



LAND USE, INFRASTRUCTURE AND REGULATORY FREIGHT ANALYSIS

CENTRAL MIDLANDS REGIONAL FREIGHT MOBILITY PLAN



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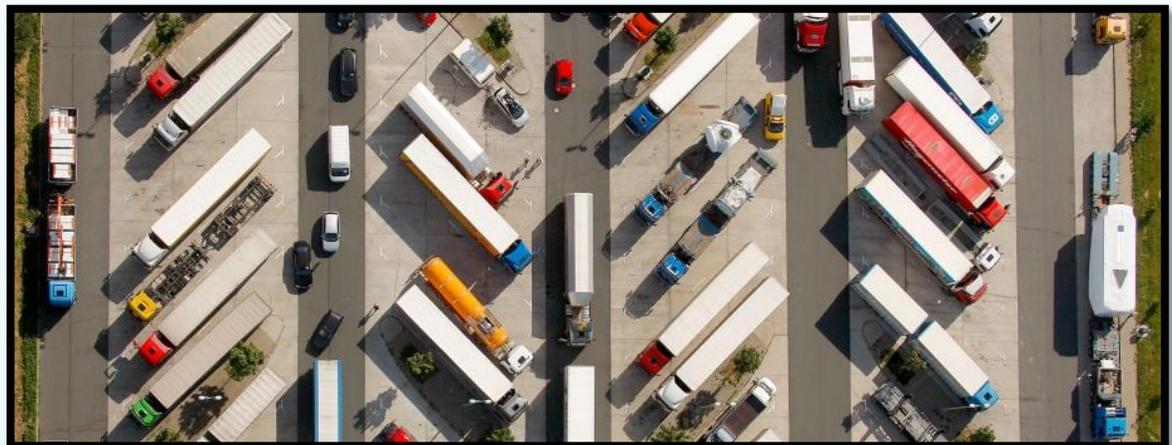
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1. Introduction

1.1 LAND USE, FACILITY, INFRASTRUCTURE AND REGULATORY, GAP/FUTURE DEMAND ANALYSIS

The Central Midlands region consists of Fairfield, Lexington, Newberry, and Richland counties and contains the Columbia Metropolitan area. It has grown significantly as a freight hub in recent years in part because the area serves as a transportation crossroads with I-26, I-20, and I-77 converging in the Columbia area. The Columbia Metropolitan Airport also serves as a cargo hub for major freight industries. In addition, Fort Jackson and the McEntire Joint National Guard Base are large freight and economic producers. The Central Midlands has become a popular region for living and working in the state, attracting many people to the area requiring the delivery of freight. With these multiple freight, economic, and social uses in one area, ensuring that land uses allow for efficient freight flows and safe public interaction is crucial. In order to gain an understanding of these issues, this analysis reviews the existing constraints impacting the freight network, regional freight specific land uses and policies, commercial truck parking, and future freight transportation demands and land use of the Central Midlands region.





2. Existing Constraints Impacting the Freight Network

2.1 BACKGROUND

The multimodal freight network serving the Central Midlands region includes highways, rail lines, and cargo airports. Manufacturers and shippers depend on this system to receive raw and partially manufactured materials and ship finished products to their markets. However, growth within the City of Columbia and surrounding region increases the likelihood of congestion and bottlenecks on the roadway network. Because the supply chain for most freight begins and ends with truck travel this congestion has the potential to impact and negatively affect the other modes. Other constraints impacting the freight network include clearance limits on bridges, at grade rail crossings and capacity at airports.

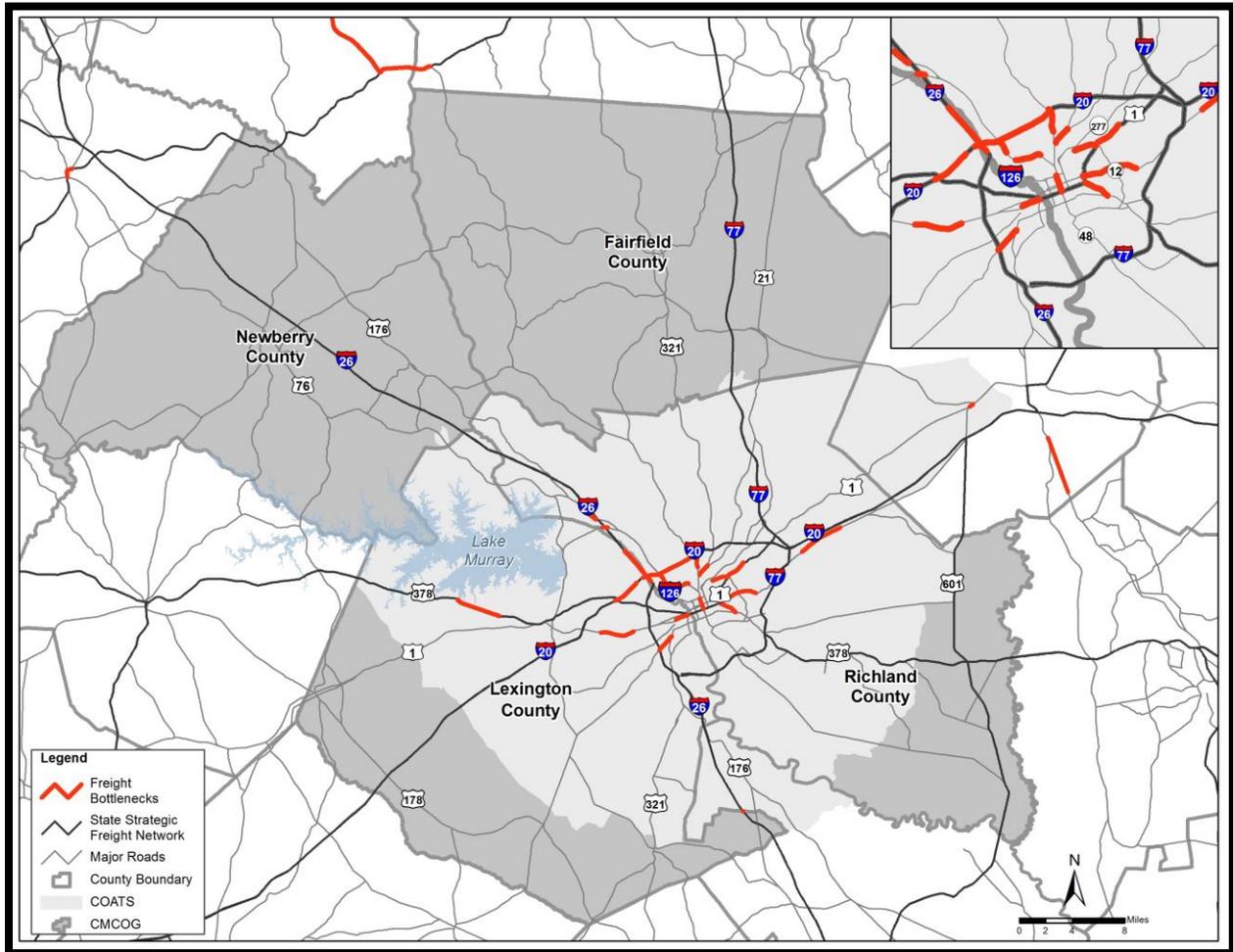
2.2 HIGHWAY BOTTLENECKS AND CONSTRAINTS

Congestion and the subsequent identification of bottlenecks were identified using the Federal Highway Administration's National Performance Measure Research Data Set (NPMRDS) vehicle probe data. The data was used to calculate the travel time reliability performance measures for the highway portion of the region's multimodal network. The performance measure results were used to identify these problematic areas. Figure 2.1 provides the freight bottlenecks identified in the Central Midlands Region.

Of the bottlenecks identified, four key highway freight bottlenecks were found within the Central Midlands region. These bottlenecks included:

- I-26 interchanges at I-20, also known as "Carolina Crossroads";
- I-26 north of Columbia;
- I-20 through the north side of Columbia; and
- I-20 from U.S. 378 to approximately Bush River Road.

Figure 2.1: Freight Bottlenecks in the CMCOG Region



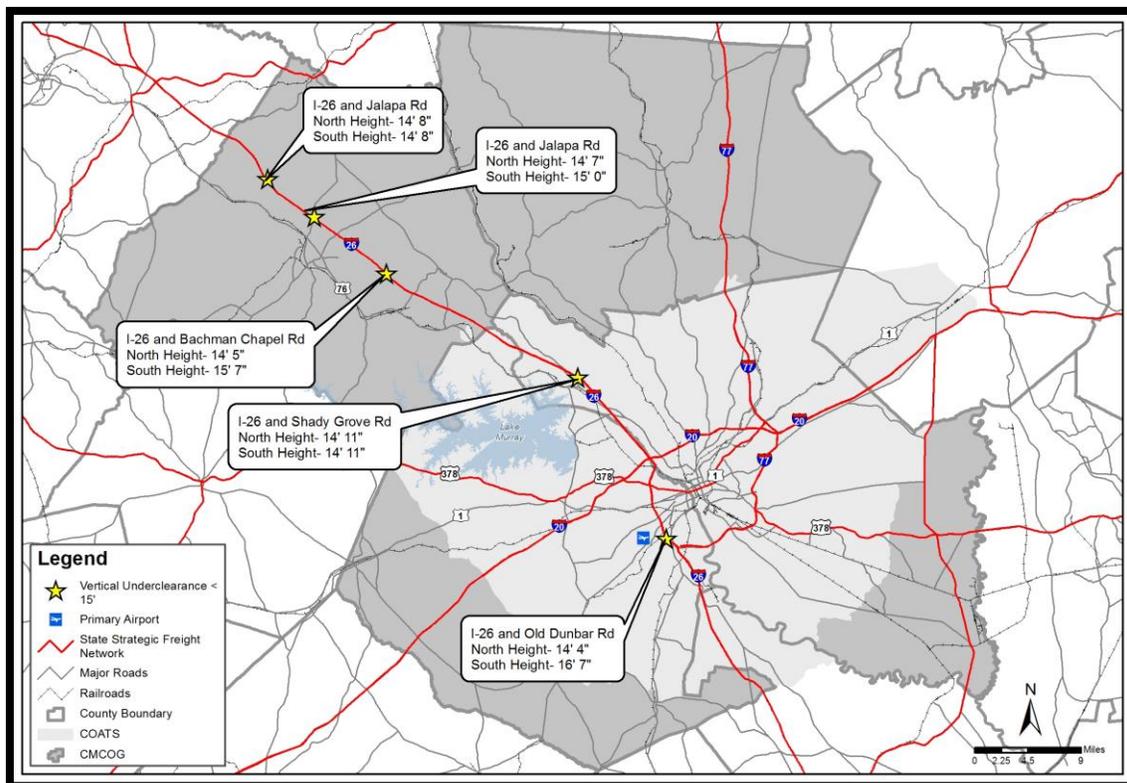
In addition to bottlenecks caused by congestion, the physical limitations or characteristics of the area's transportation infrastructure may impact freight movement. South Carolina's legal height limit for vehicles is 13 feet, 6 inches. There are five bridges in the Central Midlands region on the State Freight Network that have a vertical clearance of less than 15 feet as shown in Figure 2.2. These locations have potential to create congestion caused by bridge strikes and other conflicts. All five bridges are located on I-26:

- I-26 at Old Dunbar in Lexington County has a vertical clearance of 14' 4" high in the northbound direction;
- I-26 at Shady Grove Road in Richland County has a vertical clearance of 14' 11" high in both directions;
- I-26 at Bachman Chapel Road in Newberry County has a vertical clearance of 14' 5" high in the northbound direction;
- I-26 at SC 121 in Newberry County has a vertical clearance of 14' 7" in the northbound direction; and

- I-26 at Jalapa Road in Newberry County only has a vertical clearance of 14' 8" in both directions.

Other areas of potential congestion include routes used for hazardous material (HAZMAT) transportation. Nukem Nuclear Technologies operates a nuclear shipment and maintenance facility in Lexington County. Roads and routes used for hazardous material transportation are sensitive and typically follow designated truck and freight routes, however there are occasions when they must travel through residential areas or other incompatible land uses. In addition, natural hazards have also recently impacted freight movement in the Central Midlands region. The flood in October of 2015 caused I-126 at the Broad River Bridge to close due to the significant levels of flooding. To this day, there are roads in Lexington and Richland counties that remain unpassable because of dam failure from the historic flooding. While not a major freight route, a small part of U.S. 21 in Blythewood between Boylston Road and Hard Scrabble Road is still closed today as a result of the flooding.

Figure 2.2: Low Clearance Bridges on the State Strategic Freight Network



2.3 RAIL CONSTRAINTS

CSX Corporation and Norfolk Southern are Class I railroads which serve the Midlands region with Columbia as a crossroads for the two railroads. The railroads operate 260 miles of rail lines along with bulk transfer facilities and other rail yards within the region. Most of the commodities carried along these rail lines and their facilities have no origin or destination within the region. Railways can be a source of congestion as local traffic must often stop at railroad crossings to wait for trains to pass. Many railway locations predate the more recent urban growth and development. As cities have developed and

grown around rail lines some effects include increased congestion and conflict points between autos and trains.

Some at-grade crossings are located in densely populated areas such as the middle of neighborhoods or downtown environments. In these areas, there are added safety and noise concerns generated by the trains. Railroads can also pose a development obstacle, preventing certain types of development or placing restrictions on surrounding land. The Central Midlands Council of Governments (CMCOG) 2040 Long Range Transportation Plan proposed a railroad bridge over Assembly Street near Whaley Street which would remove five grade crossings. This would result in reducing congestion from morning and evening commutes caused by at-grade crossings.

Beyond the potential issues posed by interaction with the roadway network, railroads can suffer congestion and other constraints due to safety and natural hazards. For example, the October 2015 flooding caused a Norfolk Southern railroad bridge over the Broad River to close, which caused interruptions to automobile shipments from the BMW factory in Greer to the Port of Charleston.

