

The Economics of Land Use



Draft Report

Northwest Arkansas Commuter Corridors Alternatives Analysis: Transit Oriented Development Scenarios

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Northwest Arkansas Regional Planning Commission

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1. TRANSPORTATION-LAND USE PRINCIPLES

This report presents Economic & Planning Systems' (EPS) observations and recommendations related to implementing high capacity regional transit in the Northwest Arkansas Region and Transit Oriented Development (TOD) surrounding potential commuter rail stations. The report is organized in three chapters including this Summary of Findings and Recommendations.

- **Transportation-Land Use Principles** – Defines TOD and the necessary market and policy factors for success.
- **Rail Corridor Development Analysis** – Proposes a planning framework and station typologies for each station jurisdiction to consider in future planning. Suggests a preliminary development mix and other station area planning objectives.
- **Transit Oriented Development Toolkit** – Summarizes regional planning, local comprehensive planning, and zoning processes and regulations needed for TOD. Provides a list of funding and financing tools to encourage station area development.

Summary of Findings and Recommendations

1. *The Northwest Arkansas (NWAR) Region should create and adopt an integrated land use and transportation plan.*

Most regions that have built regional commuter transit systems have started with a multijurisdictional vision and plan for future transportation and land use in the region. The Regional Planning Commission (RPC) and Metropolitan Planning Organization (MPO) often play a central role in facilitating the plan and providing the technical expertise needed to complete it. Local leaders, however, are instrumental in generating the political and public support for local adoption of the regional plan, and for aligning local comprehensive plans and zoning with the Regional Transportation and Land Use Plan.

Two regions at different stages of regional transit implementation provide good examples: the Kansas City Region's *Smart Moves* and the Denver Region's *Metro Vision*. Denver has completed three light rail corridors, with three more commuter rail corridors under construction. Kansas City has implemented three Bus Rapid Transit Lines, but has identified several additional high capacity transit corridors that are being studied.

2. *Communities in NWAR can become transit ready ahead of a system being built.*

The principles of TOD planning and real estate development are directly transferrable to downtown, commercial corridor revitalization efforts, and moving to a more compact development pattern to reduce suburban sprawl. Cities can begin determining where higher density or concentrated development is appropriate, identify infrastructure needs, establishing funding sources, and implement zoning and other land use regulations to attract development compatible with future transit. Communities in the Kansas City region have completed several planning studies for future transit corridors, well in advance of transit service.

3. The NWAR corridor has strong anchors on the north and south, although employment is dispersed on the north.

Bentonville and Fayetteville have the largest concentrations of employment in the region, making them logical anchors for either end of a linear transit corridor. The University of Arkansas has approximately 25,000 students and 4,000 faculty and staff, and U of A sporting events have a national draw. Several large employers are located in Bentonville including Wal-Mart, Wal-Mart suppliers, and two major hospitals. However, a constraint in Bentonville and elsewhere along the corridors that employment is dispersed in suburban office parks, which are difficult to serve efficiently with transit.

4. High Capacity transit stations can present an opportunity to re-energize the smaller communities and Downtowns between Fayetteville and Bentonville.

TOD has been attractive to local governments, property owners, and real estate developers because of its potential to re-energize communities and neighborhoods. There is a body of academic and consultant research and real world examples of successful TOD throughout the U.S. Property value increases of 10 to 25 percent and higher have been observed in successful TODs. While many are in larger metro areas such as Washington D.C., Charlotte, N.C. (South End), Dallas, TX, and Denver, CO, smaller metros can attract TOD under the right conditions as described in this report.

5. High quality Bus Rapid Transit (BRT) can have many of the same benefits as commuter and light rail, but with less real estate development impact.

Bus Rapid Transit (BRT) is emerging as a lower cost alternative to commuter rail. Built in a dedicated guideway, or with dedicated lanes, "gold" and "silver" standard BRT can provide levels of service, reliability, and comfort similar to light rail. While the real estate and economic impacts are typically less than light or heavy rail, BRT can have positive land use and economic impacts when there is permanence in the system, such as connecting major employers, institutions, activity, and population centers, and having a dedicated or partially dedicated guideway.

Transit Oriented Development

This Chapter presents an introduction and overview of Transit Oriented Development (TOD), including a definition of TOD, factors for success, and economic benefits. In addition, three brief case studies of recent Bus Rapid Transit lines are also presented for consideration as a lower cost or phased alternative to commuter rail.

Transit oriented development (TOD) can be defined as mixed use residential or commercial development within walking distance of a transit station designed to maximize access to transit and incorporating features designed to encourage transit ridership. A TOD often resembles other activity centers with a greater mix of uses and higher densities than the surrounding market area. TODs typically have the following features:

- **Mix of Uses** – Land uses can be mixed either vertically or horizontally. TOD is most often primarily residential at suburban locations but can have employment and other commercial and retail uses at activity center and downtown locations.
- **Compact Development** – TODs are built at higher densities than the surrounding market area, creating a focal point around a transit station. The density and amount of development are market driven; higher land values support higher development densities and more urban locations support greater amounts of development.
- **Pedestrian Oriented** – The development pattern at TODs is designed to facilitate pedestrian access to and from the station with ample sidewalks, interconnected blocks and streets, and buildings oriented toward the street, and parking located in secondary locations.
- **TOD Typology** – Stations can be classified according to their transit function and their approximate place in the continuum of urban and suburban development. This continuum ranges from Downtown and Regional Activity or Employment Centers areas on the larger and most intense end of the development spectrum to Neighborhood Centers on the smaller end. There are also more specialized single use centers such as hospitals or major sports complexes. The mix of uses varies by type and location; however, the larger, more intense urban centers tend to be higher density and contain more employment uses while smaller centers tend to contain lower densities and a greater proportion of housing.

The presence of transit at a station location can have a positive effect on development potential in the immediate area because transit improves the regional accessibility of properties, which has a positive impact on property values. These higher land values can support higher development densities and in some cases a different mix of land uses in much the same way as property adjacent to a highway interchange is different from development farther away. However, the presence of transit alone does not translate to greater development potentials. There are other key economic requirements impacting TOD, including:

- **A Positive Market** – TOD cannot overcome other negative local or national real estate market conditions, including negative household or employment growth, declining building and land values, or the lack of conventional development financing.
- **Supportive Public Policy** – In order for a TOD activity center to be built, the local jurisdiction needs to provide a planning framework and zoning that allows for the type, mix, and density of development supportable by the market and desired by the community.

- **Realistic Expectations** – TOD can alter the location, density, and form of development within a market area. It can have a positive impact on the development capture of a city or subregion. However, it cannot by itself create measurable demand for net new development within the larger region.

TOD Plan

OD also requires a commitment to a long-term development plan. Historically, TOD has generally not occurred until the transit investment is in place and providing a high level of accessibility that is generating high levels of ridership. In all but the most robust real estate markets, a TOD plan may take 10, 20, or more years to be fully implemented as a significant activity center.

A station area plan is key as it provides direction for the preferred land uses to be developed within a station influence area over a long-term time horizon of 20 to 25 years. The typical area of influence is approximately a half-mile radius modified by logical roadway and geographic features. In addition to the land use element, the plan should be grounded by a market study that identifies the potentials for TOD land uses. It should also contain an infrastructure needs analysis, redevelopment strategies, and recommendations for changes and incentives to encourage TOD. The TOD plan allows a municipality to address the individual characteristics and market opportunities and constraints of individual station locations and settings.

Transit Ready

Planning for transit and TOD is compatible multiple revitalization and redevelopment goals such as attracting mixed use development, increasing development density and diversity, creating walkable neighborhoods and business districts, and redeveloping or re-purposing obsolete industrial property adjacent to rail corridors. Many communities in the Kansas City, Denver, and Dallas regions are planning or have planned for transit service and TOD well in advance of an operating transit service. Many of the principles of TOD—higher densities, walkability, and a mix of uses—are the same principles that apply to any urban, suburban, or downtown revitalization planning effort. Since land use change can take several years, it is important to begin planning and implementing higher density development and revitalization plans now to position the region for future transit service.

Transit Oriented Development Benefits

Transit Oriented Development (TOD) is being pursued by communities for several reasons including local economic development benefits, increased access to jobs (by residents) and labor force (by employers), and for the environmental and social benefits of compact development. The private sector, land owners, investors, and developers are interested in TOD because of its potential to support higher property values. TOD also increases ridership on transit systems, and to the transit operator is a lower cost way of adding riders compared to expanding the transit system. This section provides an overview of the motivations for developing TOD and its benefits.

