

# Land Use Assessment

---

## Transit Vision Plan for the Charlottesville Area

### Background and Purpose

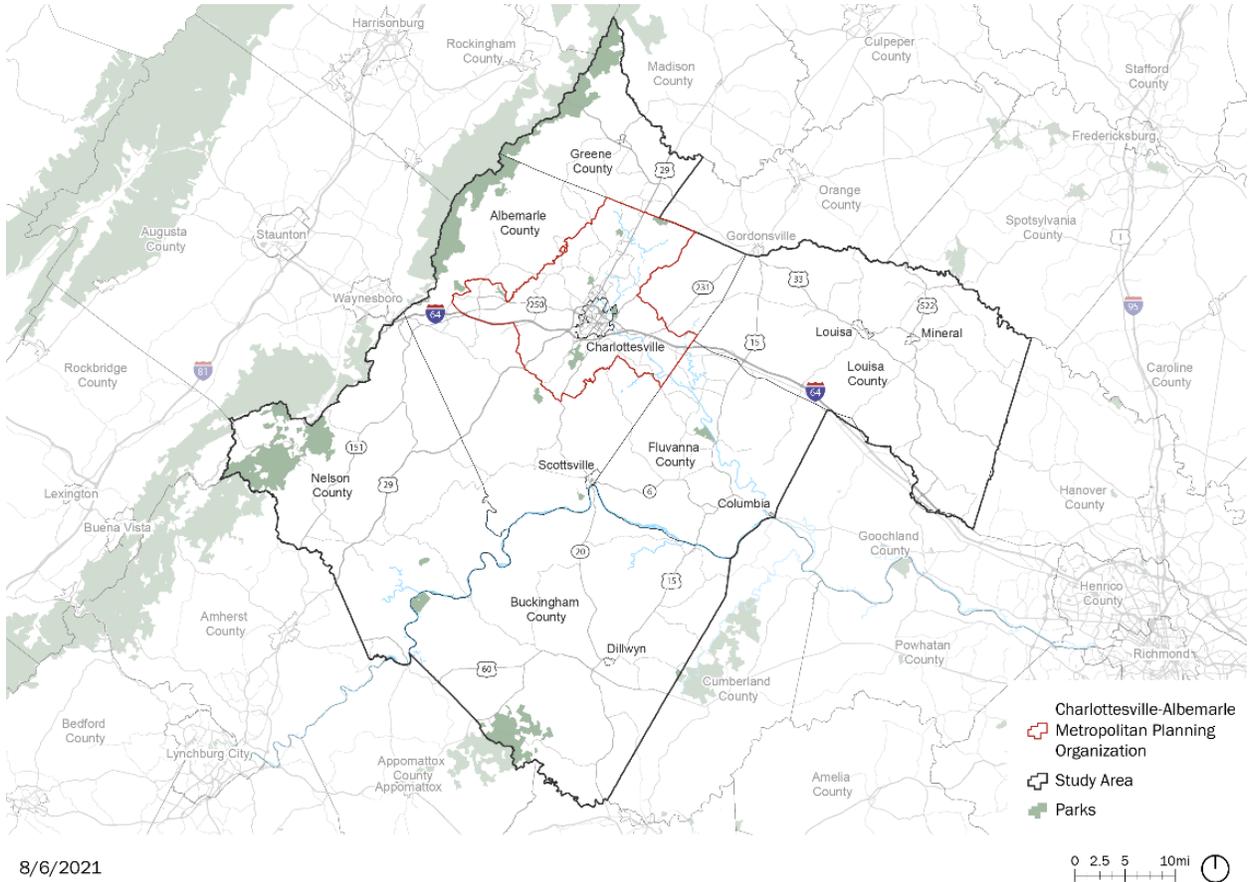
The *Regional Transit Vision Plan for the Charlottesville Area* is a study effort that seeks to develop a single, unified vision for the future of transit service in the Charlottesville area. The Thomas Jefferson Planning District Commission (TJPDC) initiated this effort to provide a basis for increased cooperation and collective action among the region's transit providers. The Vision Plan is a next step for the Regional Transit Partnership (RTP), which the TJPDC formed "to provide recommendations to decision-makers on transit-related matters."

One of the critical first steps in this planning and visioning effort is completing a Land Use Assessment of the study area. Land use patterns and transportation systems are always interrelated subjects. However, the connection between the two is especially significant for transit services. Traditional transit systems are almost always most efficient and successful in places with land use patterns featuring characteristics such as mixed-uses, relatively high densities, and widely available bicycle and pedestrian infrastructure. Transit service can still be offered in places without those characteristics but may require innovative or alternative service approaches.

