or fee imposed on commercial or business-owned parking spaces, rather than on individual transactions.
Tourist Tax	Local	County/ City	Lodging or visitor-related taxes can be collected for transportation infrastructure and transit services.
Special Local Sales and Use Tax (ACA 26-73-111)	Local	County/ City	Arkansas law allows counties or cities to levy a special sales tax (up to 0.25%) dedicated to public mass transportation systems and facilities, subject to voter approval[39].
Improvement District	Local	City	An Improvement District is a designated area where property owners agree to pay special assessments or fees to fund infrastructure improvements that benefit their properties.
Development Impact Fee	Local	City	A one-time charge imposed on new developments to offset the cost of required public facilities[40].
System Revenue (e.g. fares)	Local	Transit Agency	Fare revenue collected from riders and/or institutions.
Advertising	Local	Transit Agency	Income from displaying ads on vehicles, stations, and other transit assets.

[34] educational_half_cent_sales_tax_booklet_2020_01_29_web.pdf
[35] Arkansas Code Title 26. Taxation § 26-63-302 | FindLaw
[36] Regional Mobility Authority (RMA) | Northwest Arkansas Regional Planning Commission
[37] Northwest Arkansas Council Regional Mobility Authorities Handout #1
[38] FHWA - Center for Innovative Finance Support - Value Capture - Local Sources
[39] Arkansas Code § 26-73-111 (2024) - Special local sales and use tax - Election :: 2024 Arkansas Code :: U.S. Codes and Statutes :: U.S. Law :: Justia
[40] FHWA Center for Innovative Finance Support - Value Capture Strategy Primers

Name	Category	Agency	Description
Land Value Capture	Local	Transit Agency	Land Value Capture is a strategy used to fund public transit projects by capturing an increase in land value due to public infrastructure investments.
University Student Fees	Local	University	Fees assessed to students to support campus transit services or regional transportation partnerships.
Private Foundation/ Philanthropy	Local	-	Grants or donations from private organizations can fund transportation projects.

Table 35 Potential Funding Sources

Table 36 on the next page summarizes which aspect – planning, environmental review, construction, vehicles, O&M each funding source can be used on.

Name	Planning/ Engineering/ Design	Environmental Review	Vehicles	Construction	O&M
Capital Investment Grants (CIG)	X	X	X	X	
Urbanized Area Formula Grants (§5307)	X	X	X	X	X
Bus & Bus Facilities Program (§5339)	*	*	X	X	
Metropolitan & Statewide Planning (§5303 / §5304)	X	X			
Pilot Program for TOD Planning (§5309 TOD)	X				
Low-No Emission/Bus Discretionary	*		X		
Congestion Mitigation and Air Quality (CMAQ)	X	X	X	X	
Surface Transportation Block Grant (STBG)	X	X		X	
Transportation Alternatives (TA) Set-Aside	X			*	
BUILD Grants	X	X	X	X	
Carbon Reduction Program (CRP)	X		X	X	
Transportation Infrastructure Finance and Innovation Act (TIFIA Loans)				X	
Tolls/Congestion Pricing	X	X	X	X	X
Fuel Tax	X	X	X	X	X
Vehicle Registration Fees	X	X	X	X	X
Arkansas Public Transit Trust Fund	X	X	X	X	X
Arkansas State Half-Cent Sales Tax Turnback Funding	X	X	X	X	X
Rental Vehicle Tax (ACA 26-63-302)	X	X	X	X	X
Regional Mobility Authority Act (ACA 27-26-101)	X	X	X	X	X
Property Taxes	X	X	X	X	X
Regional Sales Tax	X	X	X	X	X
Employee Levy	X	X	X	X	X
Parking Surcharge	X	X	X	X	X
Non-residential Parking Levy	X	X	X	X	X
Tourist Tax	X	X	X	X	X
Special Local Sales and Use Tax (ACA 26-73-111)	X	X	X	X	X
Improvement District	X	X	X	X	X
Development Impact Fee	X	X	X	X	X
System Revenue (e.g. fares)	X	X	X	X	X
Advertising	X	X	X	X	X
Land Value Capture	X	X	X	X	X
University Student Fees	X	X	X	X	X
Private Foundation/Philanthropy	X	X	X	X	X