Demand for Transit Accessible Real Estate

Demographers, economists, and the national homebuilding industry expect housing and commercial real estate demand to shift dramatically in the coming years; some areas of the U.S. are already experiencing these predicted shifts. Over the past decade there have been at least four national studies of housing preferences and national demographic trends that indicate increasing demand for more compact and transit accessible housing, workplace, and retail locations. Conversely, the demand for large homes and large lot suburban and exurban development is expected to decrease. Some highlights of this research is summarized below:

- Approximately 38 percent of Americans would like the option to live in attached housing (apartments, condos, townhomes), and 35 to 40 percent would prefer single family homes on small lots (less than 7,000 square feet).
- Attached housing comprises only 30 percent of the housing supply and small lot housing comprises only another 30 percent of the housing supply, creating a gap between housing preferences and what the market is providing.
- One quarter of Americans would like to be able to walk or cycle to work, yet only 4 percent actually do. However, when work, shopping, and services are located less than one mile from home, roughly 40 percent of the population will walk or cycle to these locations.
- From 1990 to 2010 approximately 80 percent of housing demand was from growing families (children of baby boomers having their own children). Over the next 20 years, this market segment is projected to be one quarter of the housing market. The housing market will be dominated by empty nesters (baby boomers), smaller households as household size continues to fall, and the young labor force
- Generation Y and Millennials show stronger preferences for more urban style housing in both central city and suburban locations, and have lower rates of car ownership. They also prefer workplaces in more mixed use urban style environments rather than the single use suburban business parks popular from the 1970s through the 2000s. As the U.S. labor force shrinks with the retirement of the baby boomers, attracting this young labor force will be important to businesses and cities.

Real Estate Impacts

There is a growing body of evidence in both academic research and the experience of real estate developers (and local governments) engaged in TOD that TOD locations support higher property values than non-TOD locations. The access and convenience that good transit service provides makes these locations attractive to residents and businesses, resulting in higher property values.

There have been numerous academic and consultant studies that estimated the premiums in real estate values associated with being located close (generally within one-quarter- to one-half-mile of high frequency transit), as summarized below. Rent and value premiums range from as little as seven percent in Boston to as much as 40 percent in the San Francisco Bay Area (**Table 1**).

- Average rents in the Bay Area for a one-bedroom apartment were priced 10 percent above comparable projects and 16 percent higher for two-bedroom units.¹ On average, rents at the East Bay TOD (e.g. Oakland and Berkeley) were 10 to 15 percent higher than non-TOD units.
- A similar study conducted in Dallas found that a sample of properties located around DART rail stations saw increases in property values and rents of about 25 percent greater than overall county levels and comparable non-TOD properties.² Specifically, an analysis at Dallas' Mockingbird Station found a rent premium of 23 percent above comparable non TOD units. In addition, between 1997 and 2001 median values of residential properties increased 32.1 percent near DART light rail stations compared to 19.5 percent in control group areas.

**Table 1
Transit Oriented Development Residential Property Premiums**

City/Region	System	Technology	Study Date	Passenger Miles ¹	Metro Area Congestion Ranking ²	Value of Proximity to Station
Residential						
Alameda County (Bay Area)	BART	Heavy Rail	1994	1,448,529,163	8	39%
Netherlands	---	Commuter Rail	2006	---	---	25%
No. San Diego County (Coaster Line)	NCTD	Commuter Rail		40,139,482	13 ⁺	+20%
Santa Clara County (Silicon Valley)	VTA	Light Rail	2001	54,474,946	8	15%
Bay Area	BART	Heavy Rail	1996	1,448,529,163	8	10-15%
Philadelphia	SEPTA	Commuter Rail	1993	486,427,898	11	7-15%
Portland, OR	TriMet	Light Rail	1993	193,574,421	25	11%
Boston	MBTA	Commuter Rail	1994	792,889,367	12	6.7%
Commercial						
Santa Clara County (Silicon Valley)	VTA	Light Rail	2001	54,474,946	8	23%
Washington D.C.	WMATA	Heavy Rail		1,639,628,551	7	10-20%
San Diego, CA	Various	Various		---	13	20-40%

¹ Federal Transit Administration National Transit Database, <http://www.ntdprogram.gov/ntdprogram/>

² Texas Transportation Institute Urban Mobility Report, <http://mobility.tamu.edu/ums/>

Source: Research summarized by Economic & Planning Systems

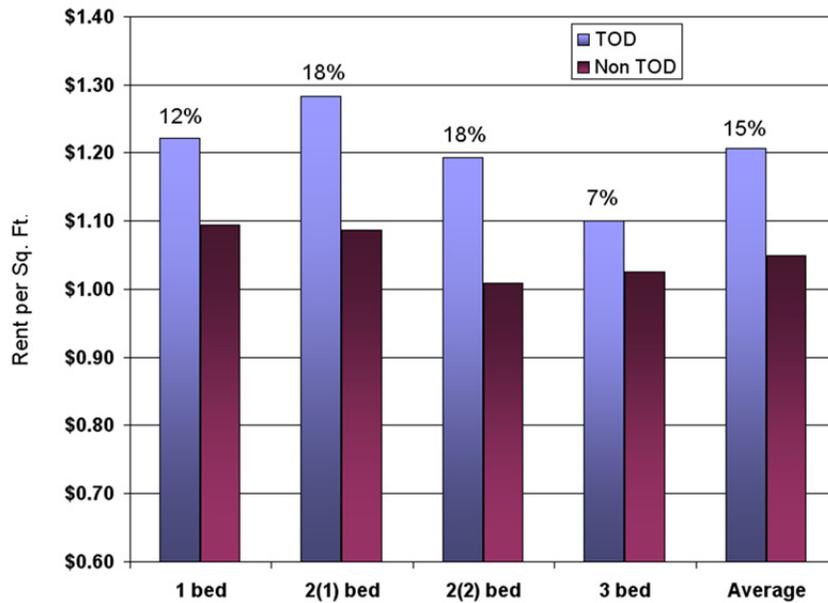
\\epasc02\Proj\23044-ArkansasNWNorth-SouthCorridorAA1\Data\1\23044-TOD Premiums.xlsx]Sheet 1

¹ *Transit-Oriented Development in the United States: Experience, Challenges, and Prospects*. TCRP Report 102. Transportation Research Board. 2004.

² *The Initial Economic Impacts of the DART LRT System*. Center for Economic Development and Research. 1999.

- A study completed by EPS in the Denver, Colorado region found that apartment rents in TOD locations were 15 percent higher than comparable properties in non-TOD locations (**Figure 1**).

Figure 1
Denver Region TOD Apartment Rent Premiums



Much of the evidence suggests that TOD projects served by intensive transit service produce the healthiest real estate results. However, while good quality transit is important, it is not the only factor in determining financial performance. Higher densities, pedestrian amenities, and retail services all contribute to the level of premium. According to the TRB, it is the synergy of proximity, density, mix of uses, and pedestrian friendliness that truly translates into property values and enhanced real estate performance.³

Equity

Transportation and fuel costs are rising nation and worldwide. For those who cannot afford to own a car or choose not to, good public transit can provide a viable means to access better job opportunities that may not be close to home. Transit can connect people of all income ranges to opportunities for job training, education, and career advancement.

³ *Transit-Oriented Development in the United States: Experience, Challenges, and Prospects*. TCRP Report 102. Transportation Research Board. 2004.

Rail and Bus Rapid Transit TOD

In North America the majority of TOD has historically occurred on fixed rail lines and the conventional wisdom has been that bus transit does not support TOD. The fixed investment that a rail line represents conveys a sense of permanence to property owners, investors, and developers—rail lines rarely move, while bus routes can be easily changed. However, modern bus rapid transit (BRT) is beginning to emerge as a viable and lower cost alternative to rail, and is supporting TOD or at least development oriented to transportation corridors. The highest levels of BRT, gold and silver rated, have dedicated or partial guideways and service that are as reliable as rail transit.

Mason Corridor, Fort Collins, Colorado

The Mason Corridor is a five-mile, north-south byway within the City of Fort Collins which extends from Cherry Street on the north to south of Harmony Road. The corridor is centered along the Burlington Northern Santa Fe (BNSF) Railway property, located a few hundred feet west of College Avenue (US 287). In May of 2014, the construction of a bus rapid transit (BRT) system is scheduled to be completed. The system will cover 5.0 miles and serve eight stations and four stops. Buses are scheduled to arrive at 10 minute intervals and serve close to 4,000 riders per day. The project is slated to cost approximately \$86 million and will have an annual operating cost of approximately \$1.6 million. The corridor has already spurred development in the form of a \$40 million, 665-bed apartment complex called the Summit On College. The developer has stated that the BRT system the city is installing is one of the primary reasons their firm chose the site for development.

MAX Line, Kansas City, MO

The Metro Area Express (MAX) BRT system was opened in Kansas City in July of 2005. The system is composed of two primary lines, the Main Street MAX and the Troost MAX. The Main Street MAX opened in July of 2005 at a cost of \$21 million and serves more than 6,000 daily riders. The Troost MAX opened in January of 2011 at a cost of \$30 million and serves more than 8,500 daily riders. Kansas City is currently working to plan catalyst sites for infill development to serve the neighborhoods along the corridors, and to address challenges such as food access and access to jobs and adult education and job training.

