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the 76 Gateway

THE 76 GATEWAY CORRIDOR STUDY

September 2018

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Introduction

US 76 is one of the most prominent corridors in Florence County. It connects Downtown Florence to Francis Marion University and communities beyond. Prior to the improvement and widening of Williston Road (SC 327), US 76 served as the principle route for seasonal beach traffic traveling to/from I-20 and I-95. Even now, many travelers still prefer US 76, either because of nostalgia or habit. No matter the type of traffic, local, commuter, or seasonal, there is no arguing that US 76 is and will continue to be a significant corridor in the Florence community. Many key destinations are located on or immediately adjacent to the corridor, including Downtown Florence, McLeod Health, Florence Regional Airport, Florence Flea Market, and Francis Marion University.

Because of the significance of the corridor, it is often the first and only impression many people have of Florence County. Today, that impression is poor, as the corridor is not attractive or inviting. With no zoning along the majority of the corridor, land has developed in a somewhat haphazard manner, with some property owners taking great pride of ownership, while others do the absolute minimum required. Because of its history as a highway, the road itself is designed for moving large numbers of cars and trucks at higher speeds, with very little accommodations for people who walk, ride a bicycle, or take transit. These factors have contributed to the corridor having very little character, designed as a passthrough rather than a place.

Recognizing the significance of the US 76 corridor, Florence County initiated **The 76 Gateway Corridor Study**. The Study was focused on identifying the right balance between growth, transportation needs, and the community's desires for the future. The Study considered mobility, safety, convenience, and comfort for all modes of transportation coupled with the impact to adjoining land uses and the unique character of the area. Specifically, The 76 Gateway Corridor Study considered US 76 from Church Street in Downtown Florence to Francis Marion Road at the campus of Francis Marion University.

The 76 Gateway Corridor Study Final Report summarizes the strategic planning and design approach that was followed. That approach was composed of five key steps:

1. **Public Participation –** A continuous and meaningful public participation process was implemented to ensure that the desires of the community were clearly understood and integrated into final recommendations. The critical component of this was the convening of a Steering Committee that provided guidance to the development of the Study.
2. **Baseline Review –** To establish a firm foundation for the Study, existing conditions were reviewed. This provided the project team with a strong understanding of history, opportunities, constraints, and possibilities for the future.
3. **Technical Analyses –** While public participation was extremely important, it was equally important to temper public input with analysis of land use and transportation. This enabled the project team to develop solutions that would be agreeable to the community while also being technically sound.
4. **Alternative Solutions –** Based on public input received and technical analyses performed, the needs of the corridor were determined and alternative solutions developed. Working with the Steering Committee, alternatives were reviewed to determine the most appropriate path forward.
5. **Recommendations and Implementation –** Following direction from the Steering Committee, alternative solutions were refined into final recommendations. Recommendations include a variety of strategies for moving the corridor toward a more place-based future. An implementation plan was also crafted to determine how to most successfully advance recommendations.

Steering committee members provided direction to the study process.

Baseline Review

Public Input

To ensure that The 76 Gateway Corridor Study was grounded in reality and would be complementary to the core values of the community, public input was solicited in a variety of ways. Through a steering committee, public meetings, survey, and stakeholder meetings, an understanding was gained of the community's desires for the 76 Gateway.

Steering Committee

A steering committee was established to guide The 76 Gateway Corridor Study process. The steering committee was composed of representatives of agencies and organizations that have a vested interest in the future of the 76 Gateway, including:

- Florence County
- Florence Area Transportation Study
- City of Florence
- Francis Marion University
- McLeod Health
- Greater Florence Chamber of Commerce
- Florence Regional Airport
- South Carolina Department of Public Safety
- South Carolina Department of Transportation
- Pee Dee Regional Transportation Authority
- Federal Highway Administration
- Citizen and business representatives

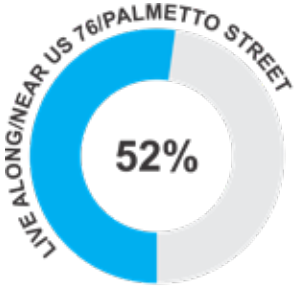
The steering committee met at key project milestones to review work products, give feedback, and provide direction. The input of the steering committee was vital to understanding the perspectives of those who would be most affected by changes to the corridor.

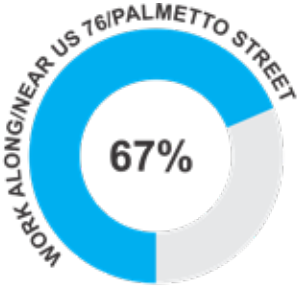
Public Meetings

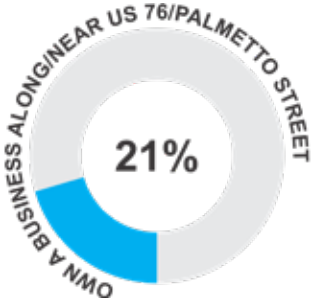
Public meetings were held on July 18, 2017 and October 24, 2017 to solicit input from the public on The 76 Gateway Corridor Study. These meetings were drop-in open houses, providing interactive opportunities for the participants to communicate their priorities, concerns, and needs with regard to the 76 Gateway. Information gathered during these meetings influenced the recommendations that are presented in this document.

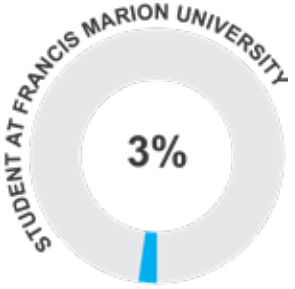
Survey

To provide another forum for public input in addition to the public meetings, a survey was provided in both online and paper formats. The survey was available from early October 2017 to mid-December 2017. During this time, 36 people responded to the survey, providing key insights regarding priorities and concerns. Respondents represent several specific demographics that have an invested interest in the 76 Gateway. Over half of respondents live along or in close proximity to US 76, while two-thirds work along or near US 76. Approximately one in five respondents own a business on or near the corridor. Only 3% attend Francis Marion University.

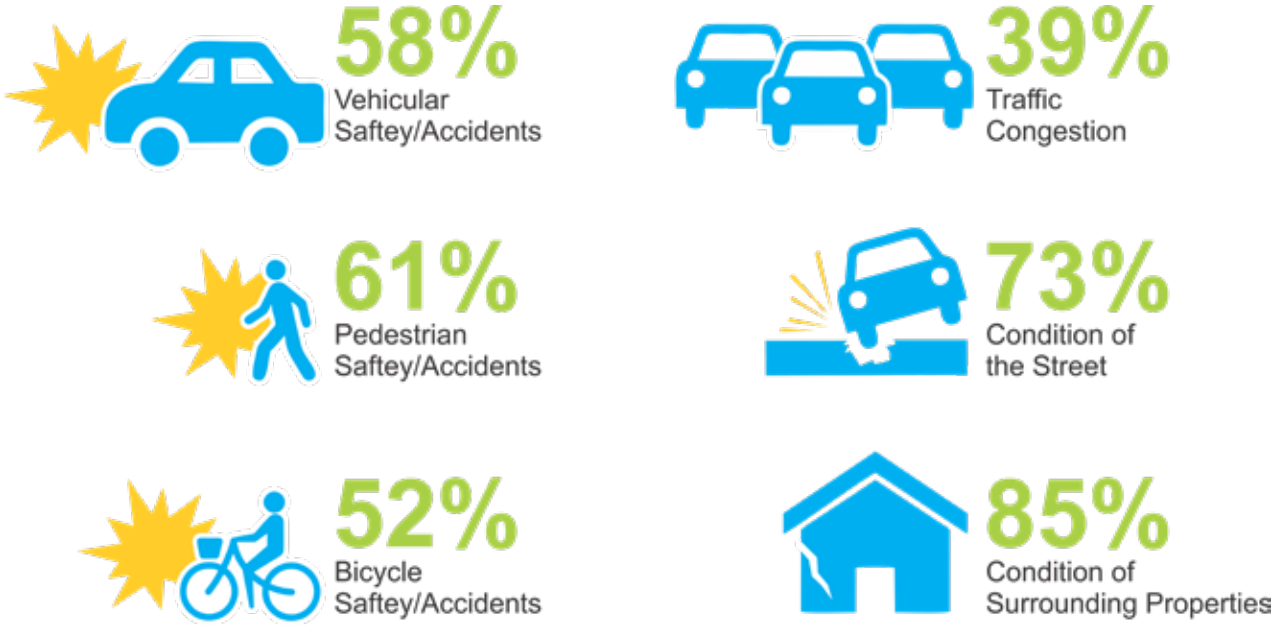






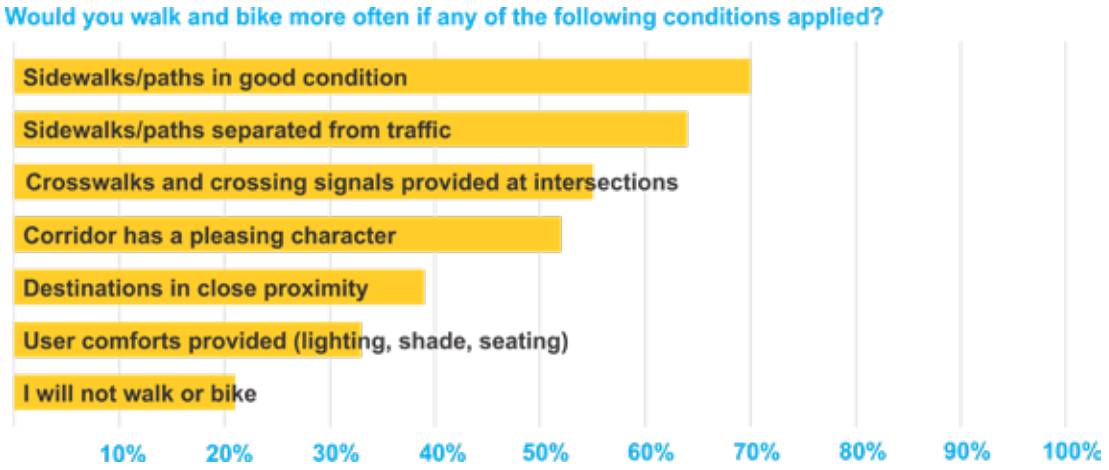


Respondents were asked to express their concerns regarding the current condition of US 76. Six multiple choice answers were available, along with an open-ended “other” category. Respondents could select as many of the options as they felt described their concerns. Condition of surrounding properties and condition of the street were the top two concerns expressed, with 85% and 73% respectively. With regard to safety and accidents, respondents were most concerned about pedestrians (61%), with vehicles (58%) and bicycles (52%) following closely. Traffic congestion was not a major concern, with only 39% of respondents choosing this option.



Respondents were also asked about the types of businesses, organizations, and residential uses they would like to see along US 76. Local retail and restaurants scored the highest with 88% of respondents expressing a desire to see these uses. Parks and open space was the second highest choice at 76%. There is also interest in seeing more national chain retail and restaurants, as well as hotels and visitor accommodations.

To gauge interest in walking and bicycling along the corridor, respondents were asked if certain changes to the corridor would encourage them to walk or bike more often. The presence of sidewalks and paths that are in quality condition would be most encouraging. Separating sidewalks and paths from motorized traffic was also highly desired, as was the provision of crosswalks and crossing signals at intersections. In short, safer, more comfortable pedestrian and bicycle environments would result in more walking and biking.



Stakeholder Meetings

Once draft recommendations were crafted and vetted with the steering committee, five stakeholder meetings were held in April 2018 to ensure that key stakeholders bought into solutions and would take ownership of the Study once it was completed. These meetings were conducted with Florence County, City of Florence, Francis Marion University, Florence Regional Airport, and McLeod Health. Recommendations were reviewed, and feedback received. While some minor refinements were suggested during these meetings, overall, stakeholders were supportive of recommendations presented.

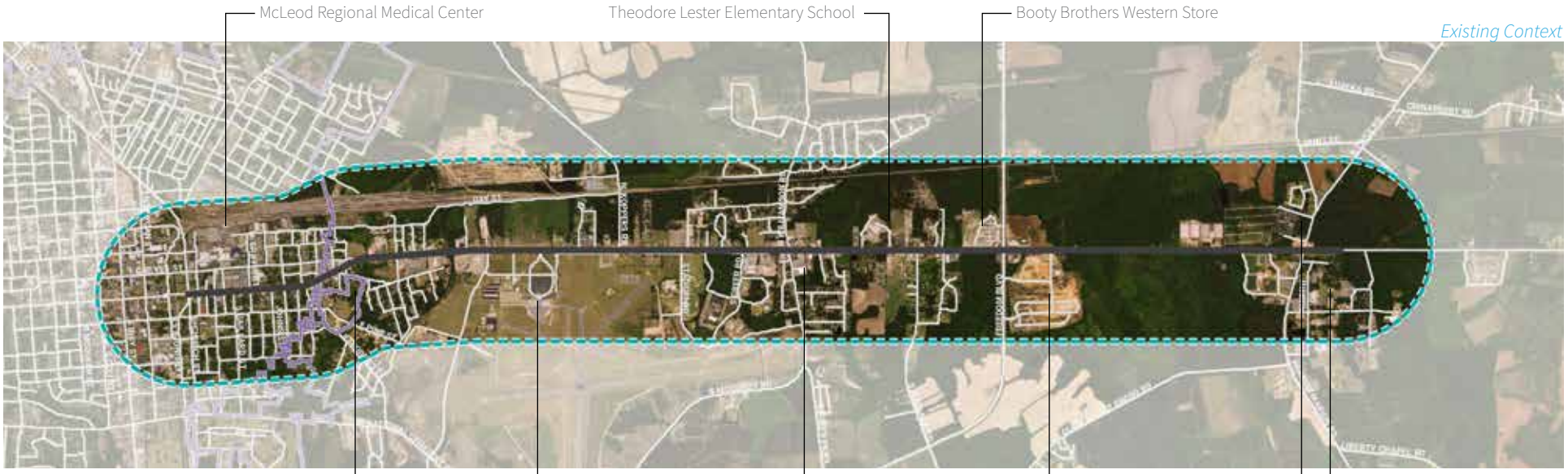
Land Use Context

The 76 Gateway Corridor Study represents a diverse cross-section of land uses that begins near historic downtown of Florence, South Carolina and ends approximately 6.5 miles east, near Francis Marion University. This once rural corridor is now quickly transitioning with new development at major intersections and the expansion of existing institutional uses. Development along this corridor varies from single-family and multifamily homes, to auto-oriented strip commercial and light industrial uses.

Key observations include:

- Several large land owners – McLeod Regional Medical Center and Francis Marion University - bookmark this corridor and have the potential to set the character for this portion of US 76.
- Development is limited between Freedom Boulevard/N. Williston Road and Francis Marion Road due to a flood plain.
- The Florence Regional Airport controls a large portion of US 76 frontage that is currently undeveloped.
- The intersections of Freedom Boulevard/N. Williston Road/US 76 and N. Williamson Road/S. McCurdy Road/US 76 are prime locations for redevelopment.

Existing Context

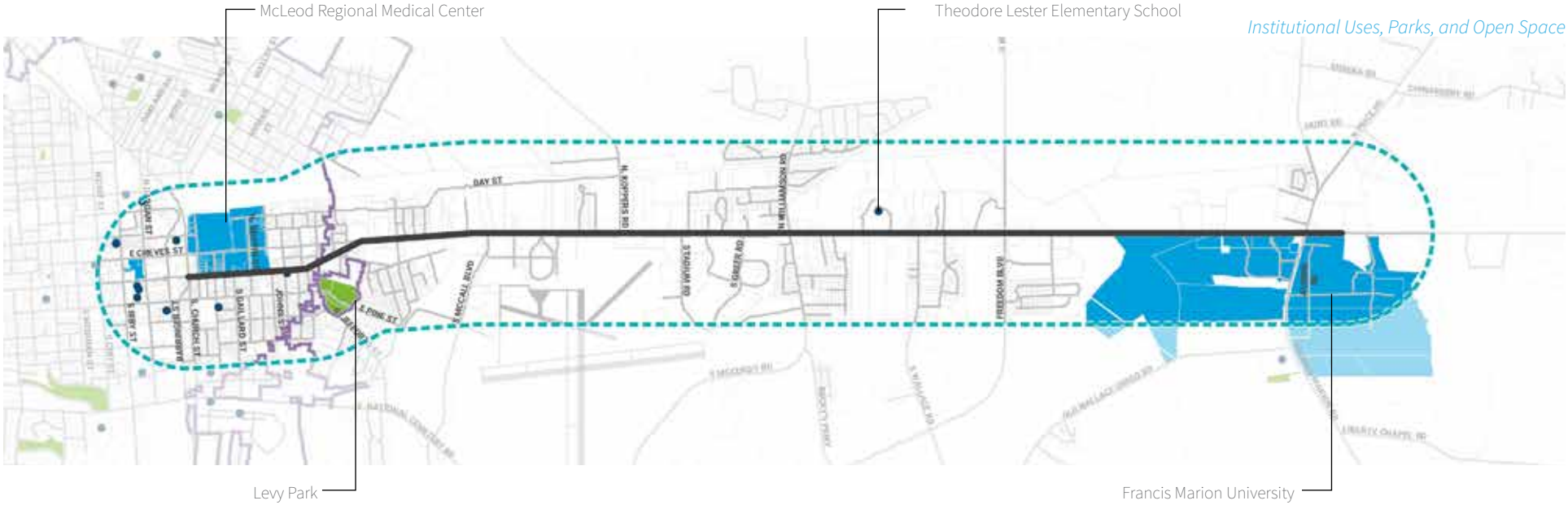


Institutional Uses, Parks, and Open Space

The 76 Gateway Corridor Study has several large institutional land owners that bookend this study area. These institutional uses will continue to grow, and have the potential to set a precedent of how the corridor should look and feel. This section of US 76 also includes Levy Park and Theodor Lester Elementary School. Significant environmental constraints between Freedom Boulevard/N. Williston Road and Francis Marion Road also exist and will limit development along this portion of the corridor.