** narrower scope*

Table 36 Funding Eligibilities by Funding Source

The planning team reviewed these sources and concluded that the most likely funding sources include:

- **Federal**
  - Capital Investment Grants (CIG)
  - Urbanized Area Formula Grants (§5307)
  - Bus & Bus Facilities Program (§5339)
  - Metropolitan & Statewide Planning (§5303 / §5304)
  - Pilot Program for TOD Planning (§5309 TOD)
- **State**
  - Arkansas Public Transit Trust Fund
- **Local**
  - Property Taxes
  - Regional Sales Tax
  - Special Local Sales and Use Tax (ACA 26-73-111)
  - System Revenue (e.g. fares)
  - Advertising
  - University Student Fees
  - Land Value Capture
- **Private Foundation/Philanthropy**

And the other possible funding sources include:

- **Federal**
  - Better Utilizing Investments to Leverage Development (BUILD) Grants
  - Transportation Infrastructure Finance and Innovation Act (TIFIA Loans)
- **State**
  - Arkansas State Half-Cent Sales Tax Turnback Funding
  - Rental Vehicle Tax (ACA 26-63-302)
  - Regional Mobility Authority Act (ACA 27-26-101)
- **Local**
  - Employee Levy
  - Parking Surcharge
  - Tourist Tax
  - Improvement District
  - Development Impact Fee

Of these, the funding sources that are most likely to be successfully accessed and to generate the largest proportion of funding for the project are:

- Capital:
  - Capital Investment Grants (CIG)
  - Urbanized Area Formula Grants (§5307)
  - Bus & Bus Facilities Program (§5339)
  - Property Taxes
  - Regional Sales Tax
  - Land Value Capture
  - Private Foundation/Philanthropy
- O&M

- Urbanized Area Formula Grants (§5307)
- Property Taxes
- Regional Sales Tax and/or Special Local Sales and Use Tax (ACA 26-73-111)
- System Revenue (e.g. fares)
- Advertising
- University Student Fees

12.3 SCENARIOS

The planning team developed three scenarios to provide examples of how various combinations of Federal, state, local, and private funding potentially could support the development and operation of the proposed alternative. These scenarios are high-level and simplified and include only the sources that are most likely to attract Federal, state, and private grant support, as well as support from the public and political leadership. The alternative's ultimate funding package most likely will be more complicated and include other and/or additional funding sources. All three scenarios assume Federal funding (primarily CIG but could include funding from various Federal grants listed previously) will support 50% of all capital expenditure, including construction and vehicles. All professional services are assumed to be funded locally, but some or all of these costs could be funded by Federal, State, or private grants.

12.3.1 Bonding

As discussed in section 2, capital costs of major transit projects require most of their funding over a period of just 3-4 years. Many of the Federal, State, and private grant programs will provide lump sum payments to cover capital expenditures. However, most local tax funding sources are semi-permanent and fluctuate very little from year to year. To even out the annual cost of major capital projects and extend the terms of payment over a longer period, transit agencies and other governmental entities tend to issue bonds. Issuing bonds is a common way for state and local governments to raise capital to fund major capital projects. Bonds allow governments to borrow against future tax revenues to raise large investments to build capital facilities that will be used over many years. The governmental entities eligible to issue bonds, the terms under which they can be issued, and how the proceeds can be used are defined in state law and typically offer terms of 20-30 years or more, depending on the size of the investment and the useful life of the investment. Public bonds typically offer investors lower returns than private bonds or other securities, but these lower interest rates are offset by the perceived superior security of lending to governmental entities, which rarely default on their financial obligations, and by the tax advantages of public bonds, particularly local government bonds, the returns on which are exempt from Federal, state, and local taxes. These lower returns translate into lower interest rates for governmental entities to borrow funds for investing in public improvements compared to the interest rates paid by borrowers on the private bond market or other equity markets.

Issuing bonds is the most likely strategy for one or more government agencies in the project study area to cover the portion of the project's capital costs not covered by Federal, state, and private grants. The project financing scenarios described later in this section will include local government bonds as the primary source of local government funding for the project's capital investments.

Table 37 below presents a hypothetical scenario of issuing six 15-year bonds to cover 50% of the capital and vehicle costs for the project, assuming the other 50% will be covered by one or a combination of Federal programs, starting in 2028, with the last bond paid off in 2050.