Health Line, Cleveland, OH

The Health Line was built in October of 2008 by the Greater Cleveland Regional Transit Authority (RTA). The line replaced the older Route 6 and serves an average of 15,000 to 18,000 riders per day. The route is composed of 58 stops and covers close to 6.8 miles. The system cost a total of \$168.4 million (\$25 million/mile), which was funded by a variety of sources. Development of the Euclid Corridor, the area that the Health Line serves, has played an important role in the success of this project. The Cleveland RTA has improved the infrastructure, roads, and sidewalks along the corridor in addition to dedicating \$1.2 million to public art installations.

According to a study published by the Institute for Transportation & Development Policy, the Health Line has generated approximately \$115 in economic development for every dollar spent on the bus system. Since the health line began, there has been more than \$4.3 billion in proposed, new, or finished development projects along the corridor.

One of the most significant projects that has been developed along the corridor is the \$28 million MidTown Tech Park that opened in the summer of 2011. The 128,000 square foot building serves as a space for variety of businesses, including nonprofit organizations, tech companies, and biomedical firms. In addition, there have been 5,100 new housing units developed along the corridor, which has contributed to the area's revitalization.

2. RAIL CORRIDOR DEVELOPMENT ANALYSIS

EPS has prepared conceptual development scenarios for the approximate station locations identified for the commuter rail alternative in the AA. The purpose of this analysis is to generate ideas and to help set in motion further planning for TOD to help the region be more “transit ready.” Shifting the overall development pattern of the region to a more nodal and transportation corridor-oriented pattern should be a focus of future land use and infrastructure planning.

This chapter begins with descriptions of the proposed station areas for the commuter rail alternative. Next, each station area is classified within a station area typology framework that characterizes the types of development that are compatible with the transit function and geographic and market context for each station. Last, we identify potential development and redevelopment sites and estimate the mix of land uses and amount of development these sites could support at some point in the future.

This analysis is not intended to imply any local government action on specific properties. Market conditions and property owners will determine when development or redevelopment is appropriate.

Proposed Station Areas

EPS has examined six proposed station areas for this analysis: Downtown Fayetteville, Johnson, Downtown Springdale, Lowell, Downtown Rogers, and Bentonville (**Figure 2**). Actual station locations for eventual construction have not yet been identified. The locations chosen in this analysis represent logical locations based on roadway access and existing development patterns, particularly for the Downtown stations.

Downtown Fayetteville

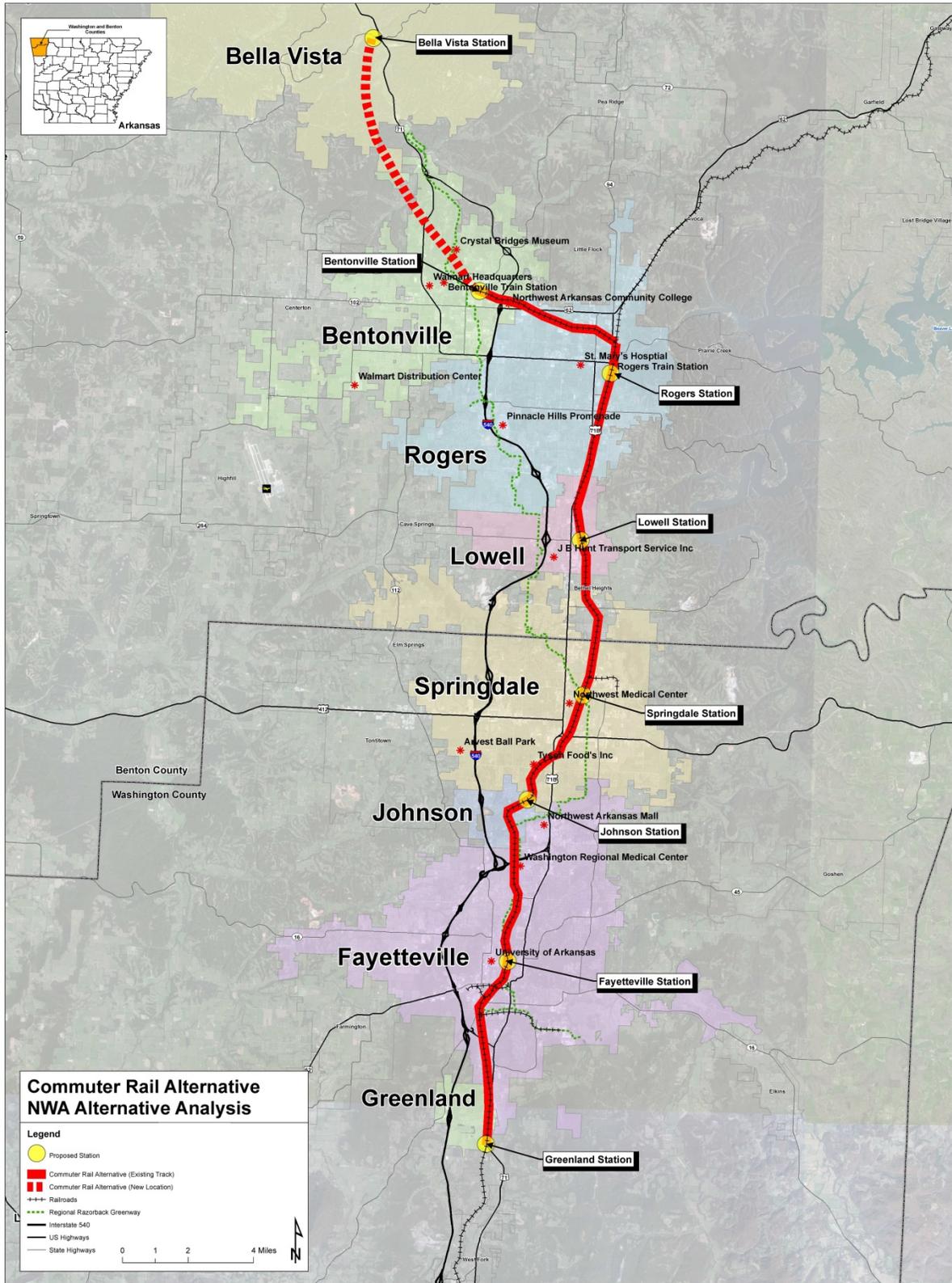
A logical location for the Fayetteville Station would be near the intersection of the rail with West Dickson Street. This is near the heart of Downtown Fayetteville, approximately one-quarter- to one-half of a mile to the center of the University of Arkansas (U of A) campus just to the west. Dickson Street and Downtown Fayetteville is a densely developed mixed use district containing ground floor retail, restaurant, and office businesses, homes, and student apartments. Fayetteville has the largest and strongest downtown in the Region due to the presence of 24,595 students and 4,000 staff at U of A. The station would serve U of A staff and faculty, U of A events, and northbound commuters. In fact, much of the downtown development pattern can be considered TOD as it is already dense for the NW Arkansas region and contains a mix of land uses.



Johnson

The Johnson station would be located at approximately Main Drive and the rail alignment. This area also has approximately 250 acres of undeveloped agricultural land surrounding the station area, largely on the west side of the rail alignment. The small residential community of Johnson is located to the east.

Figure 2
Proposed Commuter Rail Station Locations



I-540 at Gregg

Although not identified in the AA, Fayetteville Junction could be considered as a station location for either rail or BRT. The Washington Regional Medical Center, a large employment center and major destination, is located here, and there are several hundred acres of undeveloped land surrounding this junction. The undeveloped land provides an opportunity to create a new development that is transit ready.

Downtown Springdale

Downtown Springdale has been identified as a logical location for Springdale's station at roughly Emma Avenue and the rail alignment. Springdale envisions that a commuter rail station could be a catalyst for downtown and an additional amenity to support business and street activity. The station could integrate well with the Razorback Greenway, which is the first of many projects aimed at revitalizing Downtown, including daylighting Spring Creek.



Downtown Springdale's compact street grid and comparably higher density development is support of transit, although property values are low and vacancies are high at this time. The City's offices are the dominant occupant of downtown office space. The Springdale Housing Authority owns income restricted apartments within one-quarter of a mile of downtown. From a driving tour, the neighborhood immediately to the southwest of downtown was estimated to be a lower income Hispanic neighborhood.

Rogers



Rogers station could be located near the center of their downtown in the vicinity of the intersection of Walnut Street (E-W) and 1st Street (N-S). Downtown Rogers is an 1800's main street oriented around the historic rail depot area along 1st Street. The Arkansas & Missouri Railroad has some maintenance facilities here, including a station for its excursion passenger service.