2.4 AVIATION CONSTRAINTS

Located in Lexington County approximately five miles southwest of Columbia, Columbia Metropolitan Airport (CAE) is the main airport of the Central Midlands region. The airport has a single main terminal and two runways, well as cargo aprons and other facilities. There is a Foreign Trade Zone (FTZ 127) in the airport which allows intermediate foreign and domestic goods into the airport without customs entry. This airport is also a UPS regional cargo hub which consists of a facility that can sort 41,000 packages an hour and services destinations in the southeast.

The primary constraints faced by CAE are limitations of cargo capacity and highway connections. The most recent Columbia Metropolitan Airport Master Plan stated a need for a 40,000-square yard cargo apron expansion and a new 30,750 square foot cargo building for one of the air cargo facilities west of the main terminal. As freight volumes increase at this airport, expansion will be necessary to meet the increased demands.

In terms of highway connections, CAE does not have a direct limited access connector road from the airport to I-26. The John N. Hardee Expressway links SC 302 and SC 602 north of the airport. However, the extension of the John N. Hardee Expressway was not completed due to funding constraints. The extension would ultimately provide a direct linkage between the airport and other industrial and shipping facilities nearby.



3. Regional Freight Land Use and Policies

3.1 BACKGROUND

Local land use decisions have a significant impact on freight mobility. The current and future land uses and allowed activities will ultimately guide the location and type of freight entering and leaving the Central Midlands region. To understand the land use policies impacting freight movement within the Central Midlands region, a review of local government land use plans has been conducted. The review was used to determine where growth is expected to occur and identify areas with freight mobility constraints. Freight activities is a broad term, with each local government defining their land uses differently. For this review, overall freight activities can include manufacturing, industrial, storage, agriculture, airports, rail, mining, and timber among others.

3.2 POLICY ANALYSIS METHODOLOGY

To determine the existing and future land use policies on the local level, a survey of municipal and county guiding documents was conducted. The guiding documents analysis included approved comprehensive plans and zoning ordinances where available. These guidance documents were studied to identify areas which allowed freight-related uses and any additional policy guidance which supported the development and location of these activities.

Freight-related activities for the Central Midlands region include raw material generation areas (farming, timber, and mining operations), transportation and other intermodal facilities, military installations, warehousing and distribution areas, and manufacturing facilities. Guidance and regulations for land use categories and zoning districts were reviewed to identify the land use designations which allowed these specific uses. In addition, other land use policy guidance not directly tied to land use categories or zoning districts which encouraged the development of freight-related uses for specific locations and other related guidance was reviewed.

For this review, the primary preference was to utilize local comprehensive plans. This allowed for an understanding of the current and potential future landscape for freight-related uses within the area. A “crosswalk” was developed for each local government to identify applicable land use categories or zoning districts, as well as any other relevant freight-supportive policy guidance. The most common land use category and zoning district types which allowed freight-related activities within this region included industrial, agricultural, rural, some commercial, institutional, and governmental.

3.3 EXISTING FREIGHT LAND USE POLICIES

Table 3.1 provides a summary table of the existing land uses of most the local governments in the Central Midlands region. It also identifies which land uses allowed for freight activities in each jurisdiction. Existing land use information for the towns of Jenkinsville, Ridgeway, Pelion, South Congaree, Summit, Swansea, Silverstreet, and Eastover was not available and are not represented in the table below.

Table 3.1: Existing Land Use Municipality Summary Table

Municipality	Land Use Categories	Permissible Freight Activity
Fairfield County	County Land, Towns, Mixed Use Commercial, Residential, Business/Industrial, Rural Communities, Farming-Forestry	Mixed Use Commercial, Business/Industrial, Rural Communities, Farming-Forestry
Lexington County	Residential, Commercial, Industrial, Institutional	Industrial
Town of Batesburg-Leesville	Single Family Residential, Multi-Family Residential, Mobile Home, Public/Institutional, Limited Commercial, General Commercial, Industrial, Rural/Forested, Vacant	Industrial, Rural/Forested
City of Cayce	Residential Conservation & Infill Areas, Residential "Density-Flex" Areas, Transition Areas, Commercial-Business/Retail Areas, Commercial-Business/Industrial Areas, Planned Mixed Use Areas, Resource Areas	Commercial, Business/Industrial
Town of Chapin	Residential, Commercial, Industrial, Public/Institutional, Vacant/Undeveloped	Industrial
Town of Gaston	Residential, Rural Residential, Cropland, Pastureland, Commercial, Public/Institutional, Unimproved, Recreational, Unclassified	Rural Residential, Cropland, Pastureland
Town of Irmo	Commercial, Public/Institutional, Single Family Residential, Multi-Family Residential, Industrial, Undeveloped	Industrial
Town of Lexington	Protected Residential, Protected Residential 2, High Density Residential, Neighborhood Commercial, Office-Commercial, Limited Commercial, General Commercial, Industrial	Industrial
Town of Pine Ridge	Commercial, Golf Course, Industrial, Public/Institutional, Residential, Rural, Undeveloped, Vacant	Industrial
Town of Springdale	Single Family Residential, Multi-Family Residential, Public/Institutional, Commercial, Industrial, Mobile Home, Recreation, Undeveloped, Rural	Public/Institutional, Industrial
City of West Columbia	Commercial, Industrial, Public/Institutional, Residential, Rural, Vacant	Industrial
Newberry County	Agricultural/Forestry, Commercial, Industrial, Single-Family Residential, Multi-Family Residential, Parks & Recreation, Public/Institutional, Sumter National Forest, Vacant Land	Agricultural/Forestry, Industrial
Town of Little Mountain	Agricultural/Forestry, Single-Family Residential, Vacant, Public/Institutional, Commercial, Multi-Family Residential, Parks & Recreation	Agricultural/Forestry
City of Newberry	Parks, Recreation & Open Space, Single-Family Residential, Public/Institutional, Vacant, Commercial, Multi-Family Residential, Industrial, Central Business District	Industrial
Town of Peak	Agricultural/Forestry, Single-Family Residential, Vacant, Public/Institutional, Commercial	Agricultural/Forestry
Town of Pomaria	Agricultural/Forestry, Single-Family Residential, Vacant, Public/Institutional, Commercial	Agricultural/Forestry
Town of Prosperity	Agricultural/Forestry, Single-Family Residential, Vacant, Public/Institutional, Commercial, Multi-Family Residential, Parks & Recreation	Agricultural/Forestry
Town of Whitmire	Single-Family Residential, Agricultural/Forestry, Parks & Recreation, Vacant, Public/Institutional, Industrial, Multi-Family Residential, Commercial	Agricultural/Forestry, Industrial

Municipality	Land Use Categories	Permissible Freight Activity
Richland County	Recreation, Agriculture, Residential Agriculture, Residential, Institutional, Governmental, Commercial, Industrial, Vacant	Agriculture, Governmental, Industrial
Town of Arcadia Lakes	Railroad Right-of-Way, Street Right-of-Way, Vacant, Single-Family Residential, Institutional, Commercial	N/A
Town of Blythewood	Commercial, Developing, Industrial, Public/Institutional, Residential, Rural, Rural Residential, Undeveloped, Vacant	Industrial, Rural
City of Columbia	Residential, Mixed Use, Planned Unit Development, Commercial, Office, Industrial, Civic/Institutional, Parks & Green Space, Vacant	Industrial
City of Forest Acres	Residential Single-Family, Residential-Duplex, Residential Multi-Family, Manufactured Housing Unit, Commercial, Industrial, Public/Quasi-Public, Vacant	Industrial
Calhoun County	Agricultural, Urban, Rural Residential, Rural Nonresidential	Agricultural, Urban, Rural Nonresidential

Table 3.2 represents the future land use or zoning designations for most local governments in the Central Midlands region. The table also includes which land uses or zoning allows for freight activities. Future land use or zoning information was not available for the towns of Jenkinsville, Summit, Silverstreet and Eastover. If future land use information was not available, zoning information was used instead.

Table 3.2: Future Land Use/Zoning Municipality Summary Table

Municipality	Land Use/Zoning Categories	Permissible Freight Activity
Fairfield County	R-1 Single-Family Residential, R-2 Inclusive Residential, R-O Residential-Office, B-1 Limited Business, B-2 General Business, I-1 Industrial, RC Rural Community, RD Rural Resource, RD-1 Rural Residential, PDD Planned Development, APD Airport Protection District, DOD Design Overlay, Neighborhood Conservation & Stabilization	I-1 Industrial, RD Rural Resource
Town of Ridgeway	R-1 Single Family Residential, R-2 General Residential, C-1 Downtown Commercial District, C-2 General Commercial District, I-1 General Industrial District, D-1 Development District	I-1 General Industrial, D-1 Development District
Town of Winnsboro	R-1 Single Family Residential, R-2 Duplex Residential, R-3 Multi-Family Residential, R-O Residential-Office, C-1 Principal Commercial, C-2 General Commercial, I-1 General Industrial, PDD Planned Development District	C-2 General Commercial, I-1 General Industrial
Lexington County	Residential, Commercial, Industrial, Institutional	Industrial
Town of Batesburg-Leesville	Public/Institutional, Industrial, Residential, Multi-Family Residential, Vacant/Rural, Commercial, Transitional Commercial	Industrial, Vacant/Rural
City of Cayce	RS-1 Single Family, Large Lots; RS-2 Single Family, Medium Lots; RS-3 Single Family, Small Lots; RS-4 Single Family, Small Lots; RG-1 General Residential; RG-2 General Residential, High Rise; C-1 Office-Institutional; C-2 Neighborhood Commercial; C-3 Central Commercial; C-4 Highway Commercial; M-1 Light Industrial; M-2 Heavy Industrial; D-1 Developmental; PDD Planned Development District; DAD Design Agreement District	C-3 Central Commercial, C-4 Highway Commercial, M-1 Light Industrial, M-2 Heavy Industrial, D-1 Developmental, PDD Planned Development District
Town of Chapin	Single Family Residential, Multi-Family Residential, Mixed Use, General Commercial, Interstate Commercial, Town Center, Industrial, Public/Institutional	Industrial
Town of Gaston	Conservation & Protected Area, Economic Development, Residential Development, Rural Resource Development	Economic Development, Rural Resource Development
Town of Irmo	Single Family Residential, General Residential, Mixed Use-Town Center, General Commercial, Public Resource Area, Limited Commercial, Rural/Farming/Forestry	Rural/Farming/Forestry
Town of Lexington	Urban Residential, Low-Density Residential, Medium-Density Residential, High-Density Residential, Mixed-Use, General Commercial, Regional Commercial, Community Commercial, Neighborhood Commercial, Business, Industrial	Industrial

Municipality	Land Use/Zoning Categories	Permissible Freight Activity
Town of Pelion	RS 1 Residential-Low Density, RS 2 Residential-High Density, RG Residential General, OC Office Commercial, GC General Commercial, LM Light Manufacturing, MH Mobile Home, PUD Planned Unit Development, RU Rural	LM Light Manufacturing, PUD Planned Unit Development
Town of Pine Ridge	R-1 Single-Family Residential, R-2 Duplex Residential, R-3 High Density Residential, C-1 General Commercial, MU Mixed Use District, P-1 Public and Semi-Public, FP Flood Protective Overlay, LI Light Industrial, BI Basic Industrial, PD Planned Development District, DI Development District	LI Light Industrial, BI Basic Industrial
Town of South Congaree	D-1 Development, R-1 Residential (Single-Family), R-2 Residential (Duplex), R-3 Residential (Multi-Family), C-1 General Commercial, C-2 Neighborhood Commercial, I-1 Industrial	D-1 Development, C-1 General Commercial, I-1 Industrial
Town of Springdale	R-1 Single Family Residential, R-2 Duplex Residential, R-3 Multi-Family Residential, C-1 General Commercial, C-2 Transitional Commercial, I-1 Industrial, P-1 Public/Institutional	I-1 Industrial
Town of Swansea	RS-1 Single Family Residential, RS-2 Single Family Residential, RS-3 Single Family Residential, RG General Residential, OC Office Commercial, GC General Commercial, I Industrial, RU Rural District, PUD Planned Unit Development	GC General Commercial, I Industrial, RU Rural District, PUD Planned Unit Development
City of West Columbia	Low Density Residential, Medium & High Density Residential, Mobile Home Park, General Commercial, Intensive Commercial, Restricted Commercial, Light Industrial, Heavy Industrial, Gateway District, Planned Development District, Public/Institutional, Village District	Light Industrial, Heavy Industrial
Newberry County	Rural Development, Economic Development, Sumter National Forest, Lake Development, Parks & Recreation, Residential, Public/Institutional	Economic Development, Lake Development, Rural Development
Town of Little Mountain	Rural Development, Residential, Public/Institutional, Economic Development, Parks & Recreation	Rural Development, Economic Development
City of Newberry	Commercial District, Central Business District, Industrial District, Residential District, Mixed Use District, Parks, Recreation & Open Space District, Public & Institutional District	Industrial District
Town of Peak	Rural Development, Residential, Public/Institutional, Economic Development	Rural Development, Economic Development
Town of Pomaria	Rural Development, Residential, Public/Institutional, Economic Development	Rural Development, Economic Development
Town of Prosperity	Residential, Rural Development, Economic Development, Public/Institutional, Parks & Recreation	Rural Development, Economic Development
Town of Whitmire	Residential, Rural Development, Parks & Recreation, Public/Institutional, Economic Development	Rural Development, Economic Development
Richland County	Conservation, Rural (Large Lot), Rural, Neighborhood (Low-Density), Neighborhood (Medium-Density), Mixed Residential (High-Density), Mixed Use Corridor, Economic Development Center/Corridor, Military Installations, Activity Centers (Rural, Neighborhood, & Community), Municipality	Rural (Large Lot), Economic Development Center/Corridor, Military Installations
Town of Arcadia Lakes	RS-1 Single Family Residential (Low Density), RS-2 Single Family Residential (Medium Density), LC Light Commercial, PD Planned Unit Development	N/A
Town of Blythewood	Commercial, Residential, Public/Institutional, Development, Rural, Suburban, Light Industrial	Light Industrial