The purpose of the Land Use Assessment is to evaluate both existing and planned development patterns in the study area to better understand where and how future transit services might be most effectively delivered in the region. The study region includes all of the jurisdictions served by the TJPDC. That area consists of the City of Charlottesville and the counties of Albemarle, Buckingham, Fluvanna, Greene, Louisa, and Nelson. Refer to **Figure 1**.

This report summarizes existing land development patterns in those localities and their activity centers, key destinations, bicycle and pedestrian networks, and future land use plans. Finally, it concludes with a brief discussion of the potential implications of the region's land uses practices on the future of its transit systems. A Transit Propensity Assessment serves as a companion memorandum. It uses a multi-factor model of Census and employment data to understand better what kind of transit service is needed and feasible in the area. Both technical pieces work together to document the region's characteristics and implications for transit.

Figure 1 | The study area includes the Thomas Jefferson Planning District (Region 10) and Buckingham County, which is within the JAUNT service area.



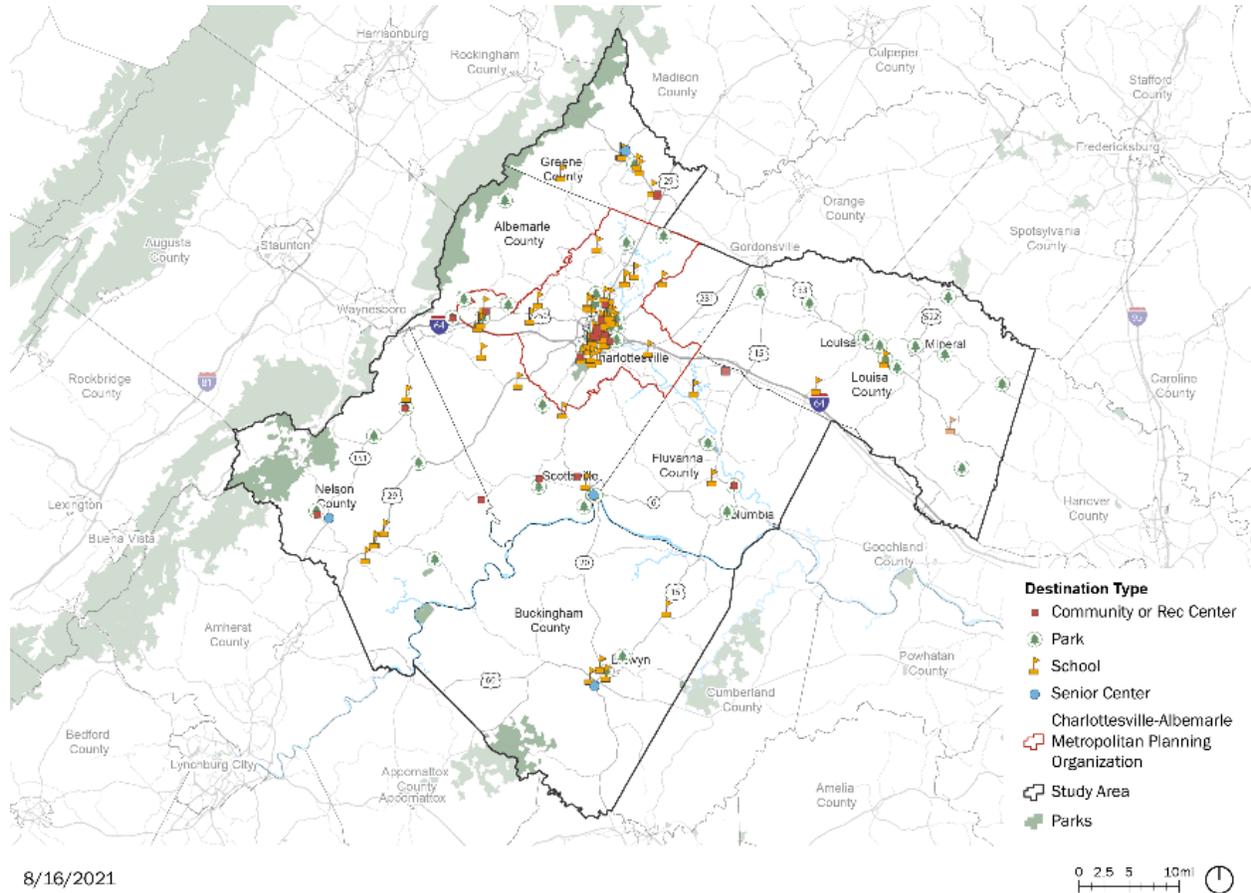
8/6/2021

## Existing Land Uses in the Region

The Transit Vision Plan's study area is predominantly rural in character. The one notable exception is the City of Charlottesville and the immediate area in Albemarle County, which functions as the urban core for the study region. The City's 2020 population is 47,266. It offers amenities, services, and employment opportunities that residents use throughout the area, reflected by the dense cluster of facilities shown on the Key Destinations Map, **Figure 2**. The Regional Activity Center Map (**Figure 3**) shows the concentration of major activity centers, including the City's Downtown Mall and the University of Virginia. The National Land Cover Database (NLCD) Land Use Map (

**Figure 4)** further shows the difference between the study area's urban core and surrounding rural areas. Within the City, there are other differences in density. High-intensity development in the center of Charlottesville extends between downtown and the University, along West Main Street. The remaining areas in the City consist of low and medium-intensity development and limited pockets of undeveloped land in the northern portions of Charlottesville due to steep slopes.

*Figure 2 | Key destinations in the region implies potential transit destinations.*



8/16/2021

Figure 3 | Regional Activity Centers shows areas that the region tends to identify as “places.” This illustration can serve as a regional roadmap, to guide transit discussions later in the process.