The City of Rogers has made substantial investments in the streetscape environment in Downtown, including brick paving, planters, curb bulb outs, and cross walks. The downtown is

visually appealing with an attractive building stock. Although there are still some vacancies in street level storefronts, these investments are helping to attract new businesses, including at least two new restaurants.

Lowell

The approximately station location for Lowell would be in the vicinity of Hwy. 264 (West Monroe Ave.) at US-71B. Land use in this area is a mix of agricultural and ag-industrial buildings, active agricultural fields, and new residential subdivisions on former agricultural properties. In addition, there are several recently constructed single family residential subdivisions in this vicinity indicating demand for housing in this area. Homes are generally in the entry level first time buyer and first move-up market segments.

Bentonville

Bentonville is the home of Wal-Mart, whose headquarter buildings are located at the northeast corner of 8th Street and South Walton Boulevard. A possible commuter rail station location is in the vicinity of Southeast 8th and Southeast J Streets. The City's Southeast Downtown Plan proposes creating a Market District and an Arts District in this area. The Market District is proposed in area between SE 5th, SE 8th, SE J, SE E Court. The Market District block has a vacant Tyson chicken plant, an active Kraft Foods manufacturing facility, and a number of homes. Integrating the station at the western edge of this plan area should be evaluated further.



The Arts District is planned for roughly three square block area between SW B and SW A west to east, respectively, and approximately Southeast 4th on the north and Southeast 8th on the south. This area is developed with a mix of aging industrial and commercial buildings. Southeast 6th Street would be a key connection between the two Districts.



Surrounding land use ranges from residential at Moberly Lane to large distribution warehouses between Moberly and Southeast J Streets. Downtown (The Square) is approximately one-half of a mile to the northwest. The rail right of way appears to end in this 5th to 8th block; extending the rail into downtown may not be practical as it would require substantial property acquisition in established neighborhoods.

The Wal-Mart headquarters located approximately 1.5 miles to the west and is not walkable from this station location. Wal-Mart campus buildings are a mixture of one to two story buildings that have been gradually converted to office from warehouse and distribution uses. The Square is the core of Downtown Bentonville, a four- to six-block commercial district with two- to three-story mixed use buildings dating from the 1800s. The buildings are in good condition and occupied with a variety of restaurants and specialty retail businesses. The original Walton's Five and Dime is located here, and the area is busy with shoppers, diners, and passersby.

A high frequency circulator service would be needed to connect the station area with the Wal-Mart headquarters and The Square. It would not be practical to attempt to extend the rail beyond the 5th to 8th block area due to the impacts to existing homes and other properties.

Station Typologies

EPS has created station typologies for each station area after evaluating the existing land use conditions surrounding them, the type of station (e.g. neighborhood walk up vs. park-n-ride) their economic function along the Corridor, roadway connections and other access, available land, and each jurisdiction's planning objectives for the station areas. A station area typology is an aspirational characterization of future development that also reflects the economic and geographic characteristics of the area, as described above. The typologies contain a range of development intensities (amounts) and densities based on these site characteristics. A benefit of creating station typologies is that it helps establish unique market positions for each station so that they are not all competing for the same types of development.

The NWAR corridor is a linear corridor connecting two major employment and entertainment destinations. It differs from the suburb to central city corridors in which the central city station is often surrounded by the largest amount of and highest density development. The NWAR corridor can be thought of as having two anchors on the North and South, with unique nodes in between. The proposed station typologies described below are scaled for the NWAR commuter rail corridor and listed generally in order of development intensity.

First, we apply the station typologies to each station area to create future development scenarios. Next, we estimate the potential land use mix and densities for each prototype and assign these development types to vacant sites and potential redevelopment sites at each station.

Downtown - Fayetteville

A Downtown station typology has the full range of land uses including a variety of residential, retail and restaurant, major employers, and institutional developments. Downtown Fayetteville has the highest land use densities in the region. While development around a new commuter rail station will be limited to site specific redevelopment and infill projects, Fayetteville can be expected to be the most densely developed TOD initially. Downtown Fayetteville's station will serve a broad transit rider market, including inbound and outbound commuters as well as special events at U of A.

Urban Center – Fayetteville Junction

An Urban Center is an area of focused development with densities that are higher than the surrounding area. Urban Centers are urban in the sense of development density and the diversity of land uses present, but are generally located in suburban settings. Urban Centers have good regional access from highways and arterials, absent transit. Transit service enhances the access to markets and labor already present at an Urban Center location. Because of their location and access characteristics, Urban Centers are able to support significant amounts of office employment, retail development, and institutional uses including hospitals, government centers, and education facilities.

I-540/Gregg is envisioned as an Urban Center station. There are two highway interchanges serving this area, at Fulbright Expressway just east of North Gregg Avenue, and at I-540 and Highway 112, providing excellent regional access by car. A major medical center has already located here, proving the location's attractiveness for large employers. The addition of rail transit or BRT will further enhance this site's access.

Commuter Town Center – Johnson and Lowell

Commuter Town Centers are suburban stations that function both as park-n-rides for the transit system and as an organizing feature and anchor for a residential community. Commuter town centers are mostly residential, with a limited amount of neighborhood or community-serving commercial depending on the size of the site's retail trade area. Homes can be built at higher than typical densities (smaller lot sizes) and clustered around the station, connected by a compact street grid with low automobile speeds, and with sidewalks, trails, and bicycle facilities. The principles of Traditional Neighborhood Design (TND) can be applied in this setting as an alternative to larger lot suburban development designed around the car. The South Pass development planned in Fayetteville, while not a TOD, is an example of the style of suburban residential development that can be integrated with transit.

Johnson and Lowell stations have large parcels of undeveloped land in the vicinity of the stations that could be developed with a large number of homes. At Lowell, the rail corridor has numerous industrial and ag-industrial buildings that may be candidates for redevelopment, depending on the ultimate station location. The market will determine when and if these buildings will be redeveloped, and any subarea planning should assume some phasing of development so as not to unduly disrupt businesses.

Main Street – Springdale and Rogers

Springdale and Rogers both have traditional Main Streets with good access to their surrounding residential populations. These areas already have a compact walkable street grid, a mix of businesses and residents, and an interesting building stock which sets the stage for TOD. Springdale and Rogers are working to re-energize their Main Streets, and transit stations have proven to be excellent catalysts for Main Street and Downtown revitalization as they create a daily flow of traffic and people. Businesses and services can locate near stations to capitalize on the increased customer traffic.

The Main Street stations will have a finer grain of development that complements the existing buildings, and potentially less parking than other stations due to land constraints. Springdale and Rogers will need to continue their revitalization efforts to fully leverage the impact of a future transit station. The Springdale station also presents an opportunity to connect affordable housing and low to moderate income families with more job opportunities in the region. The Springdale Housing Authority owns an affordable housing development within a quarter-mile of the station and there are other free-market but modestly priced homes in the area

Cultural and Market District - Bentonville

The City of Bentonville's SE Downtown Plan identifies the potential station area as a Market and Arts District, as noted above. The Market District is planned for a large semi enclosed or enclosed Public Market, a Public Art Center, and high density residential development. The Arts District is planned to include several civic buildings including a library, theater, farmer's co-op, a park, and a parking structure. Private development could include a hotel and medium to high density housing.

For this analysis, we have assumed that the station will be in this area to complement the City's redevelopment and economic development plans. This station will be different than others, as it will need to serve this activity district as well as The Square and the Wal-Mart headquarters. A high quality circulator service (e.g. bus or streetcar) will be essential to making this station work from a transit perspective.

