

LAMTPO US 11E/SR 34/W. ANDREW JOHNSON HWY CORRIDOR STUDY
TASK 2: CORRIDOR CHARACTERISTICS – TECHNICAL MEMORANDUM

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INTRODUCTION

The Lakeway MTPO is the metropolitan planning organization for the region consisting of Morristown, Jefferson City, White Pine, Hamblen County, and portions of Jefferson County. The Lakeway Area Metropolitan Transportation Planning Organization (LAMTPO) has determined the need to identify short and long-term transportation improvements to US 11E/SR 34/W. Andrew Johnson Highway from Old Andrew Johnson Highway East (near the Hamblen/Jefferson County line) to Walters Dr/W. Morris Blvd (in Morristown, TN). This route serves as a major corridor in east Tennessee, extending from Knoxville to Bristol, and provides a parallel route to Interstate 81 through Hamblen County. As the City of Morristown and the Lakeway region continue to grow and attract investment, enhancing the operational efficiency of the corridor and improving the route to accommodate current and future traffic volumes will be critical. The focus of this study is the following:

- Multimodal safety enhancements that facilitate reliable travel for all modes throughout the corridor
- Capacity improvements to maintain and improve level of service (LOS) and accommodate increased traffic and congestion
- Ensure safe access to businesses located along the corridor through access management needs and considerations

To identify the most sustainable corridor improvements, an evaluation of current corridor characteristics as well as existing transportation systems and facilities is needed. Corridor recommendations will be shown in a final report and will be developed using a holistic approach that combines these efforts with detailed traffic analysis and feedback from public participation (to be completed in subsequent tasks of this study).

CORRIDOR OVERVIEW

US 11E/SR 34/W. Andrew Johnson Highway is one of the main transportation routes used throughout the City of Morristown, providing a primary connection running southwest to northeast and connecting to several main routes within the Lakeway Region, including SR 160/Air Park Blvd, SR 66 (Merchants Greene Blvd), and W. Morris Blvd, and running parallel to Interstate 81 through Morristown and Hamblen County more broadly. The route was originally constructed for thru-travel but is now a less desirable route for that purpose because most of the adjoining commercial development directly accesses the highway. The LAMTPO's current long-range plan (LRTP) includes a project to evaluate the potential of combining or reducing the number of driveways on certain sections of US 11E. Although the best opportunity to make such changes is when properties redevelop, alterations to access may also be initiated when congestion and accidents become a serious problem on a particular section of roadway. The LAMTPO's current LRTP also identifies the need to make investments in corridors that serve the majority of freight and commuting movements, including US 11E, and encouraging reinvestment in existing communities to increase community revitalization and efficiency of investments.

As outlined in Figure 1, the study area is approximately seven miles long and is divided into three distinct roadway segments for purposes of analysis, based on existing land uses and development opportunities:

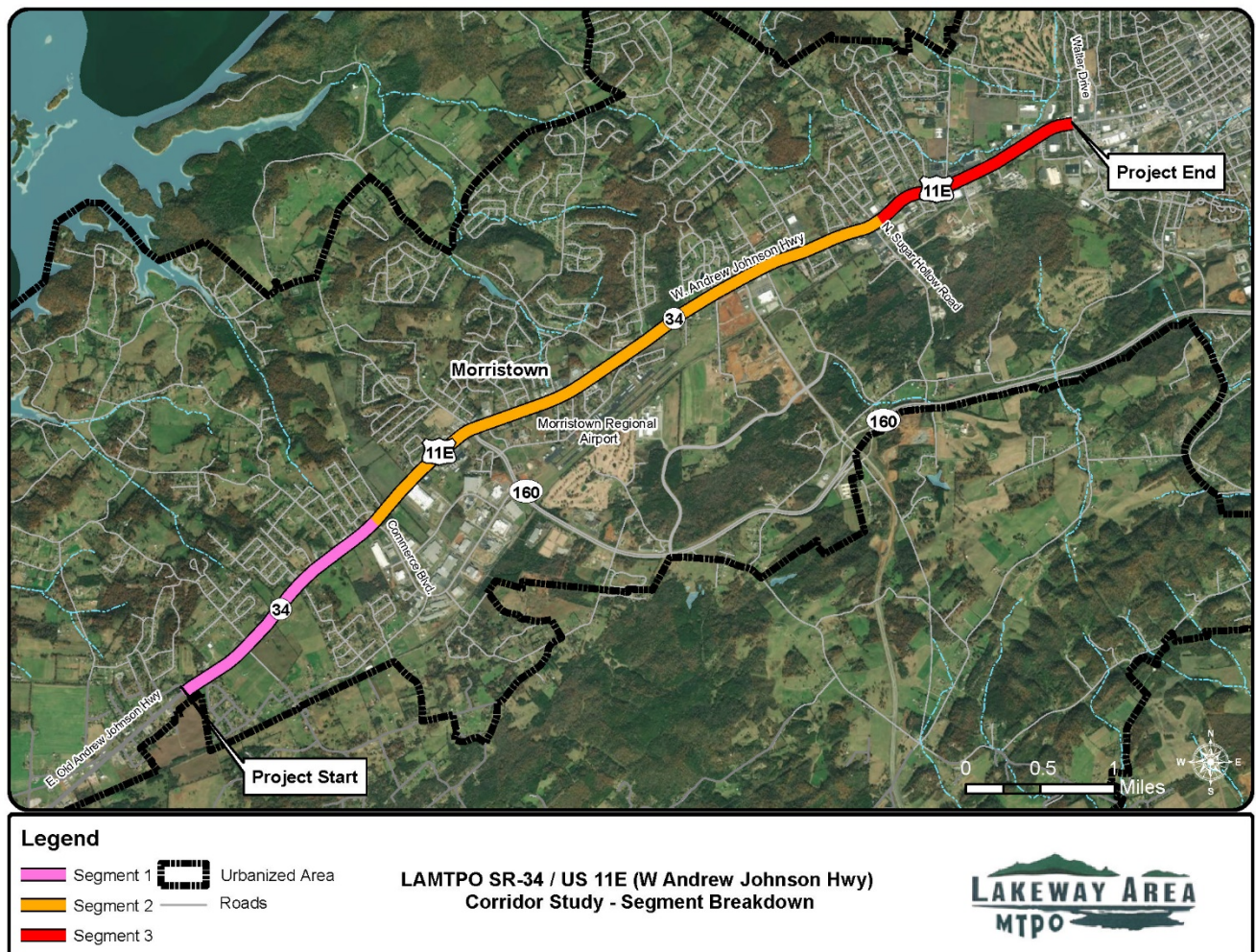
- **Segment 1** – Old Andrew Johnson Highway in Jefferson County to Commerce Blvd
- **Segment 2** – Commerce Blvd to just east of N. Sugar Hollow Rd
- **Segment 3** – East of N. Sugar Hollow Rd to Walters Dr/W. Morris Blvd