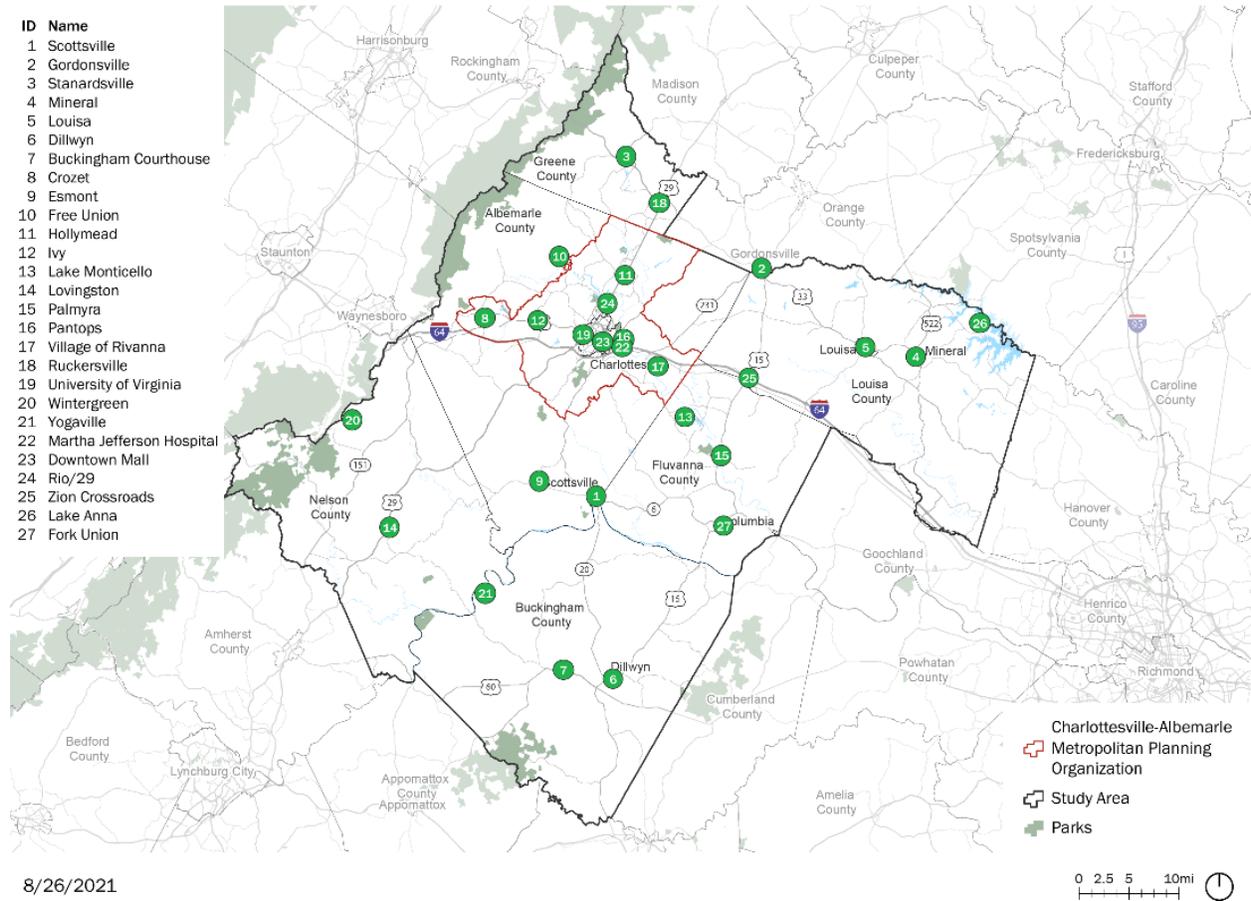