Municipality	Land Use/Zoning Categories	Permissible Freight Activity
City of Columbia	Urban Cored Mixed Residential-1, Urban Core Mixed Residential-2, Urban Edge Mixed Residential, Urban Edge Multi-Family, Urban Core Residential Small Lot, Urban Core Residential Large Lot, Urban Edge Residential Small Lot, Urban Edge Residential Large Lot, Urban Core Neighborhood Activity Center, Urban Core Community Activity Center, Urban Edge Community Activity Center, Urban Core Regional Activity Center, Urban Edge Regional Activity Center, Neighborhood Activity Center, Community Activity Center, Regional Activity Corridor, Employment Campus, Industrial, Transportation & Utilities, Sports/Amusement District, Civic/Institutional District, Central Business District, Riverbanks Zoo & Garden, Universities/Colleges, Fort Jackson	Industrial, Transportation & Utilities, Fort Jackson
City of Forest Acres	Predominantly Commercial, Public/Recreation/Schools/Churches, Predominately Residential	N/A
Kershaw County	R-15 Low Density, Single-Family Residential District, R-10 Medium Density Residential District, R-6 High Density Residential District, O-I Office-Institutional District, B-2 General Business District, B-3 Limited Business District, I-1 Industrial District, GD General Development District, RD-1 Rural Resource District, RD-2 Rural Resource District, MRD-1 Rural Resource District, PDD Planned Development District, HOD Historic Overlay District, AOD Airport Overlay District, LWOD Lake Wateree Overlay District	GD General Development District; I-1 Industrial District; RD-1 Rural Resource District; RD-2 Rural Resource District; MRD-1 Rural Resource District; PDD Planned Development District; AOD Airport Overlay District
Calhoun County	UD Urban, RUD Rural, RC Single-Family Residential, RD Multiuse Residential, IND Industrial, OR Office-Residential, LD Limited Development, PUD Planned Use, SPI Special Public Interest, Flood Hazard, River and Streamside Management	RUD Rural District, UD Urban District, IND Industrial District, LD Limited Development District, PUD Planned Use District

Table 3.3 represents a summary of the freight policies held by each municipality. More information about the specific freight policies of each municipality can be found in Appendix A. Freight policy information was not available for the cities of Cayce, Newberry, and Forest Acres as well as the towns of Jenkinsville, Ridgeway, Winnsboro, Pine Ridge, South Congaree, Summit, Swansea, Little Mountain, Peak, Pomaria, Prosperity, Silverstreet, Whitmire, Arcadia Lakes, Blythewood, and Eastover.

Table 3.3: Freight Policy Summary Table

Municipality	Freight Policy Theme	Policy References
Fairfield County	Airport Protection Districts; Industrial development away from community environments; Compatible land use between freight uses and adjacent land; Promotion of planned industrial parks; Protection of agricultural areas; Reserving land for future industrial development; Set aside land for rail construction	Fairfield County Land Management Ordinance: P.4; Fairfield County Comprehensive Plan: Existing Land Use, P. 123; Industrial Policies 1 & 4, P.133; Economic Development Goal, P.158; Land Use Goal, P.159, EG-2 Action 5, P.116
Lexington County	Airport Protection Districts; Compatible land use between freight uses and adjacent land	Lexington County Zoning Ordinance: Article 4, P.59; Lexington County Goals & Objectives: Goal 3, P.3; Goal 16, P.7
Town of Batesburg-Leesville	Road widening/improvements	2000 Statewide Transportation Improvement Plan
Town of Chapin	Encourage industrial development; Road widening/improvements	Town of Chapin Comprehensive Plan: Economic Development Objective, P.106; P.87
Town of Gaston	Protection of agricultural areas	Town of Gaston Comprehensive Plan: Land Use Goal 2, P.7.11
Town of Irmo	Encourage industrial development	Town of Irmo Comprehensive Plan: Industrial Objective, P.69

Municipality	Freight Policy Theme	Policy References
Town of Lexington	Industrial overlay; rail overlay	Town of Lexington Code of Ordinances: Ch. 155, Article 3, Division 5; Ch. 156, Definitions, 156.02.01
Town of Pelion	Industrial development away from community environments; Encourage industrial development; Compatible land use between freight uses and adjacent land; Promotion of planned industrial parks; Protection of agricultural areas; Reserving land for future industrial development	Town of Pelion Comprehensive Plan: Natural Resource Element P.49; Growth & Development Goals, P.72; Economic Development Considerations, P.35; Economic Goals, P.77; Land Use Objective 6, P.74; Light Manufacturing Zoning Policy, P.86
Town of Springdale	Reserving land for future industrial development	Town of Springdale Comprehensive Plan: Industrial Land Use, P.22
City of West Columbia	Compatible land use between freight uses and adjacent land; Road widening/improvements	City of West Columbia Comprehensive Plan: Industrial Zones, P.43; Highways, P.27
Newberry County	Airport Protection Districts; Encourage industrial development; Compatible land use between freight uses and adjacent land; Protection of agricultural areas	Newberry County Zoning Ordinance: Article 5, Section C, P.5.3 Newberry County Comprehensive Plan: Ch. 11, P.11-1, Population Strategy 2.1.2.1; Ch. 10, P.10-30, Land Use Strategy 10.1.1.2; Ch. 10, P.10-30, Land Use Strategy 10.1.1.3
Richland County	Airport Protection Districts; Compatible land use between freight uses and adjacent land; Reserving land for future industrial development; Road widening/improvements; Promotion of transportation crossroads	Richland County Zoning Ordinance: Ch. 26, Article V, Sec. 26-104; Ch. 26, Article V, Sec. 26-111 Richland County Comprehensive Plan: Economic Development Strategy 4.1, P.74; Richland County Transportation Improvement Program (CTIP)
City of Columbia	Airport Protection Districts, Compatible land use between freight uses and adjacent land	City of Columbia Zoning Ordinance: Ch. 17, Article III, Division 8, Sec. 17-249; Plan Columbia Land Use Plan: Industrial, Transportation, and Utility Centers, P.39
Kershaw County	Airport Protection Districts; Encourage industrial development	Kershaw County Comprehensive Plan: Priority 3 Capital Improvement Projects, P. F-35; Kershaw County Zoning Ordinance: Article 3, Section 3:1.1-3, P. 3-4;
Calhoun County	Encourage industrial development; Compatible land use between freight uses and adjacent land; Protection of agricultural areas	Calhoun County Comprehensive Plan: Ch. 9, Section C, Goal 9.7, P. 68; Ch. 9, Section C, Goal 9.4, P. 68; Ch. 9, Section C, Goal 9.5, P. 68



4. Intermodal and Truck Parking Analysis

4.1 BACKGROUND

Freight carried by truck dominates freight flows within the CMCOG region in terms of volume and value. In comparison to other modes, trucks carry 68.2% of all freight goods by volume and 76.3% by value and by 2040, freight truck movements are expected to increase by 84.2% in volume and by 122.6% in value.

Regardless of the importance of trucks in moving freight across the region, there are limitations on the number of hours a truck driver can spend behind the wheel. In December 2011 (amended in December 2014), the Federal Motor Carrier Safety Administration (FMCSA) instituted revised hours-of-service regulations which include mandatory ‘down time’ for drivers. These new regulations combined with increasing truck based freight movements have increased the demand for truck parking facilities in the region. Adequate truck parking facilities are necessary to ensure safety, stability and allow continued growth of freight movements along the region’s corridors. Such facilities assist drivers in satisfying the hours of service regulations without parking in ill-suited locations including, highway shoulders and interchange ramps.

SCDOT’s ArcGIS online truck parking map identifies truck parking facilities in the Central Midlands region. SCDOT lists 30 truck parking facilities within the study area. Of those 30, a sample of 16 truck parking facilities were surveyed to measure the levels of demand and availability of truck parking in the region.

4.2 TRUCK PARKING SURVEY METHODOLOGY

A truck parking survey was conducted to measure the levels of demand and availability of truck parking in the study area. The survey was comprised of two components, a desktop analysis and field verification survey. The desktop analysis was used to first identify truck parking facilities and associated amenities. Facilities were identified using the 2017 National Truck Stop Directory (<http://www.truckstops.com>) and the SCDOT’s truck parking map. This initial list of facilities was then verified and studied using satellite images accessible through Google Earth Pro.

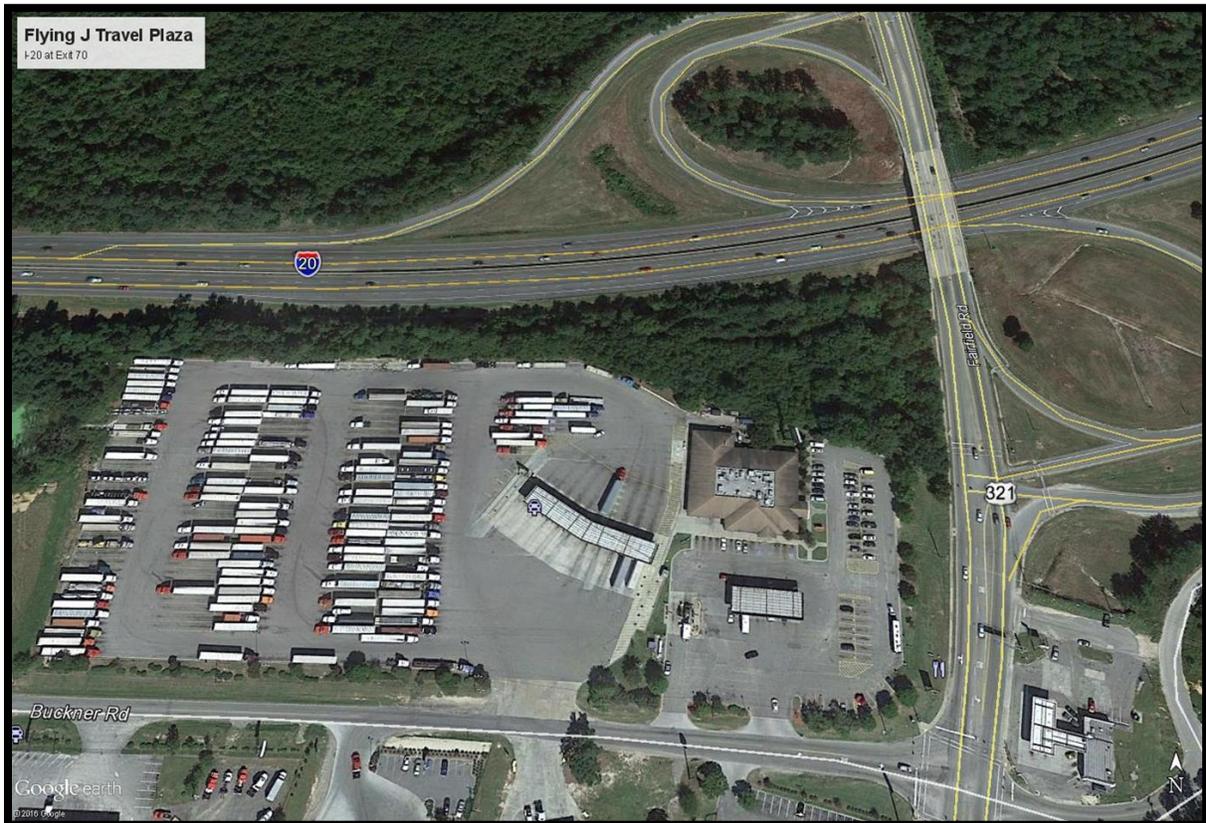
The results of the initial desktop analysis were then documented and confirmed through field verification surveys. Field surveys were conducted to assess the validity of the desktop analysis results and identify any additional information unobtainable through the desktop analysis. The field surveys were conducted from May 16 to 18, 2017 between the hours of 9:50 PM to 3:00 AM¹.

¹ The truck parking survey for the Circle K (BP) facility located at I-26 Interchange Exit 119 only consists of a desktop analysis.

In total, 16 truck parking facilities were surveyed within the study area along I-20 and I-26. Private truck parking facilities were the focus of the survey, but public facilities such as rest areas, welcome centers, and visitor centers were also considered. Desktop analysis conducted through <http://www.scdot.org/getting/restareamap.aspx> did not identify any public facilities within the study area².

Truck parking facility utilization is determined by the number of trucks parked during the field survey divided by the number of truck parking spaces identified in the SCDOT truck parking map.³ The desktop analysis and field surveys revealed that some facilities have installed informal parking areas such as gravel or dirt lots to accommodate additional truck parking. Others may have paved areas with no striping or designated parking spaces. Some truck parking facilities were found to be operating over capacity, with some trucks parked on the side of the road next to the facility because the parking areas were full.

Figure 4.1: Example of a near capacity Truck Parking Facility (Flying J I-20 at Exit 70)



² There is a public rest area with trucking parking located along I-20 at Mile Marker 93.5, but it is located just outside of the study area boundaries.

³ Designated truck parking spaces were defined as individually marked parking spaces.