Table 2
Proposed Commuter Rail Station Typologies

v	Current Land Use	Future Station Typology	Residential	Commercial Development	Scale	Parking and function
Fayetteville	Downtown	Downtown and Special Events	<ul style="list-style-type: none"> Urban multifamily and townhome 	<ul style="list-style-type: none"> Retail, restaurant, entertainment emphasis Office and institutional 	2-5+ Stories	<ul style="list-style-type: none"> Parking structure Walk up Circulator bus or streetcar Special events
I-540/Gregg	Agricultural, Hospital, Hwy. Interchange	Major Urban Center	<ul style="list-style-type: none"> Multifamily and townhome 	<ul style="list-style-type: none"> Employment emphasis Significant retail possible 	<4 stories	<ul style="list-style-type: none"> Both commuter park-n-ride and employment/ services destination
Johnson	Agricultural, Residential	Commuter Town Center	<ul style="list-style-type: none"> Small lot single family Some apartments and townhomes 	<ul style="list-style-type: none"> Neighborhood retail and restaurants 	2 stories or less	<ul style="list-style-type: none"> Commuter park-n-ride
Springdale	Main Street	Main Street	<ul style="list-style-type: none"> Multifamily and townhome 	<ul style="list-style-type: none"> Main street style retail/restaurant and office 	< 4 stories	<ul style="list-style-type: none"> Small park-n-ride Walk-up Feeder bus routes
Lowell	Agricultural, industrial, residential	Commuter Town Center	<ul style="list-style-type: none"> Small lot single family Some apartments and townhomes 	<ul style="list-style-type: none"> Neighborhood retail and restaurants 	< 4-5 stories	<ul style="list-style-type: none"> Commuter park-n-ride
Rogers	Main Street	Main Street	<ul style="list-style-type: none"> Multifamily and townhome 	<ul style="list-style-type: none"> Main street style retail/restaurant and office 	< 4 stories	<ul style="list-style-type: none"> Small park-n-ride Walk-up Feeder bus routes
Bentonville	Industrial	Activity District	<ul style="list-style-type: none"> Multifamily and townhome 	<ul style="list-style-type: none"> Cultural and entertainment Retail, restaurant Some office 	< 4 stories	<ul style="list-style-type: none"> Parking structure Walk up Circulator bus or streetcar Special events

Station Area Planning Considerations

This section provides guidance and suggestions on land use and infrastructure planning around future commuter rail stations. Many of the same principles could be applied to BRT stations in similar locations. The considerations offered here are based on EPS' tour of each station area, interviews with local jurisdiction planners, and professional experience in TOD planning at other similar stations and on similar corridors.

Downtown Fayetteville

As noted earlier, Downtown Fayetteville already has many of the elements that contribute to successful TOD: relatively high development densities, a compact street grid, policies that prioritize bicycle and pedestrian street improvements, and mixed use zoning. The potential commuter rail station area is largely developed. The remaining sites are generally small surface parking lots and other small vacant parcels. Any additional development in Downtown Fayetteville would likely be a continuation of the current land use pattern. There may be market pressure to increase densities, however, due to the limited land supply and generally strong market conditions in Fayetteville (**Figure 3**).

If and when a commuter rail or BRT station location is identified, the City's focus will likely need to be on integrating parking with the station in a pedestrian supportive manner. Structured parking will likely be needed due to the land constraints. The City should also continue its focus on bicycle and pedestrian needs and access to the station, and bike and pedestrian routes to the station.

Johnson

The proposed station typology for Johnson is for a commuter town center, which implies largely residential development. There are large undeveloped agricultural parcels to the east of the rail along Main Drive, which could be planned for Traditional Neighborhood Design-style (TND) residential neighborhood (**Figure 4**). TND neighborhoods typically have smaller lots than conventional residential developments; however, they also have neighborhood parks, trails, sidewalks, bicycle lanes, and other features to compensate for the smaller lots. There is a collection of older railroad depot and commercial buildings that could be converted to small scale neighborhood serving commercial uses while maintaining the agricultural and railroad heritage of the neighborhood.

Some improvements to Main Drive may be needed to facilitate bicycle and pedestrian access to the station from the existing neighborhoods and new development. Station parking should be located in a way that respects the surrounding context, and does not create a perceived walking barrier or "sea of parking" between development and the station.

Figure 3
Downtown Fayetteville Station Context

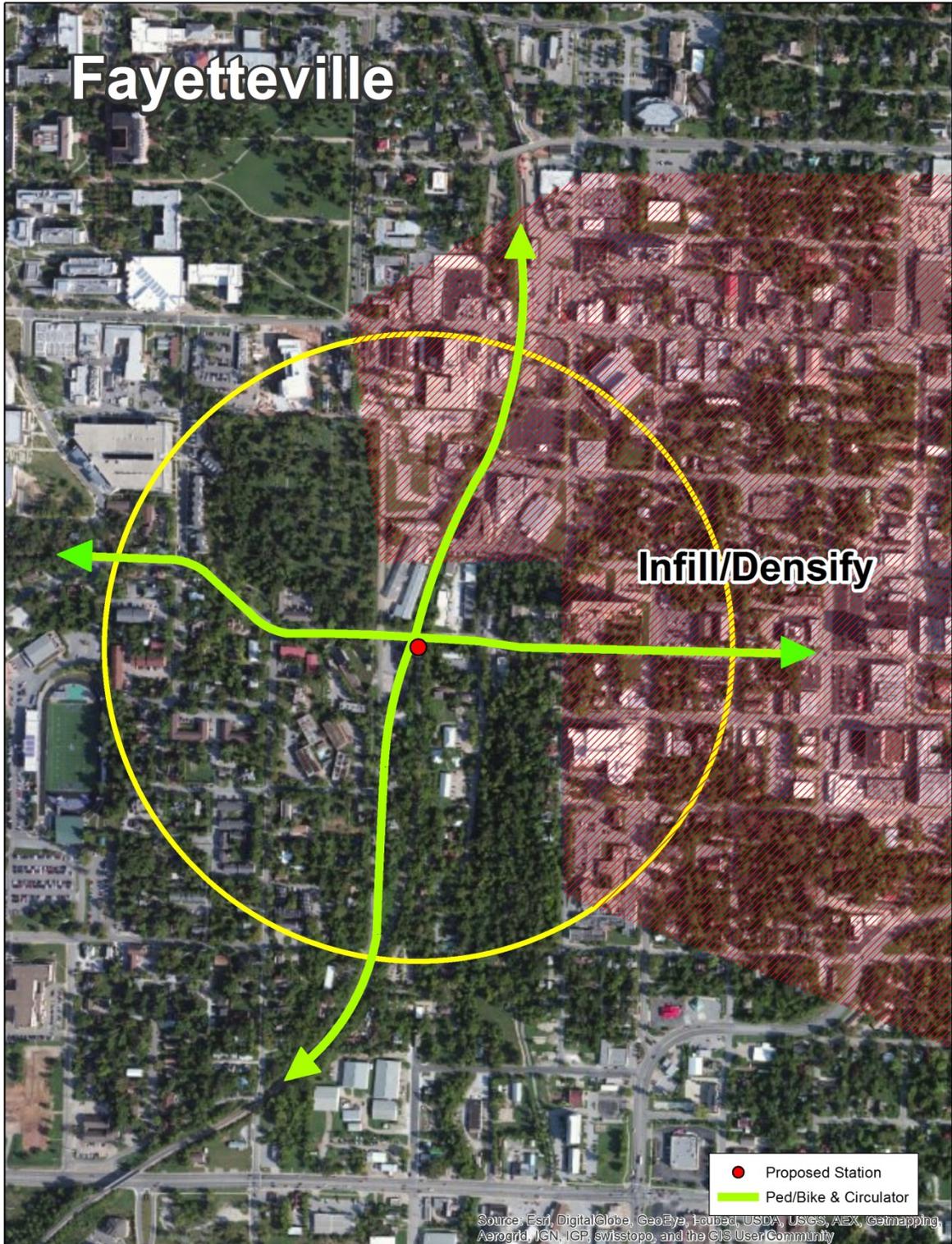
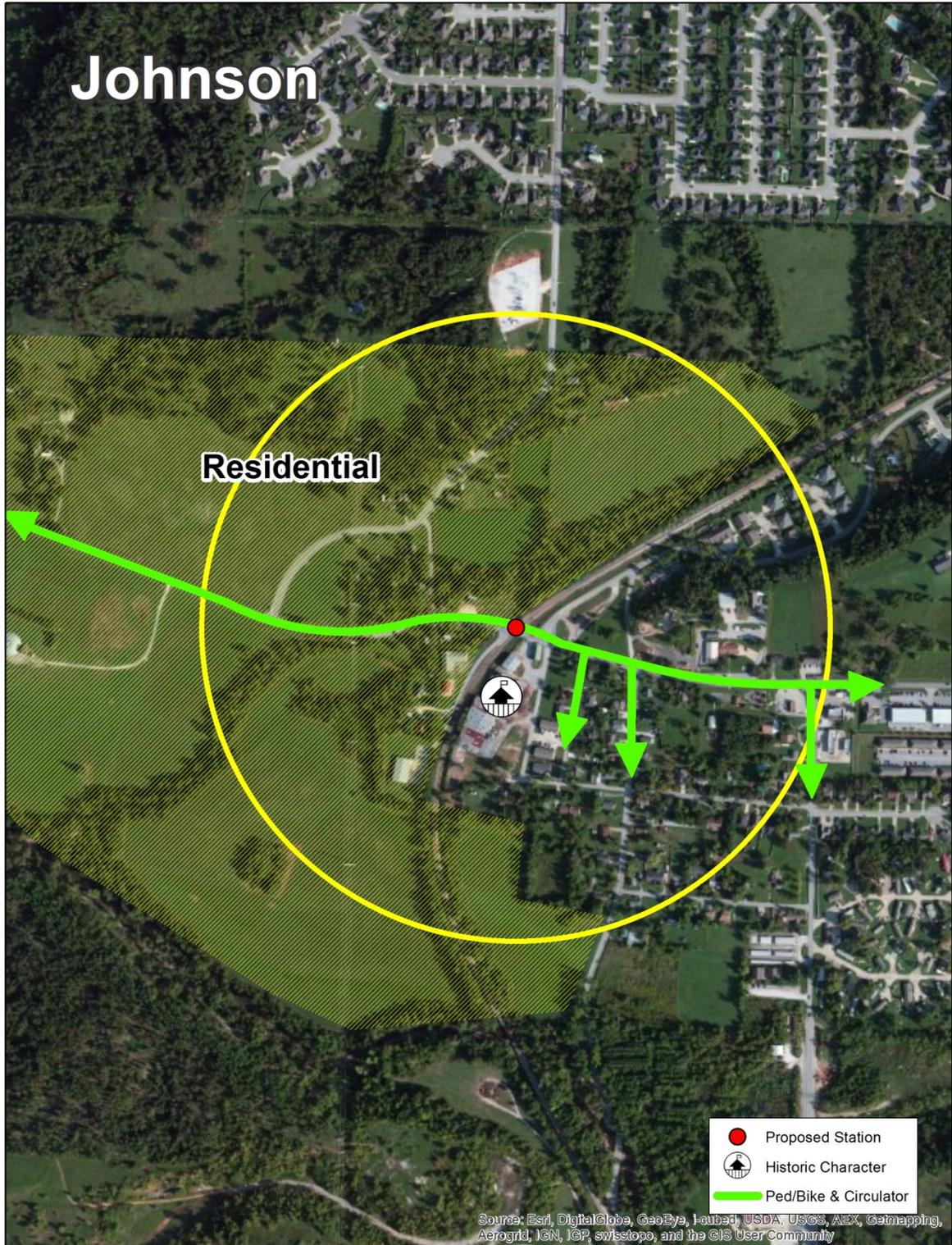


