

Transportation projects have the potential to create significant impacts to the natural environment and can disrupt communities as much as they improve traffic mobility. Only through early awareness and responsible planning can these impacts be minimized or even avoided. Environmental and social issues must be addressed early in the planning process in order to avoid inefficient use of time and resources. The result is a transportation plan that is respectful of the environment and cost-effective in its implementation.

The vast majority of impacts associated with projects in a typical long-range transportation plan (LRTP) are associated with roadway projects. This is mainly due to the large amounts of land required to build roadway projects and the resulting facility that can become not only a conduit for traffic but also a barrier to the surrounding community. Sidewalks and bicycle facilities are much more limited in the magnitude of their impacts, due to smaller cross-sections and greater flexibility to avoid problem areas. Furthermore, pedestrian and bicycle facilities are most often built in conjunction with roadway facilities and have only marginal impacts, if any, beyond those of the roadway itself.

Transit improvements such as bus route and service expansions typically involve no new construction and therefore tend to have minimal impacts on either the natural or manufactured environment. In general, transit improvements improve social and environmental conditions because increased service tends to reduce vehicle miles traveled (VMT), lower air emissions, and improve accessibility in disadvantaged neighborhoods.

The following chapter examines the social and environmental conditions in the SUATS MPO area. It also includes a series of maps that illustrate some of the discussion of the plan's environmental screening. These maps include elements such as wetlands, recycling centers, hazardous waste treatment, storage, and disposal facilities, air regulated facilities, schools, churches, hospitals, and historic districts as well as socioeconomic distributions. When overlaid with the proposed transportation projects, these will prove to be useful tools in assessing the relative impacts to the environment.

Social and Environmental Features

Environmental Features

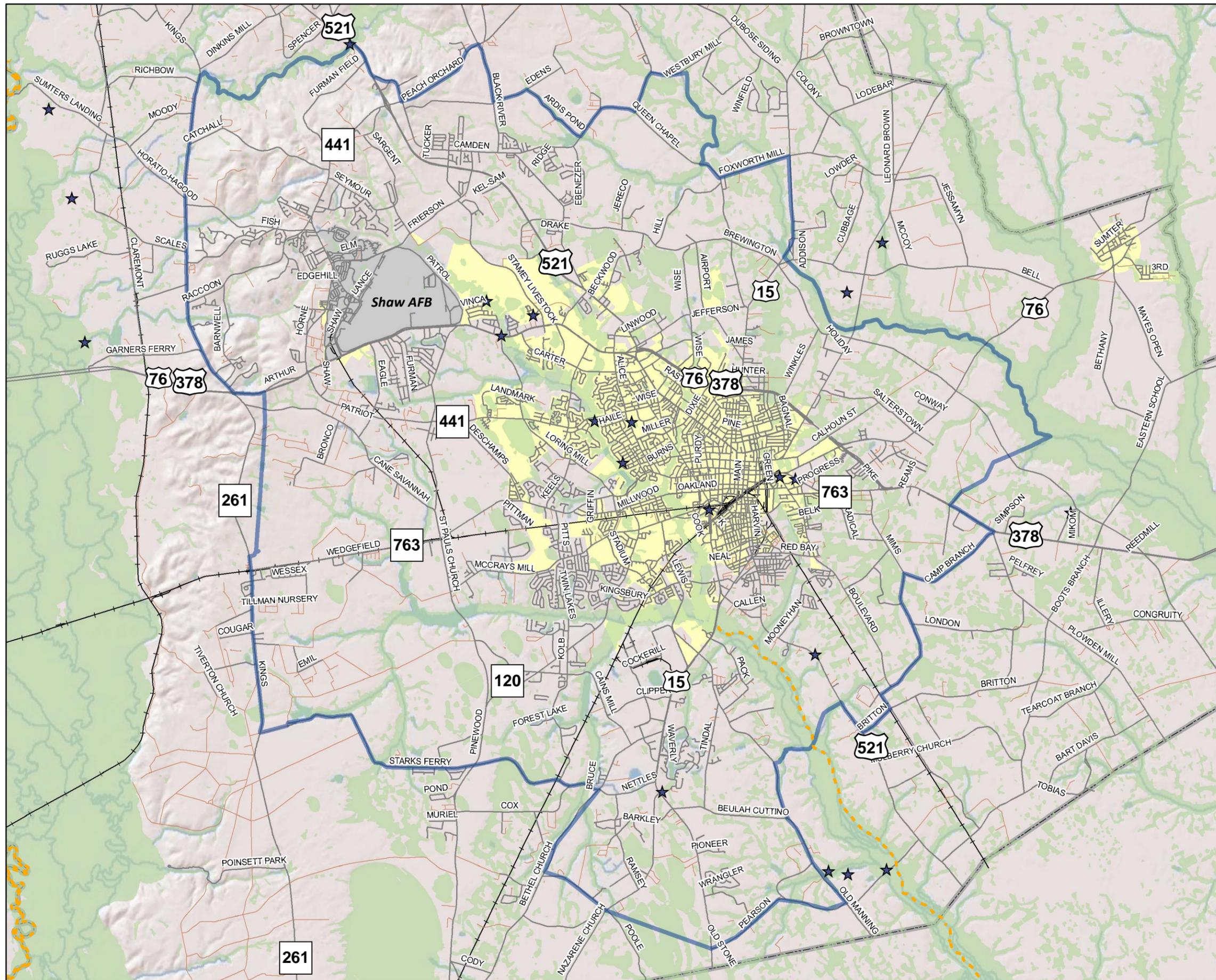
When both the existing growth rate and the projected influx of military population are considered, it is clear that the SUATS MPO area will continue to urbanize. As growth occurs, impacts to the environment are inevitable. With the development of new infrastructure it will be important to manage and minimize these impacts. Some natural amenities, however, such as clean water and open spaces must be maintained to satisfy not only residents' desires for a high quality of life, but also state and federal environmental policies. Figures 3.1 and 3.2 depict important environmental features within the SUATS study area. Figure 3.1 shows that there are a significant number of wetlands in the SUATS region. Lake Marion is partially contained within Sumter County, and the large number of streams and rivers drain towards the coast. There are also 11 locations in the study area with 401 certification, granting the state authority to protect the water quality at the site under the Clean Water Act (CWA). Figure 3.2 displays other environmental issues such as the locations of infectious waste generators, dry cleaners, underground storage tanks, hazardous waste facilities, and recycling centers.