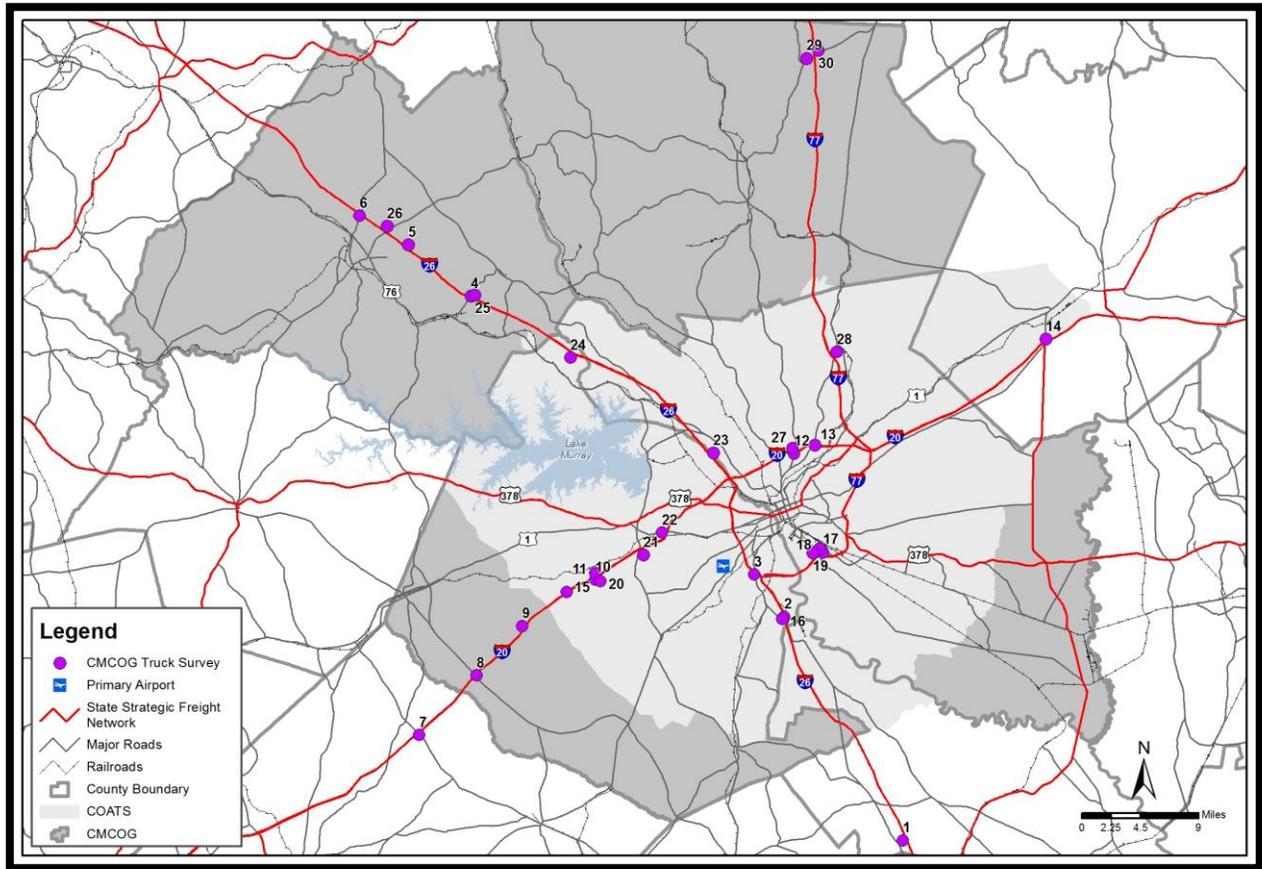
4.3 FACILITY LOCATIONS AND CAPACITIES

The locations of these truck parking facilities are listed in Table 4.1 and shown in Figure 4.2. The numbers in Table 4.1 corresponds to the locations of the truck parking facilities in Figure 4.2.

Table 4.1: Identified Truck Parking Facilities

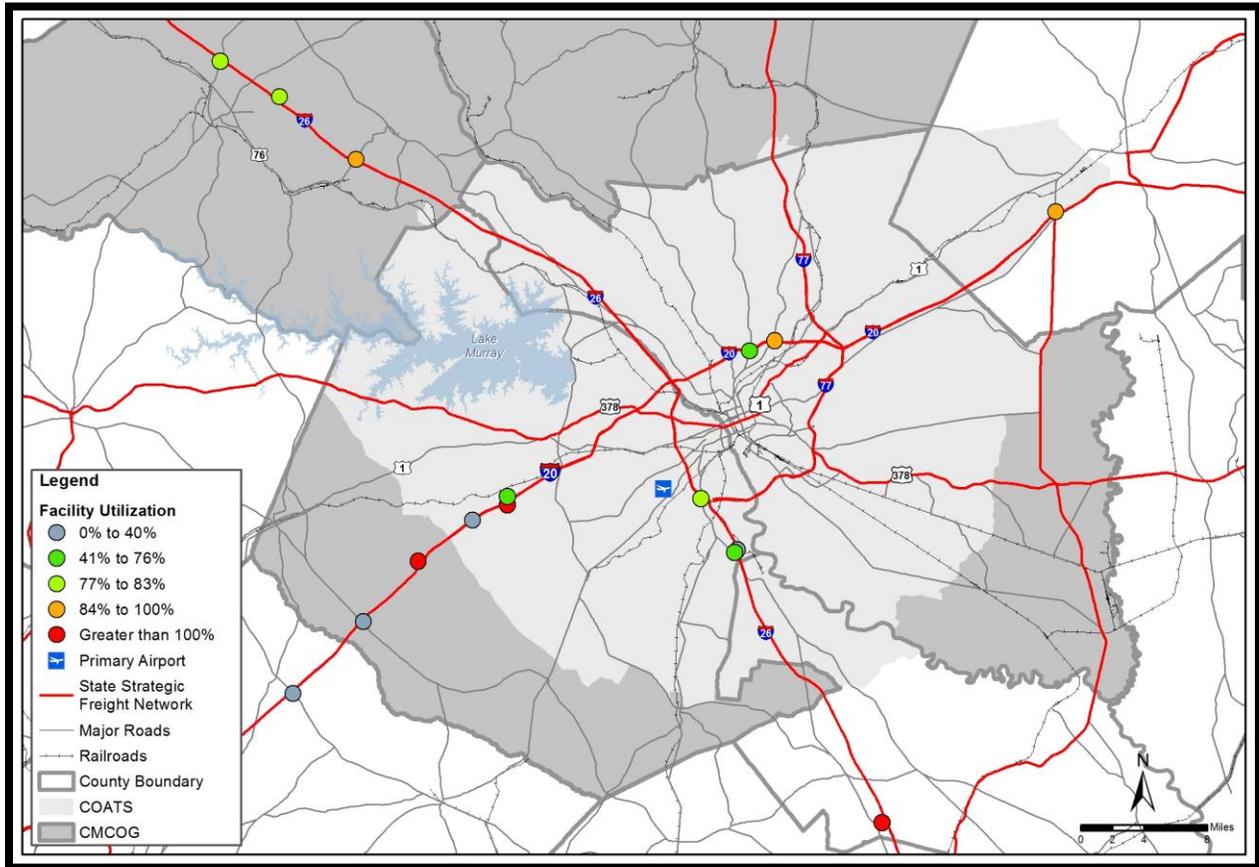
Number	Facility Name	Spaces
1	Pilot/WilcoHess #0933	25
2	Pitt Stop #36	25
3	Pilot Travel Center #338	90
4	Pilot/WilcoHess #4580	80
5	Love's Travel Stop #396	100
6	Corner Market #44	5
7	Circle K	100
8	Hill View Truck Stop	100
9	Truck Stop 44	30
10	Love's Travel Spot #424	90
11	Pitt Stop #15	25
12	Flying J Travel Plaza	178
13	TA Columbia #262	78
14	Pilot Travel Center #346	60
15	Public Parking on I-20	Unknown
16	Circle K (BP)	10
17	Petro Columbia	134
18	Pitt Stop #35	25
19	Love's Travel Stop #657	92
20	Pitt Stop #38	5
21	Kangaroo Express #3254	5
22	Pitt Stop #6 (Texaco)	10
23	Spinx #266	3
24	Rainbow Gas Garden #12	4
25	Kangaroo Express #3441	15
26	I-26 Shell	25
27	United Oil/Sav-a-thon	4
28	Pitt Stop #3 Texaco	10
29	Pilot Travel Center #4578	142
30	Grand Central Station	100

Figure 4.2: Identified Truck Parking Facilities



The demand for truck parking facilities can be determined by calculating the current utilization of the facilities. As stated previously, the rate of utilization was obtained from dividing the number of trucks parked at the facility divided by the number of spaces identified from the SCDOT truck parking tool. Within the study area, utilization ranged from 0% to 112% with six facilities reporting 84% and greater as shown in Figure 4.3.

Figure 4.3: Truck Parking Utilization



Six facilities from the survey do not have designated truck parking spaces. These facilities have either open, unmarked pavement areas or gravel lots.

Table 4.2 includes the truck parking facility survey list, the type of facility based on parking space infrastructure, and associated capacities. For those facilities with no designated truck parking spaces, all but one reported trucks parked at these facilities. The lowest number parked was four trucks while the highest number was 32. For those facilities with designated truck parking spaces, a significant number of trucks are not parked in designated parking spaces. The number of trucks not parked in designated parking spaces range from 1 to 18. Three facilities, Pilot/WilcoHess #0933, Truck Stop 44, and Love's Travel Spot #424 were originally calculated to have a utilization rate greater than 100% during the survey time. Pilot/WilcoHess #0933 was the only facility with an overflow lot. Pilot/WilcoHess #0933 has 25 designated spaces, but had 28 trucks parked during the survey. Truck Stop 44 does not have designated spots, but according to SCDOT, allots for 30 spaces. During the survey, this facility had 32

trucks parked. Love’s Travel Spot #424 has 90 designated spaces and had 91 trucks parked on the day of the survey.

Table 4.2: Truck Parking Facility Inventory

Facility Name	Location	Facility Parking Area Layout	Potential Capacity Range ¹	Designated Spaces	Trucks Parked in Spaces	Total Trucks Parked
Pilot/WilcoHess #0933	I-26 (Exit 139)	Designated Spots with Overflow Lot	25-84	25	23	28
Pitt Stop #36	I-26 (Exit 119)	No Designated Spots	25-84	25	0	6
Pilot Travel Center #338	I-26 (Exit 115)	Designated Spots Only	85+	90	68	69
Pilot/WilcoHess #4580	I-26 (Exit 82)	Designated Spots with Overflow Lot	85+	80	54	72
Love's Travel Spot #396	I-26 (Exit 76)	Designated Spots Only	85+	100	74	79
Corner Market #44	I-26 (Exit 72)	No Designated Spots	25-84	5	0	4
Circle K	I-20 (Exit 33)	Designated Spots with Overflow Lot	85+	100	33	40
Hill View Truck Stop	I-20 (Exit 39)	No Designated Spots	85+	100	0	22
Truck Stop 44	I-20 (Exit 44)	No Designated Spots	25-84	30	0	32
Love's Travel Spot #424	I-20 (Exit 51)	Designated Spots Only	85+	90	78	91
Pitt Stop #15	I-20 (Exit 51)	Designated Spots with Overflow Lot	25-84	25	9	19
Flying J Travel Plaza	I-20 (Exit 70)	Designated Spots Only	85+	178	120	128
TA Columbia #262	I-20 (Exit 71)	Designated Spots with Overflow Lot	85+	78	65	75
Pilot Travel Center #346	I-20 (Exit 92)	Designated Spots with Overflow Lot	25-84	60	37	50
Public Parking on I-20	I-20 ²	No Designated Spots	Unknown	N/A	0	0
Circle K (BP)	I-26 (Exit 119)	No Designated Spots	5-24	10	0	5

¹ As identified from the 2017 National Truck Stop Directory.

² This public parking space is located west of Lexington, South Carolina.

4.4 CURRENT AND FUTURE DEMAND

The use of non-designated parking areas associated with the truck parking facilities identified within the inventory suggest there is current demand for more adequate parking facilities for truck drivers. Many of these facilities have had to improvise to cater to demand. While beneficial in attempting to meet current demand, these overflow and improvised parking facilities have potential issues including truck driver safety.

This situation is anticipated to worsen over time due to hours of service regulations and forecasts of increased truck traffic within the CMCOG region.



5. Freight Transportation and Land Use Analysis

5.1 INTRODUCTION

Identifying the locations of future freight activities is important in understanding areas of future growth and development. By finding the areas of future growth, as identified by the Central Midlands municipalities, the future centers of freight and economic growth can be anticipated. This information examined together with information on the access to existing and future freight areas will determine which areas have current and future land uses available and accessible to freight. From this analysis, freight opportunities, needs and access recommendations can be generated.

5.1.1 METHODOLOGY

The areas of future growth were identified through multiple sources. The Priority Investment Areas and other development areas were identified in the Comprehensive Plans and Zoning Ordinances of each municipality. The Regional Growth scenarios were found in the Columbia Area Transportation Study (COATS) Long Range Transportation Study. The future industrial parks were found on the Central SC Alliance property search website. The Sites and Parks property type was applied to the four counties using the property search filter.

To identify access for freight land uses, the Priority Investment Areas, Regional Growth Areas, and Future Industrial Parks were mapped with the current rail lines, rail yards, interstates, and freight bottlenecks. This analysis will allow for the assessment between where the freight infrastructure is located compared to where freight activity is expected to grow. This analysis consisted of both reviewing existing and future facilities in the Central Midlands region.