The corridor is classified as a principal arterial throughout and has two typical roadway sections:

- Four-lane divided highway with depressed median from western project limits in Jefferson County to N. Sugar Hollow Rd (Segment 1 and Segment 2)

- Five-lane highway with curb and gutter from N. Sugar Hollow Rd to Walters Dr/ W. Morris Blvd (Segment 3)

Figure 1. Corridor Segments



CORRIDOR CHARACTERISTICS ANALYSIS

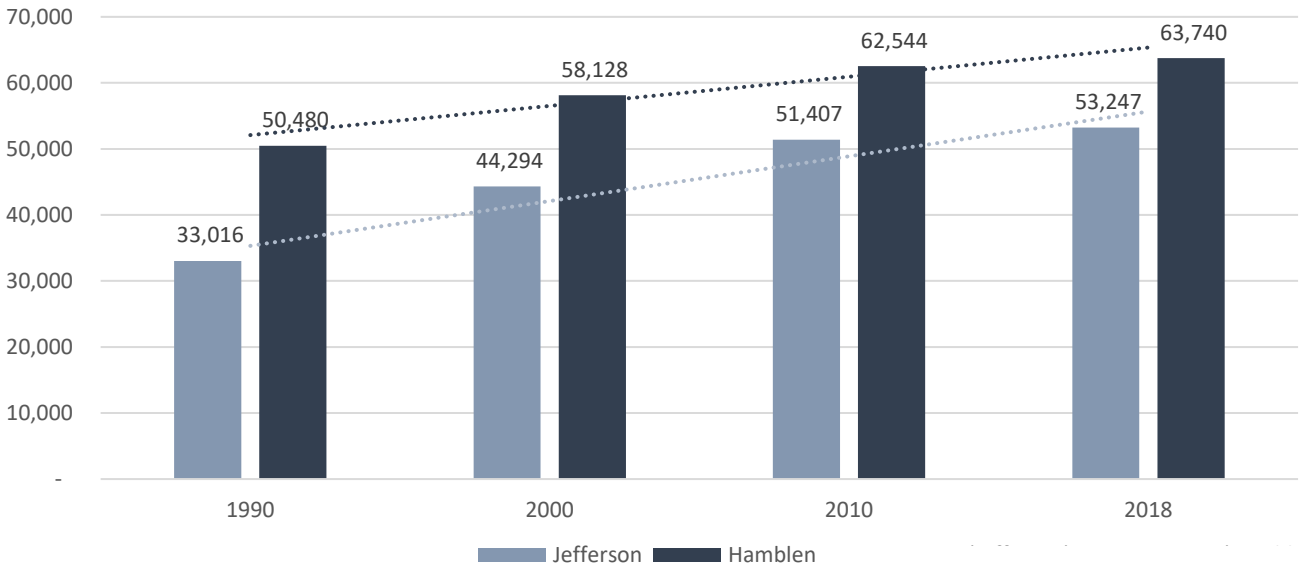
An evaluation of current corridor characteristics, including existing land use patterns in the vicinity of the corridor, development patterns, and future land use is needed in order to recommend potential transportation improvements that meet traffic demand and address operational and/or safety issues throughout the corridor. The analysis included in this technical memorandum is focused on Segment 2 and includes a discussion of population, employment, development trends, as well as land use patterns throughout Segment 2 of the corridor, between Commerce Blvd and East of N. Sugar Hollow Rd. Subsequent tasks as part of this study will evaluate and identify safety, capacity, and access management opportunities for all segments identified in the corridor.