Social Features

Figure 3.3 shows the locations of many social features of the SUATS MPO area, such as schools, churches, libraries, hospitals, and industrial parks. All of these locations can serve as popular destination points as well as important community landmarks. Shaw Air Force Base is also shown on this map and is important to consider as a hub of residential, industrial, and commercial growth.

The environmental and social features shown in these figures should be considered together in order to create a more complete picture of the SUATS area. Responsible planning dictates that these features should be considered during the planning process.



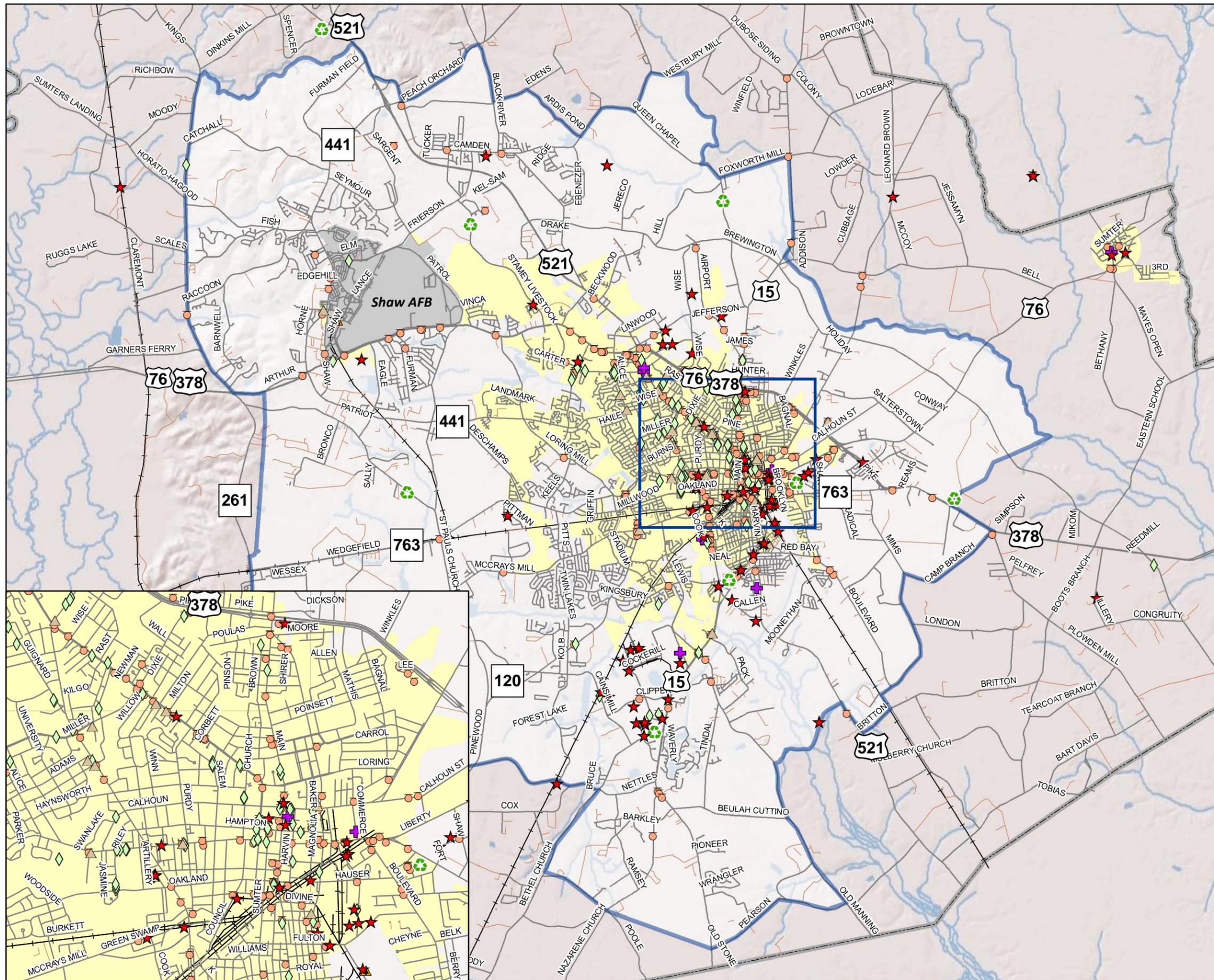


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Figure 3.1
Natural Resources

- ★ 401 Certification
- - - Fish Advisory Streams
- Street
- Dirt Road
- Railroad
- Wetlands
- Shaw Air Force Base
- City Limits
- Study Area Boundary
- County Boundary

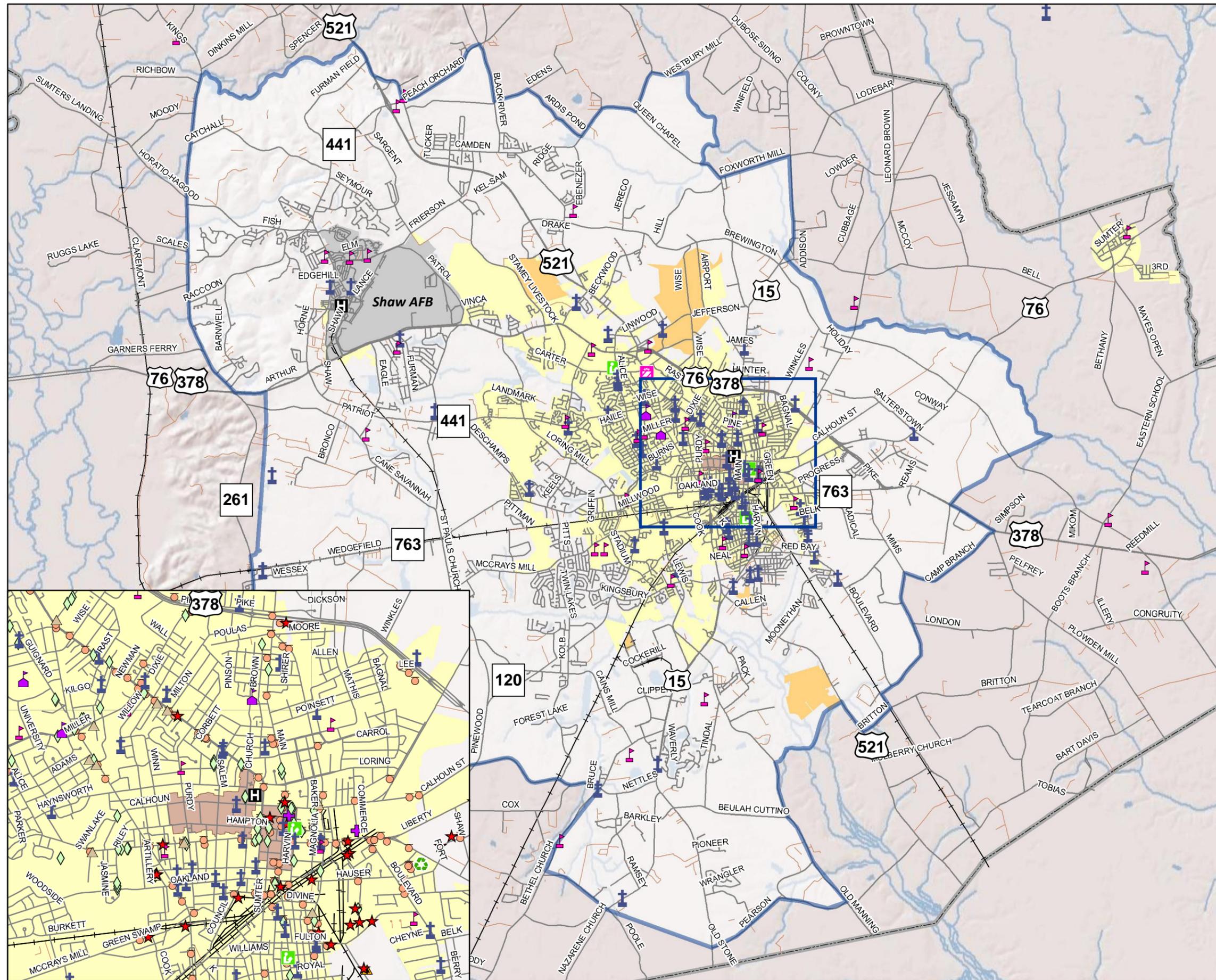
2010 - 2040
Figure 3.2
Environmental Issues