Key observations include:

- McLeod Regional Medical Center is a large land owner that has expansion plans south towards US 76 and east along E. Cheves Street.
- On-street bicycle connections should be explored to connect to Levy Park.
- Theodore Lester Elementary School is located along the corridor with no pedestrian or bicycle connections.
- Francis Marion University (FMU) is located at the eastern edge of the study area and includes a 468-acre main campus. FMU recently expanded across Francis Marion Road/Highway 327. This expansion includes new athletic fields, courts and a walking trail.
- A large flood plain that includes a mix of pine-hardwood and bottom land forests is found to the north and south of US 76.

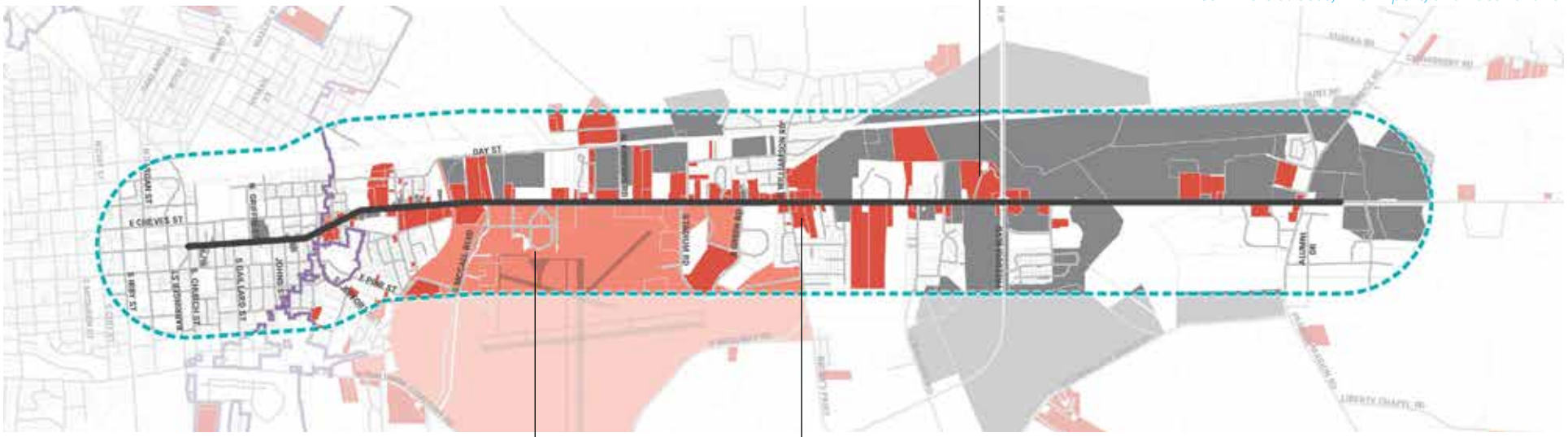


Commercial Uses, The Airport, and Vacant Land

Commercial land uses are the prevalent use along US 76. A bulk of this land is dedicated to the Florence Regional Airport. The overwhelming majority of the commercial uses are auto-oriented. However, there is a considerable amount of vacant land that includes flood plains and potential developable land.

Key observations include:

- The Florence Regional Airport covers approximately 1,400 acres and has two runways.
- Commercial land uses include Booty Brothers Western Store, gas stations, auto dealerships and repair shops, and fast food restaurants. Recent additions include a CVS pharmacy and Food Lion.
- A majority of the vacant land can be found north of US 76.



Existing Zoning

The majority of the study area is not zoned, and therefore has a mix of uses as described in previous pages. Parcels within the City of Florence's boundary are guided by their Unified Development Ordinance, which was adopted in 2011. These uses include:

- **Business and Commercial Districts** - The western edge of the study area includes several mixed-use districts. These districts include the Central Business District and Activity Center District. A Commercial Re-Use District and Commercial General District allow a more suburban style of commercial development.
- **Planned Development** - The McLeod Regional Medical Center area is mainly zoned as a Planned Development. This allows developers flexibility in terms of design and character of new development.
- **Campus District** – A portion of land east of McLeod Regional Medical Center is designated a Campus District. This allows for a variety of medical, research and educational uses.
- **Open Space and Recreation District** - This zoning district is protected by a conservation easement. Levy Park is included in this district.
- **Neighborhood Conservation District** – This district is largely found south of US 76 with a mix of single family detached and two-family attached homes.

Existing Zoning

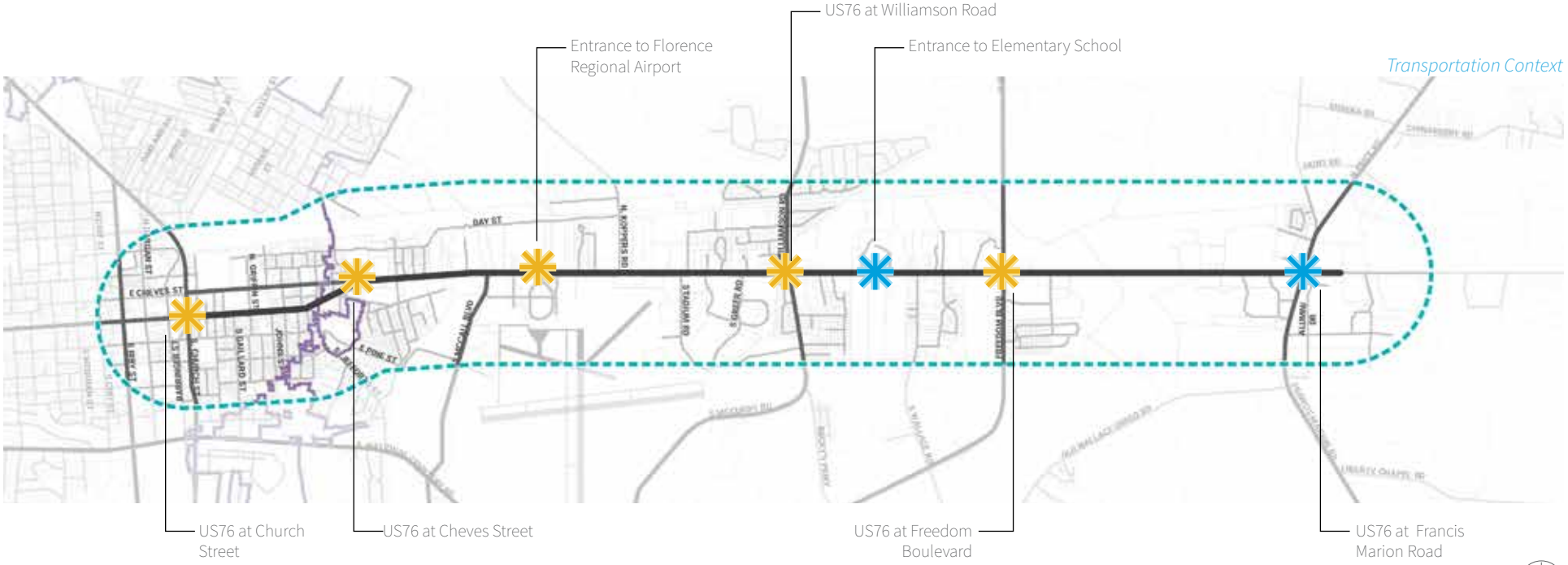
Legend

- Business and Commercial Districts
- Planned Development
- Open Space and Recreation District
- Neighborhood Conservation District
- Campus District
- Unzoned

N

Transportation Context

The US 76 corridor from Church Street to Francis Marion Road various from a 5-lane highway with curb and gutter, and sidewalks in downtown Florence to a 5-lane, median divided highway at the eastern study area boundary with no pedestrian facilities. Along the study area are several major intersections that provide access to various commercial, institutional, and residential land uses. Many of these intersections are signalized with pedestrian cross walks, but no pedestrian facilities outside of the City limits. There is also a parallel service road in front of the airport. There are currently no designated bicycle facilities along the entire corridor.



Transit

Pee Dee Regional Transportation Authority (PDRTA) operates two fixed bus routes along US 76.

- **Route 3 West Evans Street to Department of Motor Vehicles (R3):** This route provides transit service to McLeod Regional Medical Center and the Department of Motor Vehicles (DMV), which is located just east of the airport.
- **Route 7 West Evans Street to Francis Marion University (FMU) (R7)**: This route provides direct access from downtown Florence to Francis Marion University and destinations within the campus.

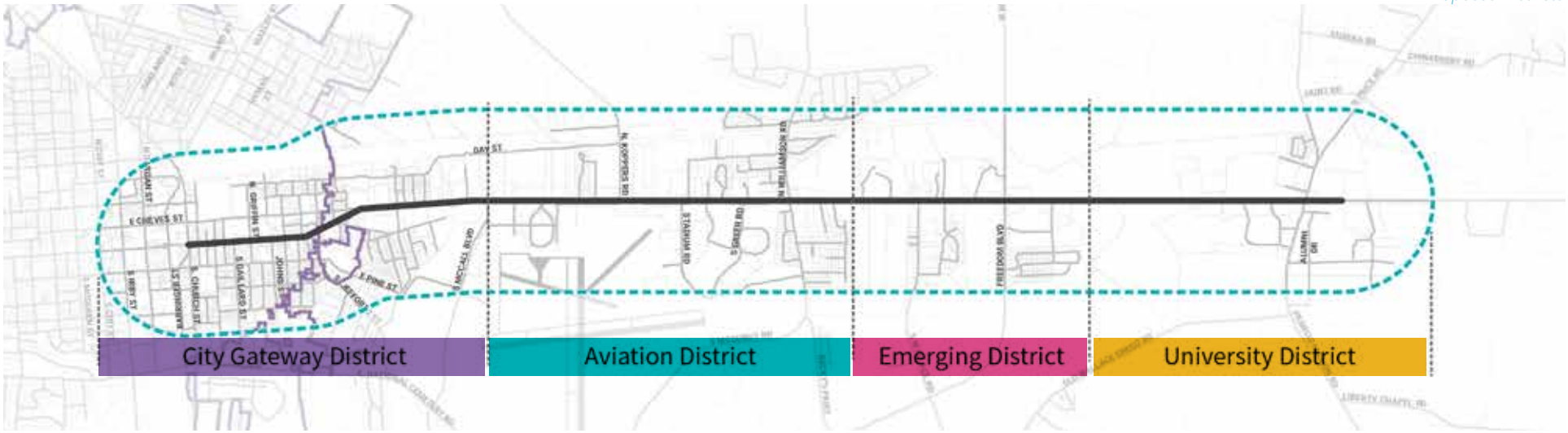
PDRTA Transit Routes along US76

Summary

Based on the existing conditions along the corridor there are four distinct districts that have emerged. Each district has a unique character of existing street typology, land use, and opportunities and constraints. These four districts are:

- **City Gateway District** - The City Gateway character zone begins at Church Street and ends at South McCall Boulevard, approximately 1.6 miles. This section of roadway is primarily a five-lane highway with curb and gutter. Sidewalks are present, setback from the roadway, and there are few disconnects in the network. Large mature trees are dappled throughout this section. McLeod Regional Medical Center is the main property owner in this corridor and most other parcels are related to the health care industry on the North side. The rest of the corridor is made up of residential property, restaurants, commercial, derelict properties, vacant parcels, unsightly power lines, and dilapidated landscapes.
- **Aviation District** - The Aviation District character zone begins at South McCall Boulevard and ends at South McCurdy Road, approximately 1.6 miles. This section of roadway is a five-lane highway with a mix of open ditch/valley gutter and curb and gutter on either side. There is a parallel frontage road present on the south side which minimizes the number of curb cuts in this area. Predominately made up of the Florence Regional Airport to the south, this is a large open expanse with little landscape, several vacant parcels, and unsightly views. Large overhead powerlines on the South side also contribute to the lack of aesthetics. The north side consists of few restaurants, vacant properties, and light industrial/commercial sites. Sidewalks nor shoulders are present.

Proposed Districts



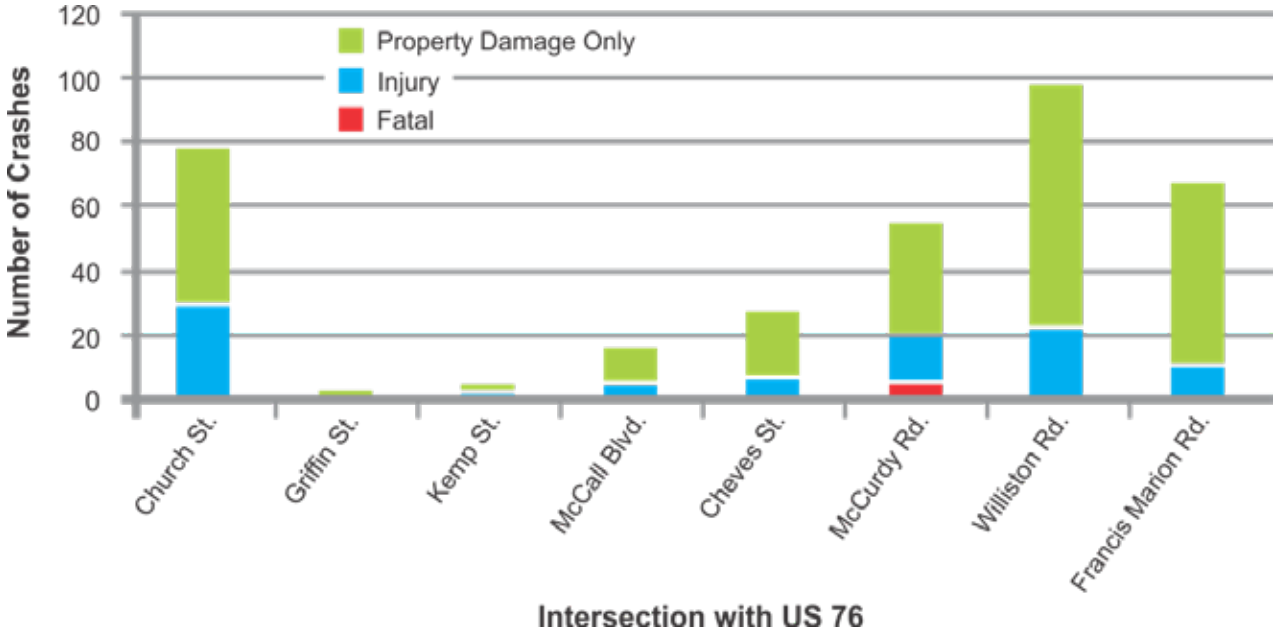
- **Emerging District-** The Emerging District character zone begins at South McCurdy Road and ends just east of Freedom Boulevard, approximately 1.5 miles. This section of roadway is a four-lane divided highway with landscape medians and open ditch/valley gutter. The landscape is dotted with a few restaurants, strip malls, Theodore Lester Elementary School, several light industrial/commercial sites, and a new single-family development. Each parcel has its own identity with little requirements to landscape, signage, and building setback. Large over-head powerlines are present throughout the corridor and switch from the South to the North side halfway through the character zone. Sidewalks are not present however large shoulders exist.

- **University District -** The University Rural character zone begins at just east of Freedom Boulevard and ends at Francis Marion Road (S-327), approximately 1.3 miles. This section of roadway is a four-lane divided highway with landscape medians and open ditch/valley gutter. The landscape is dominated by mature trees, large stands of forest, and flood plain. There is, several light industrial buildings along the northern side of the road, and anchored by Francis Marion University. Large overhead powerlines are present throughout the corridor and switch from the South to the North side halfway through the character zone. Sidewalks are not present however large shoulders exist.

Technical Analyses

Safety Analysis

Historical crash data for eight intersections along US 76 was provided by SCDOT for the most recent available three-year period (i.e., 2014-2016). A total of 372 crashes were reported within the three-year period along the US 76 corridor, with 96 injuries (26%) and 3 fatalities (<1%); all other crashes were property damage only (73%). The intersection of US 76 and Williamston Road (SC 327) experienced the highest number of crashes. Other areas along the corridor that experienced a high number of crashes were the intersections at Church Street and Francis Marion Road.



Crashes were also categorized by type of collision. Types of collisions included rear-end, sideswipe, angle, head-on, and run off road. The majority of crashes were rear-end collisions, with 152 of the 372 total crashes or 41%. Following this were angle (32%), sideswipe (21%), run off road (4%), and other types (1%). The number of crashes at signalized intersections was significantly higher than the amount at unsignalized intersections. Only 51 of the reported crashes happened at an unsignalized intersection. Additionally, 80% of crashes occurred in dry conditions, while 78% of crashes happened during daylight hours.

Capacity Analysis

To inform the development of project recommendations, traffic data was collected and subsequently analyzed for US 76 and its intersection with key roads along the corridor.

Level of Service (LOS) is a metric used to describe the amount of delay a vehicle may typically experience at a given intersection. As shown in **Table 2-1,** LOS is a letter designation that corresponds to a certain range of roadway operating conditions, with A signifying the best operating condition and F indicating the worst, or a failing, operating condition. Highway Capacity Manual (HCM) methodology was employed to analyze the capacity of five intersections under consideration.

Note that the delays associated with LOS for signalized intersections are different from those associated with unsignalized intersections. The HCM explains that drivers perceive that a signalized intersection is designed to carry higher traffic volumes and therefore expect to experience greater delays at signalized intersections. A signalized intersection is described by a single LOS. Unsignalized intersections are assigned a LOS for each minor movement. LOS D is considered acceptable for signalized intersections and LOS E can be acceptable for brief times during peak travel periods. During peak periods, LOS F on select minor movements of an unsignalized intersection can be acceptable.