5.2 EXISTING INDUSTRIAL PARKS

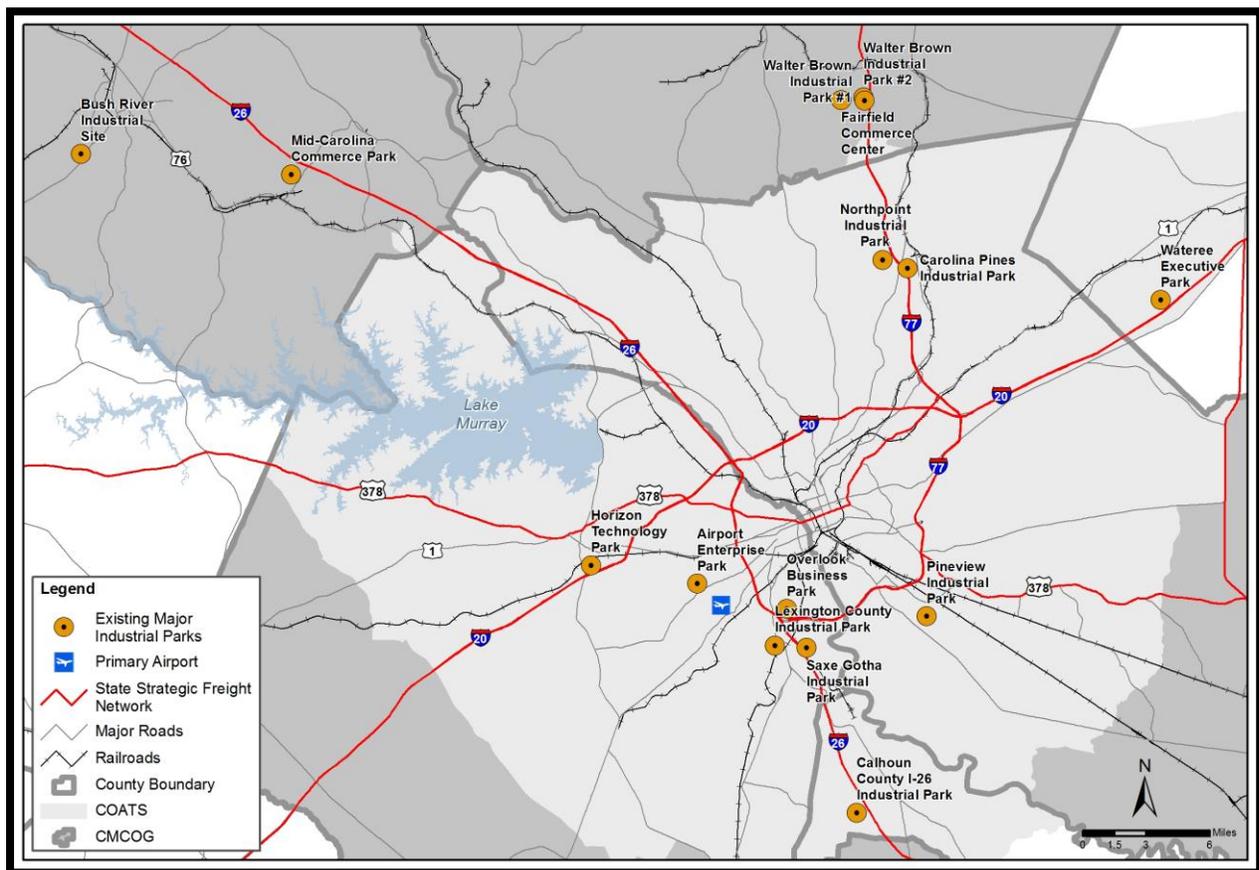
The Central Midlands region has five existing industrial parks. Most of the industrial parks are located outside municipal boundaries. The existing industrial parks represent where freight activities are currently happening and where they have potential to grow. Table 5.1 lists the existing industrial parks of each municipality, their locations, and tenants.

Figure 5.1 shows the major industrial parks within the area of the map. All of the existing industrial parks are located on or near railroads, the State Strategic Freight Network, or major roads. Pineview and Carolina Pines Industrial Park both have access to Norfolk Southern and Saxe Gotha has access to CSX rail.

Table 5.1: Existing Industrial Parks

Municipality	Industrial Parks	Location	Tenants
Fairfield County	Walter Brown Industrial Park #1 & #2; Fairfield Commerce Center	Near I-77 corridor; Peach Rd	Innovative Plastics Recycling, B2Strategies, Caterpillar, Bomag Americas
Lexington County	Lexington County Industrial Park; Saxe Gotha Industrial Park; Horizon Technology Park; Overlook Business Park	U.S. 21 near I-26; 12th Street Extension; South Lake Drive & Glassmaster Rd; Dixiana Rd	RNDC, Husqvarna, Janpak, Home Depot, Nephron Pharmaceuticals, Amazon, Avtec Inc., Sunbelt Rentals
Town of Springdale	Airport Enterprise Park	Platt Springs Rd	Flextronics, Allied Air, Colite
Newberry County	Mid-Carolina Commerce Park; Bush River Industrial Site	SC Hwy 773 & I-26; 304 Industrial Park Rd	Caterpillar, Komatsu
Richland County	Carolina Pines Industrial Park; Northpoint Industrial Park; Pineview Industrial Park	East of Blythewood near I-77 off U.S. 21; South of Blythewood off I-77; Pineview Rd	Belk Distribution, Intertape Polymer, Amcor, Lula Roe, Spirax Sarco, Koyo Bearing, Hueck Foils, Accutech
Kershaw County	Wateree Executive Park	2234 Whiting Way	Kershaw Health
Calhoun County	Calhoun County I-26 Industrial Park	Sonntag Dr and Sirens Ln	Starbucks Roasting Plant, The Fitts Company

Figure 5.1: Existing Industrial Parks



5.3 AREAS OF FUTURE GROWTH

Future freight growth areas can be identified in a number of ways. Priority investment areas are one type of identification that can be specialized in their focus. These areas can be geared more towards economic growth, transportation or other purposes. Priority investment areas are used by local governments to identify where they expect or desire future growth to occur. Identifying these areas allows local government to anticipate and commit resources to establish an area for a specific use.

Other potential growth areas are found in municipal plans and discuss areas of potential freight development to better serve the needs of their community. These other areas often start as recommendations, but may become priority investment areas at some point.

On a broader scale, the Columbia Area Transportation Study (COATS) Long Range Transportation Study identifies six areas for potential population growth in the Central Midlands region over the next thirty years. It is anticipated that these areas will continue to grow and develop because of significant growth in the past few decades and projected growth in the future.

The last indicator of future freight growth are the plans for future industrial parks or sites. There are many locations in the Central Midlands region with land set aside for industrial parks. These locations show where new freight centers are anticipated.

5.3.1 PRIORITY INVESTMENT AREAS

5.3.1.1 Richland County

Richland County has identified several priority investment areas intended to have industrial or freight-related activities. These priority investment areas are outlined in the Richland County 2015 Comprehensive Plan on pages 91 through 93.

The priority investment corridors as discussed in the County's Comprehensive Plan include:

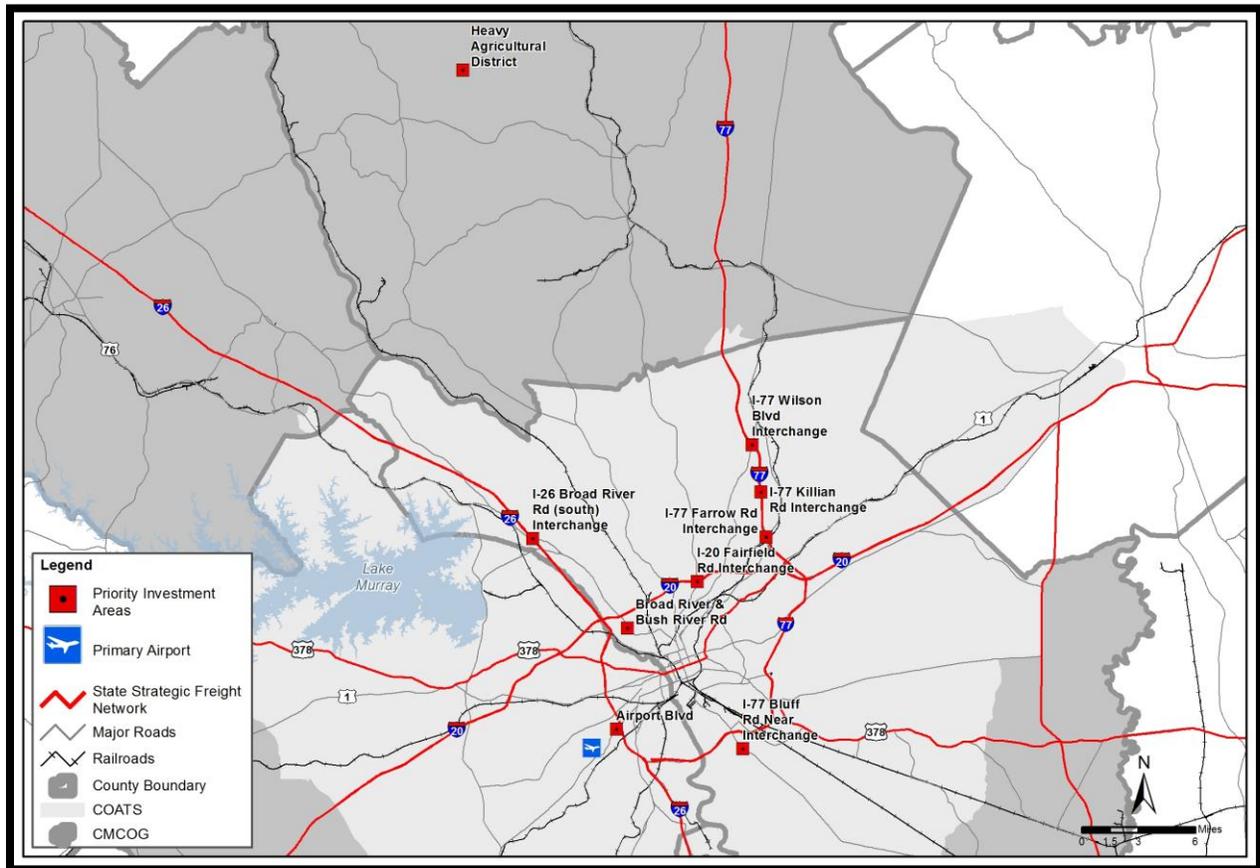
- I-77 Wilson Road Interchange: this area is identified as a commercial and industrial node. I-77 offers a prime spot for future industrial and business park uses.
- I-77 Killian Road Interchange: this area is a commercial and industrial node with a good location for future industrial and business park uses. In addition, this intersection is ideal for tourism and will be the location for the planned Richland County water park.
- I-77 Farrow Road: this intersection is identified as a commercial node with opportunities for redevelopment. It is developed for a range of commercial and industrial uses.
- I-20 Fairfield Road Interchange: this area is identified as a commercial and industrial node. The area is currently a mix of commercial and industrial uses and has the potential to be redeveloped to have a larger array of uses.
- I-77 Bluff Road near Interchange: identified as an industrial node located at the southern border of the cities of Columbia and Cayce and is considered a strategic economic opportunity.

5.3.1.2 Town of Springdale

The Town of Springdale identified Airport Boulevard as a priority investment area on page 31 of the Town of Springdale 2013 Comprehensive Plan. It is a predominately commercial corridor that the town shares with the cities of Cayce and West Columbia. The three municipalities are working together to enhance the corridor as it serves as a gateway to the region due its access to Columbia Metropolitan Airport.

Figure 5.2 illustrates the Priority Investment Areas as outlined in the Comprehensive Plan analysis.

Figure 5.2: Priority Investment Areas



5.3.2 OTHER DEVELOPMENT AREAS

5.3.2.1 Fairfield County

Fairfield County recommended the inclusion of a “Heavy Agricultural District” to their zoning ordinance. The proposed location for this district is generally north of Winnsboro and Jenkinsville and west of I-77.

5.3.2.2 Town of Chapin

The Town of Chapin proposed a freight-related action strategy in their priority investment section in the Town of Chapin 2011 Comprehensive Plan on page 116. Their recommended strategy is to consider officially designating a Town of Chapin Industrial/Business Park/Interstate Commercial Priority Investment Area.

5.3.2.3 Newberry County

As mentioned previously, Newberry County has discussed a \$930,000 project that will be funded with a combination of investment earnings from bonds, sales tax funds, and overage from the last quarter of collection. The money will be used to clear additional acreage for the Mid-Carolina Commerce Park. This money will also pay for additional roadway, bridge, and sewer infrastructure for the park.

5.3.3 REGIONAL GROWTH SCENARIO ANALYSIS

The COATS Long-Range Transportation Plan identified six areas of growth in the Central Midlands Region. These areas are expected to grow in population and as a result, increase demand of goods and services needed in these areas.

5.3.3.1 Northeast Richland County

The COATS Long-Range Transportation Plan has recognized the northeastern area of Richland County as an area that has experienced significant growth. In 1970, the area had a population of 4,482 people and was considered predominately rural with large tracts of farmland. Around 2000, the area significantly developed because of the residential and commercial growth that spread to the northeast along Two Notch Road. The population in 2000 was 43,972 people. During the 1970 to 2000 time-period, the population skyrocketed by 881%, and continued the trend up to the 2010 Census. Currently, this area has dramatically transformed into an economic and commercial hub where it is home to a variety of commercial, residential, office, and recreational uses. The LRTP states that since the 2010 Census, there has been more than 1,800 residential units permitted in this area. The 2040 population estimates project this area to have 92,500 persons.

5.3.3.2 Town of Lexington

The COATS Long-Range Transportation Plan also identified the Town of Lexington as another area that has seen considerable growth in the past few decades. The Lexington and Lexington County area have grown largely in part because of the area's proximity to the Columbia Metropolitan area in combination with the area's lower property taxes, housing prices, proximity to the lake, and good schools. This is apparent as the population for the Lexington area grew from 12,297 people in 1970 to 82,772 in 2010. This trend will only continue as more residential units are developed in the area, according to the LRTP, there were 3,844 new residential units permitted since 2010. The 2040 estimates project the population of the Lexington area to grow to approximately more than 141,000 residents.

5.3.3.3 Irmo/Dutch Fork/Chapin

The COATS Long-Range Transportation Plan listed the northwestern portion of the Columbia Metropolitan area, otherwise known as Irmo/Dutch Fork/Chapin, as an area with significant growth in recent years. This area has a strong residential and economic presence, as it is home to the Ballentine community, Columbia Center, and Harbison Boulevard. In 1970, this area had a population of just 9,730 people. In 2000, the Irmo/Dutch Fork area alone grew to 59,851 people. In 2010, the population grew to 71,388. The Irmo/Dutch Fork area has seen approximately 538 new residential units permitted each year since 2010. The Town of Chapin has also developed significantly, with a population of 2,039 in 1970 to 14,236 people in 2010. A combination of lakeside living and top schools make the Chapin area a popular place to live. Overall, this area combined is expected to grow even more in the future.