- ★ Air Regulated Facilities
- ▲ Dry Cleaners
- ▲ Hazardous Waste Facility
- ◆ Infectious Waste Generators
- ⊕ Potential Groundwater Contamination Site
- ♻️ Recycling Centers
- Underground Storage Tanks
- Street
- Dirt Road
- Railroad
- Shaw Air Force Base
- City Limits
- ▭ Study Area Boundary
- ▭ County Boundary

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**Figure 3.3
 Social Features**



- Schools
- Colleges
- Churches
- Shopping Malls
- Public Libraries
- Hospitals
- Street
- Dirt Road
- Railroad
- Historic Preservation Design Districts
- Industrial Parks
- Shaw Air Force Base
- City Limits
- Study Area Boundary
- County Boundary

Environmental Justice

Environmental justice is a movement intended to avoid the use of federal funds for projects, programs, or other activities that generate disproportionate or discriminatory adverse impacts on minority or low-income population. This effort is consistent with Title IV of the 1964 Civil Rights Act, and is promoted by the U.S. Department of Transportation (USDOT) as an integral part of the long-range transportation planning process, as well as individual project planning and design. The environmental justice assessment incorporated in this LRTP update was based on three basic principles, derived from guidance issued by the USDOT:

- The planning process should avoid, minimize, or mitigate environmental impacts (including economic, social, and human health impacts) that affect minority and low-income populations with disproportionate severity.
- Transportation benefits should not be delayed, reduced, or denied to minority and low-income populations.
- Any community potentially affected by outcomes of the transportation planning process should be provided with the opportunity for complete and equitable participation in decision-making.

As part of this transportation plan update, 2010 Census and 2011 American Community Survey data were used to identify the geographic distribution of minority (non-white), Hispanic, and low-income populations, so positive and negative effects of various transportation investments in the transportation plan could be assessed. This information is depicted on Figures 3.4, 3.5, and 3.6.

Figure 3.4 depicts the minority population in the SUATS study area. This figure indicates that there is a large minority population in the SUATS MPO area. In fact, the population of Sumter County is divided almost 50/50 between minority and non-minority residents. When compared with other counties in South Carolina, Sumter County has the 14th highest percentage of minority population with 51.8% (according to the 2010 Census). The racial makeup of Sumter County is compared with South Carolina and the United States in Table 3.1 and Figure 3.7.

Category	United States	South Carolina	Sumter County
White alone	223,553,265	3,060,000	51,825
Black or African American alone	38,929,319	1,290,684	50,414
American Indian and Alaska Native alone	2,932,248	19,524	389
Asian alone	14,674,252	59,051	1,188
Native Hawaiian and Other Pacific Islander alone	540,013	2,706	99
Some Other Race alone	19,107,368	113,464	1,511
Two or More Races	9,009,073	79,935	2,030
Total	308,745,538	4,625,364	107,456
% Minority Population	27.6%	33.8%	51.8%