Bond	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050
1	$17.31 million																						
2		$17.69 million																					
3			$24.39 million																				
4							$3.73 million																
5								$5.03 million															
6									$5.12 million														

Table 37 Bonding Scenario for Capital Costs

Table 38 below summarizes the total bond payment each year between 2028 and 2050, assuming 4% interest rate for each bond.

Year	Bond Payments
2028	$1.20 million
2029	$2.43 million
2030	$4.12 million
2031	$4.12 million
2032	$4.12 million
2033	$4.12 million
2034	$4.38 million
2035	$4.72 million
2036	$5.08 million
2037	$5.08 million
2038	$5.08 million
2039	$5.08 million
2040	$5.08 million
2041	$5.08 million
2042	$5.08 million
2043	$3.88 million
2044	$2.65 million
2045	$0.96 million
2046	$0.96 million
2047	$0.96 million
2048	$0.96 million
2049	$0.70 million
2050	$0.36 million

Table 38 Annual Bond Payment in Year-or-Expenditure Dollars between 2028 and 2050

Table 39 below summarizes the total annual O&M, professional services, and bond payment between 2026 and 2040.

Year	O&M Costs	Professional Services Costs	Bond Payment	Total Costs
2026		$2.18 million		$2.18 million
2027		$11.16 million		$11.16 million
2028		$12.18 million	$1.20 million	$13.38 million
2029		$5.45 million	$2.43 million	$7.88 million
2030		$6.76 million	$4.12 million	$10.88 million
2031	$5.59 million	$2.44 million	$4.12 million	$12.14 million
2032	$5.72 million	$0.47 million	$4.12 million	$10.31 million
2033	$5.86 million	$2.41 million	$4.12 million	$12.39 million
2034	$5.99 million	$2.62 million	$4.38 million	$12.99 million
2035	$6.13 million	$1.17 million	$4.72 million	$12.03 million
2036	$6.27 million	$1.45 million	$5.08 million	$12.80 million
2037	$6.65 million	$0.52 million	$5.08 million	$12.25 million
2038	$6.81 million		$5.08 million	$11.89 million
2039	$6.97 million		$5.08 million	$12.05 million
2040	$7.13 million		$5.08 million	$12.21 million

Table 39 Annual Total Costs Including O&M, Professional Services, and Bond Payment in Year-or-Expenditure Dollars between 2026 and 2040

12.3.2 Scenario 1 – 0.25% Sales Tax in Fayetteville, Springdale, Rogers, and Bentonville

NWARPC provided sales tax revenue collected in the four cities, and their associated tax rates – 2% in 2024. The WSP team estimated the total taxable sales by dividing the tax revenue by the tax rates, then estimated the additional sales tax revenue assuming an additional sales tax rate of 0.25%. As shown in Table 40 below, an additional 0.25% sales tax in the four cities will generate $29.57 million in revenue per year, in 2024 US dollars.

Cities	Sales Tax Revenue	Current Sales Tax Rates	Estimated Total Taxable Sales	Proposed Transit Tax Rate	Estimated Additional Sales Tax Revenue
Fayetteville	$66.85 million	2%	$3,342.57 million	0.25%	$8.36 million
Springdale	$51.59 million	2%	$2,579.61 million	0.25%	$6.45 million
Rogers	$64.26 million	2%	$3,213.23 million	0.25%	$8.03 million
Bentonville	$53.88 million	2%	$2,693.79 million	0.25%	$6.73 million
Total	**$236.58 million**		**$11,829.20 million**		**$29.57 million**

Table 40 0.25% Sales Tax Scenario

Table 41 on the next page summarizes the total revenue collected from the 0.25% additional sales tax, the total costs, and the surplus or deficiency each year between 2026 and 2040, inflated to year-of-expenditure dollars. As suggested in Table 41, a 0.25% additional sales tax will generate enough revenue to not only cover the total costs for the project, but also have enough surplus to significantly improve the existing transit system to better meet the region's transit needs.