5.3.3.4 Blythewood

The COATS Long-Range Transportation Plan has identified the Blythewood as an area with significant growth because of its proximity to the growing Northeast Richland County area. The residential and commercial growth from Northeast Richland County has spread to the west. Due to this growth, Blythewood is now home to several major businesses that employ large amounts of people. In 1970, Blythewood had a population of 3,164 people and grew to 27,222 people in 2010. Since 2010, there has been 1,895 new residential units permitted in this area. This population trend is expected to continue as the major employers in the area take advantage of nearby transportation routes and cement the Blythewood area as an attractive locale for business.

5.3.3.5 Southeast Columbia

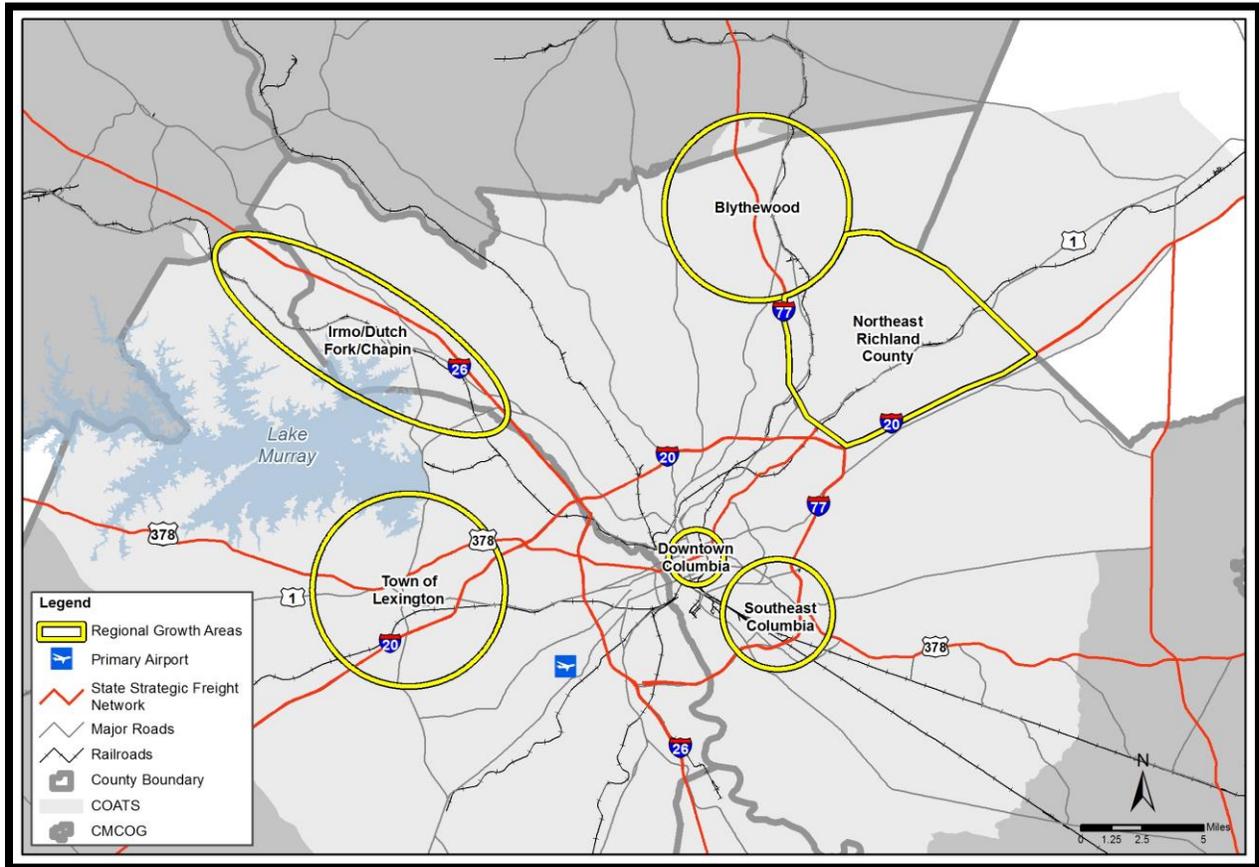
The COATS Long-Range Transportation Plan has recognized Southeast Columbia as another significant area of growth. The area is home to semi-industrial uses like trucking and light-manufacturing. Also, the Southeast Columbia area is on the southern border of Fort Jackson. Residential growth stagnated possibly due to this semi-industrial perception, but has grown recently as residential development has been constructed around Williams-Brice Stadium. Due to the increased residential development, commercial growth has located in this area as well with businesses like Whole Foods, Ulta, Basil Thai, and American Roadside café locating in this area. In 1980, this area had a population of 27,890 and in 2010 had a population of 35,230 residents. This trend is expected to continue as well with 2040 population estimates expected to be around 37,051.

5.3.3.6 Downtown Columbia

The COATS Long-Range Transportation Plan has identified Downtown Columbia as the last area of significant growth. Recently, this area has seen a revival of residential and commercial development due to infill residential developments. The University of South Carolina will continue to serve an important role in future development, attracting new off-campus student housing areas to locate near the university. This is currently happening at several different locations around the USC campus. In 1970, the population of this area was 19,137 people. This area had a declining population of 14,587 people in 2000, but recovered to 16,626 people in 2010. Again, this was largely in part due to the development of new residential units. This trend is expected to continue as the population is expected to grow to more than 20,000 people by 2040.

Figure 5.3 shows the regional growth areas as discussed in the Columbia Area Transportation Study (COATS) Long-Range Transportation Plan.

Figure 5.3: COATS LRTP Regional Growth Areas



5.3.4 FUTURE INDUSTRIAL PARKS

There are many planned industrial parks in the Central Midlands region. These parks are currently undeveloped and awaiting development.

5.3.4.1 Fairfield County

Fairfield County has two additional sites set aside for industrial purposes, these sites are currently undeveloped. One is the Buchanan Site on SC-34, set aside for future industrial development near Winnsboro. The other, near Ridgeway is the Highway 34 Ridgeway Rail Site. Both sites are currently undeveloped.

5.3.4.2 Lexington County

There are many sites zoned for industrial development spread throughout Lexington County. The Batesburg-Leesville Industrial Park is currently undeveloped but is set aside for industrial purposes. Three undeveloped sites are zoned for industrial related uses near Cayce at the Saxe Gotha Industrial Park Phases II and IV in addition to the Otarre Hills Site within city limits. The U.S. 321, 5000 Block Parcel site is also undeveloped and zoned for industrial uses near Gaston. There are three undeveloped sites near Lexington that are zoned for intensive development, the Newton Court at Two Notch Road site, 131 Riverchase Way, and Burton Road at I-20. The Congaree Industrial Site is zoned for industrial purposes near Springdale. Near South Congaree, the Loxcreen Industrial Site has an industrial zoning

designation as well. The 1600 Old Dunbar Road site located near West Columbia has been zoned for intensive development as well.

5.3.4.3 Newberry County

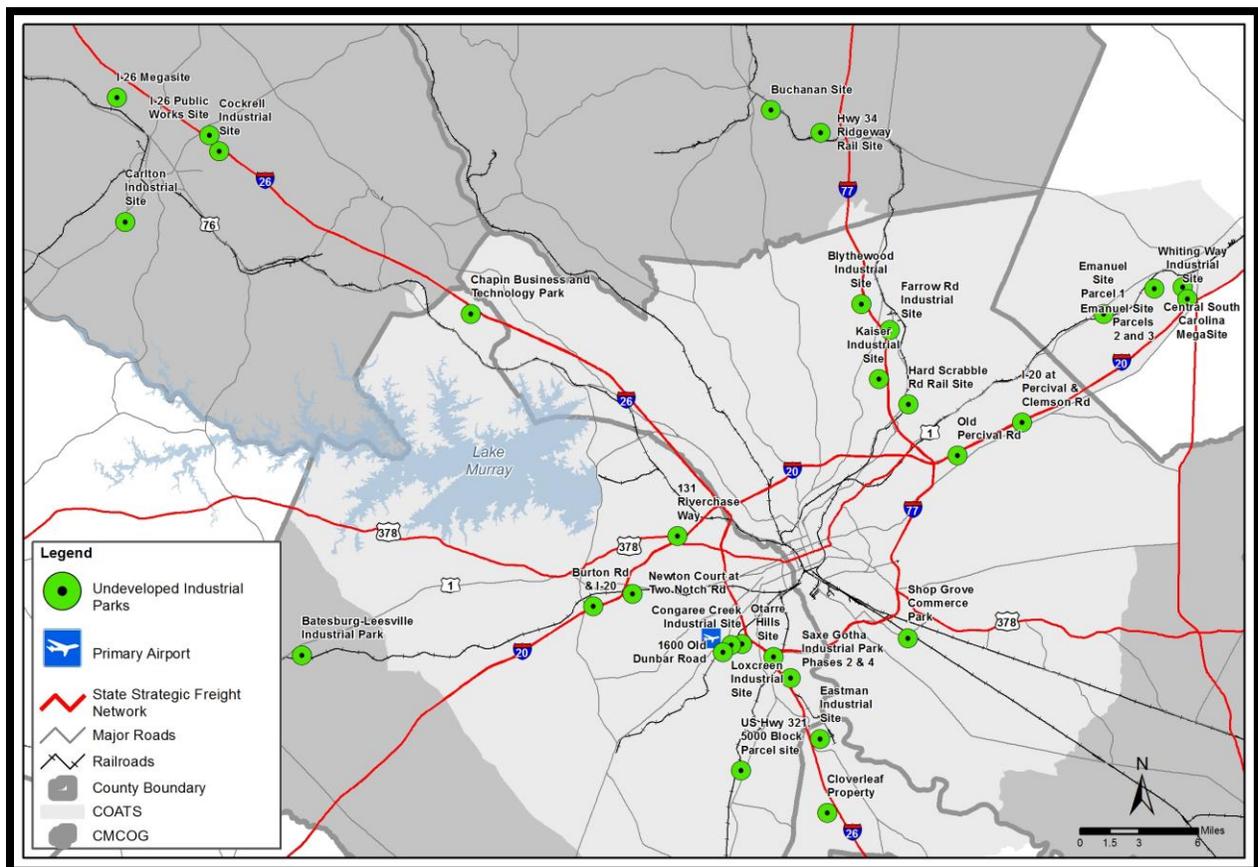
There are four currently undeveloped parcels near Newberry that are zoned for Basic Industrial purposes. The sites are the I-26 Megasite, Carlton Industrial Site, I-26 Public Works Site, and the Cockrell Industrial Site.

5.3.4.4 Richland County

There are several industrial parks planned in Richland County with nine sites set aside for industrial uses. The Hard Scrabble Road Rail Site is zoned for manufacturing purposes near Arcadia Lakes. The Blythewood Industrial Site is zoned for industrial uses in Blythewood, while the Farrow Road Industrial Site near Blythewood are zoned for Light Industrial uses. Three sites near Columbia are zoned for Commercial-Industrial uses. They are the I-20 at Percival and Clemson Road site, Kaiser Industrial Site, Shop Grove Commerce Park, and Old Percival Road.

Figure 5.4 shows the location of the future industrial parks.

Figure 5.4: Future Industrial Parks

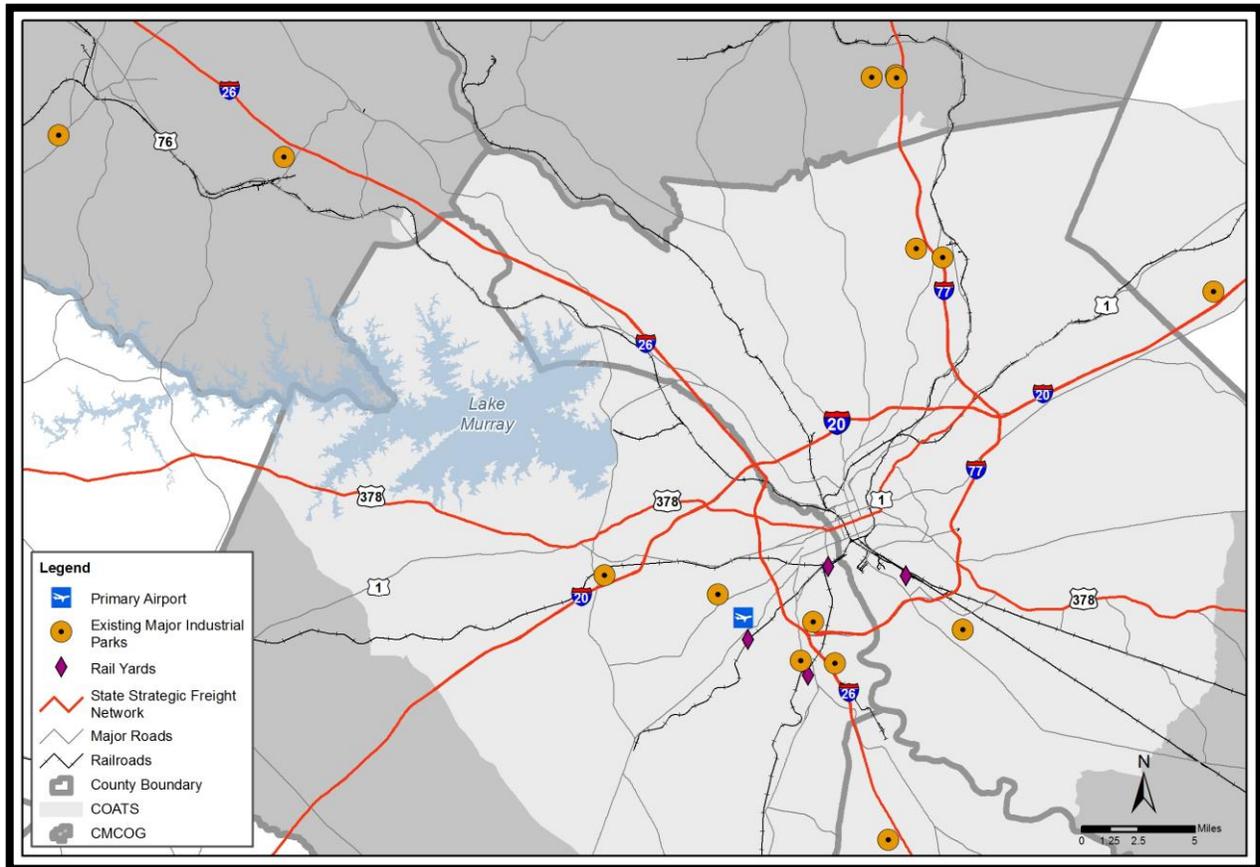


5.4 CORRIDOR ACCESS FOR FREIGHT LAND USES

5.4.1 ACCESS FOR EXISTING FREIGHT AREAS

Figure 5.5 below illustrates the existing industrial parks in relation to freight corridors such as the state strategic freight network and rail yards. The industrial parks predominately locate near interstates, with a couple of parks located near railroads.