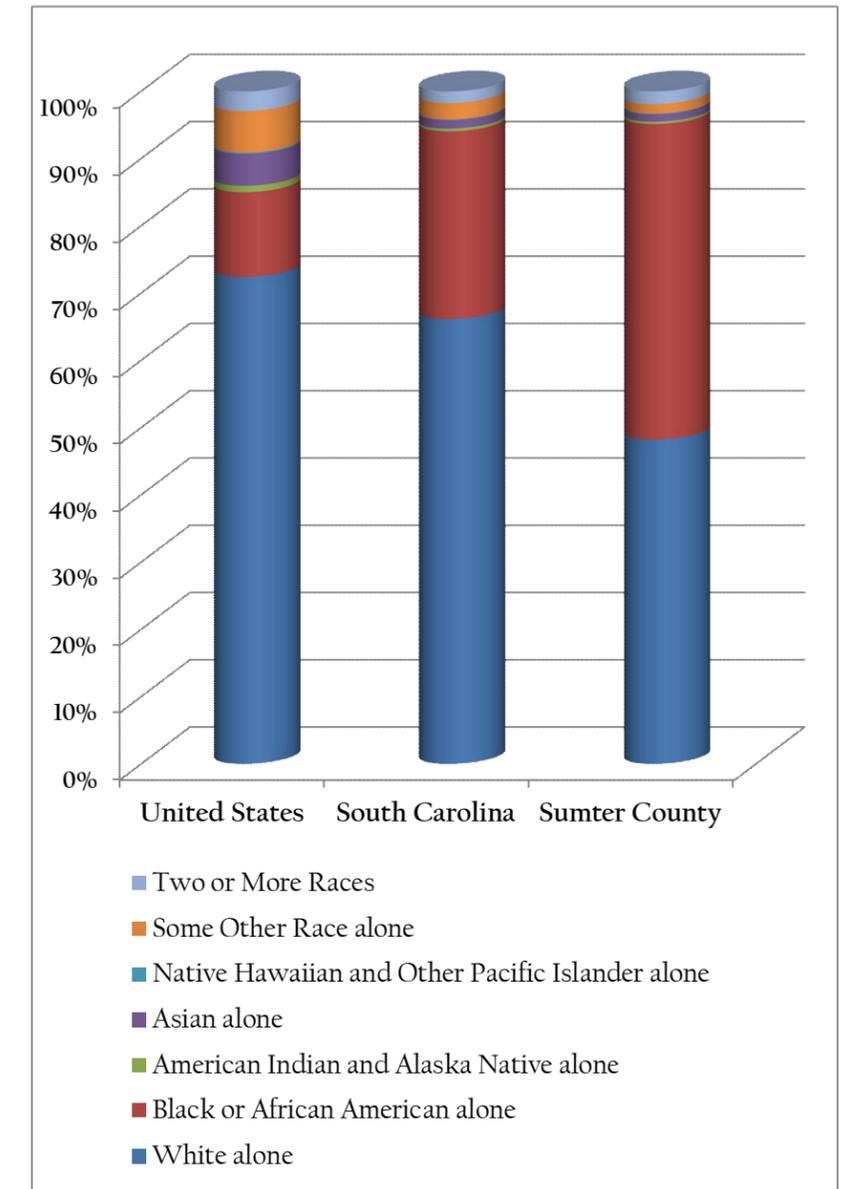
Source: 2010 United States Census

Figure 3.5 depicts the Hispanic population in the SUATS area. As is shown in the figure, the Hispanic population is slightly lower than the statewide average. Census data for Sumter County indicates that 3.3% of the county population is Hispanic. However, the Hispanic population is the fastest growing population cohort in Sumter County.

Figure 3.6 depicts the percentage of the population in the SUATS area that is below the poverty line. The figure indicates that the portions of the study area with the greatest percentage of population below the poverty level are in East Sumter, with other areas located near Shaw Air Force Base.

While it is nearly impossible to construct infrastructure without impacts, it is through careful planning and early consideration that the SUATS Long Range Transportation Plan intends to manage impacts to communities effectively. Rather than an ad hoc approach to environmental justice planning, this transportation plan identified sensitive communities early in the process. Early identification allows for an assessment of the existing transportation plan and influenced the selection and alignment of future transportation improvements.