Figure 4
Johnson Station Context



Springdale

Downtown Springdale has a compact street grid and a mixture of building types built in a traditional Main Street style along Emma Avenue, as well as eclectic rail road depot and small industrial/commercial buildings. While this provides a good physical context for TOD, market demand for infill development will need to be catalyzed. The City should continue its downtown revitalization efforts including additional streetscape investments, sidewalks, bike lanes, small parks, and other investments. Some façade improvements or renovations to City and private buildings would also help to improve Downtown Springdale's image.

The station location in this analysis is shown at approximately Emma Avenue and the rail. The area within a quarter- to half-mile radius here is largely developed (**Figure 5**). Expanding employment and population around the station will require infill development and redevelopment. The City could begin creating a phased plan that identifies key redevelopment or adaptive re-use properties, and any infrastructure needs that need to be addressed to facilitate the market.

There are several neighborhoods surrounding the quarter-mile radius that would benefit from regional transit service. Additional focus should be on creating safe and attractive pedestrian and bicycle connections to the station. There are some areas of low to moderate income households, to the southeast of the station area near the Airport, which will need a better connection to the station. A circulator or feeder bus route may also be needed, potentially along Emma and West Meadow Avenue.

Lowell

A potential location for Lowell station is shown near the intersection of East Monroe Avenue and the rail alignment. Monroe Avenue as well as US-71B provide access to a large catchment area for the station. The area is developed with a mixture of strip and freestanding commercial buildings along the US-71B frontage, agricultural, and industrial buildings. Newer single family neighborhoods have been built east of the rail, and west of US-71B.

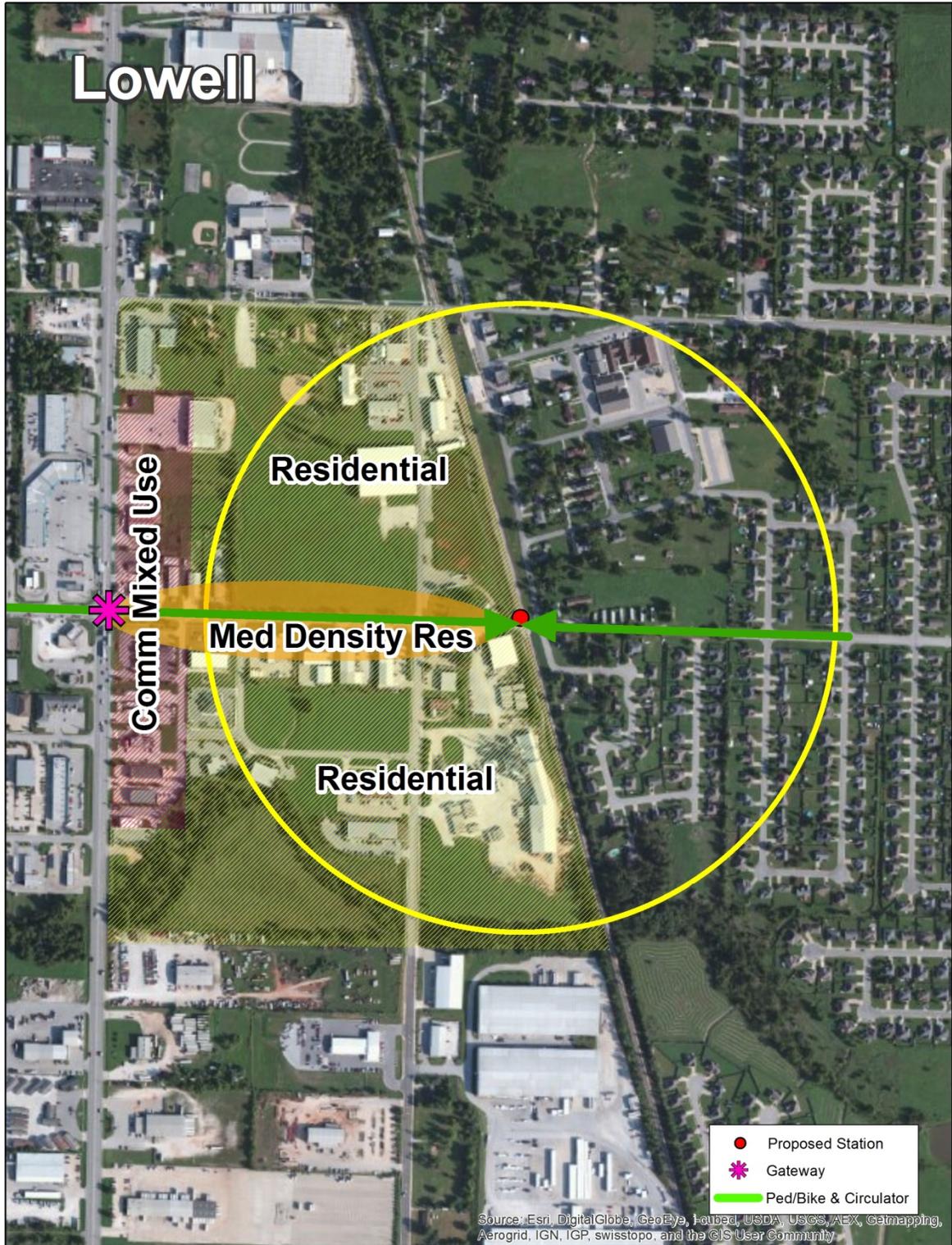
As a commuter town center station, future development is proposed to be largely residential. A mixture of medium density housing, such as apartments and possibly townhomes, could be located between the station and the US-71B frontage (**Figure 6**). The US-71B frontage and corners at East Monroe Avenue could be anchored by new commercial and mixed use development, creating a gateway into the station and surrounding development. A mixture of small-lot single family homes, townhomes, and apartments could be built as infill or as redevelopment over time north and south of the Monroe Avenue axis.

Monroe Avenue is a high capacity arterial roadway and would be the primary east-west access to the station. To encourage bicycle and pedestrian access to the station, sidewalks and bicycle lanes, with some separation from traffic, should be considered. The area also has a large suburban block pattern that inhibits bicycle and pedestrian movements. The feasibility of creating additional mid-block connections to the station from surrounding developments should be explored.

Figure 5
Downtown Springdale Station Context



Figure 6
Lowell Station Context



Rogers

A logical location for a station in Rogers is in or near the center of their downtown, which is near the intersection of Walnut Street (E-W) and 1st Street (N-S). Downtown Rogers is an 1800's main street oriented around the historic rail depot area along 1st Street. The Arkansas & Missouri Railroad has some maintenance facilities here, including a station for its excursion passenger service. The collection of 1800s 2-story buildings on Main Street and Walnut Street, combined with the railroad depot style buildings along the rail corridor provide a unique and attractive context for infill and redevelopment.