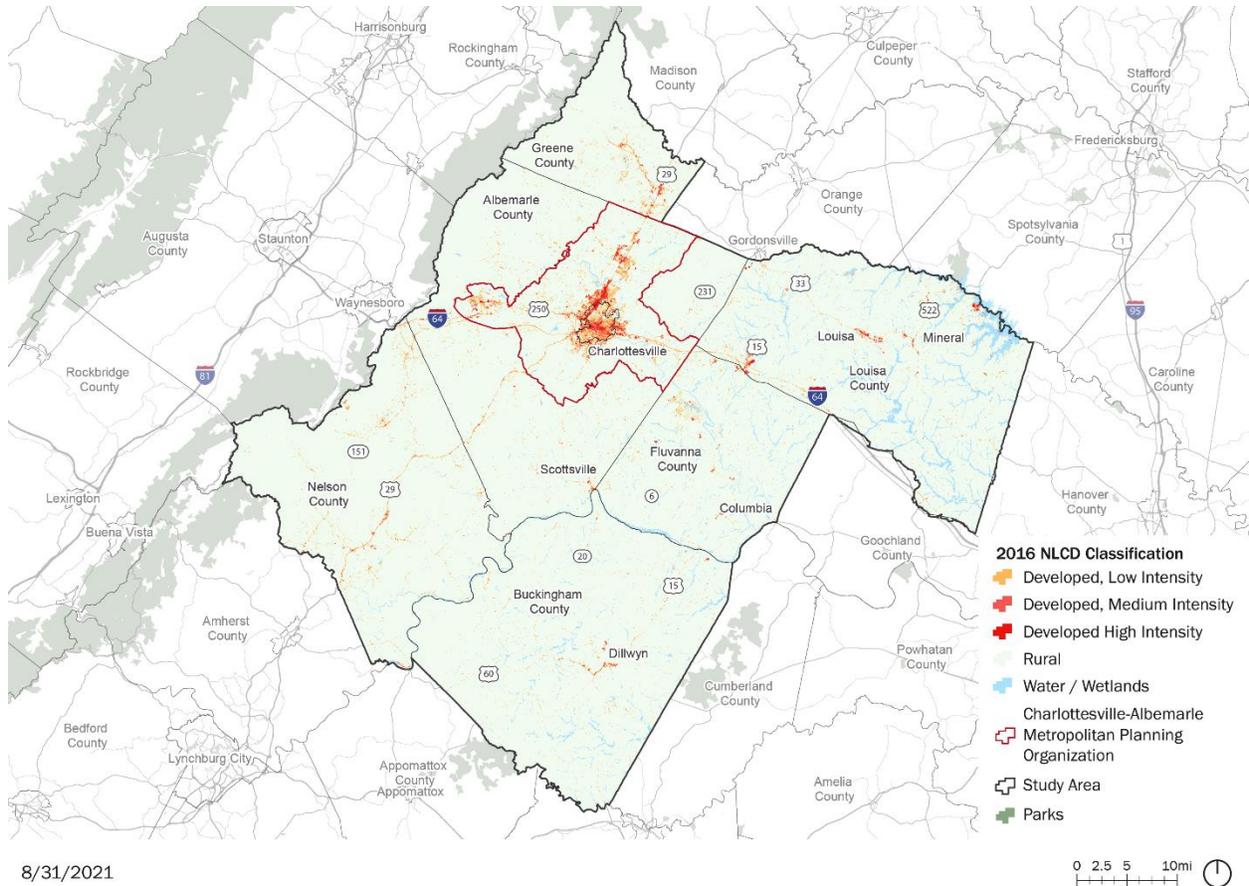