The analysis was performed using Synchro 9.2 (build 914, Rev 6) for the unsignalized and signalized study intersections. The analyses were conducted in accordance with the latest SCDOT signal design guidelines in regards to the Synchro inputs. Sim Traffic was used to identify 95th percentile queuing.

Table 2-1: Intersection Level of Service Criteria

Level of Service	Description	Control Delay Range (seconds/vehicle)	
		Unsignalized Intersection	Signalized Intersection
A	Operations with very low control delay occurring with favorable progression and/or short cycle lengths.	≤ 10.0	≤ 10.0
B	Operations with low control delay occurring with good progression and/or short cycle lengths.	> 10.0 and ≤ 15.0	> 10.0 and ≤ 20.0
C	Operations with average control delays resulting from fair progression and/or longer cycle lengths. Individual cycle failures begin to appear.	> 15.0 and ≤ 25.0	> 20.0 and ≤ 35.0
D	Operations with longer control delays due to a combination of unfavorable progression, long cycle lengths, or high volume-to-capacity (V/C) ratios. Many vehicles stop and individual cycle failures are noticeable.	> 25.0 and ≤ 35.0	> 35.0 and ≤ 55.0
E	Operations with high control delay values indicating poor progression, long cycle lengths, and high V/C ratios. Individual cycle failures are frequent occurrences. This is considered to be the limit of acceptable delay for a signalized intersection.	> 35.0 and ≤ 50.0	> 55.0 and ≤ 80.0
F	Operation with control delays unacceptable to most drivers occurring due to oversaturation, poor progression, or very long cycle lengths. This can be considered reasonable for short periods of time on unsignalized side streets during peak hours.	> 50.0	> 80.0

Source: 2010 Highway Capacity Manual

Existing Analysis

The SCDOT Planning and Roadway Average Daily Traffic (ADT) Capacity Chart was used to determine if the corridor is over capacity (LOS C or better). Based on the SCDOT functional classification of a 4-lane divided principal arterial, the capacity of US 76 is projected to be 33,600 vehicles per day. The highest daily vehicular volumes along US 76 is 25,900, occurring just east of Williston Road (SC 327). Using this highest volume, the corridor is operating under capacity with a volume to capacity ratio (v/c ratio) of 0.77, resulting in an LOS C or better.

An existing conditions analysis was performed for the five study intersections. The existing (2017) LOS and delay for each intersection is summarized in **Table 2-2**.

Based on **Table 2-2,** the existing intersection analysis indicates that US 76 at Cheves Street currently operates at LOS F for the stop controlled approach during the PM peak hour. As previously mentioned, during peak periods, LOS F on select minor movements of an unsignalized intersection can be acceptable. All other study intersections are performing acceptably under existing conditions.

Table 2-2: Existing 2017 Summary of LOS and Delay

ID#	Intersection with US 76	Control	LOS AM	LOS PM	Delay AM (sec/veh)	Delay PM (sec/veh)
1	Church Street (S-12)	Signal	C	D	28.8	40.3
2	Cheves Street (S-92)	Stop Control	C	F	22.8	71.9
3	Williamson Road/McCurdy Road (S-925)	Signal	B	B	16.4	14.2
4	Williston Road (SC 327)/Freedom Boulevard (US 301)	Signal	C	C	22.3	21.9
5	Francis Marion Road (SC 327)	Signal	C	C	34.9	23.4

Future No-Build Analysis

Future traffic projections were calculated using a 0.5% annual growth rate projected to the year 2040. Based on this projected growth, traffic conditions were analyzed for the year 2040 without any improvements made to the existing roadway and its intersections. The results of this analysis is shown in **Table 2-3**.

Based on **Table 2-3**, two of the study intersections will operate at an unacceptable LOS in 2040. The US 76 at Church Street signalized intersection will experience an LOS E in the PM peak hour, while the US 76 at Cheves Street stop controlled intersection will have an extreme LOS F (i.e., over 150 seconds of delay), also in the PM peak hour.

Table 2-3: Future No-Build 2040 Summary of LOS and Delay

ID#	Intersection with US 76	Control	LOS AM	LOS PM	Delay AM (sec/veh)	Delay PM (sec/veh)
1	Church Street (S-12)	Signal	D	E	37.4	55.8
2	Cheves Street (S-92)	Stop Control	D	F	28.1	150.9
3	Williamson Road/McCurdy Road (S-925)	Signal	C	B	20.2	16.2
4	Williston Road (SC 327)/Freedom Boulevard (US 301)	Signal	C	C	22.9	23.2
5	Francis Marion Road (SC 327)	Signal	D	C	39.1	25.9

Build Analysis

Based on feedback from steering committee members and projected 2040 operations, the following improvements were analyzed to enhance flow and safety along the corridor. It is important to note that turning movement counts were not collected at some locations, therefore, some recommendations are made at a planning level using engineering judgment.

- Construct a westbound right-turn lane on US 76 onto Church Street with 200 feet of storage;
- Construct a westbound right-turn lane on US 76 onto Griffin Street with 200 feet of storage;
- Realign Cheves Street to form a signalized intersection with US 76 and Old Mars Bluff Road;
- Terminate Ives Street at Cheves Street through a stop controlled, right-in/right-out intersection;
- When warranted, signalize the intersection of US 76 at McCall Boulevard;
- Construct a northbound left-turn lane on McCurdy Road onto US 76 with 200 feet of storage; and
- In general, restrict full access at driveways along US 76 by constructing R-Cuts and U-Turns along the corridor.

Table 2-4 summarizes the operation at the intersections with the above proposed improvements in 2040. All study intersections improve to an acceptable LOS. Of particular note is the change to Cheves Street, which will improve to LOS B or better in the AM and PM peak hours. In realigning Cheves Street to intersect with US 76 at Old Mars Bluff Road, it was conservatively assumed that all traffic that would have passed through the existing US 76/Cheves Street intersection will utilize the new realigned intersection. This is conservative because the grid network provides many ways to travel between US 76 and Cheves Street. Additionally, new improvements at the intersection of US 76 and Church Street, will encourage truck traffic to use that intersection.

Table 2-4: Build 2040 Summary of LOS and Delay

ID#	Intersection with US 76	Control	LOS AM	LOS PM	Delay AM (sec/veh)	Delay PM (sec/veh)
1	Church Street (S-12)	Signal	D	D	35.3	42.2
2	Cheves Street (S-92)	Signal	B	B	18.1	15.0
3	Williamson Road/McCurdy Road (S-925)	Signal	C	C	24.3	23.2
4	Williston Road (SC 327)/Freedom Boulevard (US 301)	Signal	D	C	39.1	25.9
5	Francis Marion Road (SC 327)	Signal	C	C	34.9	23.4
6	Old Mars Bluff Road (S-456)/Realigned Cheves Street (S-92)	New Signal	A	B	6.8	14.5
7	Cheves Street (S-92)/Ives Street	Stop Control	B	B	14.8	10.2

Utility Inventory

To gain a better understanding of the context of the corridor and the needs of future development, existing water, sewer, and electric utility infrastructure information was collected from municipal and private sources. This information was mapped; those maps are included in Appendix X.

Water and Sanitary Sewer Infrastructure

The land use context along US 76 has a significant influence on the prevalence of utility infrastructure, and vice-versa. The first 0.75 mile of US 76, between S. Church Street and S. Jeffords Street, is within the City of Florence. This area is unmistakably urban in character and presents a mixture of commercial and residential uses on relatively small parcels. Density within this area is the highest along the corridor. Public rights-of-way are established in a traditional grid roadway network, and the City of Florence owns and operates water and sewer infrastructure characteristic of urban water distribution and sanitary sewer collection systems. A six-inch water main with associated water valves and fire hydrants is located within the US 76 right-of-way, as well as an eight-inch gravity sewer main and multiple sewer manholes.

East of S. Jeffords Street, the governmental jurisdiction changes from the City of Florence to Florence County, but the City's water and sanitary sewer service areas extend eastward. Over the next mile to S. McCall Boulevard, the character of US 76 transitions from urban to suburban with commercial and small-scale industrial uses. Density of development decreases as parcel size becomes increasingly larger by comparison, and the number of residential parcels fronting US 76 declines sharply. The presence of sanitary sewer begins to decline as distance from the City's downtown commercial core increases, and sewer infrastructure is absent from E. Cheves Street until S. McCall Boulevard. The City operates a 12-inch water main along this portion of US 76.

The Florence Regional Airport dominates the next mile between S. McCall Boulevard and S. Stadium Road, and most of the water and sewer infrastructure is concentrated between US 76 and the airport's landside operations. The City's 12-inch water main continues along US 76 throughout this segment of the corridor, and few other water and sewer improvements exist, except for a few laterals in the water distribution system to service some areas of development. Many of the large parcels in this area enjoy both frontage along US 76 to the south and a CSX Transportation railroad to the north.

The City's 12-inch water main continues along US 76 between S. Stadium Road and S. McCurdy Road. Two looped water systems connect to the 12-inch main to service residential and commercial development to the north and south of US 76. There is no significant sewer infrastructure in this portion of the corridor until nearing S. McCurdy Road. East of S. McCurdy Road, and throughout the remainder of the corridor, the sanitary sewer infrastructure is composed almost entirely of sewer force main to transport sewage from distant collection systems to treatment facilities where the rise and run of topography precludes the use of gravity sewer mains. A small 2,000 linear-foot gravity sewer system on the north side of US 76 terminates at a lift station located in the southeast corner of the Theodore Lester Elementary School parcel. The City's major water main along US 76 increases in size to 14 inches. Approaching Freedom Boulevard (US 301), two lateral lines extend to the south to primarily service single-family residential development. It should be noted that a large 30" diameter water line following the N. Williston Road/Freedom Boulevard right-of-way crosses the US 76 within the intersection of US 76 and US 301.

The development potential between Freedom Boulevard and Francis Marion Road is restricted by the presence of flood plain and wetlands associated with Polk Swamp, which runs approximately north-south and perpendicular to the US 76 corridor. To the east of Polk Swamp, the City of Florence operates the East Water Treatment Plant on the south side of US 76. This facility treats raw water obtained from two active groundwater wells and conveys up to three million gallons per day into the water distribution system through a 16-inch connection to the City's water main along US 76. A significant amount of sanitary sewer infrastructure exists in this portion of the corridor, with both gravity sewer and force main extending along the US 76 right-of-way to the intersection with Francis Marion Road where Francis Marion University and its associated Griffin Athletic Complex represent considerable demand.

Overhead Electric Infrastructure

Duke Energy Progress operates overhead electric distribution lines along US 76 throughout the corridor's length. This medium voltage electric distribution infrastructure is 23 kV, with 13.2 kV line-to-ground service provided for customers. These lines are supported by utility poles that are installed, likely by encroachment permit, in the SCDOT right-of-way in a narrow grass strip between the concrete curb and sidewalk within the City of Florence. Beginning approximately 900 feet east of the intersection of US 76 and E. Cheves Street, these poles are positioned behind the sidewalk, and continue this alignment along the northern side of US 76 until the sidewalk terminates near N. Cromwell Drive. From here, the overhead electric lines continue along the northern side of US 76, outside and adjacent to the SCDOT right-of-way boundary, until crossing to the south side of the street right-of-way just north of the Florence Regional Airport. For approximately the next mile, the lines continue eastward in a grassed shoulder/median between US 76 and an adjacent, parallel frontage road along the northern airport boundary.

East of S. McCurdy Road, the US 76 cross section transitions to a divided four-lane highway with a grassed median, and the Duke Energy Progress overhead electric lines appear to be positioned just beyond the outside bank of the roadside ditch within a private easement immediately adjacent to the SCDOT right-of-way. This alignment continues through the Freedom Boulevard (US 301) intersection and approximately one-half mile further east before the overhead lines transition across US 76 to a private easement located immediately adjacent to the SCDOT right-of-way on the northern side of the corridor.

Additional utility service providers are supported by the Duke Energy Progress utility poles within the corridor via joint use agreements. Joint use utilities in the western segments of the corridor near the City of Florence include telecommunications providers Crown Castle and AT&T and cable television provider Spectrum (Time Warner Cable). In the eastern portions of the corridor, closer to Francis Marion University, joint use utilities include AT&T and Spectrum.


SPEED LIMIT
40

Recommendations

Transportation Improvements

Recommended transportation improvements were developed as part of a conceptual roadway design for US 76. These improvements work in concert with the districts and land use characteristics that have been previously presented. Major goals of the transportation improvements include:

- Improving walkability and bikeability;
- Providing a safe and convenient non-motorized connection between Francis Marion University and Downtown Florence;
- Increasing access to and convenience of public transit;
- Enhancing safety, while reducing conflicts; and
- Maximizing the efficiency of the existing transportation network.

While many location-specific improvements are included in the conceptual roadway design, there are a number of strategies that are recommended for the entire corridor:

- Basic pedestrian intersection improvements, like crosswalks, pedestrian signals, and ADA curb ramps;
- Minor intersection improvements to increase vehicular capacity and reduce delay;
- Access management through the consolidation of left-turn, reduction of driveways, and general organization of the street; and
- Interconnectivity of parcels to enable short trips to be made without need to access US 76.

Recommended transportation improvements are summarized in the following sections. The concept roadway design in its entirety is included in the **Appendix.**

Key Intersection Improvements

Several intersection improvement recommendations go beyond basic enhancements. Intersections where more comprehensive capital improvements are recommended are summarized below.

US 76 at Cheves Street

Currently, Cheves Street intersects US 76 on a skew, which results in dangerous eastbound left-turning movements from Cheves Street onto US 76. Additionally, the current geometry provides a continuous, straight movement for westbound traffic on US 76 to transition to Cheves Street without reducing speed. This encourages downtown-bound traffic to use Cheves Street instead of remaining on US 76.

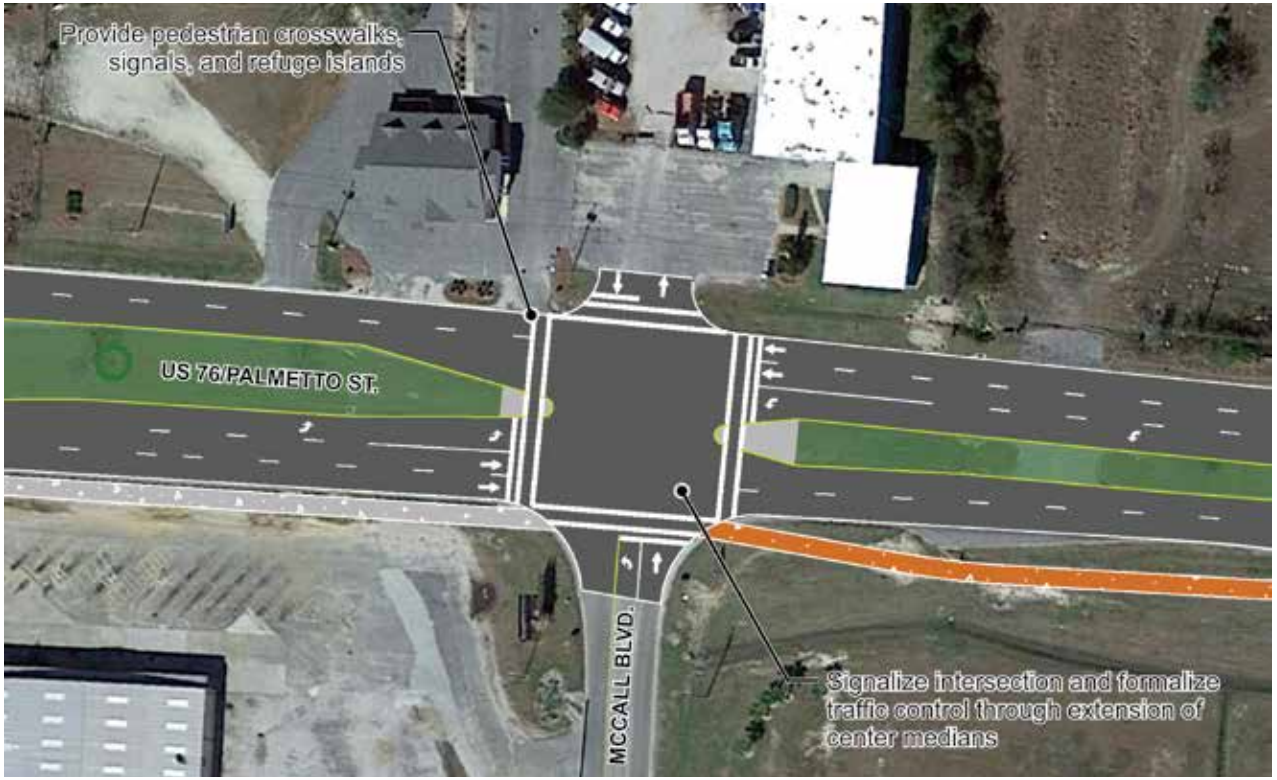
It is recommended that Cheves Street and Old Mars Bluff Road be realigned to form a new, signalized intersection with US 76. As shown in the traffic analysis, this new intersection will be more than capable of handling the traffic volumes today and into the future. By eliminating the skewed intersection of US 76 and Cheves Street, safety will be greatly improved, traffic not needing to access Cheves Street will stay on US 76, and speeds will be reduced. Further, with the City of Florence adding a dedicated right-turn lane at the intersection of US 76 and Church Street, through truck traffic will continue on US 76, rather than using Cheves Street. All of this will contribute to a more walkable and bikeable environment for Cheves Street, which is the desire of both the City of Florence and McLeod Health.

US 76 and Cheves Street Recommendation

US 76 at McCall Boulevard

The intersection of US 76 and McCall Boulevard is a prime example of how formalization can help to define how and where vehicular and pedestrian movements should occur. Today, the intersection has very little organization, with excess pavement, lack of safe pedestrian crossings, and is unsignalized while serving as a major connection to areas south of US 76.