Figure 5.5: Existing Industrial Parks & Freight Corridors



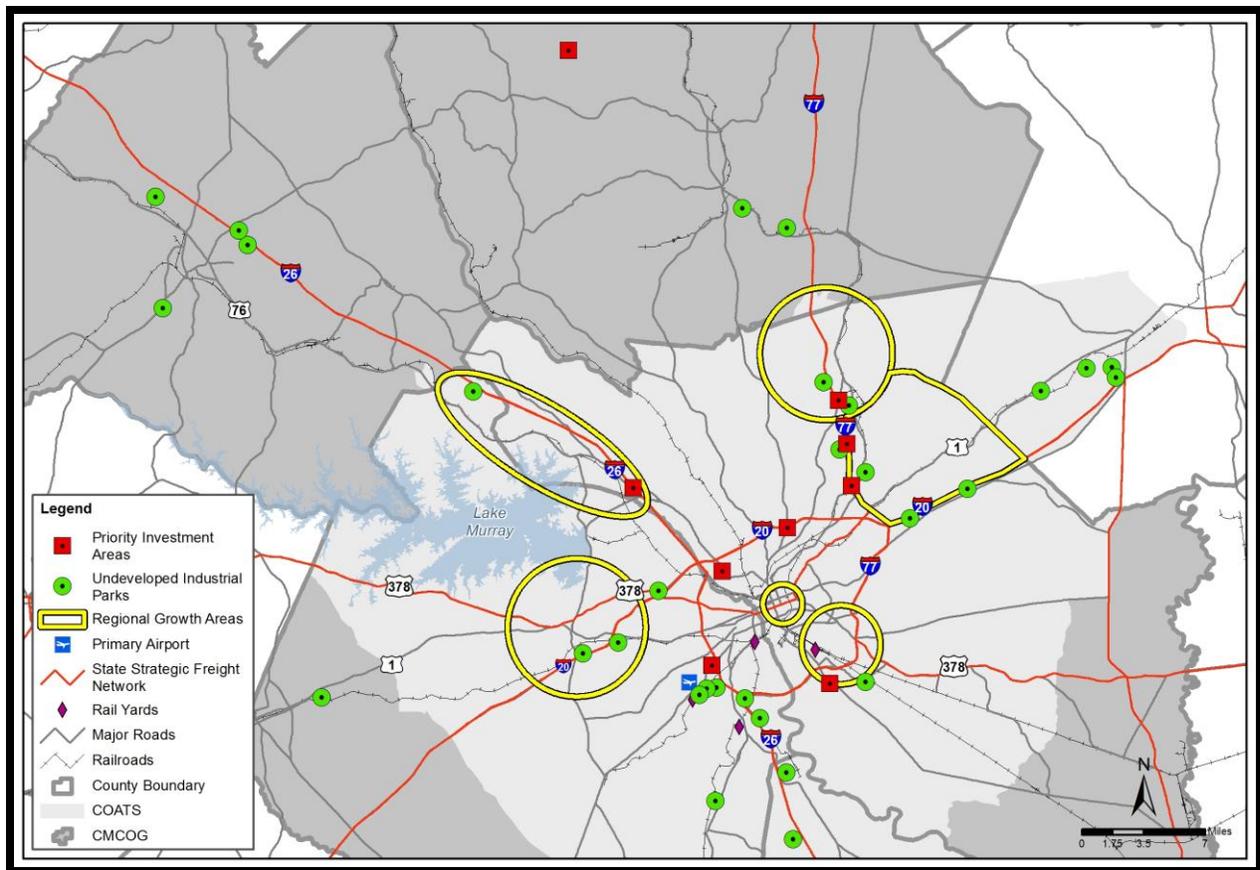
5.4.2 ACCESS FOR FUTURE FREIGHT AREAS

Figure 5.6 represents the locations of the priority investment areas, regional growth areas, and the undeveloped industrial parks in relation to freight corridors such as rail and the state strategic freight network.

Along I-77, many of the Priority Investment and Regional Growth Areas are located close together. This is also true in the southern parts of I-26 near Springdale and I-77 in southern Columbia. Other than these examples, the Priority Investment and Regional Growth Areas are located in the more densely developed areas whereas the undeveloped industrial parks are scattered away from the highly populated and more developed areas.

A majority of the Priority Investment Areas are located along or in close proximity to the interstates. The Regional Growth Areas generally are located along rail lines, near or along interstates or major roads, or in predominately undeveloped areas. The undeveloped industrial parks are mostly located along or near interstates, major roads, or railroads. This is likely because manufacturers or other industrial users need to have easy access to freight routes to transport goods. However, 22 of the 31 undeveloped sites do not have access to rail. Other sites do have access to rail, either through Norfolk Southern or CSX. Only three sites, the Otarre Hills Site and Emanuel Site Parcels 1 through 3, are identified as having on-site rail access. In sum, U.S. 321, 5000 Block Parcel Site, I-26 Megasite, Otarre Hills, Central South Carolina Megasite, Emanuel Site Parcels 1 through 3, and Eastman Industrial Site have access to CSX lines while Highway 34, Hard Scrabble, and Pineview have access to Norfolk Southern lines. Newton Court at Two Notch Road appears to be adjacent to existing rail lines, but it is not clearly indicated if the site will have rail access.

Figure 5.6: Areas of Future Growth and Access to Freight Corridors



There are a few areas in the Central Midlands region with limited access to roadway and rail corridors. In southwest Lexington County, south of I-20, there appears to be limited access to rails and roadways. Another area with limited access to freight transportation is eastern Fairfield County. The Regional Growth area in the northeastern part of Fairfield County is not located next to rail or road infrastructure. Since this area is targeted for future freight development, it will need investment in future infrastructure to support freight development.

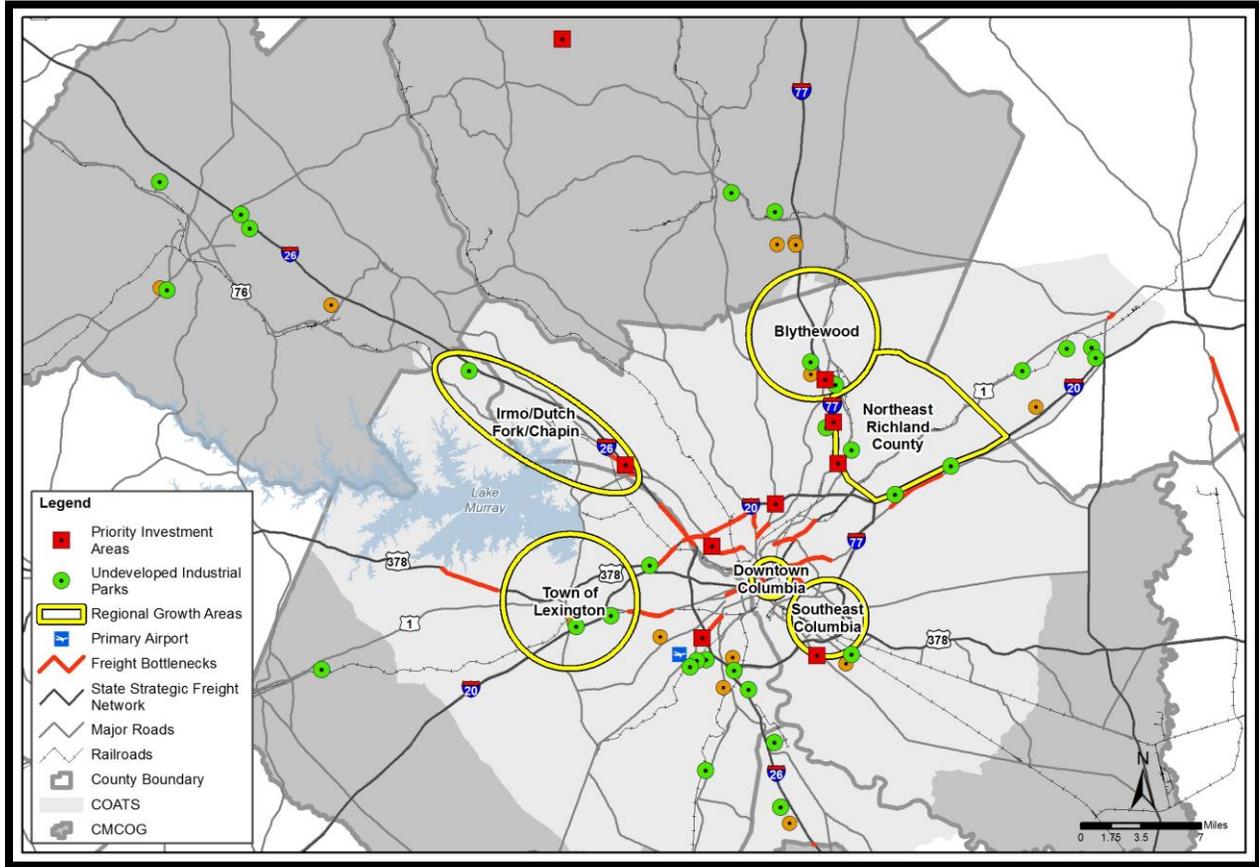
Table 5.2 lists the future industrial park access. This table takes the future industrial parks listed in the Areas of Future Growth section and lists each of the park’s county, its accessible corridor, the distance from the corridor, and whether it has access to rail and which one. As noted previously, there are many future industrial parks that will not have access to rail. From the list, there are 8 sites that have less than a one-mile distance to their respective accessible corridor. A majority of the parks are located near I-77 and I-26 with some having access to both corridors.

Table 5.2: Future Industrial Park Access

Name	County	Accessible Corridor(s)	Distance from Corridor(s)	Access to Rail
Buchanan Site	Fairfield	I-77	4.5 miles	No
Highway 34 Ridgeway Rail Site	Fairfield	I-77	1.6 miles	Yes- Norfolk Southern
Batesburg-Leesville Industrial Park	Lexington	I-20	10.1 miles	No
Chapin Business & Technology Park	Lexington	I-26	1 mile	No
Saxe Gotha Industrial Park Phase II	Lexington	I-26/I-77	I-26 (4 miles)/I-77 (2.5 miles)	No
Saxe Gotha Industrial Park Phase IV	Lexington	I-26/I-77	I-26 (1.5 miles)/I-77 (1 mile)	No
Otarre Hills Site	Lexington	I-26/I-77	Both adjacent to site	Yes- CSX (On Site)
U.S. 321, 5000 Block Parcel site	Lexington	U.S. 321	Adjacent to site	Yes - CSX
Newton Court at Two Notch Road	Lexington	I-20	1 mile	Potential- Norfolk Southern
131 Riverchase Way	Lexington	U.S. 378/I-20	0.3 miles	No
Burton Road and I-20	Lexington	I-20	1 mile	No
Congaree Creek Industrial Site	Lexington	I-26	2.3 miles	No
Loxcreen Industrial Site	Lexington	I-26	2.5 miles	No
1600 Old Dunbar Road	Lexington	I-26	3.2 miles	No
I-26 Megasite	Newberry	I-26	Adjacent to site	Yes- CSX
Carlton Industrial Site	Newberry	I-26	6.5 miles	No
Cockrell Industrial Site	Newberry	I-26	0.5 miles	No
I-26 Public Works Site	Newberry	I-26	0.2 miles	No
Hard Scrabble Road Rail Site	Richland	I-77	1.25 miles	Yes- Norfolk Southern
Blythwood Industrial Site	Richland	I-77	6 miles	No
Farrow Road Industrial Site	Richland	I-77	1.8 miles	No
I-20 at Percival and Clemson Rd	Richland	I-20	0.9 miles	No
Old Percival Road	Richland	I-20/I-77	I-20 (1 mile)/I-77 (1 mile)	No
Shop Grove Commerce Park	Richland	I-77	3 miles	No
Kaiser Industrial Site	Richland	I-77	0.3 miles	No
Whiting Way Industrial Site	Kershaw	U.S. 601/I-20	U.S. 601 (0.7 mile)/I-20 (Adjacent to site)	No
Central South Carolina MegaSite	Kershaw	U.S. 601/I-20	U.S. 601 (0.5 mile)/I-20 (0.7 miles)	Yes- CSX
Emanuel Site Parcel 1	Kershaw	U.S. 1/I-20	U.S. 1 (Adjacent to site)/I-20 (5 miles)	Yes- CSX (On Site)
Emanuel Site Parcels 2 & 3	Kershaw	U.S. 1/I-20	U.S. 1 (Adjacent to site)/I-20 (0.5 miles)	Yes- CSX (On Site)
Eastman Industrial Site	Calhoun	U.S. 176/I-26	Both adjacent to site	Yes- CSX
Cloverleaf Property	Calhoun	I-26	Bisects site	No

Figure 5.7 identifies the areas impacted by future freight bottlenecks. The map indicates that several of the Priority Investment Areas will be the most impacted by freight bottlenecks. This is shown in the Irmo, northwest Columbia area, and Springdale area. The future industrial parks may also be affected by freight bottlenecks, particularly east of Columbia on I-20 and west of Columbia on I-20. Overall, the freight bottlenecks appear to mostly occur in Columbia and along I-26 north of Columbia. I-77 appears to be free of future freight bottlenecks, however the anticipated industrial parks, Priority Investment Areas, and Regional Growth Areas may affect this traffic.