GROWTH ALONG THE CORRIDOR

Historical Growth

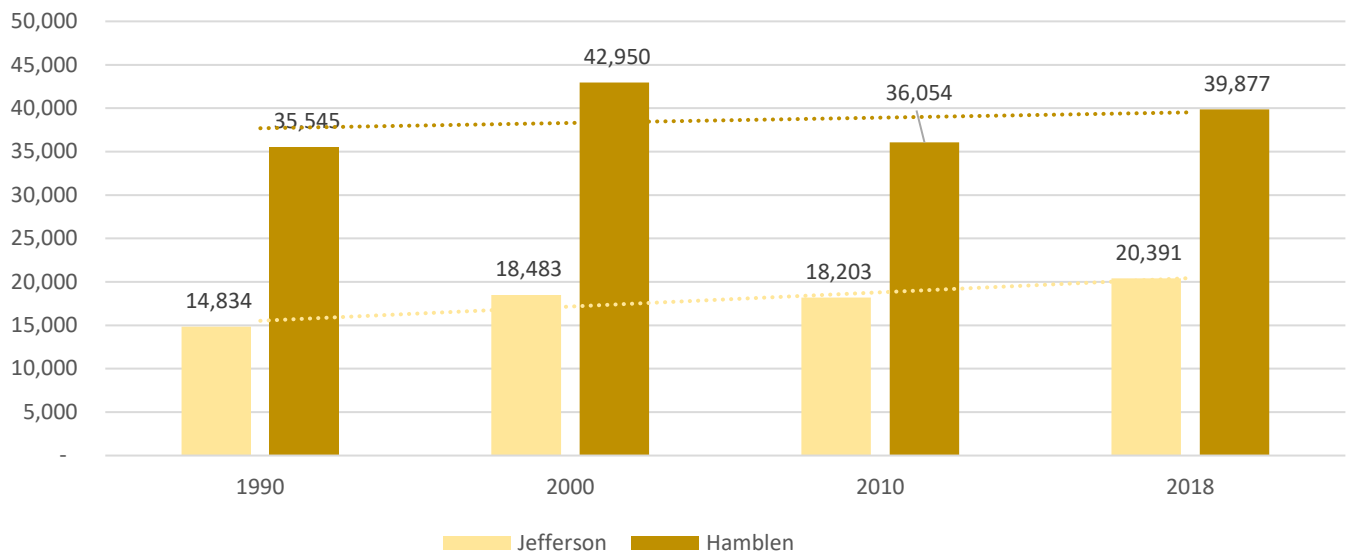
Historical growth and development trends help inform an understanding of development in the region and are critical to establishing socioeconomic projections used to forecast transportation demand and prioritize investments for the future. Since 1990, both population and employment have increased in both counties that overlap with the LAMTPO region, with Hamblen County and its incorporated areas being home to the majority of residents and jobs in the region. Historical data from the decennial Census, American Community Survey (ACS), and Bureau of Economic Analysis (BEA) show Hamblen County and its incorporated areas as the center of jobs and residents in the region. While population has grown steadily as seen in Figure 2, total employment declined between the 2000 and 2010 decennial Census (Figure 3), and has since rebounded. This is likely a result of the greater economic recession experienced nationwide in the late 2000s.

Figure 2. Population Growth (1990-2018)



Source:
2018: ACS Resource: Table B01003, 5-year estimates
2010: Census 2010: Table P1 (SF 1a - P & H Tables [Blocks & Larger Areas])
2000: Census 2000: NP001A (SF 1a - 100% Data [Areas Larger Than Block Groups])
1990: Census 1990: Source NP1 (STF 1 - 100% Data)

Figure 3. Employment Growth (1990-2018)



Source: BEA Regional Data, CAINC30 Economic Profile - Total Employment (number of jobs)

Future Growth

Although the LAMTPO planning data does not support projections specifically for a small buffer on either side of the corridor, it is possible to estimate corridor growth from the traffic analysis zones (TAZ) used for the regional travel demand model. These projections, developed in coordination with local governments, show that population and employment growth is expected to continue within the region over the next 20 years, with growth in the corridor and Segment 2 outpacing regional growth (Table 1). According to the LAMTPO's current 2040 LRTP, the area along US 11E east of the Hamblen/Jefferson County line is anticipated to be a significant hot spot for new employment in the region, with high rates of job growth also projected for SR 66 (Merchants Greene Blvd), which opened to traffic in late 2020 and improves connectivity between Interstate 81 and the US 11E corridor through Morristown. A compilation of data from zones adjacent to US 11E Segment 2 verifies this and indicates more than 5,500 new residents and more than 5,000 new jobs in the immediate vicinity of Segment 2. With an overall length of four miles, this translates to approximately 1,380 new residents and over 1,300 new jobs per mile along this segment of the corridor (See Figure 4 and Figure 5).