It is recommended that, when warrants are met, the intersection of US 76 and McCall Boulevard be signalized. This intersection was not included in the study intersections for capacity analysis, but is anticipated to need signalization in the near future for both vehicular and pedestrian volumes and safety. The addition of crosswalks, pedestrian signalization, and pedestrian refuge islands will be most appropriate as well, and will assist with increased pedestrian and bicyclist volumes that will come with implementation of the trail on the south side of US 76.



US 76 at McCall Boulevard Recommendation

Frontage Road

A frontage road runs parallel to US 76 between the Florence Regional Airport and just west of McCurdy Road, providing access to properties on the south side of the corridor. While this frontage road does relieve some of the traffic stress by keeping shorter trips off US 76, it is also susceptible to high speeds. Additionally, traffic transitioning between US 76 and the frontage road can result in dangerous conditions that increase the potential for high speed crashes.

Two key improvements are recommended for the frontage road. First, the connections to the frontage road should be modified to relocate the stop control from traffic exiting US 76 to traffic traveling on the frontage road. This will keep turning traffic from queuing into the mainline traffic on US 76 while also slowing traffic on the frontage road. Second, intersections to the frontage road that experience heavy traffic should have dedicated right-turn lanes installed. One of the most prevalent examples of this is the frontage road and US 76's intersection with Stadium Road, which has large bus and car volumes due to the Pee Dee Regional Transportation Authority and Florence Memorial Stadium being located on it.

Frontage Road Recommendation

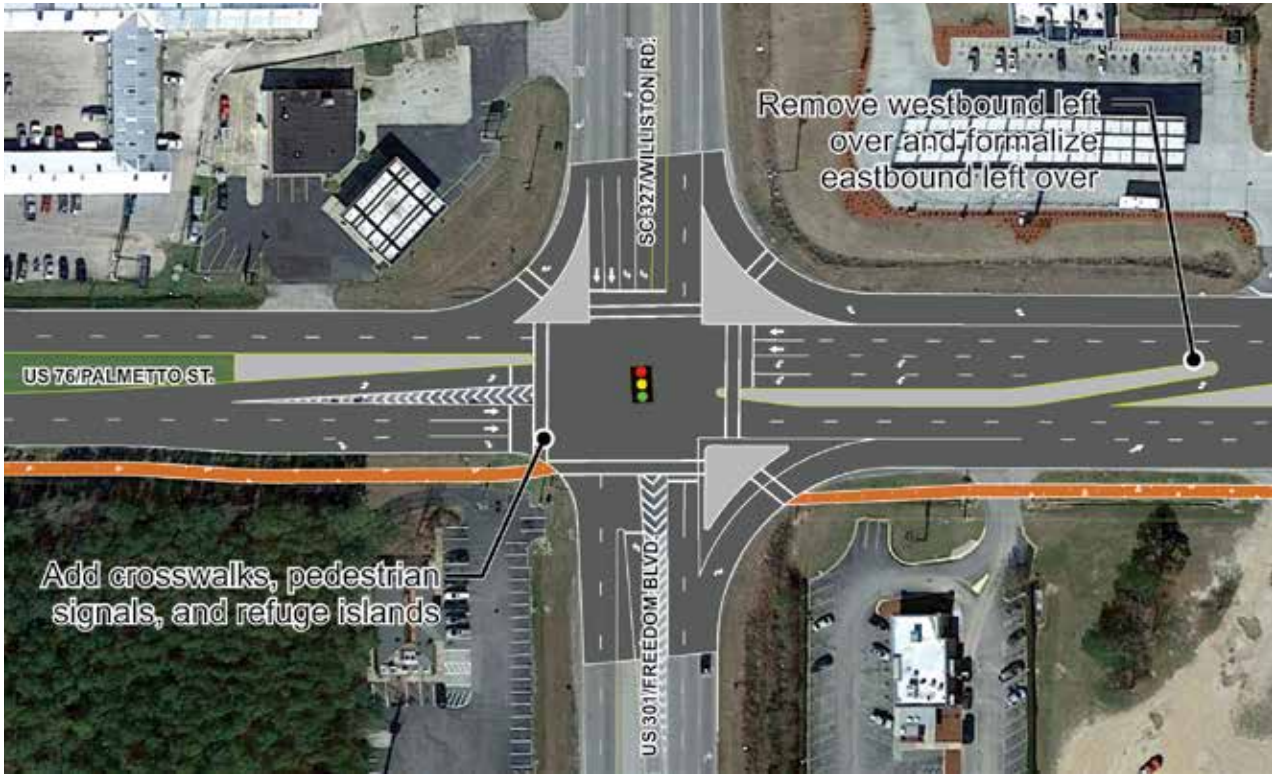
US 76 at McCurdy Road

The intersection of US 76 and McCurdy Road is currently signaled but does not have adequate pedestrian facilities. With the implementation of the trail on the south side of US 76, it is recommended that stronger pedestrian connections be established to connect neighborhoods north of US 76 to the trail. Additionally, a new road connection is recommended between McCurdy Road and properties south of US 76. This road will provide another access option, connectivity to a signalized intersection, and opportunities for greater access management on US 76.

US 76 at McCurdy Road Recommendation

US 76 at Williston Road/Freedom Boulevard

The intersection of US 76, Williston Road, and Freedom Boulevard has been designed to reduce delay and move large volumes of vehicles. As one of the most significant crossroads for local and seasonal beach traffic, this is not surprising, but it has resulted in a very large intersection that is difficult for pedestrians to traverse. In recent years, a number of commercial businesses have been constructed in proximity to this intersection, which attract a level of pedestrian activity. Additionally, as Francis Marion University enrollment and residential development increase, this portion of the corridor is anticipated to become a commercial center to support that growth. Further, once the trail is implemented, pedestrian and bicycle traffic will greatly increase at this intersection. For all the above reasons, greater emphasis on walkability is recommended at this intersection, including crosswalks, pedestrian signals, and refuge islands. Also, to increase safety, on the east side of the intersection, the westbound left over should be channelized and the eastbound left over should be removed.



US 76 a Williston Road/Freedom Boulevard Recommendation

US 76 at Francis Marion Road

The intersection of US 76 and Francis Marion Road is another intersection that is currently challenging for pedestrians. With private student housing on the north side of US 76 and Francis Marion University campus on the south side, this intersection needs to be more pedestrian friendly. Some recent improvements have been made, including a single crosswalk across US 76 and pedestrian signals, but additional improvements are appropriate. It is recommended that crosswalks across Francis Marion Road and refuge islands be installed. As more properties develop on the north side of US 76, a sidewalk network should be developed.

US 76 a Francis Marion Road Recommendation

Bus Stop Guidelines

Because the Pee Dee Regional Transportation Authority (PDRTA) operates two transit routes along US 76, it is essential that quality transit facilities exist within the corridor. Such should include bus stops with shelters and benches and bus turnouts in high traffic areas. These facilities, in conjunction with proposed sidewalks and shared use paths, will provide basic dignity elements that make riding transit viable. The following sections provide design guidelines for bus stop improvements.

Bus Stop Placement: General Considerations

Stop spacing range for different environments:

- Urban core/central business district: 300 to 1,000 feet
- Urban areas: 500 to 1,200 feet
- Suburban areas: 600 to 2,500 feet
- Rural areas: 650 to 2,640 feet

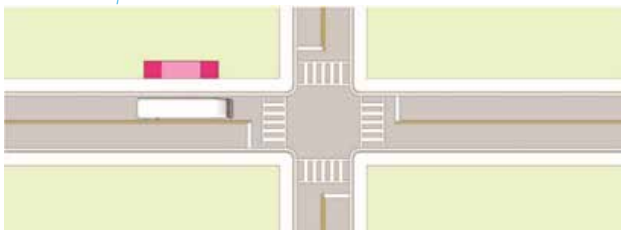
Safety elements:

- Passenger protection from vehicular traffic
- Accessibility
- Proximity to crosswalks and curb ramps
- Proximity to major trip generators
- Convenient passenger transfers to routes with nearby stops
- Proximity to stop for the same route in opposite direction
- Street elements

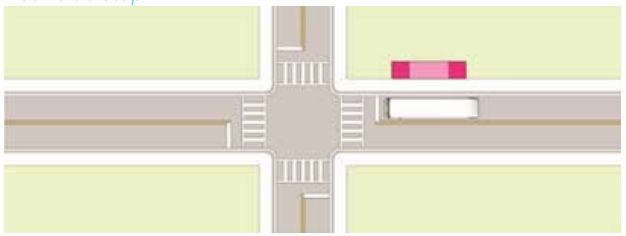
Operating elements:

- Curb space for number of buses expected at stop at one time
- Impact of stop on adjacent properties
- On-street parking and loading zones
- Bus routes
- Directions and widths of intersection streets
- Types of traffic signal controls
- Traffic volumes and turning movements
- Sidewalk widths

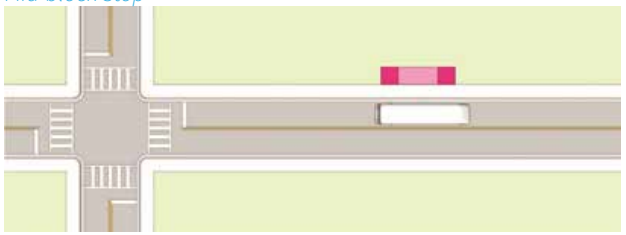
Far Side Stop



Near Side Stop

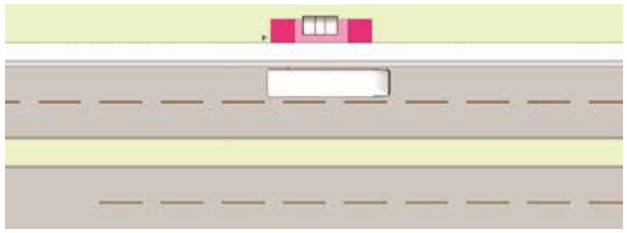


Mid-block Stop

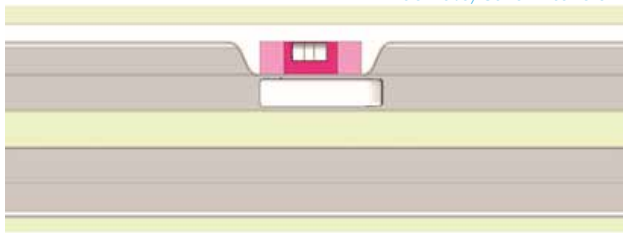


Bus Stop Design Types

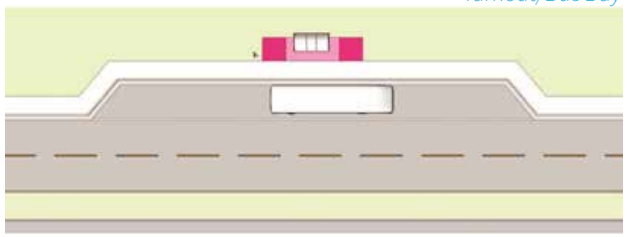
Curbside



Bus Bulb/Curb Extension

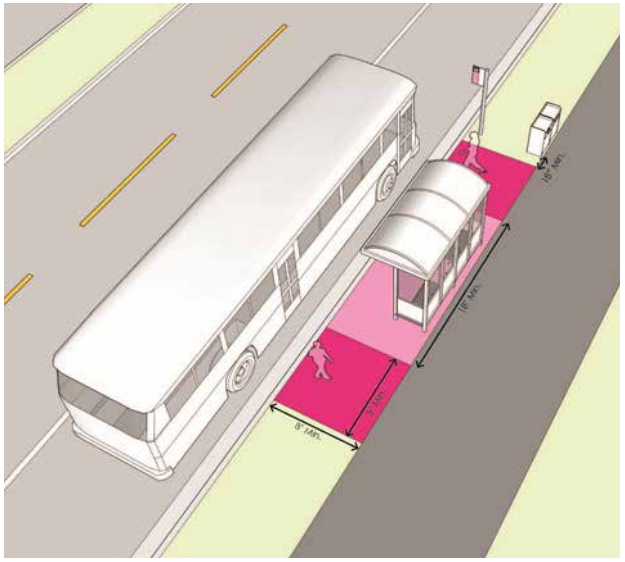


Turnout/Bus Bay



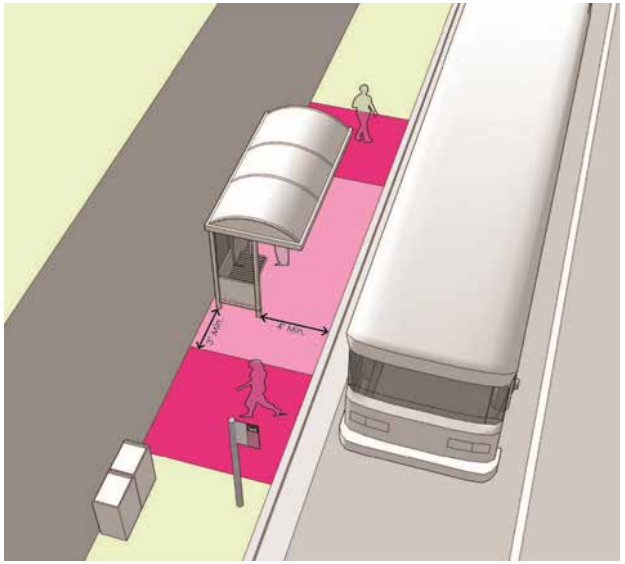
Bus Stop Geometry: General Dimensions

- Loading zones: 5’ wide minimum, 8’ deep minimum
- Distance between landing zones: 18’ minimum
- Distance from stop to crosswalk: 5’ minimum, 10’+ preferred
- Trash/recycling bins: 18” minimum to the left of landing
- Trees: 10’ minimum offset from landing
- Bus stop signs: 2’ from back of curb



Bus Stop Shelters: General Dimensions

- Crosswalk to shelter: 15’ minimum
- Shelter to back of curb: 4’ minimum
- Ground obstructions to shelter: 1’ minimum
- Fire hydrant to shelter: 10’ minimum
- Shelter to Landing Zone: 3’ minimum, 20’ maximum



Zoning and Overlay District Recommendations

Why a Zoning District?

Zoning regulations govern what land uses are permitted by municipal law to be developed on a particular parcel of land. Physical development characteristics such as bulk requirements (e.g., building coverage, building height, setbacks, parking, minimum lot size) and density (dwellings units per acre) can also be governed by zoning regulations.

The City of Florence has established zoning regulations within its boundary. Outside the City limits, within Florence County, there are no zoned parcels. With growth continuing to occur along the 76 Corridor it will be important to guide development that is reflective of the character and values of the community.

Proposed Zoning Districts

There are four zoning districts proposed outside of the City of Florence and within the Overlay District boundary. They are:

- **Residential District (R-5 and R-5A) Multi-Family Residential**- This district is proposed in the University area. It allows for higher density residential development.
- **Business District B-3 General Business District** - The intent of this district is to provide for commercial and businesses to serve the community and larger region.
- **Business District B-5 Office and Light Industrial District** - The intent of this district is build on the proximity of the airport and downtown. It would include office, distribution and light manufacturing.
- **Planned Development District** - The intent of the planned development district is to allow large parcels flexibility to include a mix of uses.

Overlay District and Proposed Zoning

The Benefits of an Overlay District

An overlay district would establish regulatory criteria for certain characteristics within each district. There are a wide variety of characteristics (e.g., sidewalks, open space requirements, driveway configuration, parking requirements, lighting, etc.) that can be regulated along the corridor. Parcels identified for an overlay district include vacant land, existing commercial land, and industrial land.

It will be important to identify the overall intent of the overlay district as it applies to the corridor and more specifically to its character districts. In general, the overlay district should:

- Encourage multi-modal facilities and amenities.
- Encourage shared parking.
- Support open space.
- Encourage new development to create interconnected streets that provide an alternative to US 76.
- Promote a pedestrian-oriented built environment.

The standards outlined here and illustrated on the following pages focus on multi-modal connectivity, and scale and form of future development for commercial, office, and industrial uses.

Multi-modal Connectivity and Block Structure

Multi-modal connectivity and block structure that exists today along US 76 has limited to no pedestrian connectivity and limited internal vehicular circulation. This results in vehicle trips being forced to use existing major roads, like US 76, for circulation. New street connectivity and cross-access between parcel will put less local trips on the existing streets and through the intersections on the regional network. In turn, it will help protect the safety and capacity of these roads.

As part of an adopted Overlay District new street connections with pedestrian and bicycle facilities should be constructed as development occurs. The incremental nature of parcel-by-parcel development within the Overlay District will over time lead to a robust, local, and multi-modal street structure that limits circulation along US 76.

- Large parcels should be organized into blocks that are between 360 feet to 600 feet. This structure should be used to organize buildings, internal parking, cross-access between parcels and/or future stub outs, and parks.
- Blocks larger than 360 feet should provide dedicated pedestrian connections that are at least 10 feet wide to connect parking and streets to building entrances and transit stops.
- Joint use driveways and/or cross-access easements should be provided, with stub-outs for future connections.
- Sites should identify primary streets (A streets) and secondary streets (B streets). Buildings should front and hold the corner on all A streets, and include where appropriate, on-street parking, bike lanes, access to building entrances, and generous pedestrian facilities and amenities. B streets should serve as supporting streets with on-street parking, and a minimum of a 5 foot sidewalk with a planting strip.

Parking

- Primary driveways are connections to commercial development from adjacent public streets. They provide access to parking lots and have minimal curb cuts and access to parking areas. They should also provide pedestrian connections to commercial developments.
- Secondary driveways provide connections through parking lots that front commercial development. These connections may have direct access to parking aisles but need to have a continuous pedestrian sidewalk on both sides either though parking lot landscape islands or adjacent to commercial buildings.