Similar to Springdale and Fayetteville, Downtown Rogers is largely built out (**Figure 7**). There are a few undeveloped parcels and surface parking lots that could potentially be developed. There are also numerous small industrial/commercial properties that could be redevelopment or re-use candidates. A station area or downtown plan in Rogers should begin identifying areas with building stock that contributes to the desired development vision, and areas where redevelopment may be acceptable. Downtown Rogers could target expanding retail and restaurant activity, small professional office, and multifamily development in and around Downtown.

Station parking should be located in a way that is convenient to Downtown Businesses and the station, potentially along 1st Street or Arkansas Street. The block pattern in Downtown Rogers is small and generally well connected, which facilitates walking from the nearby neighborhoods. Bicycle lanes could be considered on Elm and Chestnut parallel to the busier Walnut Street.

Bentonville

The City of Bentonville's SE Downtown Plan was described in the previous Chapter and is shown below (**Figure 8**). This redevelopment could be a regional and potentially national draw as a synergy with the Crystal Bridges Museum of American Art. The City's plan does not show a transit station location. We suggest that a location on the eastern edge of the property be identified, possibly along SE J Street, and that it be integrated with the plan as it is executed and developed.

This station will need to serve the Market and Arts Districts as well as The Square and the Wal-Mart headquarters. A high quality circulator service (e.g. bus or streetcar) will be essential to making this station work from a transit perspective. A circulator would also benefit these proposed districts, the Square businesses, Wal-Mart, and other major employers.

Figure 7
Rogers Station Context

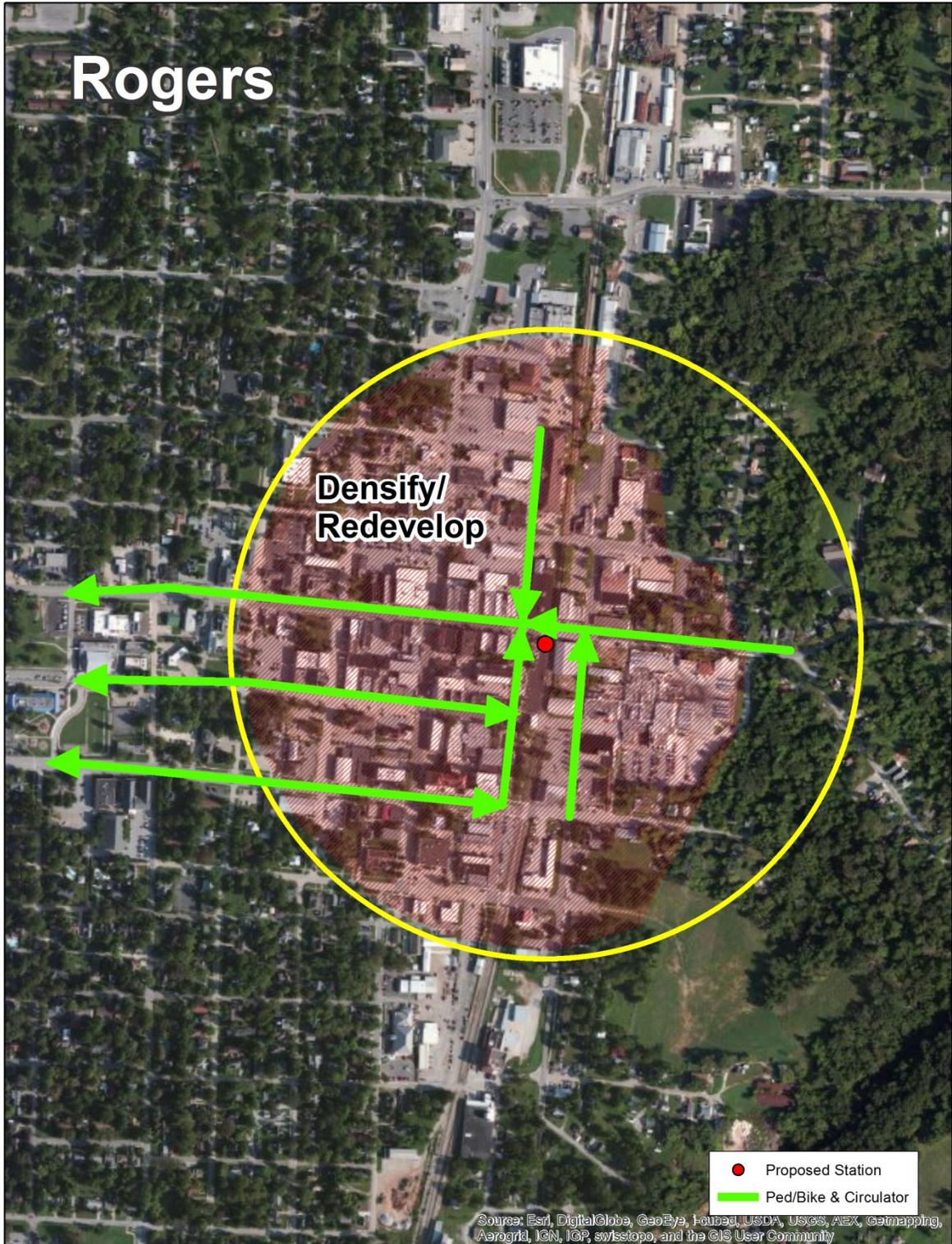
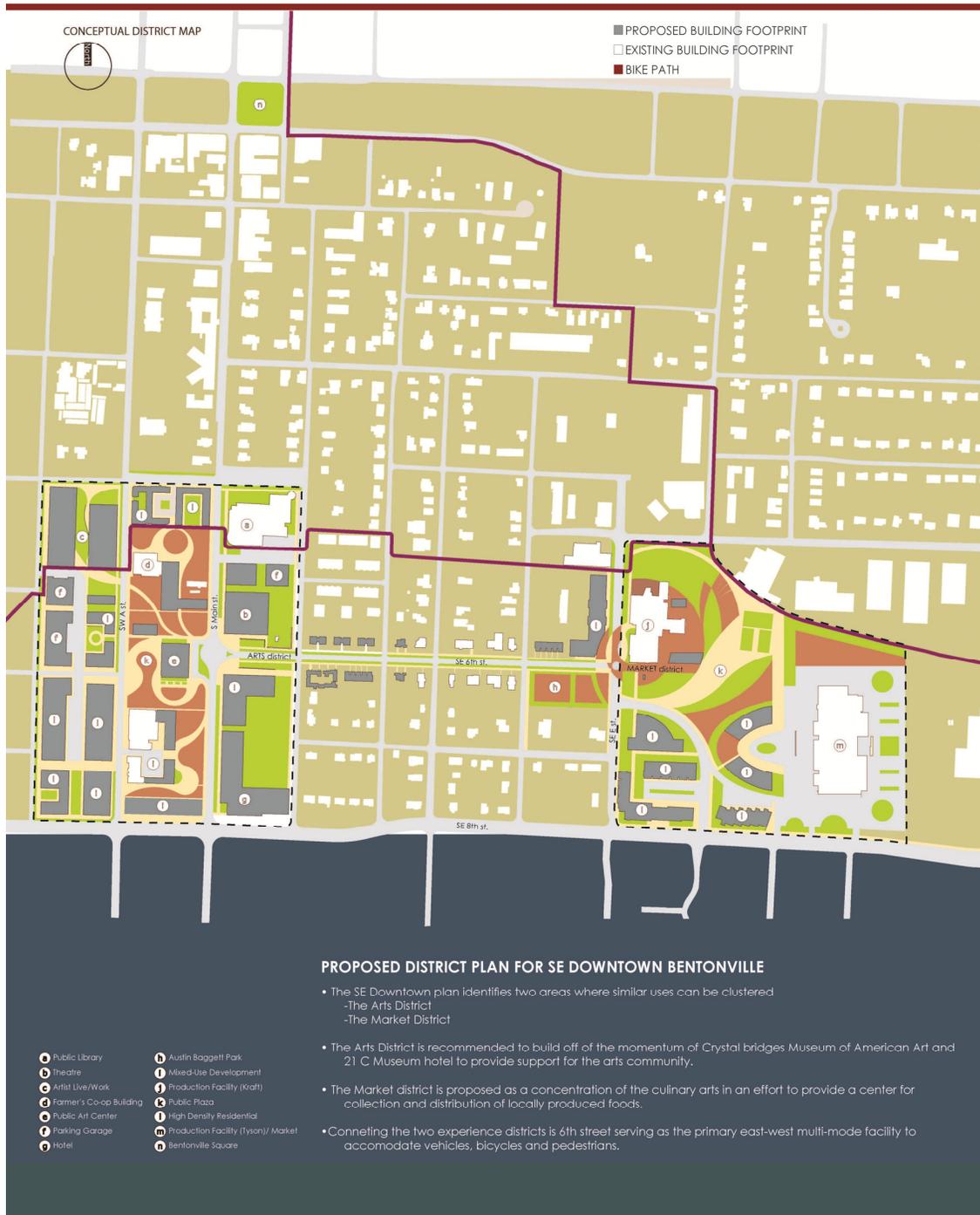


Figure 8
Bentonville Station Context

Bentonville

SE downtown.experience districts



3. TRANSIT-ORIENTED DEVELOPMENT TOOLKIT

This Chapter provides general information on the tools the local and regional government organizations can use to plan for high capacity transit service and complementary TOD. Regional and Comprehensive Plans, Zoning, Parking, and Station Area Funding and Development Incentives are covered.