Figure 3.7 Minority Population Composition



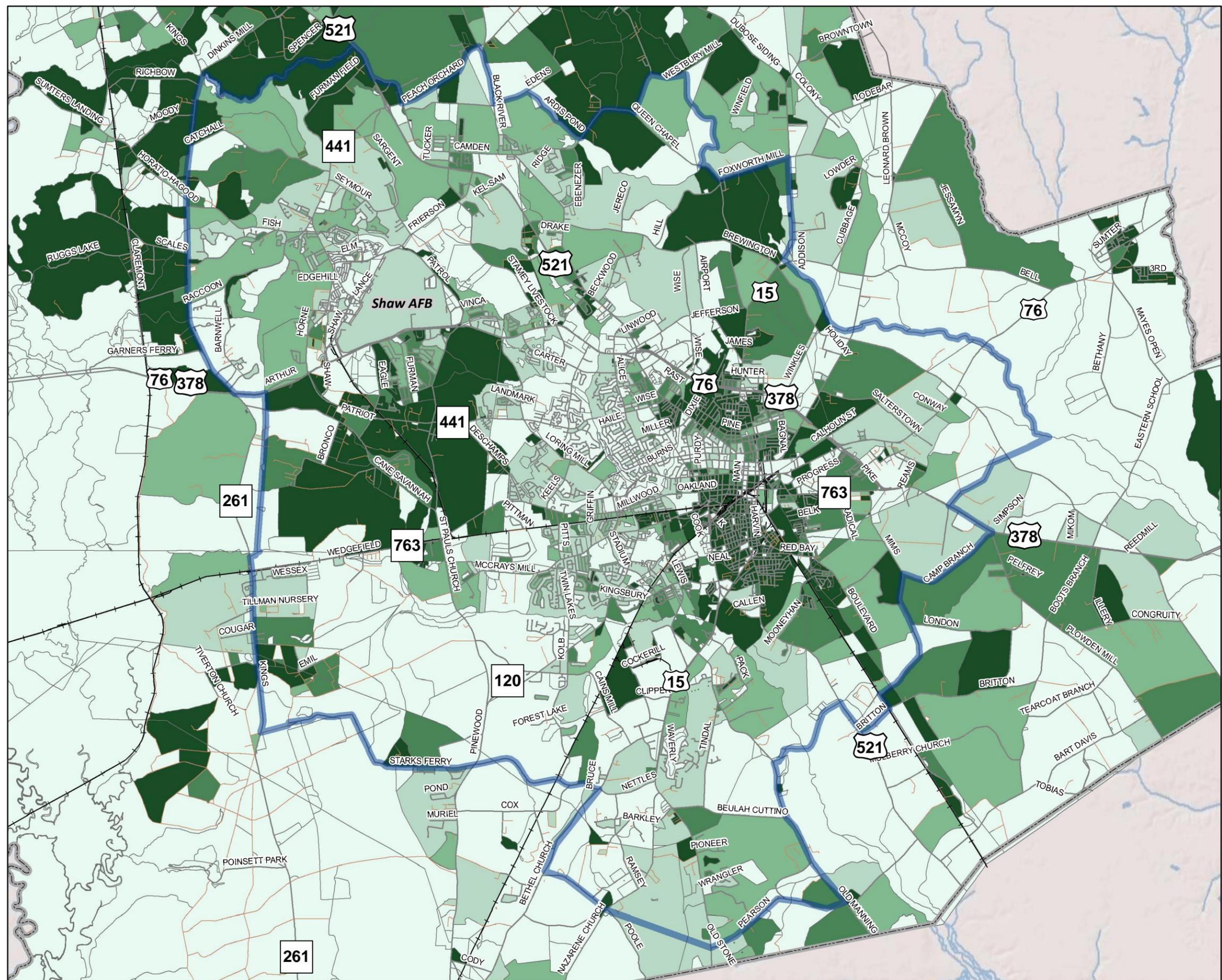
Planning Guidelines

During the development of the transportation plan, the project team will use the available data to avoid and minimize impacts to known environmental features. The collection and consideration of this data early in the planning process is intended to lessen environmental impacts and reduce potential conflicts during permitting. In addition, when considering new roadway alignments and extensions, planners and engineers should use a guiding set of principles, including those listed below, to ensure that environmental considerations are followed:

- Avoid steep slopes and otherwise unsuitable topography
- Minimize impacts to the built environment
- Stay away from FEMA designated floodplains
- Minimize the number of wetland (National Wetland Inventory) impacts
- Minimize the amount of each wetland impact (e.g., don't cross a wide wetland when a narrower one can be crossed)
- Minimize the number of stream crossings
- Minimize the length of stream crossings
- Minimize impacts to school sites
- Minimize the number and size of impacts to historic features and districts
- Minimize the number and size of impacts to threatened and endangered species
- Minimize the number and size of impacts to hazardous waste sites
- Minimize the number and size of impacts to superfund sites
- Minimize or avoid impacts to neighborhoods
- Avoid unnecessary or disproportionate impacts to minority and low-income communities
- Avoid impacts to parks and designated open spaces
- Minimize gameland impacts
- Minimize the number of new facilities in critical watershed areas
- Be aware of existing development patterns
- Capitalize on street connectivity opportunities such as stub-out streets
- Encourage a multimodal system with the promotion of pedestrian, bicycle, and transit networks

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**Figure 3.4
Percent Minority Population**