Pedestrian Access

Multi-modal options that include pedestrian and bicycle access, circulation, and facilities are equally as important as vehicular access and circulation. At the most basic, a pedestrian network is a sidewalk system along public and private roads. It should also include internal pedestrian connections and pathways within parking areas, and along parks and open space.

- Sidewalks should be a minimum of 5 feet wide and connect all building entrances to surrounding streets, transit stops, parking lots, and adjacent development.
- Sidewalks should be landscaped with shade trees at an average of one (1) per fifty (50) feet.
- Crosswalks should be design and coordinated to move people safely to and from buildings and parking areas.

Driveway Consolidations and Parcel Connections

Limiting the number of curb cuts along major roads improves safety and regional mobility. Where possible, driveways should be consolidated and cross parcel access should be provided or at a minimum stubbed out for future development. Careful review of parcel size, opportunities for connectivity to adjacent parcels and internal connectivity should be examined for all parcels, regardless of size.

Parking Lot Landscaping

Surface parking lots in suburban commercial developments often comprise well over half of the site's development area. The design and landscaping of these parking lots is important in creating a safe and attractive environment that encourages pedestrian activity and controls the micro-climate created by large paved areas.

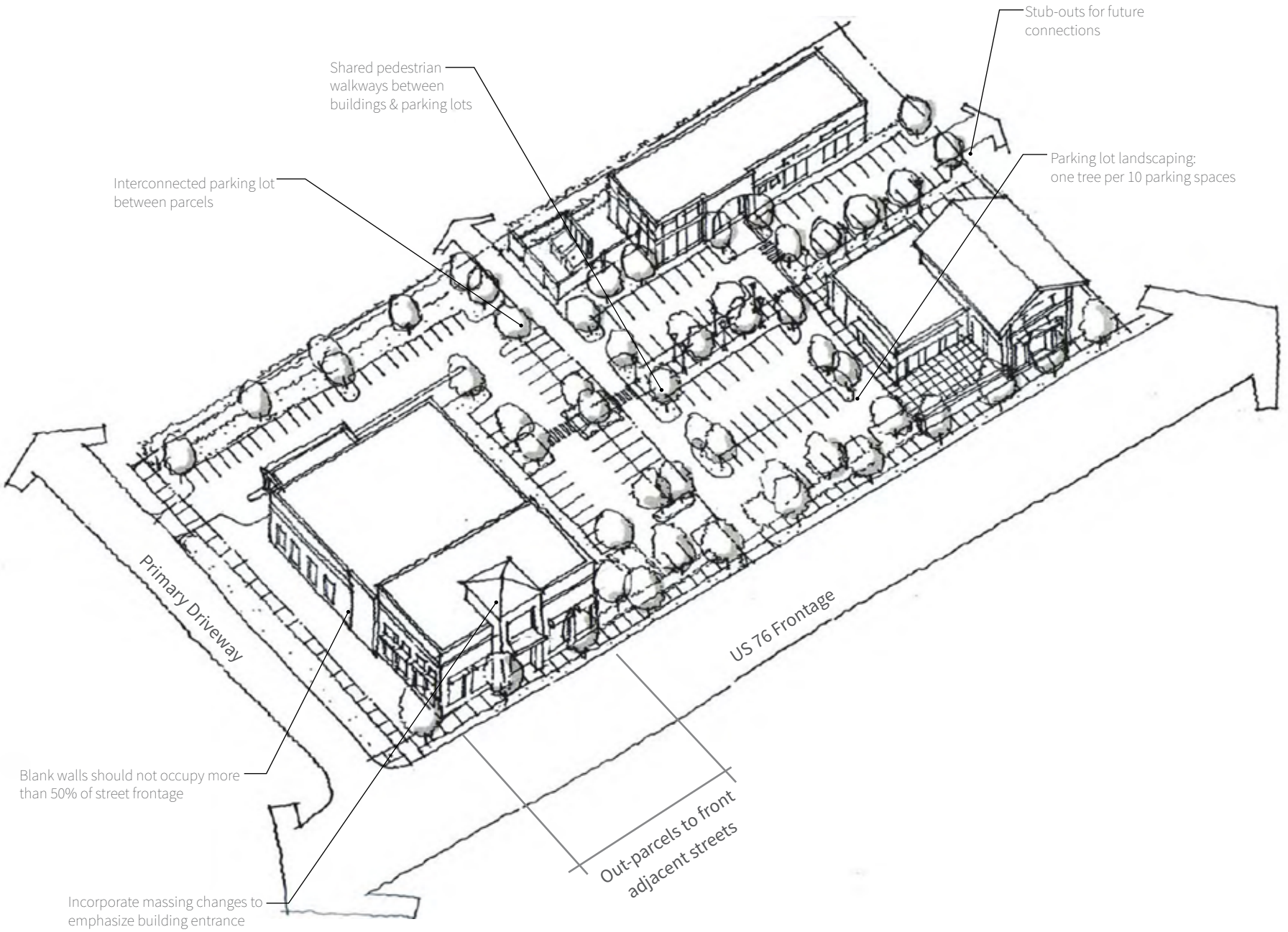
- Parking lots should be planted with overstory/ shade trees at a rate of one (1) tree per ten (10) spaces.
- Parking aisles should not extend more than twelve (12) spaces without a tree island.
- Tree islands should be a minimum of 200 square feet in size and not less than 8 feet wide.

Trail Standards

Recommendations for The 76 Gateway Corridor Study include a multi-use path along a significant portion of the project. New trails or multi-use paths should be explored to improve overall non-motorized connectivity between existing and proposed development.

- Trails should be a minimum of 8 feet to 12 feet of a paved surface such as asphalt or concrete.
- All trails should be ADA (Americans with Disabilities Act) compliant.
- All site furnishing should be located along the same side of the trail and located 3' from the back of trail edge.
- Vehicular warning signs shall be posted at all travel routes.
- A wayfinding system could include: mile markers, directional signs, trail, identification signs and trail regulations.
- Each major access point or trail head should contain a sign that directs the users along the trail.

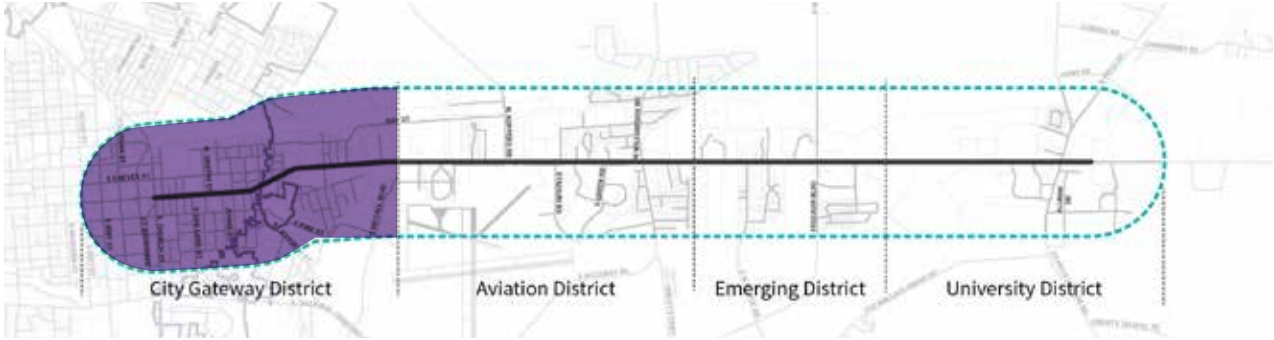
Example of a parcel with a mix of uses along a major corridor

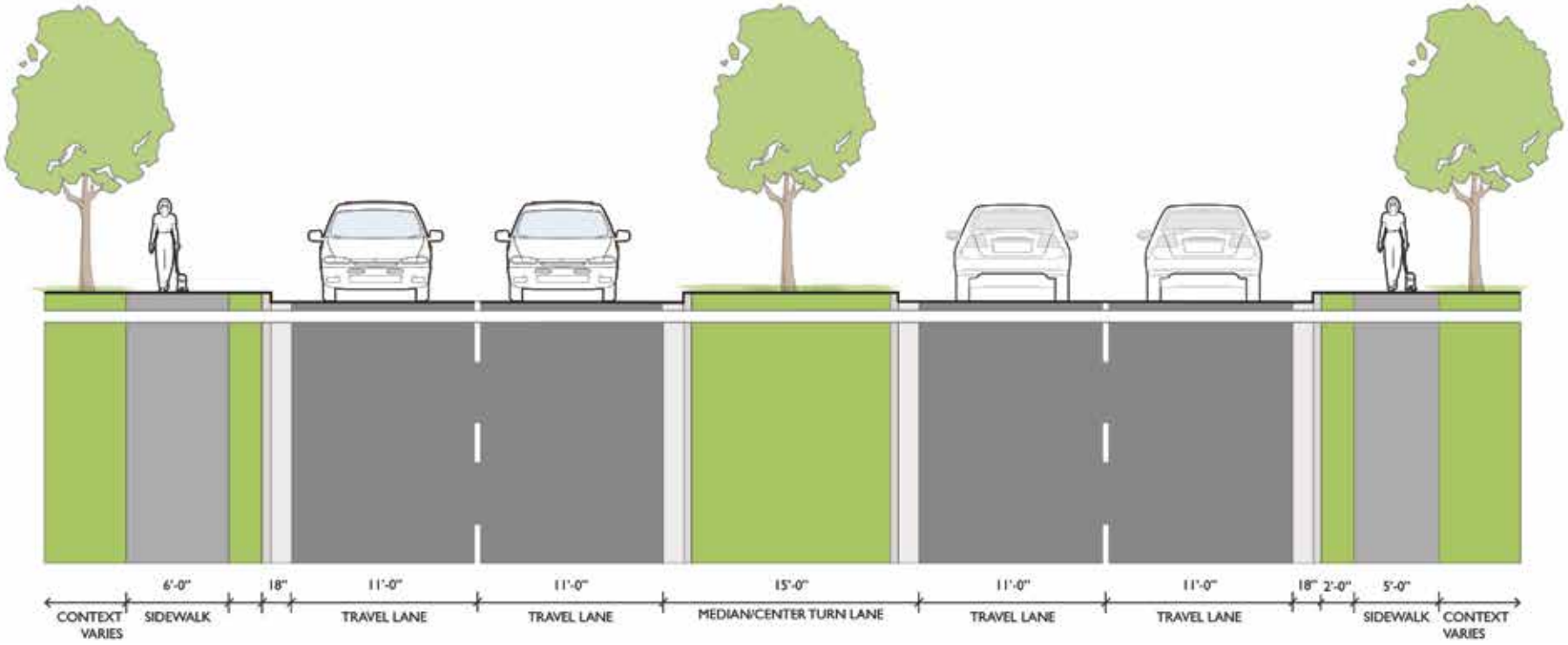


Example of interconnected commercial parcels

City Gateway District

The City Gateway character zone begins at Church Street and ends at South McCall Boulevard, approximately 1.6 miles. This current section of roadway is primarily a five-lane highway with curb and gutter. Sidewalks are present, setback from the roadway, and there are few disconnects in the network. The proposed section includes a median island or center turn lane, two travel lanes in each direction, a landscaped buffer and minimum 5 foot sidewalks.





Key Characteristics

The City of Florence has a well defined central business district with fabric, brick buildings. Key development characteristics along US 76 should build on its proximity to McLeod Regional Medical Center and its proximity to the downtown Central Business District.

Zoning Recommendations outside the City limits

The majority of the City Gateway District already has zoning designations. Within the City Gateway District the most prominent zoning designation is Planned Development (PD) with respect to the hospital, and Business/Commercial (B-2 and B-3). The recommended zoning along US 76 outside of the city boundary is Planned Development and General Commercial.

Overlay Standards

Overlay Standards should be applied along the section of this district and could include:

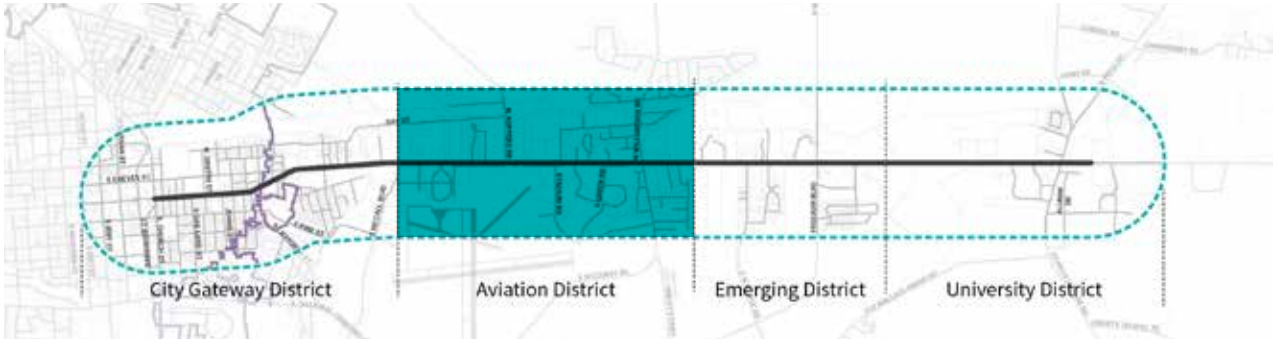
- Promote a pedestrian-oriented built environment.
- Encourage multi-modal facilities and amenities
- Encourage shared parking.
- Support open space.
- Encourage new development to create interconnected streets that provide an alternative the 76 corridor
- Provide signature lighting, signage and landscape elements.

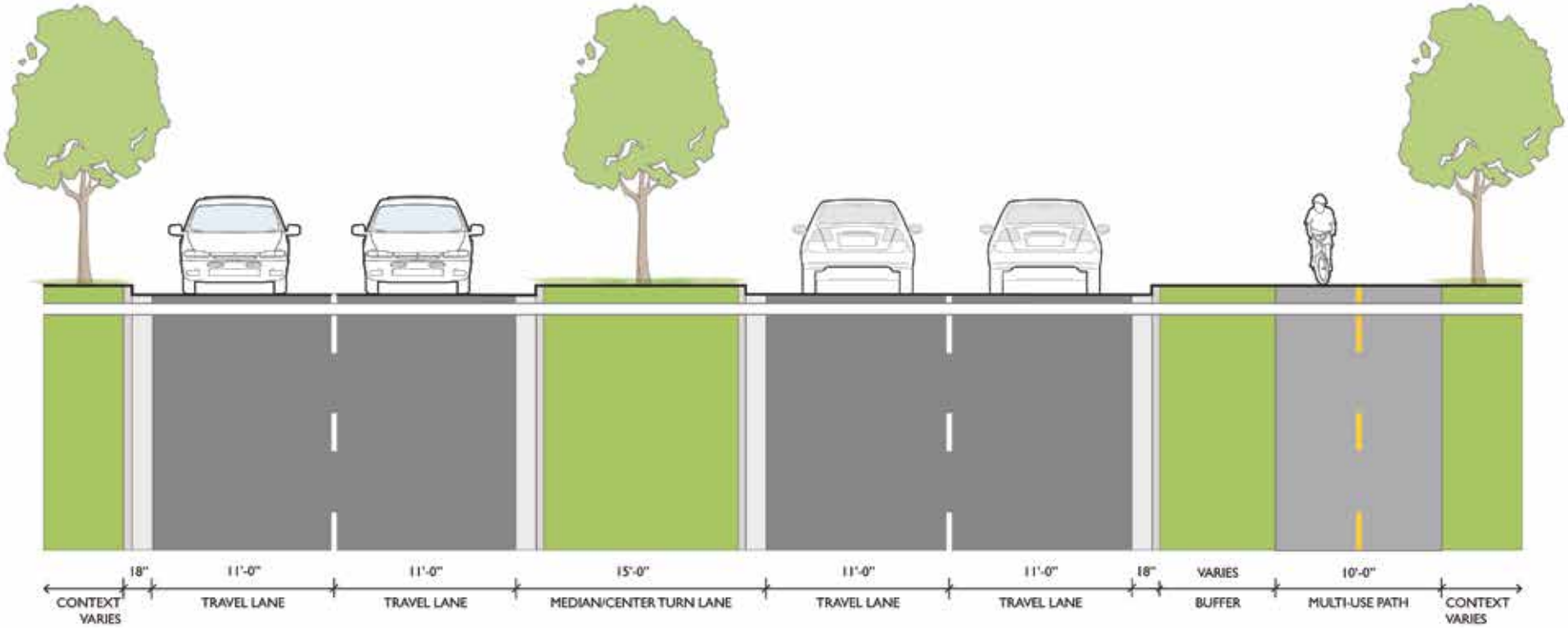

Church St
Revere St
Jarrot St
McFarland St
S Griffin St
Johns St
TIE TO EXISTING SIDEWALK
TIE TO EXISTING SIDEWALK
A
A
NEW
LEGEND
PROPOSED CONCRETE MEDIAN
PROPOSED ASPHALT
PROPOSED GRASS MEDIAN
WETLAND AREA
MULTI-USE PATH
STOP
PROPOSED STOP CONTROL
SIGNAL CONTROLLED INTERSECTION
REMOVE PAVEMENT
PROPOSED TREES/LANDSCAPING


Cheves St
TIE TO EXISTING SIDEWALK
Sykes St
TIE TO EXISTING SIDEWALK
A
A
TIE TO EXISTING SIDEWALK
ROUNDABOUT ALTERNATIVE
S. Ballard St
S. Jefferson St
Old Mars Bluff Rd
Sykes St
TIE TO EXISTING SIDEWALK
TIE TO EXISTING SIDEWALK
76
E Cemetery St
To Levy Park
TIE TO EXISTING PARKING LOT
TIE TO EXISTING SIDEWALK
Old Mars Bluff Rd

Aviation District

The Aviation District character zone begins at South McCall Boulevard and ends at South McCurdy Road, approximately 1.6 miles. This section of roadway is currently a five-lane highway with a mix of open ditch/ valley gutter and curb and gutter on either side. There is a parallel frontage road present on the south side which minimizes the number of curb cuts in this area. Sidewalks nor shoulders are present. The proposed cross-section includes a planted median or center turn land, two travel lanes in each direction, and a 10 foot multi-use path.