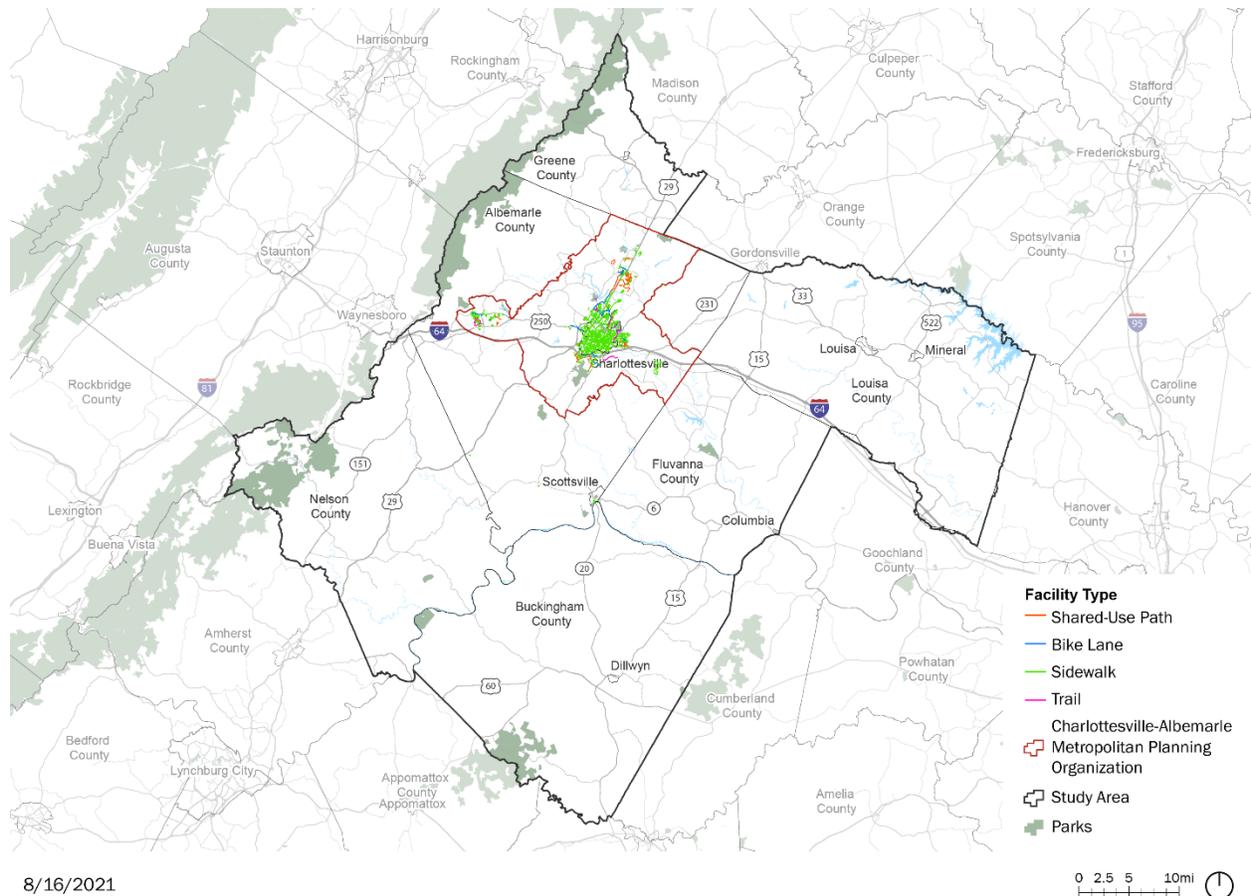