Table 1. Projected Population and Employment Change, 2014-2040

	Population				Employment			
	2014	2040	Growth	% Growth	2014	2040	Growth	% Growth
Segment 2	11,378	16,918	5,540	49%	9,727	14,971	5,244	54%
All Segments	17,275	26,457	9,182	53%	12,871	19,129	6,258	49%
LAMTPO Region	90,923	118,962	28,039	31%	43,551	58,772	15,221	35%

Source: LAMTPO Regional Travel Demand Model

Figure 4. Population Growth (2014-2040)

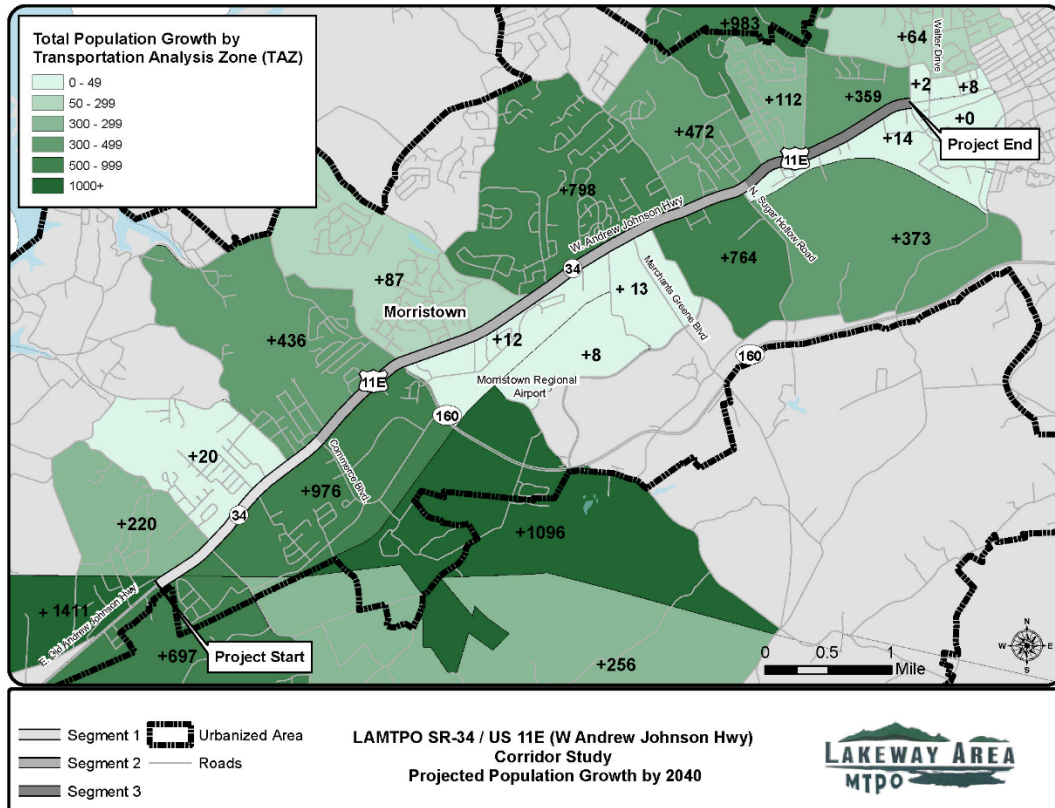
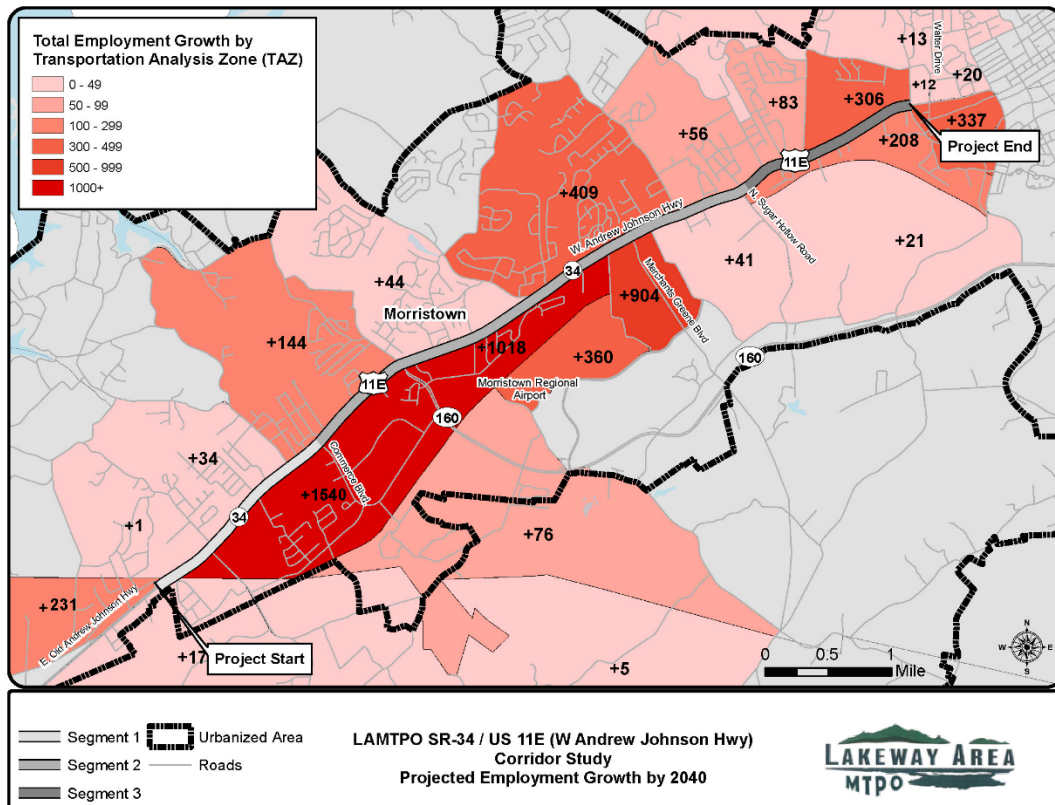