Key Characteristics

Development currently within the Aviation District includes: warehousing, automotive, and commercial uses. The character of development within this district should build on its proximity to the airport due to the availability of adjacent vacant land surrounding the airport and on both sides of US 76.

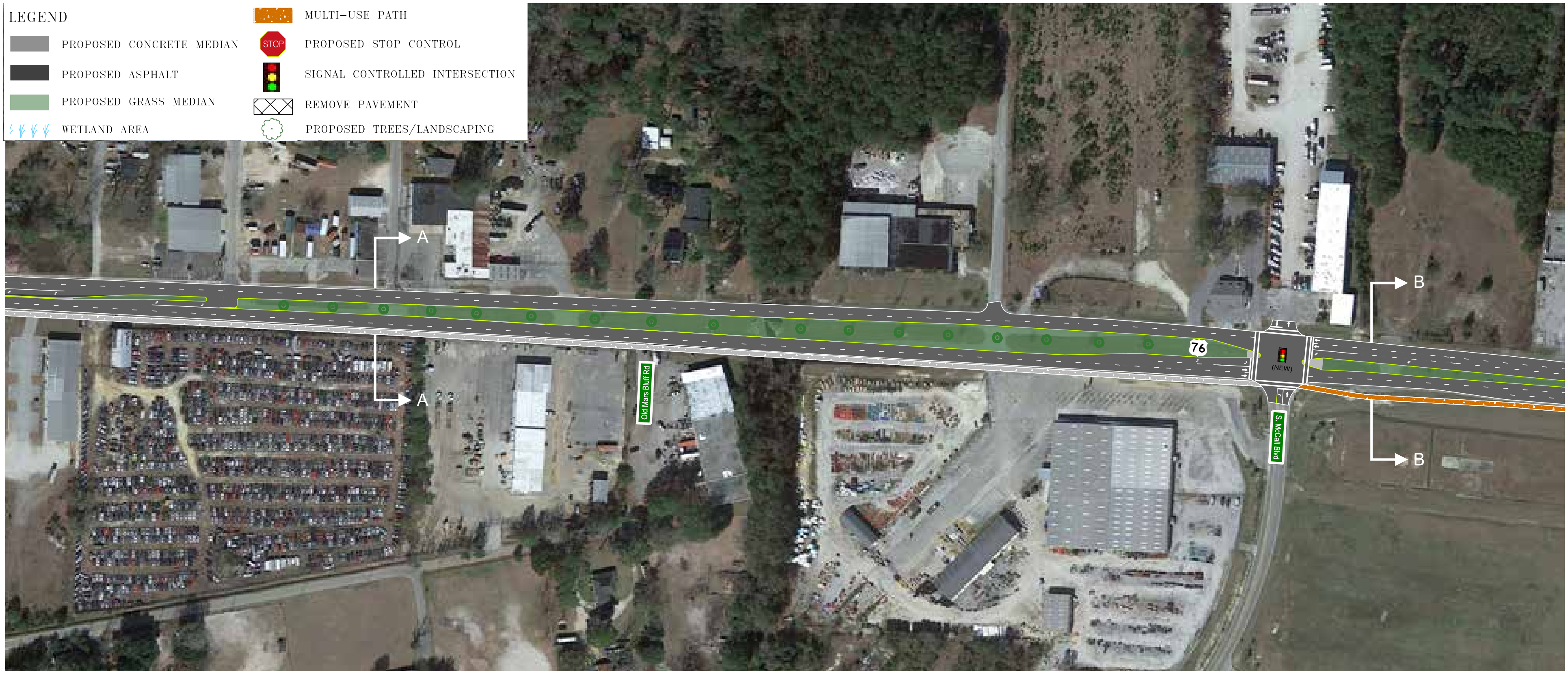
Zoning Recommendations

Within the Aviation District it is recommended to have a mix of two Business Districts - B-3 and B-5. B-3 allows for general commercial, while B-5 allows for office and light industrial that can take advantage of the airport proximity.

Overlay Standards

Warehousing and flex office uses within the Airport District should be encouraged provided they meet the standards. Standards should include:

- Provide cross-access between adjacent parcels.
- Encourage shared parking.
- Buildings should be built-to the primary street frontages with parking, loading/unloading located to the side or behind buildings.
- Architectural detail focused on primary frontage.
- Pedestrian/trail connections should be provided between building entrances and the primary street.


LEGEND
PROPOSED CONCRETE MEDIAN
PROPOSED ASPHALT
PROPOSED GRASS MEDIAN
WETLAND AREA
MULTI-USE PATH
PROPOSED STOP CONTROL
SIGNAL CONTROLLED INTERSECTION
REMOVE PAVEMENT
PROPOSED TREES/LANDSCAPING
A
A
Old Mars Bluff Rd
76
(NEW)
S. McCall Blvd
B
B


B
B
S Piedmont St
Terminal Dr
Valley Blvd
Gilbert Ave
SR-241
N Tracy Rd
76


LEGEND
PROPOSED CONCRETE MEDIAN
PROPOSED ASPHALT
PROPOSED GRASS MEDIAN
WETLAND AREA
MULTI-USE PATH
PROPOSED STOP CONTROL
SIGNAL CONTROLLED INTERSECTION
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PROPOSED TREES/LANDSCAPING
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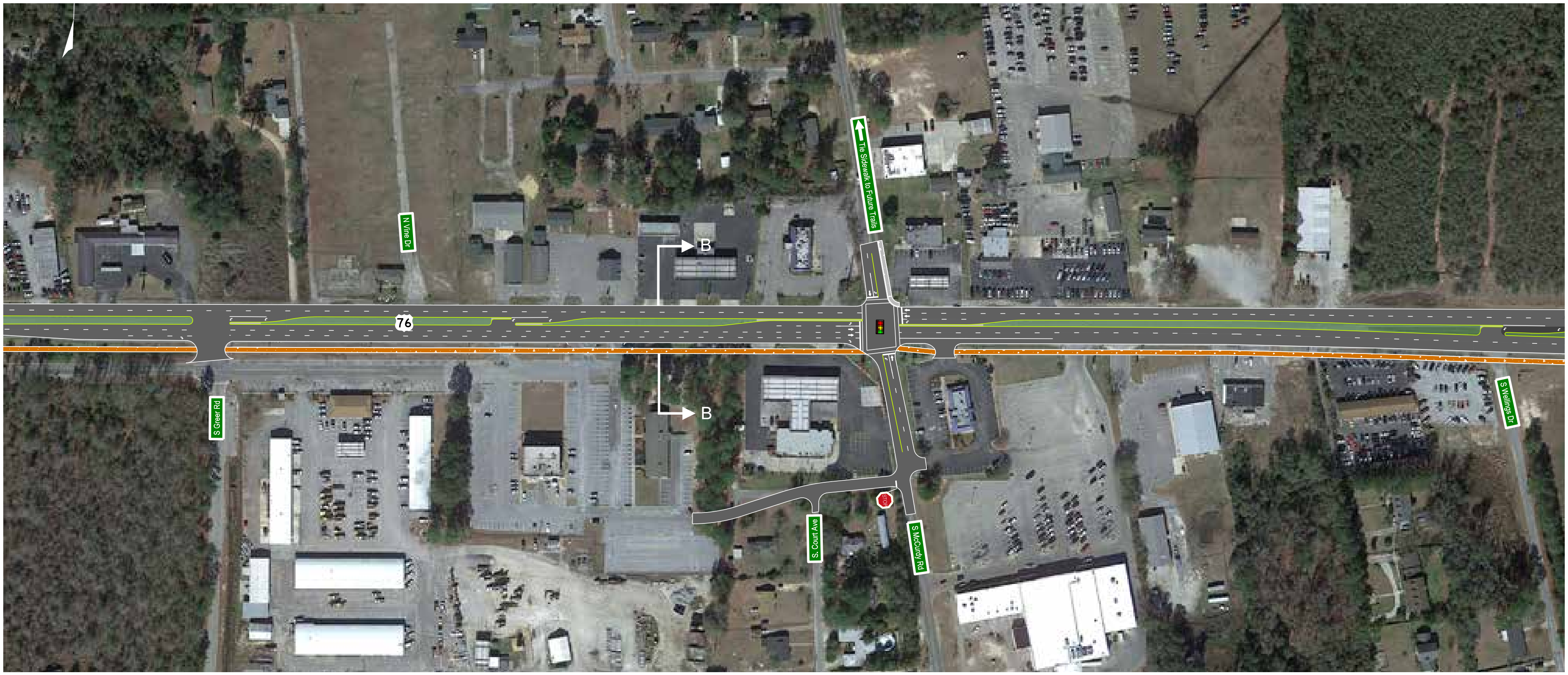
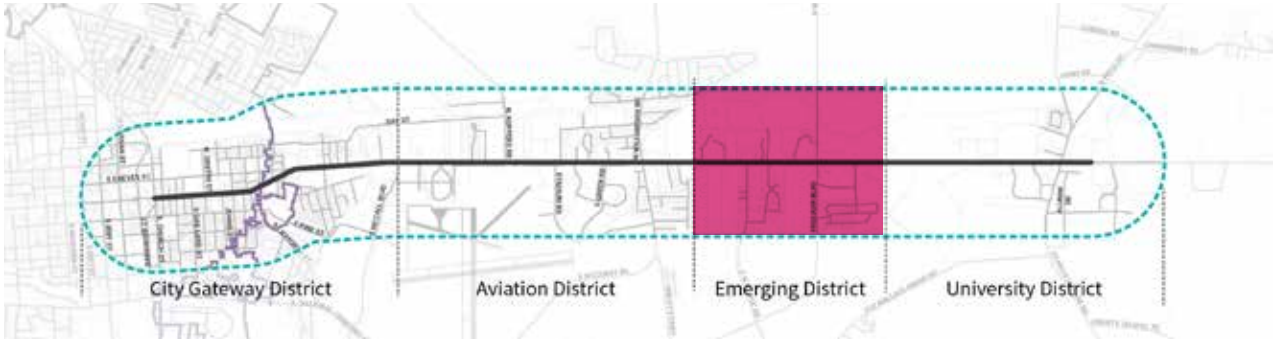
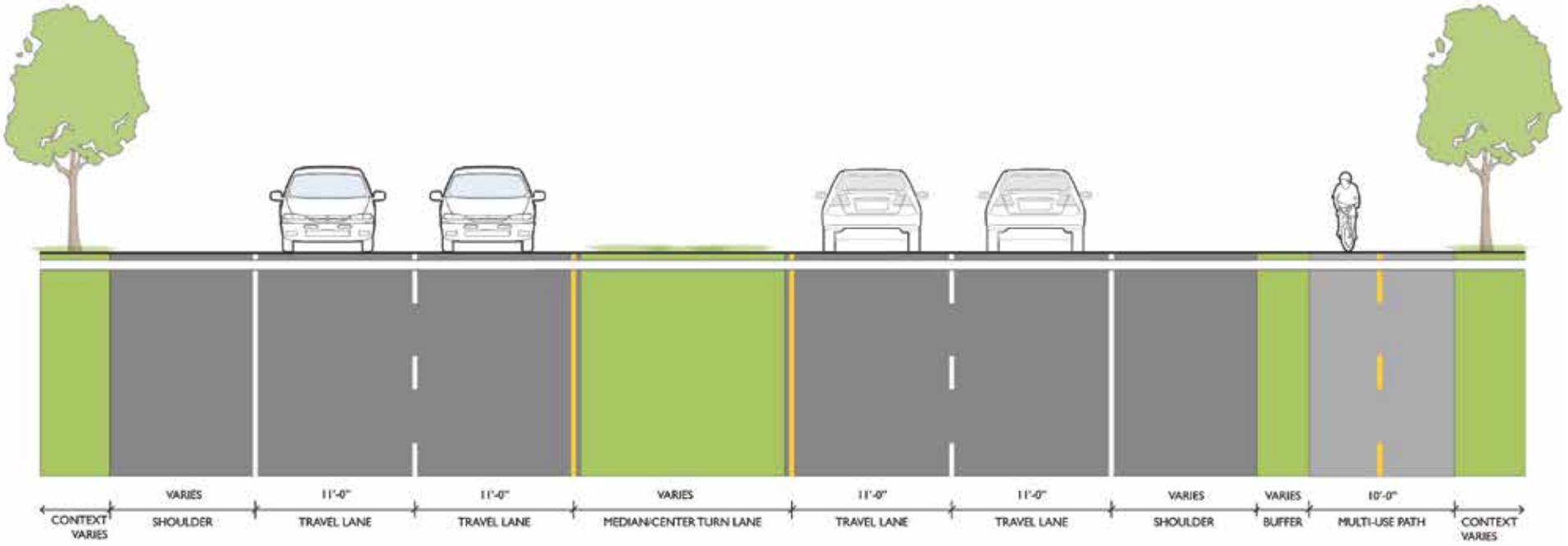


Tie Sidewalk to Future Trails
N Vine Dr
B
B
76
S Greer Rd
S. Court Ave
S McCurdy Rd
S Wellings Dr

Emerging District

The Emerging District character zone begins at South McCurdy Road and ends just east of Freedom Boulevard, approximately 1.5 miles. This section of roadway is currently a four-lane divided highway with landscape medians and open ditch/valley gutter. Large overhead powerlines are present throughout the corridor and switch from the South to the North side halfway through the character zone. Sidewalks are not present however large shoulders exist. The proposed cross-section includes a planted median or center turn lane, two travel lanes in each direction, and a 10 foot multi-use path.





Development Character

The Emerging District is a growing area with a variety of commercial, residential, and institutional uses. This area currently has little consistency in how the uses are connected and branded. As the parcels within this district re-develop, it will be important to think about long-term connectivity and design standards to tie everything together.

Zoning Recommendations

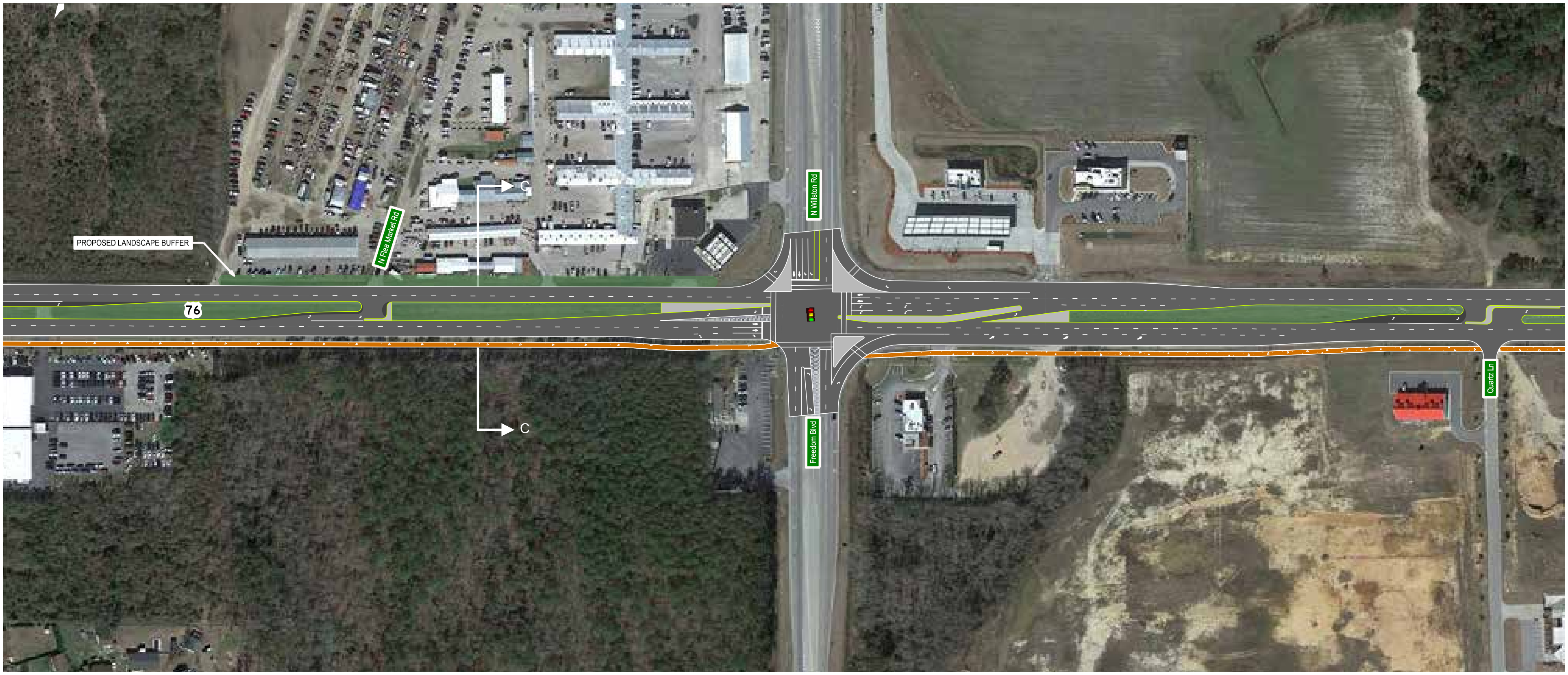
Zoning recommendations within this district include the use of a Planned Development and General Commercial (B-3). The planned development would allow flexibility for large land owners to develop a mix of uses.