**Percent Minority Population
by Census Block**

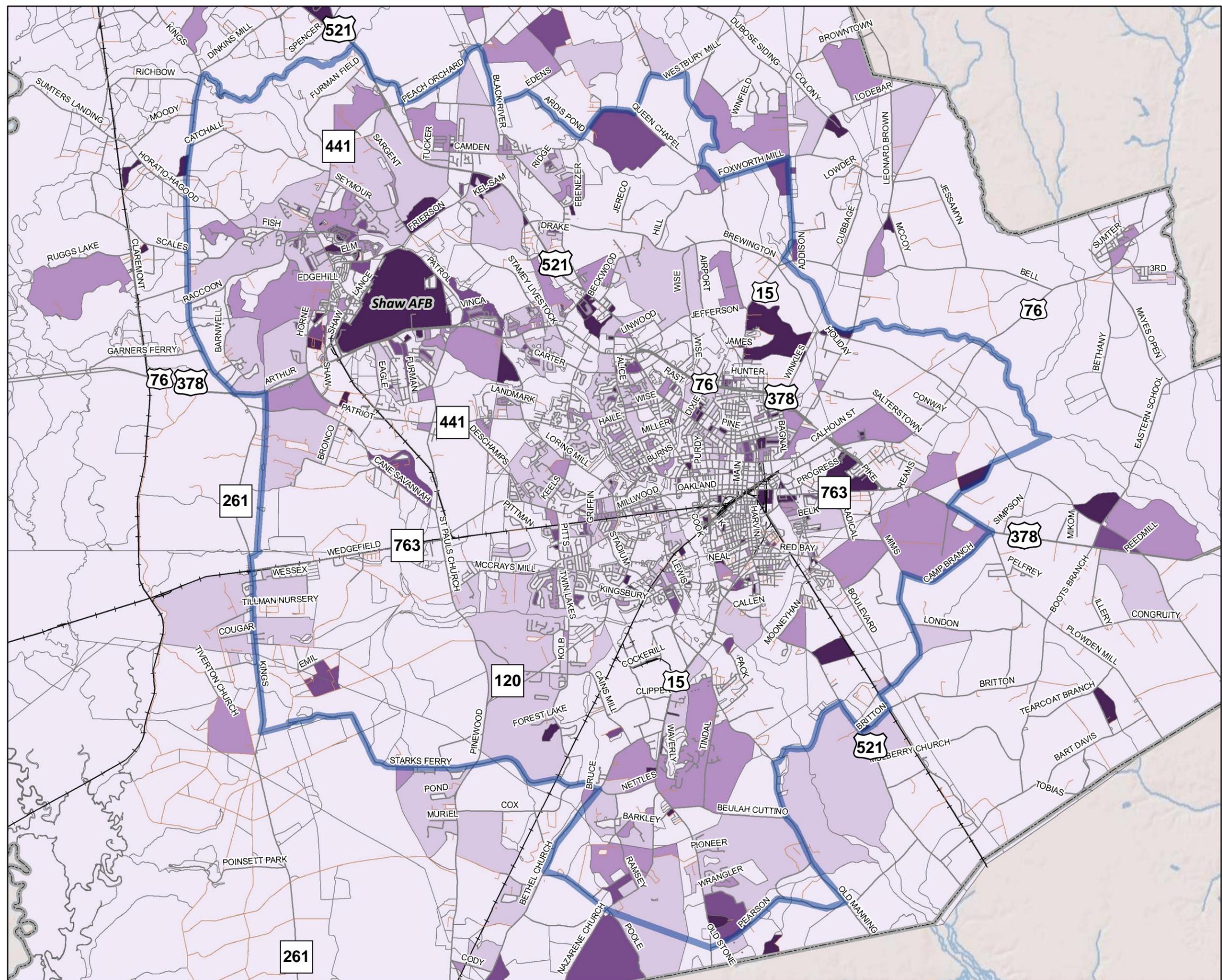
- Less than 20%
- Between 20% and 40%
- Between 40% and 60%
- Between 60% and 80%
- More than 80%

- Street
- Dirt Road
- Railroad
- Study Area Boundary
- County Boundary

Notes:
 - Data shown at the block level based on the 2010 Census.
 - Percentages shown for each block are based only on the populations in each block. That is, a block with fewer people may reveal a higher percentage of minorities despite having fewer minorities overall.