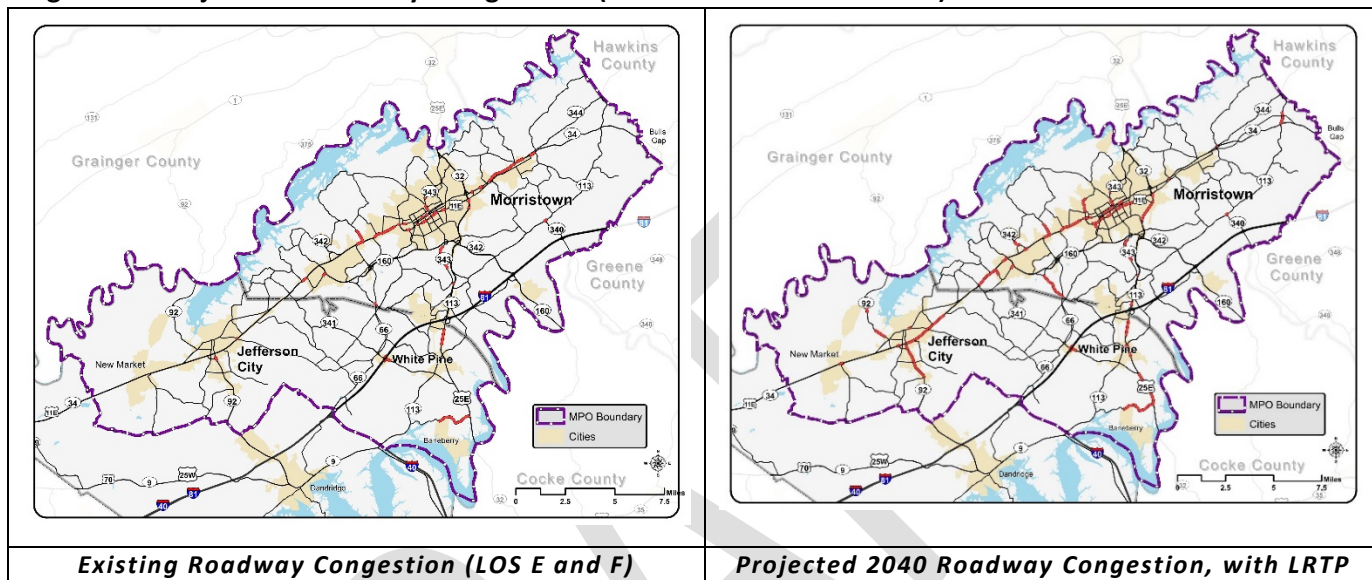
Figure 5. Employment Growth (2014-2040)



Impact of Travel Conditions

The projected growth is anticipated to have a significant impact on travel conditions in the region, and along the corridor specifically. The region's travel demand model uses the population and employment projections developed in coordination with LAMTPO member jurisdictions to predict the impact that this growth will have on traffic volumes, travel demand, and level of service on roadways. Figure 6 shows a side by side comparison of current roadway congestion compared with congestion that is anticipated if all cost-feasible projects in the LAMTPO's current LRTP are constructed.

Figure 6. Projected Roadway Congestion (2014 vs 2040 with LRTP)



Source: LAMTPO 2040 Long Range Transportation Plan (LRTP)

The current LRTP includes projects along all three segments of the corridor study area to help enhance the safe and reliable movement of all modes of transportation along US 11E. Segment 2 specifically includes one project for intersection improvements at US 11E and Kidwell Ridge Road. If this and other projects proposed as part of the LAMTPO's current LRTP are implemented, congestion is expected to continue along US 11E through western areas of Morristown and key intersections along Segment 2, including the intersection at Merchants Greene Blvd (SR 66). Key intersection improvements on this segment may help alleviate congestion and improve safety throughout the corridor. A more detailed analysis of transportation performance throughout the corridor will be undertaken as part of Tasks 3, 4 and 5 of this study.

LAND USE AND ZONING CONSIDERATIONS

The US 11E corridor is home to several land use types, including residences, industrial facilities, and a variety of commercial uses. The City of Morristown and Hamblen County both have zoning regulations that specifically define and regulate what uses are allowed on specific lots and parcels. These documents regulate the location, height, bulk, number of stories and size of buildings or other structures, the percentage of lot which may be occupied or covered, the size of yards, courts and other open spaces, the density of population, use of buildings, and other considerations. Since Morristown's city limits extend throughout the US 11E corridor, its zoning and subdivision regulations apply to development of property within the corridor, as well as the industrial and airport facilities to the south. Hamblen County regulates property outside of the city limits, including residential property north of the corridor and industrial and agricultural areas south of the corridor. Hamblen County also has jurisdiction over a small stretch of the corridor in Segment 2 on the north side of 11E just east of Woods Drive.