Year	Salex Tax Revenue	Total Costs	Surplus
2026	$31.46 million	$2.18 million	$29.28 million
2027	$32.27 million	$11.16 million	$21.10 million
2028	$33.06 million	$13.38 million	$19.67 million
2029	$33.85 million	$7.88 million	$25.97 million
2030	$34.65 million	$10.88 million	$23.77 million
2031	$35.46 million	$12.28 million	$23.19 million
2032	$36.29 million	$10.45 million	$25.85 million
2033	$37.14 million	$12.52 million	$24.62 million
2034	$38.00 million	$13.13 million	$24.87 million
2035	$38.89 million	$12.17 million	$26.72 million
2036	$39.80 million	$12.95 million	$26.85 million
2037	$40.73 million	$12.41 million	$28.32 million
2038	$41.68 million	$12.05 million	$29.63 million
2039	$42.66 million	$12.21 million	$30.45 million
2040	$43.66 million	$12.38 million	$31.28 million

Table 41 Sales Tax Revenue, Total Costs, and Surplus/Deficiency in Year-or-Expenditure Dollars between 2026 and 2040

12.3.3 Scenario 2 – 1.5 mill Property Tax in Fayetteville, Springdale, Rogers, and Bentonville

The second scenario explores funding the project with property taxes in the four cities. NWARPC provided the total property tax revenue collected in the four cities in 2023, as well as their millage rates. The WSP team estimated the taxable assessed value from the two values, then estimated the potential tax revenue from an additional 1.50 millage rate for the project, as summarized in Table 42 below.

Cities	Property Tax Revenue	Current Millage Rates	Estimated Total Taxable Assessed Value	Proposed Transit Millage Rate	Estimated Additional Property Tax Revenue
Fayetteville	$14.45 million	6.80 mill	$2,125.23 million	1.50 mill	$3.19 million
Springdale	$8.83 million	5.60 mill	$1,576.80 million	1.50 mill	$2.37 million
Rogers	$6.63 million	3.22 mill	$2,060.20 million	1.50 mill	$3.09 million
Bentonville	$9.89 million	5.32 mill	$1,858.64 million	1.50 mill	$2.79 million
Total	**$39.80 million**		**$7,620.88 million**		**$11.43 million**

Table 42 1.50 Mill Property Tax Scenario

Table 43 below summarizes the total revenue collected from the 1.50 mill property tax, the total costs, and the surplus or deficiency each year between 2026 and 2040, inflated to year-of-expenditure dollars.

As suggested by Table 43, a 1.50 mill property tax will generate enough revenue to cover the total costs of the project in most years except 2028, while leaving some surplus to potentially support some incremental improvements to the existing transit system.

Year	Property Tax Revenue	Total Costs	Surplus/Deficiency
2026	$12.49 million	$2.18 million	$10.32 million
2027	$12.81 million	$11.16 million	$1.65 million
2028	$13.13 million	$13.38 million	**-$0.26 million**
2029	$13.44 million	$7.88 million	$5.57 million
2030	$13.76 million	$10.88 million	$2.88 million
2031	$14.08 million	$12.28 million	$1.81 million
2032	$14.41 million	$10.45 million	$3.97 million
2033	$14.75 million	$12.52 million	$2.23 million
2034	$15.09 million	$13.13 million	$1.96 million
2035	$15.44 million	$12.17 million	$3.27 million
2036	$15.80 million	$12.95 million	$2.86 million
2037	$16.17 million	$12.41 million	$3.76 million
2038	$16.55 million	$12.05 million	$4.50 million
2039	$16.94 million	$12.21 million	$4.73 million
2040	$17.34 million	$12.38 million	$4.96 million

Table 43 Property Tax Revenue, Total Costs, and Surplus/Deficiency in Year-or-Expenditure Dollars between 2026 and 2040

12.3.4 Scenario 3 – 1 mill Property Tax and 0.5% Lodging Tax in Fayette, Springdale, Rogers, and Bentonville

The third scenario explores funding using a combination of property tax and lodging tax in the four cities. Using multiple sources can spread the taxing burden over a broader tax base, thus avoiding overtaxing a certain group of the population, and can potentially be more equitable. Table 44 on the next page summarizes the tax revenue generated from a 1.00 mill property tax, and the following Table 45 summarizes the tax revenue generated from a 0.5% lodging tax.