Figure 4 | The National Land Cover Database (NLCD) illustrates where manmade development generally exists. This is a common tool for identifying development areas. These developed areas overlap with the Activity Centers from Figure 3, shown previously.



The urbanized area of Charlottesville extends beyond the city limits into surrounding Albemarle County. It includes the regional activity centers of Rio/29, Hollymead, Pantops, and the Martha Jefferson Hospital. Albemarle's inner growth areas are more than double the City's population and bring the urbanized area population to 102,164. This growth includes low-intensity suburban neighborhoods and high-intensity development surrounding major highway corridors. The most notable feature is US Route 29, north of Charlottesville, US Route 250, immediately east of the City, and growth in those areas. Charlottesville's sidewalk, trail, and bike lane networks extend into urbanizing parts of Albemarle, surrounding the City's municipal boundary. These are apparent in the bike and pedestrian Facilities Map (**Figure 5**), which overlaps with activity centers, key destinations, and land cover data.

Figure 5 | Bike and pedestrian infrastructure further illustrates activity centers and shows the density of transportation options around the City of Charlottesville.



8/16/2021

Beyond Charlottesville's contiguous urbanized area, several satellite communities consist of suburban developments typically associated with Charlottesville. Examples of these include the:

- Census Designated Places (CDP) of Crozet in Albemarle County (pop. 7,159),
- Ruckersville in Greene County (pop. 1,335),
- Lake Monticello in Fluvanna County (pop. 10,862), and
- Zion Crossroads, which spans across the border of Fluvanna and Louisa Counties.

The development styles of these communities vary. Crozet features a small historic central business district and some pedestrian infrastructure. Lake Monticello is a private gated residential community. Ruckersville and Zion Crossroads grew from significant, highway-oriented commercial developments. Crozet, Lake Monticello, and Ruckersville also feature public schools.

These unincorporated and incorporated communities are local centers of business or government within their respective jurisdictions. Several feature a small historic central business district surrounded by some single-family residential homes. They may also include limited strip-commercial developments along the main highway serving the community. A brief description of these communities follows.

## Albemarle County

Albemarle features the Town of Scottsville (pop. 585), located on Route 20 at its crossing of the James River. This incorporated community includes a school, park spaces, a senior center, and nearby community center. Most downtown streets have sidewalks and small-town character. Other local activity centers in Albemarle County include unincorporated areas of Ivy (pop. 459), Free Union (pop. 261), and Esmont (pop. 828).

## Buckingham County

Buckingham includes the Town of Dillwyn (pop. 556), the CDPs of Buckingham Courthouse (pop. 59), and Yogaville (pop. 155). Both Dillwyn and Buckingham Courthouse are in the central portion of the County near the intersection of Route 15 and Route 60. Buckingham Courthouse serves as the County seat and is home to the County's administrative offices. Nearby destinations include multiple schools, a park, and a senior center. The land cover map indicates that development in these communities extend linearly along their respective highways.

## Fluvanna County

Fluvanna features unincorporated places like Fork Union (district population 4,077) and its County seat of Palmyra. Both are on Route 15 and feature small commercial developments adjacent to the highway. Fork Union is also the home of the Fork Union Military Academy, which is a college military preparatory boarding school. The small town of Columbia was an incorporated government in southeast Fluvanna before they vacated their charter in recent years. A small portion of the Town of Scottsville traverses into Fluvanna.

## Greene County

Greene County features the Town of Stanardsville (pop. 363), located about 10 miles west of Ruckersville. US Route 33 serves as a highway bypass to divert through traffic around the town. Stanardsville includes a small historic downtown and a mixture of commercial and residential developments that extend along Business Route 33. It also features county administrative offices, schools, a park, and a senior center.

## Louisa County

This rural County features the towns of Louisa (pop. 1,744) and Mineral (pop. 509). Both are in the central portion of the County. Both include historic central business districts, as well as strip commercial developments along their respective primary highways, US 33 and 522. The towns are also near county administrative buildings, schools, and parks. Louisa County also consists of a large area of residential homes around Lake Anna in the County's northern portion. To the southwest, Zion Crossroads is Louisa County's main economic driver. It is a retail center that is also home to a large office and service uses, medical offices, a large distribution center, the Spring Creek neighborhood, and other residential developments.

## Nelson County

Nelson County features the CDPs of Lovingson (pop. 494) and Wintergreen (pop. 533). Lovingson is the county seat, located near the center of Nelson County along US Route 29. This unincorporated village features a small historic downtown and a shopping center adjacent to the main highway. There are other

destinations around Lovingston that include schools, medical services, and commercial uses. Wintergreen is a primarily residential community developed around the Wintergreen Resort in the western portion of Nelson County. It does not feature a historic downtown, but there is a small collection of businesses and institutions developed along the highway at Nellysford. A school and community center are in the surrounding areas.

The remaining lands in the study area are rural in character. Property owners engage in various uses, including farming, forestry, conservation, mining, and rural residential properties.

## The Region's Future Land Use Plans

Comprehensive plans serve as the official land use policy documents for every locality. The Commonwealth requires these plans, which establish a vision of the desired future of each community and then identify policies and strategies that can achieve those outcomes.

A critical component of each comprehensive plan is the future land use plan. These maps identify the geographic areas within the jurisdiction best suited to accommodate the various styles of growth and development envisioned for the community. The locality classifies areas according to the desired uses and developments they would like to see in the future.