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**Figure 3.5
Percent Hispanic Population**



**Percent Hispanic Population
by Census Block**

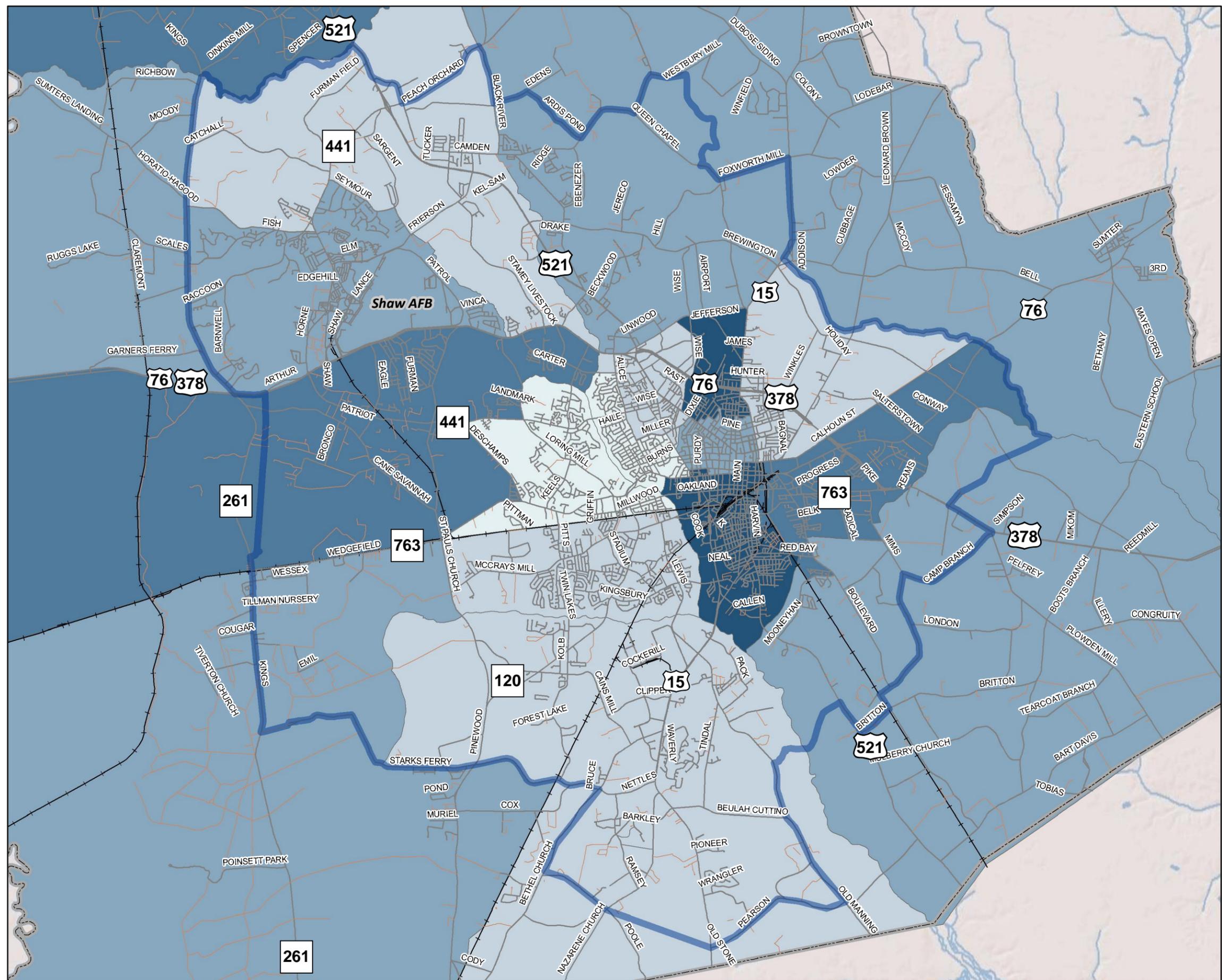
- Less than 2%
- Between 2% and 5%
- Between 5% and 10%
- Between 10% and 15%
- More than 15%

- Street
- Dirt Road
- Railroad
- Study Area Boundary
- County Boundary

Notes:
 - Data shown at the block level based on the 2010 Census.
 - Percentages shown for each block are based only on the populations in each block. That is, a block with fewer people may reveal higher a percentage of Hispanics despite having fewer Hispanics overall.

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Figure 3.6
Percent Low-Income Population



Percent Low-Income Population by Census Tract

- Less than 5%
- Between 5% and 15%
- Between 15% and 25%
- Between 25% and 35%
- More than 35%

- Street
- Dirt Road
- Railroad
- Study Area Boundary
- County Boundary

Notes:

- Data shown at the Census tract level based on the 2011 American Community Survey.
- Percentages shown for each Census tract are based only on the populations in each Census tract. That is, a Census tract with fewer people may reveal a higher percentage of low-income residents despite having a smaller low-income population overall.

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