Overlay Standards

Mixed use, commercial, institutional and residential uses should be encouraged within this district. Standards should include:

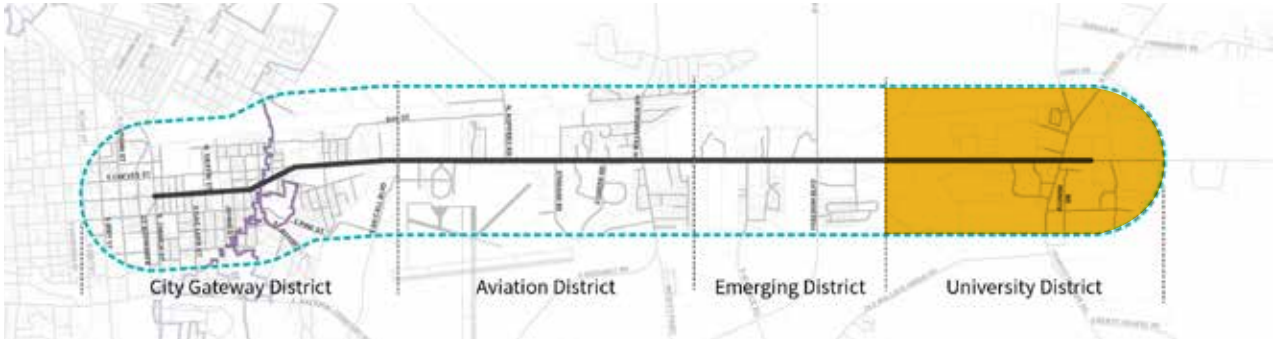
- Provide cross-access between adjacent parcels.
- Encourage shared parking.
- Buildings should be built-to the primary street frontages with parking, loading/unloading located to the side or behind buildings.
- Architectural detail focused on primary frontage.


LEGEND
PROPOSED CONCRETE MEDIAN
PROPOSED ASPHALT
PROPOSED GRASS MEDIAN
WETLAND AREA
MULTI-USE PATH
PROPOSED STOP CONTROL
SIGNAL CONTROLLED INTERSECTION
REMOVE PAVEMENT
PROPOSED TREES/LANDSCAPING
STOP
B
B
C
C
Theodore Leslie Dr
Education Ln
Village Cir
N. Junkyard Rd
S Wallace Rd
S Tremont Rd


PROPOSED LANDSCAPE BUFFER
N Flea Market Rd
C
C
76
N Williston Rd
Freedom Blvd
Quartz Ln

University District

The University Rural character zone begins at just east of Freedom Boulevard and ends at Francis Marion Road (S-327), approximately 1.3 miles. The current section of roadway is a four-lane divided highway with landscape medians and open ditch/valley gutter. The landscape is dominated by mature trees, large stands of forest, and flood plain. Large overhead powerlines are present throughout the corridor and switch from the South to the North side halfway through the character zone. Sidewalks are not present however large shoulders exist. The proposed cross-section includes a planted median or center turn lane, two travel lanes in each direction, and a 10 foot multi-use path.

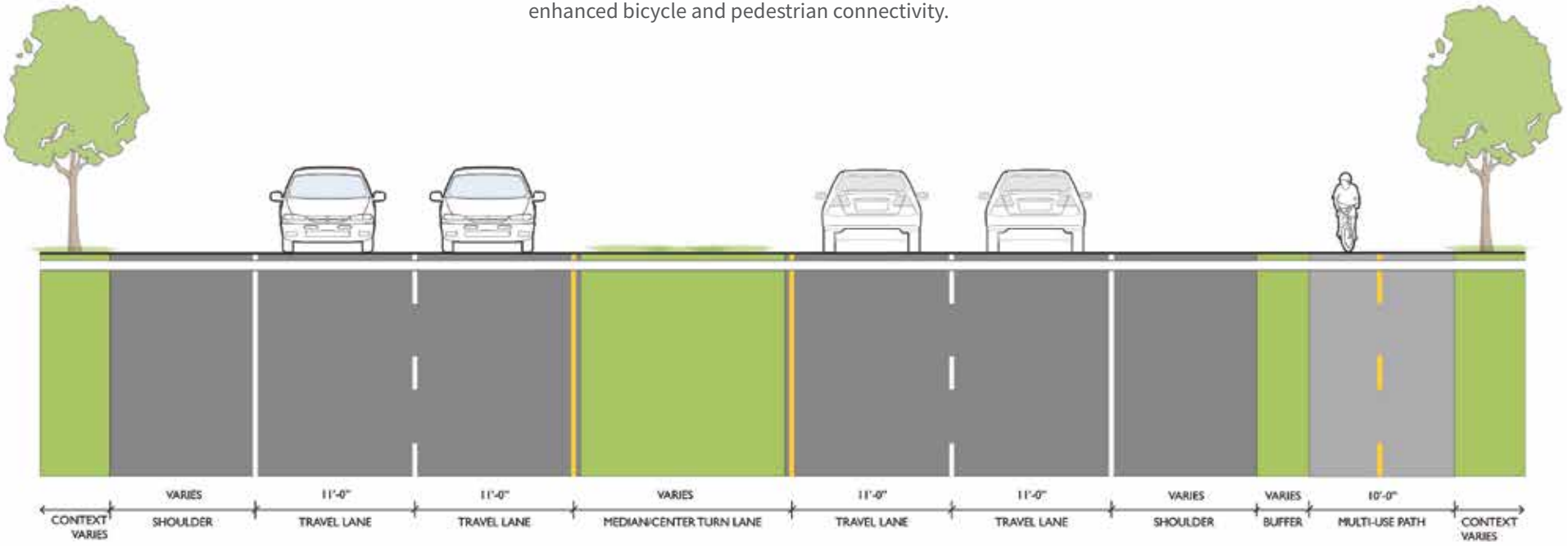


Development Character

Recent expansion of Francis Marion University across Francis Marion Road highlights the need to ensure development along the south side of the US 76 is consistent in character with that of the north side. Character within this development should build on its adjacency to the University and how to support the needs of its community, which should include enhanced bicycle and pedestrian connectivity.

Zoning Recommendations

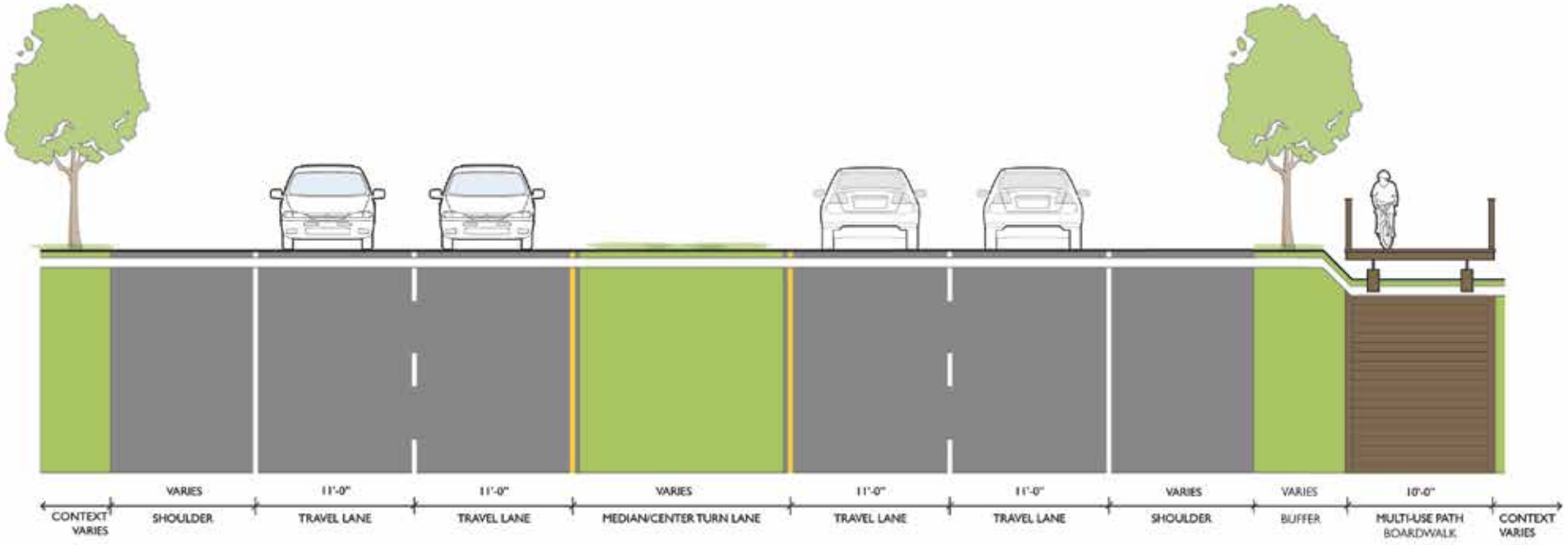
Zoning recommendations for the University District build on existing developments taking place north of US 76. Recommendations include the use of Planned Development and Residential District R-5 and R-5A.



Overlay Standards

Institutional uses, low-scale commercial development, student apartments, and parks and open space are uses that should be encouraged within this district. Standards should include:

- Pedestrian/trail connections should be provided between building entrances and the primary street.
- Buildings should be built-to the primary street frontages with parking, loading/unloading located to the side or behind buildings.
- Architectural detail focused on primary frontage.



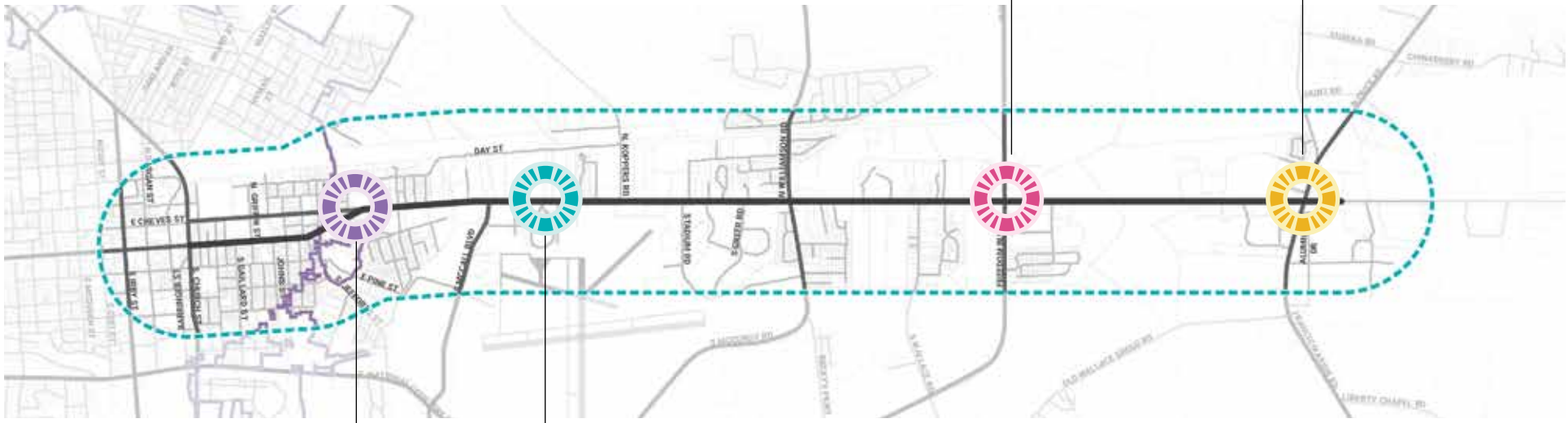

LEGEND
PROPOSED CONCRETE MEDIAN
PROPOSED ASPHALT
PROPOSED GRASS MEDIAN
WETLAND AREA
MULTI-USE PATH
PROPOSED STOP CONTROL
SIGNAL CONTROLLED INTERSECTION
REMOVE PAVEMENT
PROPOSED TREES/LANDSCAPING
C
D
76
C
D


D
D
C
C
76
Hanson Hawkins Dr
S. Evander Dr


LEGEND
PROPOSED CONCRETE MEDIAN
PROPOSED ASPHALT
PROPOSED GRASS MEDIAN
WETLAND AREA
MULTI-USE PATH
STOP
PROPOSED STOP CONTROL
SIGNAL CONTROLLED INTERSECTION
REMOVE PAVEMENT
PROPOSED TREES/LANDSCAPING
N. Price Rd
Francis Marion Rd
Wallace Woods Rd
76
C
C

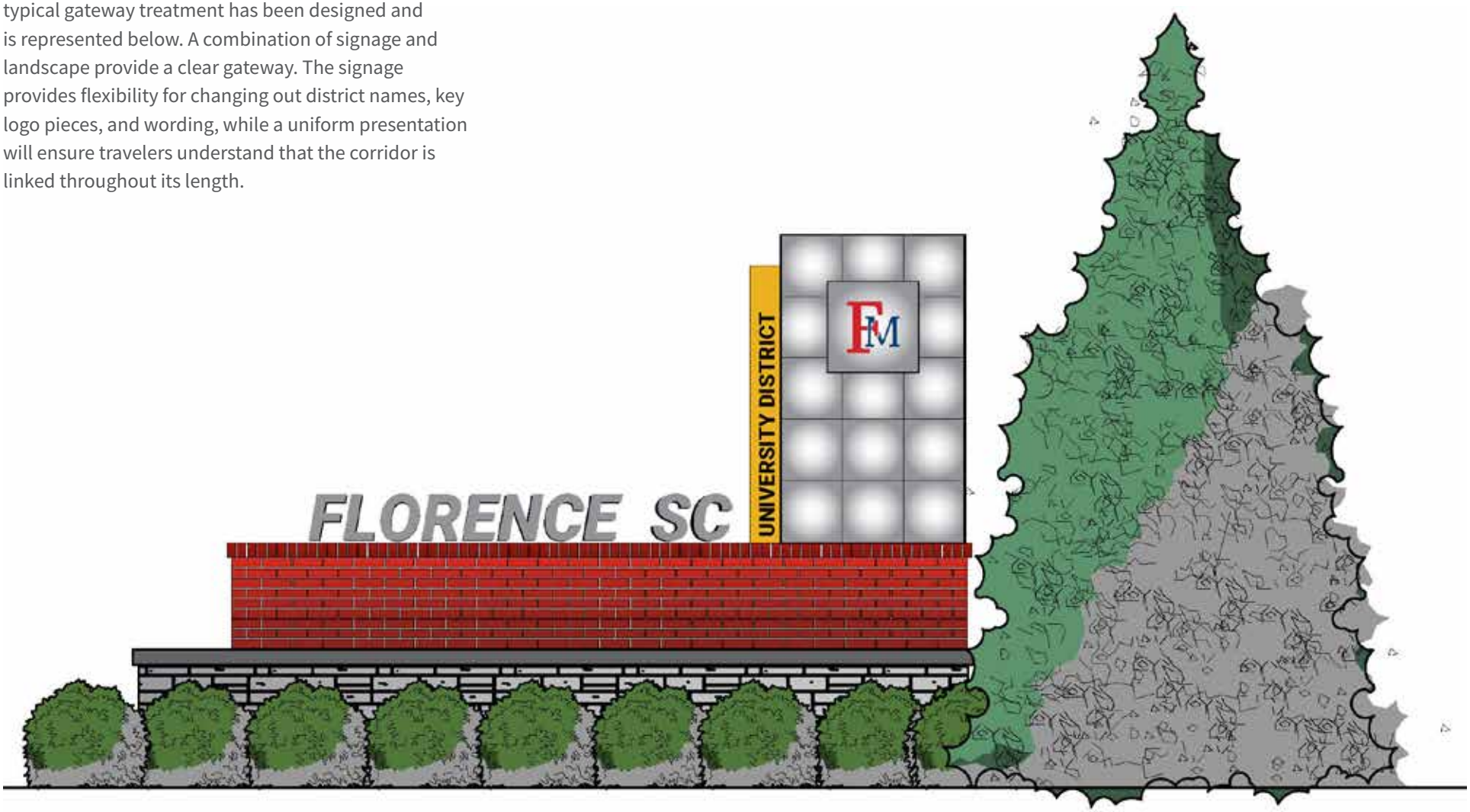
Gateways

As the moniker “76 Gateway” makes clear, the US 76 corridor is not only a primary entry to the City of Florence, but a formal introduction to Florence County as well. Key destinations exist along the corridor, like Francis Marion University, Florence Regional Airport, and McLeod Health, that deserve celebration and clear recognition. The districts that have been established offer great opportunities for gateway elements through the use of landscaping, lighting, and signage. Four key areas have been identified as primary gateways: 1) Area just east of the new US 76/Cheves Street intersection; 2) Florence Regional Airport entry; 3) intersection of Williston Road (US 327) and US 76; and 4) just east of Francis Marion Road.



Gateway Treatments

Exact gateway treatments should be unique to their location and the destinations to be highlighted. However, having thematic elements to all gateway treatments is important to establish continuity and a unified look and feel to the corridor. To this end, a typical gateway treatment has been designed and is represented below. A combination of signage and landscape provide a clear gateway. The signage provides flexibility for changing out district names, key logo pieces, and wording, while a uniform presentation will ensure travelers understand that the corridor is linked throughout its length.



Depending on the exact location, gateway treatments may be more or less pronounced. Two areas that should have more emphasis are the intersection of Williston Road and US 76 and the entrance to the Florence Regional Airport. Both of these are critical points where visitors to or passing through Florence will make their first, and possibly only, impression of Florence County and the City of Florence.

The intersection of Williston Road and US 76 is a key “capture” point for beach traffic, as it is the principle transition between US 76 and I-95. An impressive gateway treatment on the northwest corner of this intersection would help to inspire travelers to venture into Downtown Florence, rather than bypassing.

The entrance to the Florence Regional Airport is currently understated, with minimal landscaping and a stock signage element. With the introduction of vibrant landscaping and thematic signage, the entrance would be clearly emphasized as the arrival point it should be.


SPEED LIMIT
40

Implementation Plan

The US 76 Gateway Corridor Study is a critical step in advancing a more connected, safe, and efficient multimodal transportation network in this prominent area of Florence County and the City of Florence. However, the process which crafted this document is only the beginning; the conversation must continue and lead to real projects being implemented.