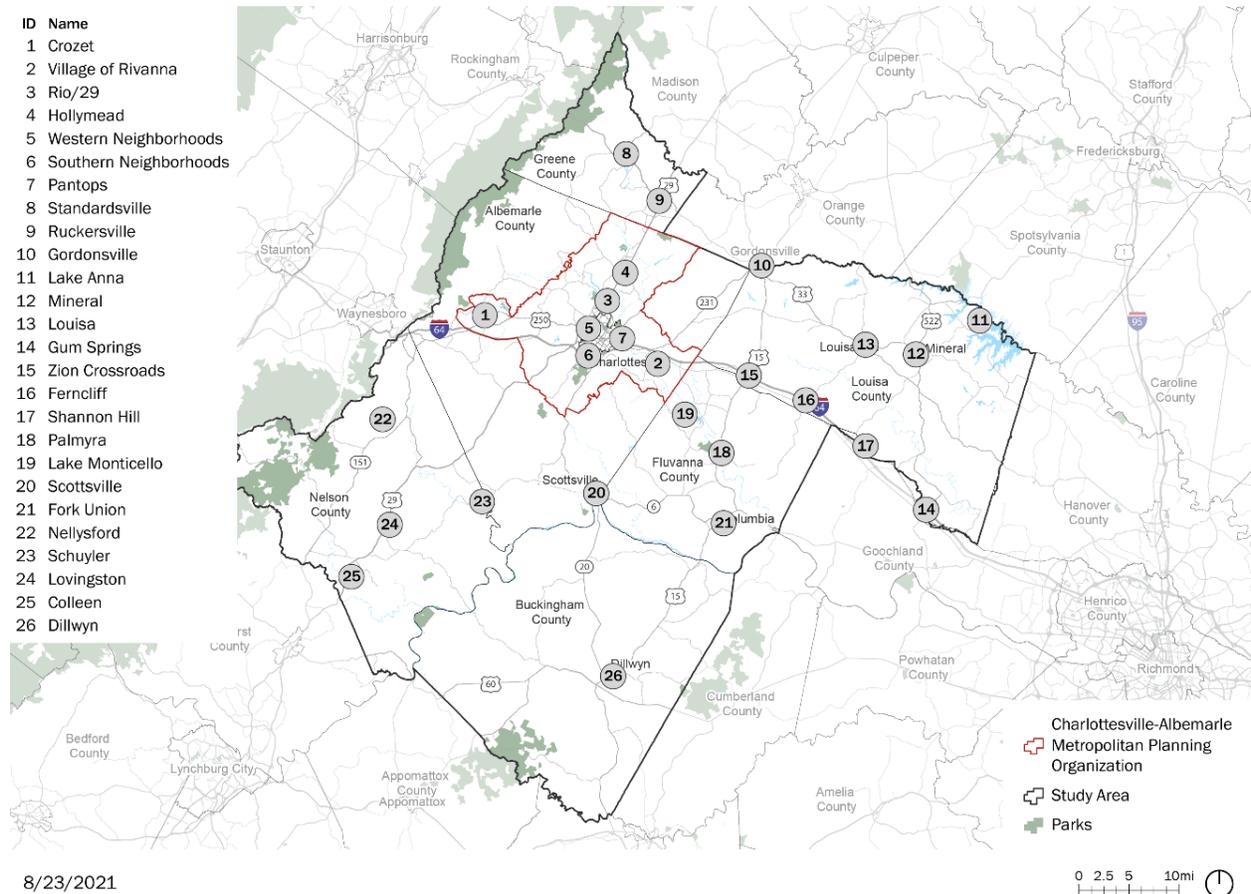
These plans do not guarantee that development will occur in the patterns described. They are, however, used as guiding documents that help determine the appropriateness of development proposals and may help to guide updates or amendments to zoning codes. Localities may also use them to decide where to allocate public services, utilities, and infrastructure investments.

The development patterns established in future land use maps also have a critical impact on transit services. They help determine what kinds of transit will be most appropriate for each community and where providers can most effectively deploy services. This study considered the future land use maps for the following jurisdictions in the study area:

- City of Charlottesville
- Albemarle County
- Buckingham County
- Fluvanna County
- Greene County
- Louisa County
- Nelson County

The study team reviewed each plan and offered the following insights into regional land use policy tendencies (see **Figure 6**).

Figure 6 | This map depicts the designated growth areas throughout the region. While each locality adopts its own Comprehensive Plan and land use policies, there are common tendencies and shared approaches.



## Urban Core

The City of Charlottesville’s comprehensive plan aspires to create a more vibrant community, bringing together places where its residents live, work, and play. It seeks to accomplish these using strategies such as increasing the number and styles of housing units, encouraging infill development on underutilized properties, and increasing commercial vitality and density in appropriate areas. The City is currently updating its comprehensive plan. While these policies will continue into the next update, Charlottesville also envisions greater densities throughout its municipal boundaries.