Cities	Property Tax Revenue	Current Millage Rates	Estimated Total Taxable Assessed Value	Proposed Transit Millage Rate	Estimated Additional Property Tax Revenue
Fayetteville	$14.45 million	6.80 mill	$2,125.23 million	1.00 mill	$2.13 million
Springdale	$8.83 million	5.60 mill	$1,576.80 million	1.00 mill	$1.58 million
Rogers	$6.63 million	3.22 mill	$2,060.20 million	1.00 mill	$2.06 million
Bentonville	$9.89 million	5.32 mill	$1,858.64 million	1.00 mill	$1.86 million
Total	**$39.80 million**		**$7,620.88 million**		**$7.62 million**

Table 44 1.00 Mill Property Tax Scenario

Cities	Lodging Tax Revenue	Current Tax Rates	Estimated Total Taxable Sales	Proposed Transit Tax Rate	Estimated Additional Lodging Tax Revenue
Fayetteville	$9.71 million	2%	$485.50 million	0.5%	$2.43 million
Springdale	$0.62 million	2%	$30.93 million	0.5%	$0.15 million
Rogers	$1.65 million	3%	$55.00 million	0.5%	$0.28 million
Bentonville	$3.69 million	2%	$184.50 million	0.5%	$0.92 million
Total	**$15.67 million**		**$755.93 million**		**$3.78 million**

Table 45 0.5% Lodging Tax Scenario

Table 46 on the next page summarizes the total revenue collected from the 1.00 mill property tax and the 0.5% lodging tax, the total costs, and the surplus or deficiency each year between 2026 and 2040, inflated to year-of-expenditure dollars. As suggested by Table 46, the combination of property and lodging taxes will generate revenue similar to a 1.50 mill property tax as examined in Scenario 2, enough to cover the total costs of the project in most years except 2028, while leaving some surplus to potentially support some incremental improvements to the existing transit system.

Year	Property Tax Revenue	Lodging Tax Revenue	Total Costs	Surplus/Deficiency
2026	$8.33 million	$4.02 million	$2.18 million	$10.17 million
2027	$8.54 million	$4.12 million	$11.16 million	$1.50 million
2028	$8.75 million	$4.23 million	$13.38 million	**-$0.41 million**
2029	$8.96 million	$4.33 million	$7.88 million	$5.41 million
2030	$9.17 million	$4.43 million	$10.88 million	$2.73 million
2031	$9.39 million	$4.53 million	$12.28 million	$1.65 million
2032	$9.61 million	$4.64 million	$10.45 million	$3.80 million
2033	$9.83 million	$4.75 million	$12.52 million	$2.06 million
2034	$10.06 million	$4.86 million	$13.13 million	$1.79 million
2035	$10.30 million	$4.97 million	$12.17 million	$3.10 million
2036	$10.54 million	$5.09 million	$12.95 million	$2.67 million
2037	$10.78 million	$5.21 million	$12.41 million	$3.58 million
2038	$11.03 million	$5.33 million	$12.05 million	$4.31 million
2039	$11.29 million	$5.45 million	$12.21 million	$4.53 million
2040	$11.56 million	$5.58 million	$12.38 million	$4.76 million

Table 46 Property Tax Revenue, Lodging Tax Revenue, Total Costs, and Surplus/Deficiency in Year-or-Expenditure Dollars between 2026 and 2040

12.4 Summary

The scenarios that were developed in this memorandum all indicate that planning, developing, constructing, operating, and maintaining the proposed transit alternative – including phase 1 and 2 – is within the capacity of the NWA region using the combination of Federal grants and local tax revenues to retire government bonds. Further analysis in subsequent phases of project development will be needed to provide further details concerning specific grant programs and funding sources, and to show how funding of the project capital and operating needs will integrate with existing, ongoing transit O&M and capital expenditures.

13 Recommendations and Next Steps

Based on the analyses conducted in the previous chapters, it is clear that the NWA region would benefit from a high-capacity transit option connecting the communities along the US-71B and I-49 corridors. While previous studies show that the public prefers a rail option, the analyses suggest that either rail option considered –light rail transit along the US-71B corridor, or a commuter rail line along the existing A&M railroad corridor – would cost much more to operate and many times more to construct than the BRT option while generating a similar level of ridership and other benefits as the BRT. Thus, it is recommended that NWARPC advance the development of the preferred alternative.