Zoning in the area of Segment 2 is shown in Figure 7 and described in Table 2 below.

Table 2. Zones in Corridor

Zone	City of Morristown ¹	Hamblen County ²	Description
Agricultural/Forestry	A1	A1	Applies to land used for agriculture, forestry, fishing, open space, etc. Low density residential uses are permitted here.
Light Industrial	L1	I1	Land for light and general manufacturing and warehousing, storage, distribution, machine shops, etc. Residential uses are typically not permitted in these areas.
Airpark Light Industrial	ALI		The Airpark Light Industrial district in the City of Morristown provides for specialized manufacturing, storage, and distribution uses near the Morristown Regional Airport which require direct access to the airport taxiway.
Heavy Industrial	H1		Land for manufacturing and other uses which may have an adverse effect on surrounding land. Examples include wrecking yards, assembly plants, gasoline or oil storage, machine shops, warehousing, and truck terminals.
Intermediate Business (Commercial)	IB		This commercial zoning designation is described in the Morristown Zoning Ordinance as more intense commercial activities like car washes, hotels, gas stations, shopping centers, parking garages, etc.
Office, Medical, Professional (Commercial)	OMP	C1	Morristown defines OMP as a transition area in which offices coexist with medium density residential. Offices and services like beauty shops, lawyers, day cares, and certain restaurant types are permitted. Hamblen County's definition of the C1 zone includes commercial activities like shopping centers, retail outlets, professional offices, etc.

¹ Zoning Ordinance, City of Morristown, Tennessee, 2020, http://cms.revize.com/revize/morristown/Dev&Planning/Zoning%20Ordinance/Zoning_Ordinance_8_18_20.pdf, accessed October 30, 2020

² Hamblen County Zoning Resolution, Amended 2020, <https://www.hamblencountyn.gov/wp-content/uploads/delightful-downloads/2020/06/Zoning-Regs-20200526.pdf>, accessed October 30, 2020

Planned Commercial Development	PCD		Allowable uses in this district include appliance stores, bakeries, delis, pharmacies, grocery stores, hotel/motels, daycares, theaters, etc. Access management and limiting curb cuts is a key objective for this use to ensure better traffic flow and circulation, with objectives of promoting a more pedestrian friendly atmosphere and allowing developers more flexibility and creativity in development design.
Mobile Home Park	MHP		Land developed and located to provide safe and sanitary living conditions for mobile home occupants; and to be convenient to employment, shopping centers, schools and other community facilities.
Single Family Residential/Rural Residential	R1, RD1	R1	Residential uses with lot sizes no less than 15,000 square feet. Titled Rural Residential by Hamblen County. In Morristown, also includes small lot single family residential (RD1) with a minimum lot size of 5,500 square feet (sf).
Medium Density Residential	R2		Minimum lot size of 7,500 sf for single residence, 11,000 sf for two residences, and 14,500 for three or more. Maximum is 12 dwelling units per acre (du/acre).
High Density Residential	R3		Minimum lot size of 5,500 sf for single residence and 11,000 sf for two and three residences. Maximum is 20 du/acre.
Planned Residential Development	RP1		Residential designation that encourages more creativity in planned residential developments. All development must be approved by the Planning Commission. No minimum lot size, with a permitted density of up to 20 du/acre.

While all of the above-mentioned zones are present in the vicinity of Segment 2, the current land use pattern is predominantly commercial uses immediately adjacent to the road, large residentially zoned areas north of the corridor to Cherokee Lake, and a combination of industrial, agricultural and airport uses south of the corridor. Specifically, Segment 2 is dominated by intermediate business zoning on the corridor. This zone allows for a variety of commercial uses ranging from banks and veterinary clinics, to churches, theaters, and microbreweries (Section 14-1002).³ There is no minimum lot size for this district. Based on current development patterns in the corridor, which include dine-in and fast food restaurants and religious organizations, Segment 2 is likely to attract primarily local trips from residents in the Morristown area. The presence of several automobile dealerships may also draw trips from outside of Morristown's city limits.

Morristown Regional Airport is also located within Segment 2, south of US 11E. Morristown Regional Airport is a general aviation facility with a 5,700-foot long runway, located adjacent to Morristown Airport Industrial District. In addition to the airport, Segment 2 is home to Alpha Elementary School near the intersection with SR 160/Airpark Blvd, Wayne Hansard Park off of Airpark Blvd south of US 11E., and the West Hamblen County Fire Department at Meadowood Drive.

³ Zoning Ordinance, City of Morristown, Tennessee, 2020, http://cms.revize.com/revize/morristown/Dev&Planning/Zoning%20Ordinance/Zoning_Ordinance_8_18_20.pdf, accessed October 30, 2020

Several prominent employers are located on Commerce Blvd near Segment 2, including JTEKT Automotive, Alcoa Howmet Corporation, and Team Technologies, Inc. The location of these employers may lend itself to the corridor serving as a primary commuter route within the region.