Regional and Comprehensive Plans

One of the first steps in planning for high capacity regional transit is to integrate land use into the Regional Transportation Plan, and for local governments to integrate their Comprehensive Plans with the Regional Plan so that they are built on a similar set of transportation and land use policy assumptions. Through collaboration across the various local jurisdictions, the Regional Transportation Plan would reflect the common transportation and land use goals for the region. The local plans then align local land use policies, development priorities, and even zoning with the Regional Plan.

Good examples of this planning framework includes the Kansas City metro area's Smart Moves plan prepared by the Mid America Regional Council (MARC), and the Denver region's Metro Vision 2030 prepared by the Denver Regional Council of Governments. In general, these plans establish the planning framework for focusing growth around existing and planned transportation corridors, and on moving towards a more nodal and corridor oriented development pattern that can be served with regional transit.

Zoning

While zoning regulations alone cannot catalyze markets, they can shape where markets exist and are an important ingredient to creating transit supportive design. Transit-supportive zoning can accommodate complex projects and remove some of the uncertainty and costs otherwise borne by developers in areas where entitlements are not already in place. Typical TOD features such as zoning for a mix of land uses, higher densities and building heights, careful placement of parking, and a strong street wall can provide assurance to potential developers as to each city's vision for the future of the station area.

Specifically, new TOD and Mixed Use zoning standards should:

- **Encourage higher-intensity mixed land uses.** A mix of land uses—higher density residential, employment, basic goods and services, restaurants and retail—as well as careful attention to the public realm and the siting of buildings, are essential to fostering a distinctive destination. A diverse use mix helps ensure activity beyond traditional business hours.
- **Utilize build-to lines, rather than setbacks.** Specifying build-to lines rather than minimum setbacks will assure consistent street walls throughout station areas. New and redeveloped buildings should generally be placed at the sidewalk to give streets and blocks a comfortable sense of enclosure.

- **Assure compact blocks.** Blocks within TOD areas should be no more than a five-minute walk around their perimeters (about 1,320 feet or one quarter-mile). This helps to promote a compact, walkable neighborhood with good interconnectedness and variety.
- **Carefully manage parking.** Parking should be on-street and/or at the center of blocks, using liner buildings to mask the lots or structures. When impossible to mask surface lot parking, lots should be behind or to the side of buildings to minimize disruption of the street wall.
- **Provide flexibility.** Each municipality's regulatory framework should be flexible enough to allow and encourage diverse and detailed architectural facades, preserve key views, allow engaging signage and sidewalk commerce, and provide attractive furnishings, colorful plantings, public art, and other points of detail.

Parking

Station area parking can be an issue in passenger rail station areas and TODs. Neighbors may be concerned about on-street and overflow parking impacts. Planners and developers are sometimes concerned about parking demands and potential or perceived conflicts with the station or development. The development of parking plans to serve the needs of both the transit station and the surrounding development should be handled in a carefully phased and coordinated manner.

Extensive research exists related to parking management practices in general and parking policies around TOD projects in particular. One of the most comprehensive summaries of parking management around TOD is contained in *The New Transit Town: Best Practices in Transit-Oriented Development* (Hank Dittmar & Gloria Ohland, Island Press 2004). That publication lists several suggested strategies for managing parking around TOD, including:

- Configure parking so it does not dominate the site by orienting parking away from pedestrian paths, behind buildings, or in structures or underground, which frees up developable land that might otherwise have been required for parking.
- Charge for parking where appropriate to encourage use of other modes and provide a revenue source.
- In urban markets, off-street parking can be reduced by up to 30 percent in TOD projects, but changes in parking requirements should be based on the specific needs of the local development.
- Protect neighborhoods by developing parking plans for those areas most affected by transit or TOD parking through the use of residential parking permits and time restrictions and development of overflow parking contingency plans during peak periods or special events.
- Utilize on-street parking to reduce off-street parking needs, provide short-term access local businesses, and provide traffic calming effects.
- Create parking districts in larger areas around TODs with municipal parking facilities funded by in-lieu fees and annual maintenance fees.

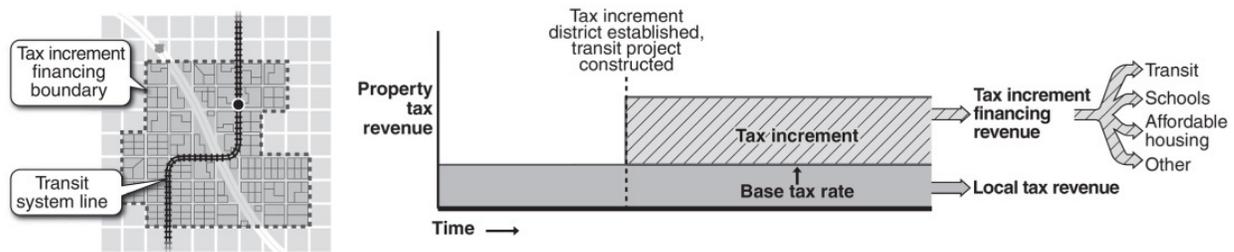
Another strategy not specifically mentioned in this publication but in many others is the use of shared parking with a transit facility. Many transit agencies work with local developers or municipalities to build a joint-use facility where a certain portion is devoted to free or paid transit parking and the remainder is available for commercial or residential purposes. In addition, these facilities can be focused on the specific temporal needs of each use; for example, in Broomfield, Colorado, the Regional Transportation District (RTD) built a shared-use parking facility next to a new events center that provides parking for transit patrons during weekdays but is available for paid parking for events center attendees at nights and on weekends.

Station Area Funding and Development Incentives

The Arkansas Legislature has enabled several financing tools that can be used by local governments to pay for infrastructure and revitalize downtowns and redevelopment districts. Many of these tools can be used for transit station area improvements and to incentivize or attract TOD and other new development or redevelopment.

Redevelopment Districts and Tax Increment Financing

The Arkansas Constitution enables local governments to issue bonds or notes to finance improvements in a redevelopment district. The bonds will be paid back from the increased tax revenue generated as a result of the improvements. A redevelopment district must be in an area that is considered blighted, deteriorated, or underdeveloped. Tax increment financing or "TIF" captures the growth in assessed value and property tax revenue and uses this revenue to incentivize development or pay for amenities and other improvements such as streetscaping, utilities, road and circulation improvements, station area parking, and bicycle and pedestrian facilities. TIF is a widely used tool in TOD to pay for improvements needed to help establish a market and attract investment and development.



Tax increment is collected from properties within tax increment financing boundary and used to pay for redevelopment activities, including transit.

Improvement Districts

Arkansas Law also allows several types of improvement districts, which are real estate or land based funding and financing tools that use property tax levies to pay for a specific set of improvements. The property tax revenue can be used to pay the debt service on bonds, which allows improvements to be constructed earlier than with a pay-as-you-go approach. The districts that are most applicable to downtown, deteriorating commercial corridors, and TOD are summarized below.

- **Municipal Improvement District** – MIDs are authorized to levy property taxes to construct and maintain a wide range of public improvements and facilities including utilities, off-street parking facilities, sidewalks, benches, and recreational areas. Forming a MID requires a signed petition from a majority of property representing the majority of the assessed value in the proposed district.
- **Suburban Improvement District** – SIDs largely apply to unincorporated areas, although they can include a portion of a municipality. The types of improvements a SID is authorized to construct are more limited than a MID. SIDs are designed to fund and construct utilities, waterworks, streets, sidewalks, and similar improvements, rather than broader public realm improvements such as recreation areas and parking facilities. A SID also requires a signed petition from a majority of property representing the majority of the assessed value in the proposed district.
- **Property Owner's Improvement District** – Property owners can on their own form a district with a petition of 100 percent of the property owners in the district. Like a MID, POIDs are authorized to fund and construct a broad range of facilities including utilities, roads, sidewalks, recreation facilities, stadiums, clubhouses, auditoriums, parks, green belt areas, and "any other facilities to provide for the recreation and cultural needs of the owners of the lands within the district". This type of district could be used early in a development project to pay for neighborhood or community amenities, and would likely be established by the land development before land or buildings were sold to residents or commercial property owners, since it requires approval of 100 percent of property owners.