The preferred alternative was presented to the public in late 2025/early 2026 and selected as the locally preferred alternative (LPA) by the Northwest Arkansas Regional Planning Commission in February 2026. The next steps for implementing the LPA should include a Conceptual Design and Environmental Project. As the next phase of the Transit Alternatives Study, the Conceptual Design and Environmental Project will

continue to refine the preferred alternative concept while determining the level of environmental analysis that will be required and preparing the project for entry into the FTA grant programs that typically support such investments. The Phase 2 project will finalize detailed planning for the preferred alternative and begin the process of project design. Some elements of the Phase 2 project will include:

- **Station locations**: The project will perform further analysis to determine more precise locations for stations, taking into account potential ridership, traffic impacts on roadway segments and intersections, right of way availability and impacts, potential for promoting development in station areas, and other factors.
- **Station area planning, design, and typology**: The project will develop a hierarchy of three or more station types that can be assigned to station locations based on a variety of factors, including ridership and the expected volume of waiting passengers at each location, transfer activity with other transit services, types of surrounding development, and other corridor-specific factors. Preliminary design of the stations for each station type will include specification of the size and types of benches, shelters, lighting, signage, and other passenger amenities that will be branded to match the BRT branding scheme. Locations where additional right-of-way may be required to accommodate stations and any potential property acquisition will be identified. Visualization renderings will be prepared for each station type. Along with this, station area planning should be conducted for optimal adjacent land use and enhanced population and employment density near key transit stations.
- **Running way**: Details of the proposed running way for the BRT will be defined, including locations of full-or part-time lane restrictions (if any) and locations where roadway widening or other reconfigurations may be required.
- **Intersection improvements**: Each intersection along the proposed alignment will be reviewed to identify specific improvements to make bus and pedestrian movements safer and more expeditious. These could include queue jump facilities to allow buses to bypass other traffic, signal improvements, lane reconfigurations, and improvements to crosswalks, pedestrian signals, and sidewalk connections to stations and surrounding development. Where queue jumps, widening, or other improvements are proposed, right-of-way needs will be identified.
- **Plans and Cost Estimates**: Conceptual plans and additional project details will allow for further refinement of the capital and operating cost estimates.
- **Environmental analysis**: NWARPC will determine the level of environmental document that will be required for the project based on the types and magnitude of proposed improvements and will use the project as an opportunity to perform a high-level environmental screening, the results of which will be used to guide the refinement of station, running way, and intersection improvements to avoid and mitigate environmental impacts.
- **Transit network integration**: Coordination with ORT and Razorback Transit will be needed to best plan for either new local transit routes or realignment of existing fixed bus routes in the region to interface with a new high-frequency BRT system. This reorientation of the regional bus network will provide improved connectivity, access, and ridership for the future BRT service.

At the end of the project, several critical decisions will need to be made by the region. Among these are the identification of the operating entity, which will receive the funding from the various sources to continue the development of the project, including completing the required environmental documents and advancing the project into preliminary engineering and final design, and ultimately constructing the BRT infrastructure and operating and maintaining the BRT service. Options for the operating agency

include one of the local transit operators, a new regional organization created to develop and operate the BRT service, collaboration among existing agencies or operating entities, or other possible arrangements.

This decision regarding the operating entity should be resolved before moving into the next steps in the project's development, including creating a funding plan and potentially seeking new tax funding or other funding sources, and applying for Federal and State grants for project development, as well as commencing the environmental and preliminary engineering steps. The FTA's Capital Investment Grants (CIG) program would likely be a primary funding source for the capital improvement portion of the alternative, but it is a competitive grant for a wide range of transit projects for the entire country. Each project is given a rating based on the criteria specified by FTA, with the two main criteria being projected ridership and costs. Identifying and securing non-Federal funding for the portion of the project cost that will not be covered by Federal funding is another differentiator that helps projects compete for these highly sought-after Federal grants. Other FTA grants, such as Urban Formula grant (Section 5307), may also be used to fund part of the capital improvements, vehicle acquisition, and/or operations.

In addition, NWARPC and the identified operating agency would need to maintain public engagement efforts throughout the entire project development, engineering, and construction processes. Much of the same process will repeat for the next phase of the preferred alternative, with similar timelines at significantly reduced costs.