The urbanized areas of Charlottesville extend beyond the city limits, however, and into neighboring Albemarle County. To preserve its natural resources and rural character, Albemarle County has established development areas as the primary locations for future growth. Three of the development areas—the Southern and Western Neighborhoods, Pantops, and Places 29—are immediately adjacent to Charlottesville. The remaining development areas include Crozet and the Village of Rivanna, located short distances west and east, respectively, of Charlottesville on US 250.

Collectively, the County’s development areas constitute approximately 5% of Albemarle’s total land area. The County intends to concentrate most of its investments in services, utilities, and infrastructure within these areas to promote efficiency and avoid sprawling growth patterns.

## Growth Corridors

Moving beyond the Charlottesville urban core, localities designate their future growth areas around major interregional transportation corridors. These corridors include US 29, which follows a north-south alignment, and I-64/US 250, which follows an east-west orientation.

The primary growth areas along US 29 are north of Charlottesville. One of the previously mentioned development areas of Albemarle County (Places 29) extends north along US 29 to the Hollymead area. Beyond Hollymead, the corridor continues north into Greene County, which expects continued growth in the Ruckersville area near the intersection of US 29 and US 33.

The I-64/US 250 corridor features growth areas both west and east of Charlottesville. The community of Crozet, which was also mentioned previously as one of Albemarle County's designated development areas, is on US 250 several miles west of Charlottesville. To the east of the region's urban core, localities established multiple growth areas along this corridor. These include the Village of Rivanna in Albemarle County, and Zion Crossroads in Louisa and Fluvanna Counties. Proceeding east is the Ferncliff, Shannon Hill, and Gum Springs growth areas in Louisa County. Local comprehensive plans envision nodes along the I-64 corridor that consist of mixed-use cores surrounded by low-density residential neighborhoods.

## Designated Rural Growth Areas

Localities expect that most of the remaining future development will concentrate around existing towns, unincorporated villages, and other designated growth areas identified by each County. Most localities express a strong desire to preserve their rural lands and utilize these growth areas to contain future development and avoid sprawl.

Buckingham County located its primary growth areas along the Route 15 corridor surrounding the Town of Dillwyn. It also has designated growth areas around Buckingham Courthouse.

Fluvanna County has established community planning areas surrounding Fork Union, Palmyra, and Scottsville. However, its largest community planning areas are those in the areas of Lake Monticello and Zion Crossroads. The comprehensive plan also designated much of the remaining northern portions of the County as rural residential development areas.

Louisa County located most of its higher density growth areas along the I-64/US 250 corridor, as described previously. It also designated areas for mixed-use and residential development in the central portion of the County surrounding the towns of Mineral and Louisa. Additionally, there is a small area designated for mixed-use development in the northwestern corner of the County adjacent to the Town of Gordonville, located on US 33. Finally, Louisa County also designated a large growth area around Lake Anna. In addition to County residents, this area will likely attract significant numbers of tourists and second-home buyers.

Greene County has only established one growth area outside of the previously described corridor of US 29 at Ruckersville. This additional area is in and around the Town of Stanardsville on US 33.

Nelson County intends to concentrate its future growth around Lovingston and in the areas around Colleen and Schuyler. It also anticipates an area of mixed-use development along Route 151 in Nellysford and Wintergreen. Due to the popularity of its adult beverage attractions and the Wintergreen Resort, the Route 151 corridor attracts significant numbers of outside visitors and county residents.

## Potential Future Transit Implications

The study area's existing and anticipated development patterns have implications on feasible transit services and how they can most effectively support the region's travel need. Fixed route transit services, such as those provided by Charlottesville Area Transit (CAT) and University Transit Service (UTS), should most logically occur in the urban core areas. As the density and diversity of development increases, the core will likely support additional routes and more frequent service. In selected high density and high activity corridors, high-capacity and high-frequency forms of transit such as Bus Rapid Transit may become practical and desirable options in the future as densities increase.

Outside of the urban center, commuter shuttles and low-frequency fixed-route service are likely to be concentrated along major growth corridors and between Charlottesville and some larger surrounding activity centers. JAUNT operates four regional commuter connection routes serving Crozet, Lovingston, Buckingham County, and US 29 North. It plans to increase the frequency of service along the US 29 North route and add additional routes serving growth areas in Louisa County.

The remaining areas of the study region are predominantly rural. They cannot support any form of fixed-route service. JAUNT's on-demand approach will likely continue to be the most feasible transit option.