While completing this study was important and necessary, implementation of recommendations identified in this document is the real desired outcome of The US 76 Gateway Corridor Study. To this end, a framework for implementation has been devised and is presented on the pages that follow. The implementation strategy provides:

- Understanding of the purpose and place of The US 76 Gateway Corridor Study in the overall planning, design, and implementation process;
- Guidance on the role and responsibility of local governments in helping to make recommendations a reality; and
- Action Plan summarizing recommendations, anticipated implementation period, order-of-magnitude opinions of probable cost, potential partners, and general notes regarding implementation.

Role of The US 76 Corridor Study

The US 76 Corridor Study fulfills a critical role in the overall transportation planning process. It is important to recognize the merits and limitations of the corridor study planning process to appropriately understand the next steps that must be taken to achieve the recommendations made here.

Relationship to the Project Delivery Process

Metropolitan Planning Organizations (MPOs) are mandated by the federal government to oversee transportation policy and planning for urbanized areas with populations greater than 50,000[1]. Florence County, serving as the Florence Area Transportation Study (FLATS), is the designated MPO for the Florence region, which includes US 76. The MPO project delivery process is composed of three basic elements[2]:

- The **Long Range Transportation Plan** (LRTP) identifies critical transportation needs of the region over a 20-30 year period and establishes a broad vision for meeting these needs. Potential projects are ranked according to criteria established at the state and/or local level and are financially constrained based on anticipated funding.
- Based on the vision established in the LRTP, more focused planning projects are developed to assist in refining that vision and provide additional details on the nature of future recommendations. These planning projects are executed through the MPO's annual **Unified Planning Work Program** (UPWP); The US 76 Gateway Corridor Study is one of these projects. Upon adoption, recommendations from The US 76 Gateway Corridor Study will cycle back into the LRTP for competitive ranking against the other projects already included in the LRTP; in this regard, there is a cyclical and symbiotic relationship between the LRTP and the UPWP.

[1] For more information about MPOs, please visit: https://www.planning.dot.gov/mpo.asp.
[2] For more information on each of these elements, please visit: http://florenceco.org/offices/planning/flats/.

- Projects that have actual federal funding assigned to them are included in the **Transportation Improvement Program** (TIP). The TIP is predominately composed of projects that make their way onto the LRTP's fiscally constrained lists and then graduate to the TIP once actual funding is allocated; however, some projects are added to the TIP without being in the LRTP, if dedicated federal funding sources are assigned to them. The local TIP becomes part of the larger Statewide Transportation Improvement Program (STIP) for implementation by the South Carolina Department of Transportation (SCDOT). SCDOT will then move projects through its project development process, which includes detailed study and analysis, public participation, environmental documentation, design, permitting, right-of-way acquisition, and construction.

A corridor study is not designed to provide definitive answers to all questions that may arise, but rather is a bridge between the extremely broad nature of the initial analyses conducted as part of the LRTP and the site-specific investigations of an actual design/construction project. The US 76 Corridor Study can be thought of as a view from 50,000 feet, while the LRTP's view is taken from 100,000 feet and a design/construction project is at "ground level."[3]

Competitive Project Prioritization

In 2007, the South Carolina Legislature passed Act 114[4] requiring SCDOT to follow a new project selection process for projects of regional significance. The SCDOT then passed that process down to the MPOs for use in their local project prioritization process. Projects are prioritized by type, so that projects compete with other similar projects. Further, individual projects only compete with similar projects within each respective urban or rural region, not statewide. Those projects ranking highest become part of the financially constrained portion of the LRTP and have the greatest opportunity for advancement to the TIP and actual implementation.

As mentioned previously, the corridor study process is taken from a 50,000-foot vantage. At this level of planning it is challenging to measure the merits of individual recommendations based on the ranking criteria of Act 114 because numerous project details have yet to be considered. However, it is still important to acknowledge that once the recommendations of The US 76 Gateway Corridor Study are adopted, they will most likely find their way into the LRTP and must compete against other projects based on how well they satisfy the various ranking criteria. Florence County and the City of Florence should begin to determine new methods for bolstering the competitive nature of recommendations coming out of The US 76 Gateway Corridor Study.

Environmental Review Process

Per the National Environmental Policy Act (NEPA) of 1970, all federally funded projects, and those seeking federal permits, must consider impacts to the natural, built, and social environment as part of their project development process.[5] Therefore, any projects that advance from The US 76 Gateway Corridor Study to the LRTP, TIP, and ultimately construction must go through a level of environmental review. The specifics of this review are based on the magnitude of the project, but generally will include consideration of a broad number of areas, including but not limited to wetlands, endangered species, noise, visual quality, environmental justice, and cultural and historic resources.

The type of documentation required is also determined by the type and number of impacts anticipated; the lowest type of documentation is a Categorical Exclusion (CE), next is the Environmental Assessment (EA), and an Environmental Impact Statement (EIS) is the highest form. Not surprisingly, as the complexity of the document increases, the time and resources needed to complete the documentation also increases and this has a direct effect on the budget and implementation schedule of a project.

[3] For more information on the federal transportation planning process, please visit: https://www.fhwa.dot.gov/planning/publications/transportation_decision_making/index.cfm.
[4] SC Code of Laws Sections 57-1-370 and 57-1-460.
[5] For more information on how NEPA affects the transportation decision-making process, please visit: https://www.environment.fhwa.dot.gov/projdev/index.asp.

Based on the 50,000-foot view of The US 76 Gateway Corridor Study, enough detail is not known now to attempt to determine what type of NEPA document would be required for each project, should federal funding or permitting be required. Similarly, the exact impacts of individual recommendations cannot currently be quantified, as recommendations were crafted at a planning level of detail based on the scope and budget constraints of the Study.

What is known is that recommendations included here will be subjected to a more comprehensive review as concepts are taken through the design and environmental review processes. Therefore, it should be noted that the recommendations of The US 76 Gateway Corridor Study may experience changes to accommodate the findings of the NEPA process; these changes may be minor or they could significantly alter a recommendation based on issues that cannot be currently assessed in the scope of a corridor study document like The US 76 Gateway Corridor Study. Therefore, Florence County, the City of Florence, property owners, development professionals, and the general public should utilize The US 76 Gateway Corridor Study as the planning document it is intended to be; no guarantees are made or implied.

Proactive Local Involvement

Historically, it has been the perspective of local governments that it is SCDOT's responsibility to handle all transportation improvements. However, in recent years it has become apparent that SCDOT's perceived responsibilities far outweigh their available resources. More and more, local communities are realizing that for transportation improvements to keep up with transportation and quality of life demands, they must become involved in not only the transportation planning process, but implementation as well. Florence County has been one of those proactive local governments.

In 2006, Florence County voters passed a capital sales tax that generated $144.7 million for road improvements. That, in turn, was leveraged to receive an additional $250 million from the State Infrastructure Bank. The initial capital sales tax was so successful, voters passed a second capital sales tax in 2013 that took effect May 1, 2014 and will expire on April 30, 2021. The second sales tax has already generated over $75 million and is expected to nearly double that for a total of $145 million before it expires in 2021. Having this dedicated revenue source, to combine with state and federal funding, puts Florence County in an enviable position. It is anticipated that a third round of the capital sales tax will be explored, and projects recommended in The US 76 Gateway Corridor Study, if included, should be looked on favorably by voters.

In addition to implementation of transportation infrastructure, local governments must adopt land use regulations that support a healthy transportation-land use balance. Florence County should advance development regulations to support the various transportation recommendations included in The US 76 Gateway Corridor Study. Florence County and the City of Florence should incorporate the recommendations of The US 76 Gateway Corridor Study into both the land use and transportation elements of their comprehensive plans. Establishing the land use context along US 76 through zoning and overlay districts will assist in achieving desired characters through the control of the type, size, and scale of development. Additionally, putting performance standards in place will shift some of the financial burden for facilities to adjacent developers, as they will construct sidewalks and shared use paths (or provide fees in lieu) as part of required frontage improvements.

Action Plan

Table 5-3 located at the end of this section presents the Action Plan for implementation of recommended improvements presented in this document. The Action Plan summarizes recommendations, anticipated implementation period, order-of-magnitude opinions of probable cost, potential partners, and general notes regarding implementation.

Opinions of Probable Cost

Where applicable, an estimated order-of-magnitude opinion of probable cost is presented for each recommendation in the Action Plan. For policy and planning actions, cost is estimated based on professional experience with similar efforts. For capital projects, costs were developed by identifying pay items and establishing rough quantities; these costs include

a planning-level contingency. Unit costs are based on 2018 dollars and were assigned based on historical cost data from SCDOT and other sources. Lump sum costs have been assigned to some general categories such as utility relocations, engineering, and right-of-way acquisition, however these costs can vary widely depending on the exact details and nature of the work. The overall estimates are intended to be general and used for planning purposes. Construction costs will vary based on the ultimate project scope (i.e., potential combination of projects) and economic conditions at the time of construction.

Transit Improvements

The PDRTA, has access to a variety of federal funding sources for capital improvements associated with the transit system. While these funds require a minimal local match (10-20%), PDRTA is reliant on local governments for this match. Without the local match, federal dollars are left unutilized.

Some of these federal funds would be eligible to assist with transit upgrades along the US 76 corridor. In many cases, these funds can be used for not only infrastructure immediately tied to the transit system, such as bus shelters and stop amenities, but also for access and connectivity to bus stops, including sidewalks, shared use paths, intersection enhancements, and ADA improvements. Florence County, the City of Florence, and PDRTA should partner to find ways to leverage these specific transit funding categories to improve transit service and access along the US 76 corridor.

To assist in determining dollars necessary to accomplish specific transit related improvements, unit costs have been developed for transit improvements that would benefit the US 76 corridor. These are presented in **Table 5-1.**

Table 5-1: Transit Improvement Unit Costs

Improvement	Notes	Unit	Unit Cost
Standard bus stop	8’x10’ concrete pad, bench, bus stop sign w/post	Each	$2,200.00
Bus shelter	8’x18’ concrete pad, shelter w/bench, bus stop sign w/post	Each	$10,100.00
Connecting multi-use path	10’ wide asphalt	Linear Foot	$170.00
Connecting sidewalk	5’ wide concrete	Linear Foot	$130.00
Bus turnout	12’x130’	Each	$32,900.00

Implementation Periods

Actions have been categorized by implementation period:

- **Short-term (0-2 years)** – These are actions that should occur immediately. They are critical to establishing early momentum and setting the foundation for the success of future improvements.
- **Mid-term (3-5 years)** – These improvements need a greater degree of coordination. Additionally, these recommendations are more costly, and will require the identification of one or more funding sources. Planning, establishment of support, and identification of funding sources should begin now for these projects so they are on track for implementation within this period.
- **Long-term (6-10 years)** – These improvements will require a level of planning and funding that must be formulated over several years.

Although implementation periods have been established, these designations are for planning purposes only; actions should be implemented as soon as opportunities arise. For example, if circumstances provide an opportunity to complete a mid-term project two years after The US 76 Gateway Corridor Study is adopted, the improvement should be made, regardless of its designation as "mid-term."

Cost Breakdown

A breakdown of cost by project type and implementation period is presented in **Table 5-2.**

Table 5-2: Capital Cost by Implementation Period and Project Type

Project Type	Cost by Implementation Period			Total Costs
	Short-term (0-2 years)	Mid-term (3-5 years)	Long-term (6-10 years)	
Zoning and Overlay District	$100,000			$100,000
Gateway Signage	$150,000			$150,000
Intersection Improvements		$666,475	$2,201,283	$2,867,758
Access Management and General Corridor Improvements		$2,136,963	$1,822,234	$3,959,197
Transit Improvements		$138,850	$138,850	$277,700
Trail Implementation Improvements		$3,736,750	$2,105,400	$5,842,150

Note: Improvements do not include resurfacing or widening of US 76 or side Streets unless otherwise noted in concepts.

Table 5-3: Action Plan

Recommended Action	Estimated Cost [a]	Potential Partners	Notes
Short-term (0-2 years)			
Zoning and overlay zoning district creation and adoption	$100,000 [b]	Florence County	• Zoning and overlay districts will be critical to achieving the desired characters along the corridor • Coordination with affected property owners will be necessary • Cost assumes consultant assistance
Gateway signage and landscape near Francis Marion Road	$50,000 [b]	Florence County; Francis Marion University	• Gateway signage will establish identity of University District
Gateway signage and landscape at entrance to Florence Regional Airport	$100,000 [b]	Florence County; Florence Regional Airport	• Gateway signage will establish stronger identity of Aviation District and be more attractive to travelers utilizing the airport

[a] Itemized opinions of probable cost are located in Appendix x.
[b] Based on prior experience and professional judgment.
[c] Based on unit costs presented in Table 5-1.

Recommended Action	Estimated Cost [a]	Potential Partners	Notes
Mid-term (3-5 years)			
Gateway signage and landscape at Williston Road/Freedom Boulevard intersection	$50,000 [b]	Florence County; Greater Florence Chamber of Commerce	• Gateway signage will establish identity for Emerging District • This intersection is a critical crossroads for local, commuter, and seasonal traffic
US 76 at McCall Boulevard Intersection Improvements	$189,963	SCDOT; Florence County	• Formalize intersection to provide clear organization for vehicular and pedestrian movements • Signalize when warrants are met
US 76 at Francis Marion Road Intersection Improvements	$90,463	SCDOT; Florence County; Francis Marion University	• Pedestrian safety improvements • Future sidewalk network as private development occurs
US 76 at Williston Road/Freedom Boulevard Intersection Improvements	$386,050	SCDOT; Florence County	• Pedestrian and vehicular safety improvements
Access management and general corridor improvements in City Gateway District	$2,136,963	SCDOT; Florence County	• General access management, geometric, and safety improvements as depicted in the concept plan
Transit improvements in City Gateway District	$69,425	Florence County; City of Florence; PDRTA	• Bus stop, shelter, and access improvements • Assumes two bus stops with shelters (one on each side of the road), 200 feet of sidewalk, and 200 feet of shared use path

Recommended Action	Estimated Cost [a]	Potential Partners	Notes
Mid-term (3-5 years)			
Transit improvements in University District	$69,425	Florence County; City of Florence; PDRTA	• Bus stop, shelter, and access improvements • Assumes two bus stops with shelters (one on each side of the road), 200 feet of sidewalk, and 200 feet of shared use path
Trail implementation in City Gateway District	$986,000	Florence County; City of Florence; SCDOT; Private Developers	• Shared use path on south side of US 76 from S. Jeffords Street to S. McCall Boulevard • Some portion of funding for implementation may be available through SCDOT, but ownership and maintenance would be a local responsibility • Cost assumes 5,000 feet of shared use path
Trail implementation in University Gateway District	$2,750,750	Florence County; Francis Marion University; SCDOT; Private Developers	• Shared use path on south side of US 76 from east of Freedom Boulevard to west of Francis Marion Road • Some portion of funding for implementation may be available through SCDOT, but ownership and maintenance would be a local responsibility • Cost assumes 2,000 feet of shared use path and 5,000 feet of boardwalk

Recommended Action	Estimated Cost [a]	Potential Partners	Notes
Long-term (6-10 years)			
Gateway signage and landscape near Cheves Street	$50,000 [b]	Florence County; City of Florence; McLeod Health	• Gateway signage will establish identity for City Gateway District • Gateway to Downtown Florence and McLeod Health's campus
US 76 at Cheves Street Intersection Improvements (assumes R.W is donated)	$1,132,947 Roundabout Alternative / $981,336 Realigned Alternative	SCDOT; Florence County; City of Florence	• Improve safety through realignment of Cheves Street at new signalized intersection with US 76 • Encourages trucks to stay on US 76 • Results in a more walkable, bikeable environment on Cheves Street • Establish stronger pedestrian connections to connect neighborhoods north of US 76 to new shared use path on south side
US 76 at McCurdy Road Intersection Improvements (assumes R.W is donated)	$87,000	SCDOT; Florence County	• General access management, geometric, and safety improvements as depicted in the concept plan
Access management and general corridor improvements in University District	$664,200	SCDOT; Florence County; Francis Marion University	• General access management, geometric, and safety improvements as depicted in the concept plan
Access management and general corridor improvements in Emerging District	$617,550	SCDOT; Florence County	• General access management, geometric, and safety improvements as depicted in the concept plan
Access management and general corridor improvements in Aviation District	$540,484	SCDOT; Florence County; Florence Regional Airport	• General access management, geometric, and safety improvements as depicted in the concept plan

Recommended Action	Estimated Cost [a]	Potential Partners	Notes
Long-term (6-10 years)			
Transit improvements in Emerging District	$69,425	Florence County; City of Florence; PDRTA	• Bus stop, shelter, and access improvements • Assumes two bus stops with shelters (one on each side of the road), 200 feet of sidewalk, and 200 feet of shared use path
Transit improvements in Aviation District	$69,425	Florence County; City of Florence; PDRTA	• Bus stop, shelter, and access improvements • Assumes two bus stops with shelters (one on each side of the road), 200 feet of sidewalk, and 200 feet of shared use path
Trail implementation in Emerging District	$1,519,600	Florence County; City of Florence; SCDOT	• Shared use path on south side of US 76 from S. McCurdy Road to east of Freedom Boulevard • Some portion of funding for implementation may be available through SCDOT, but ownership and maintenance would be a local responsibility • Cost assumes 8,000 feet of shared use path
Trail implementation in Aviation District	$585,800	Florence County; Florence Regional Airport; SCDOT; Private Developers	• Shared use path on south side of US 76 from S. McCall Boulevard to S. McCurdy Road • Some portion of funding for implementation may be available through SCDOT, but ownership and maintenance would be a local responsibility • Cost assumes 8,500 feet of shared use path

the 76 Gateway