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Figure 7. Corridor Zoning



Note: Zones symbolized based on zoning classifications described in *Table 2*.

Looking into the future, US 11E is expected to continue to be a major commercial and industrial corridor in the region. The future land use designation for the corridor, shown in Figure 8, emphasizes a desire to develop Segment 2 in the vicinity of Merchants Greene Blvd, and largely maintain the residential character of the corridor on the north side of US 11E. As a result, it is anticipated that US 11E will continue to serve as a primary route for commuters traveling to and from downtown Morristown and to industrial and commercial employers along the corridor. Many uses currently classified as vacant or “other” are expected to develop in line with adjacent properties. For example, land surrounding the airport is planned for industrial development, and the vicinity of the US 11E/Merchants Greene Blvd intersection is planned for enhanced commercial uses.

As the area grows and economic development initiatives continue to draw residents and employers to the region, the value and efficacy of specific zoning regulations on transportation-related safety, multimodal accessibility, and transportation operations will need to be evaluated. For example, Morristown’s Zoning Ordinance outlines minimum parking requirements in Section 14-216-3, “Off Street Parking Requirements,” generally outlining one space per 250-300 square feet of office space and 1.25 spaces per every employee for industrial uses. It also includes a section on Access Management (Section 14-218, “Control of Access”) with the objectives of promoting safe travel for drivers and pedestrians and alleviating traffic congestion. Section 14-209 addresses pedestrian movement throughout the City and requires a pedestrian walkway to connect buildings to public right-of-way. This may be a sidewalk, bright white-painted striped marking, or five-foot paved hard asphalt. Having new development comply with these requirements in a manner that encourages safe travel for motorized and non-motorized travelers, while also improving reliability and operations of the corridor, will be critical.

Figure 8. Future Land Use

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DEVELOPMENT PATTERNS

The LAMTPO's 2040 LRTP includes a number of livability principles guiding growth and development throughout the region and along primary corridors that run through the region's communities, including US 11E. One of these is focused on economic competitiveness and the "reliable and timely access to employment centers, educational opportunities, services, and other basic needs by workers, as well as expanded business access to markets" and the subsequent need to invest in primary corridors to help facilitate freight and commuting movements throughout the region. This principle works in tandem with other efforts in the plan, including targeting strategic transit-oriented, mixed-use development to promote community revitalization throughout the region.

As noted in the previous section, development in Segment 2 is managed by two local governments: the City of Morristown and Hamblen County. Each entity has adopted zoning ordinances and regulations to regulate land uses and development patterns and have also adopted subdivision regulations to organize the division of land and to govern the platting and land division process. Future land use designations shown in Figure 8 emphasize a desire to maintain the overarching character of the corridor today, outlining growth of industrial and municipal services south of the corridor adjacent to the airport, commercial development around the intersection of US 11E and Merchants Greene Blvd and to the east, and residences north of the corridor. The relocated SR 66, which opened to traffic in November 2020, will provide enhanced connectivity between Segment 2 and Interstate 81, providing a catalyst for further commercial development along Merchants Greene Blvd.

While significant development has occurred east of the study corridor in downtown Morristown and east of downtown, the west side has also seen growth over the past several years. The City of Morristown's Development Application includes several GIS databases, including information related to new development occurring within the city.⁴ New development along Segment 2 includes restaurants and commercial development at the intersection of US 11E and Merchants Greene Blvd, a new community center south of the corridor on Durham Landing scheduled to open in spring 2023, industrial growth and expansions in the airport district, and the Volunteer Surgery Center at 6242 W. Andrew Johnson Hwy on the western portion of Segment 2. Beyond these developments, the Morristown Area Chamber of Commerce has identified three industrial sites and buildings for sale or lease near Segment 2.⁵

- **Retail at Cherokee Crossings (Winkler Avenue)** – 15-acre shopping development located in west Morristown across from new Walmart and Merchant's Greene development, to include Aldi grocery, Knoxville TVA Employees Credit Union, four fast casual restaurants and a newly opened Chili's Bar & Grill.
- **Retail – Merchant's Greene (Merchants Greene Blvd)** – 80-acre retail development in west Hamblen County anchored by Wal-Mart. A 25,000 sq. ft. strip center currently has vacancies. Future development will include an additional 150,000 sq. ft. of retail space and 12 outparcels on the west side of Merchants Greene Blvd.
- **Trellborg Building (Commerce Blvd)** – Industrial building consisting of over 146,000 sq. ft., on 9.4 acres located in the Morristown Airport Industrial District. It includes over 134,000 sq. ft. of industrial space, 8,000 sq. ft. of office space and 4,000 sq. ft. of shipping/receiving space.

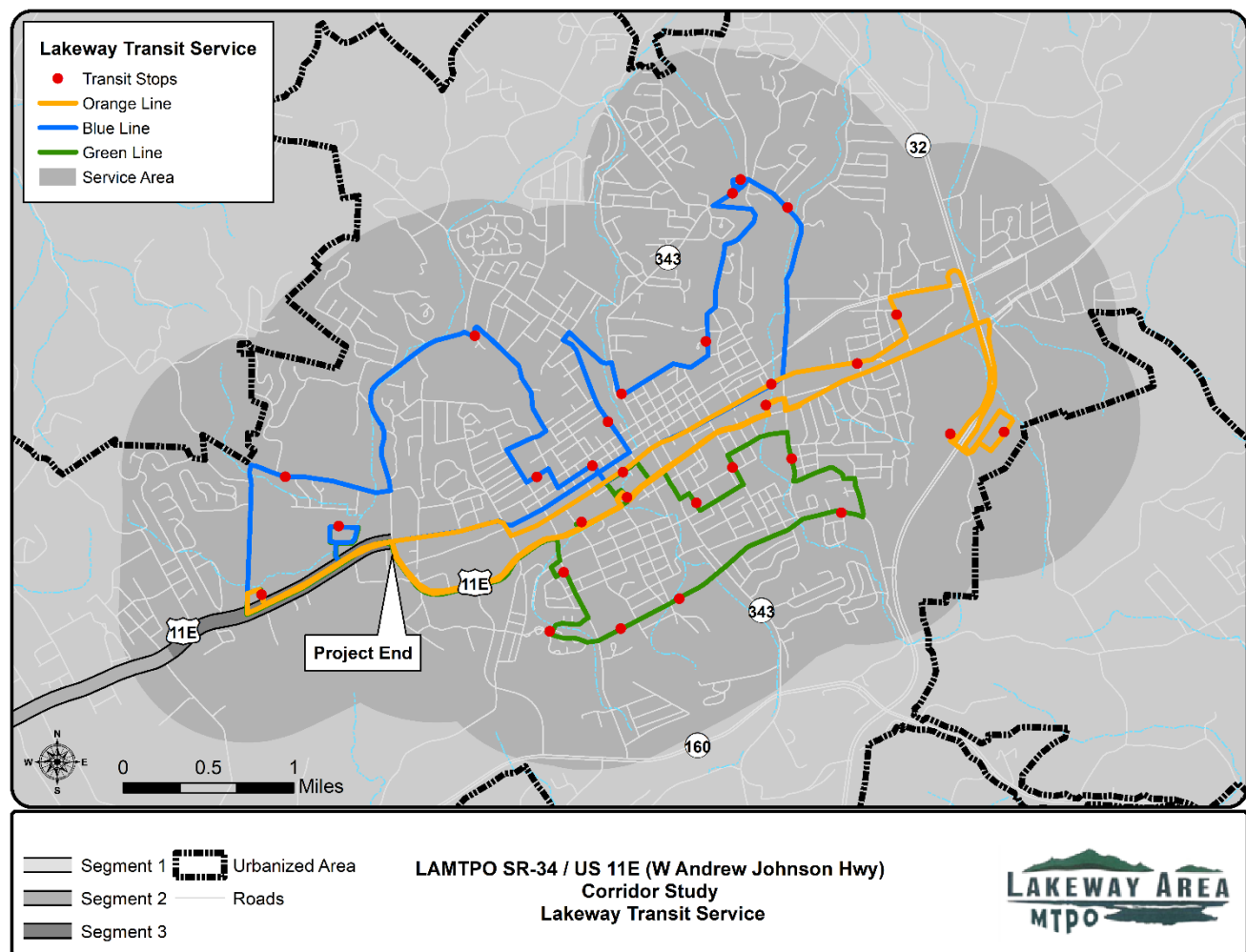
To help accommodate growth and development in the region, LAMTPO and the East Tennessee Human Resource Agency (ETHRA) will soon launch a fixed-route bus system that serves several main corridors throughout

⁴ Morristown TN New Development App, <https://mh-gis.maps.arcgis.com/apps/Shortlist/index.html?appid=e3fbb7c68bfd4c7493e80e2b6677611f>, accessed 23 October 2020.

⁵ Morristown Area Chamber of Commerce, <https://selectmorristowntn.com/sites-buildings/>, accessed October 21, 2020.

Morristown. This will provide an alternative mode of transportation to shopping, medical, industrial, and residential areas. System hours will be Monday through Friday from 7:00 a.m. to 6:00 p.m. Three routes will serve the city, with the eastern terminus of all three being the ETHRA Transit Hub right off of US 11E near West Economy Road (Segment 3).

Figure 9. Lakeway Transit Service



The Orange Line provides connectivity between Segment 3 and various businesses in downtown along Main Street and Morris Blvd, including the Super Wal-Mart and Walters State Community College off of US 25E east of downtown. The Blue and Green Lines both provide connectivity to destinations and development near Cold Creek Drive and Walters Drive, including Food City, businesses along Sandstone Drive, Sykes Enterprises, and several fast food restaurants.

Given the projected population and employment growth for the area, future land use plans, and projected roadway level of service and congestion identified in LAMTPO's LRTP, transit and other transportation improvements focusing on the safe and reliable movement of people and goods are needed to help facilitate improved access to employment centers and achieve community revitalization principles identified in long-range planning efforts. Subsequent tasks undertaken as part of this study will evaluate transportation conditions,

including current roadway cross sections, driveway patterns, and operational and safety issues along the corridor. Based on current and anticipated corridor characteristics, as well as the analysis of transportation conditions, recommendations to help meet traffic demands and address operational and safety issues will be developed.

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