Figure 5.7: Bottlenecks Impacting Priority Investment, Regional Growth Areas, and Future Industrial Parks





6. Future Freight Land Use Policy Recommendations

6.1 PURPOSE

The purpose of developing future freight land use policy recommendations is to identify potential language to support the development and appropriate siting of freight-related land uses. Such policy language would have to be consistent and reflect existing future land use practices within the region. Policy language should promote the efficient movement of freight goods and services along the transportation network through investment and ensuring access for freight-related land uses.

6.2 CURRENT FREIGHT POLICY LANDSCAPE

Within the Central Midlands region, land use planning guidance and practices are found within the local governments' comprehensive plans and zoning ordinances. Comprehensive plans provide the overarching goals, objectives, and policies while zoning ordinances provide more detailed implementation of the comprehensive plan. However, regarding land use, this is not always the case. Findings, described in Section 3, revealed that either jurisdictions have established future land use policies within comprehensive plans or rely solely on their zoning ordinance for guiding future development. Several reasons can account for this including: the size of the jurisdiction, both population and land; its location in terms of larger urbanized areas; and accessibility to highway corridors, rail lines, and the Columbia Metropolitan Airport.

For those jurisdictions with established policy language within a comprehensive plan, there does not appear to be a uniform approach – even within one county. For example, Lexington County, the City of Cayce, Town of Batesburg-Leesville and the Town of Chapin have identified future land use categories but no associated policies which fully define the categories and guide their development. Such guidance is found within their zoning ordinances. Towns of Gaston, Irmo, and Lexington do have future land use categories, as well as language which defines these categories and identifies the type of development permissible within those areas. The remaining municipalities of Lexington County rely on their zoning ordinances. Table 6.1 illustrates on where each jurisdiction relies on for future land use development guidance.

Regarding freight, all but two of the jurisdictions assessed had at least one identified future land use category or zoning district which allowed for freight-related activities. The Town of Arcadia Lakes and the City of Forest Acres were found not to have any established zoning districts which cater to freight-related activities. In addition, Fairfield County, Town of Pelion, Town of Springdale, and Richland County have established freight land use language to reserve land within their jurisdictions for future industrial development.

Table 6.1: Future Land Use Development Guidance

Local Government Relies On:		
Future Land Use Categories with Supporting Policies	"Undefined" Future Land Use Categories and Zoning Ordinance	Zoning Ordinance
Town of Gaston	Lexington County	Fairfield County
Town of Irmo	Town of Batesburg-Leesville	Town of Ridgeway
Town of Lexington	City of Cayce	Town of Winnsboro
Newberry County	Town of Chapin	Town of Pelion
Town of Little Mountain		Town of Pine Ridge
City of Newberry		Town of South Congaree
Town of Peak		Town of Springdale
Town of Pomaria		Town of Swansea
Town of Prosperity		City of West Columbia
Town of Whitmire		Town of Blythewood
Richland County		Town of Arcadia Lakes
City of Columbia		City of Forest Acres

The comprehensive plans and zoning ordinances reviewed also covered a variety of timeframes with some having been revised within the last few years and other being more than five years old. It was assumed that despite the age of these documents, they still provided the most current guidance and vision for each jurisdiction.

6.3 FREIGHT POLICIES AND THE TRANSPORTATION NETWORK

Beyond the use of specific future land use categories and zoning districts for the siting of freight development, 13 jurisdictions were identified to have established freight-specific policies associated encouraging freight development, siting, and buffers. Some of these freight-specific policies are associated with:

- Development and implementation of airport protection districts (Fairfield County, Lexington County, Newberry County, Richland County, City of Columbia);
- Road widenings and improvements (Town of Batesburg-Leesville, Town of Chapin, City of West Columbia, Richland County);
- Land set aside for rail line construction (Fairfield County); and,
- Encouraging the siting of industrial uses along rail corridors (Town of Lexington).

Airport protection districts were developed to protect the development of operations of airfields within the identified jurisdictions such as the Columbia Metropolitan Airport and smaller air facilities. These other facilities include the Fairfield County Airport, Newberry County Airport, Jim Hamilton-L.B. Owens Airport and McEntire Air National Guard Base. Policies guidance for these districts include buffers and the siting of compatible land uses adjacent to these air facilities.

As previously discussed, the bulk of freight which moves through this region is carried along highway corridors and followed by rail. Freight policies regarding road widenings and improvements focus on identified projects for significant highway corridors, such as I-26. As shown in Section 4, bottlenecks along I-26, I-20, U.S. 378, and the supporting roadway network have the potential to impact several Priority Investment Areas and undeveloped industrial park areas. Of the six regional growth areas identified, three will have their accessibility to the highway corridors impacted by bottlenecks: Downtown Columbia, Southeast Columbia, and Town of Lexington. In addition, the jurisdictions to be impacted are:

- Lexington County
- Richland County
- City of West Columbia
- City of Columbia
- City of Forest Acres
- Town of Arcadia Lakes
- City of Cayce
- Town of Springdale
- Town of Irmo
- Town of Lexington

Out of the 28 jurisdictions assessed, only two contained policies supporting the development and accessibility to rail lines. It is important to note that only a handful of the local governments within the region are not adjacent to or bisected by a rail line.

6.4 POLICY RECOMMENDATIONS

Development and operations of freight-related land uses and ability to allow the efficient movements of freight goods and services while not adversely impacting the quality of life of the residents of the Central Midlands region is critical. The development of freight land use policy language to provide for the current and future needs of freight is important as the region anticipates more freight to travel through in the upcoming decades. Below are policy recommendations to help the region accommodate for these needs.

- **Comprehensive plan and zoning guidance should be consistent and up to date**
 - For land use guidance, counties and municipalities of this region do not consistently use one form of guidance over the other. Instead, jurisdictions either use comprehensive plans or zoning ordinances to layout future growth and associated practices. These ways of planning may continue as long as the documents and associated maps are up to date and accurately reflect current future land use visions for each jurisdiction. This will aid in the collaboration between jurisdictions regarding the location of future freight developments, support of current activities, and improvements to the transportation network.
- **Promotion of efficient transportation system management and operation through land use siting practices**

- Staff has identified the locations of Priority Investment Areas, Regional Growth Areas, and undeveloped industrial park areas within the context of the transportation network and locations of bottlenecks. Jurisdictions should consider enacting and implementing policies which will locate any future industrial parks or other associated freight developments away from high growth areas and/or areas already impacted by significant congestion.
- **Improvement of accessibility to rail corridors**
 - Despite the proximity many jurisdictions have to rail lines, very few jurisdictions have established land use policies to take advantage to this access. For example, 21 of the 28 undeveloped industrial parks areas identified do not have access to rail. Promoting the use of rail can help alleviate bottleneck issues along highway corridors. Jurisdictions should consider enacting policy guidance to either site future freight developments near access to rail or set aside land to allow for the development of rail spurs to provide access.

Appendix A

MUNICIPALITY FREIGHT POLICIES

FAIRFIELD COUNTY

Fairfield County is one of four counties within the Central Midlands region. It is the northernmost county and is predominately rural. I-77 runs through the county and I-26 is to the west outside the county. Fairfield County's jurisdiction contains 686.28 square miles and has an estimated population of 22,653 people as of 2016 based on U.S. Census estimates.

Fairfield County has implemented an Airport Protection District (APD), which generally promotes land use compatibility between the airports in the county and the surrounding development. Uses within this district cannot interfere with airport operations. For example, landfills are not permitted within a certain distance to airports because landfills attract birds which can interfere with airport operations.

Fairfield County has not designated future land uses.

Industrial development has been allowed to develop in areas of the county away from communities such as Ridgeway and Winnsboro. However, the Town of Winnsboro has agreed to extend sewer and water service to the areas permitted for industrial development. These include the areas south of Winnsboro on U.S. 321 and SC 34 to I-77 and in the county's Industrial Parks. Generally, the industrial uses are more concentrated south of Winnsboro on U.S. 321, SC 34, Cook Road, in planned industrial parks and in Jenkinsville.

In terms of economic development, the County's Comprehensive Plan notes two land use issues associated with economic development. One is the designation of suitable sites for industrial development. The second is protection for existing industrial development from future industrial development.

Fairfield County has expressed intention to encourage freight-related activities within its jurisdiction, as well as locate specific industries to more compatible areas. Policies related to this are found on page 133 of the Fairfield County 2021 Comprehensive Plan and include:

- Continuing development of planned industrial parks and discouraging the location of industry other than agro-industry in rural or natural resource areas.
- Encouraging the development and/or expansion of "clean" high-tech industrial uses.
- Coordinating the location of industrial development with the provision of essential infrastructure.
- Continuing to identify and reserve lands for future industrial development and protecting these lands as well as existing industry from encroachment by interim land uses which would detract from, would be incompatible with, or would preclude their future industrial utility.

There are two recommended economic development actions for the county as described in the Fairfield County 2021 Comprehensive Plan on page 158. One is to continue to research and make available rail sites for industrial development. The second recommended action is to continue planning and development of the third proposed Industrial Park off Peach Road.

The county identified a land use action related to agriculture in the Fairfield County 2021 Comprehensive Plan on page 159. The action they recommend is to amend the zoning ordinance to include a “Heavy Agricultural District”, which would restrain the location of large commercial animal and poultry operations and remove the potential of such uses locating, as currently permitted, throughout the Rural Resource District.

Town of Jenkinsville

The Town of Jenkinsville is a rural town in Fairfield County. The town was recently incorporated in 2008 and has a 2016 population estimate of 43 people according to the U.S. Census. Jenkinsville is in the southwest part of the county just south of the Monticello Reservoir. SC 215 runs through the town while I-26 is a short distance to the town’s west.

The Town of Jenkinsville does not have their own individual Comprehensive Plan. Their plan falls under Fairfield County’s Comprehensive Plan.

Town of Ridgeway

The Town of Ridgeway is a small town in Fairfield County, located in the southeast portion of the county. It has an estimated population of 303 people as of 2016 according to the U.S. Census. U.S. 21 runs north through the town and I-77 is a short distance to the town’s west.

The Town of Ridgeway’s Comprehensive Plan was unavailable at the time of this study for review.

Town of Winnsboro

Winnsboro is a rural town in Fairfield County. It is located at the center of the county, just a few miles west of I-77. The town contains 3.23 square miles and has an estimated population of 3,311 as of 2016 according to the U.S. Census. No plans or ordinances indicated existing or future land use categories.

There is only one industrial land use within the town. It is located just south of the central core.

LEXINGTON COUNTY

Lexington County is one of the four counties in the Central Midlands region. It is in the southwest portion and borders Newberry County to the north and Richland County to the east. I-26 runs north on the eastern side of the county while I-20 bisects the county west to east. It is a partially urban and rural county with some rural, agricultural areas and urbanized suburbs near Columbia. The county’s jurisdiction contains 698.91 square miles and has an estimated population of 286,196 citizens as of 2016 based on U.S. Census estimates.

Lexington County has two Airport Districts, the Columbia Metropolitan Airport District and the Lexington County Airport District. These districts are implemented to protect adjacent land uses from the danger of aircraft operations including noise levels and aircraft accidents.

Lexington County has four freight-related goals. Goal 2 and Goal 3 focus on protecting the efficiency of current and new transportation facilities, and protection of the public investment in county airports and coordination of adjacent land uses, respectively. Goal 16 relates to mining activities and the protection of neighboring uses from the negative impacts of mining. The last freight-related goal, Goal 18, relates to the private landfills while protecting adjacent uses from negative impacts.

The four freight-related goals and their objectives are:

- **Goal 2:** Ensure the efficient and safe use of existing and proposed transportation facilities (Lexington County Goals and Objectives, p. 2).
 - Objective: Encourage the development of traffic-intensive commercial, industrial and higher density residential land uses near existing major roads, railroads, and interstate highways.
- **Goal 3:** Protect the public investment in the Pelion Corporate Airport and the Columbia Metropolitan Airport through the coordination of surrounding land uses with the respective Airport Master Plans (Lexington County Goals and Objectives, p. 3).
 - Objective: Ensure that the transportation system, to include intermodal connectivity, is enhanced at the Columbia Metropolitan Airport as it further develops as a freight hub.
- **Goal 16:** Seek ways to accommodate mining activities, vital to construction in Lexington County, while protecting adjoining properties from any negative impacts from such activities (Lexington County Goals and Objectives, p. 7).
 - Objective: Develop and implement mining regulations that better ensure the development of mining operations while minimizing impact to adjacent properties.
- **Goal 18:** Seek ways to accommodate private landfill operations while protecting adjoining properties from any negative impact from such activities (Lexington County Goals and Objectives, p. 8).
 - Objective: Develop a Solid Waste Management Plan for the county that includes the use of private landfills
 - Objective: Within that plan to recommend regulations that should apply to private landfills operations.

6.4.1.1 Town of Batesburg-Leesville

The Town of Batesburg-Leesville is a rural town within the westernmost part of Lexington County. Batesburg-Leesville was formally two independent towns that merged services and resources in 1993. The town contains 7.79 square miles and has an estimated population of 5,448 people as of 2016 based on U.S. Census estimates. U.S. 1 runs west to east and U.S. 178 runs north to south through the town.

In 2000, the CMCOG approved the inclusion of a U.S. 1 widening project in the 2000 Statewide Transportation Improvement Plan. The final stages of the U.S. 1 project began in 2017. Ultimately, the project will widen a 5.75-mile roadway section between SC 24 West to SC 23 on the eastern edge of Leesville, where U.S. 21 widens to 4 lanes through town. The widening project will allow for efficient freight movement and residential access to goods, services, and employment.

The industrial land use in the town is located along the Norfolk Southern Railroad line which runs through the center of town. The town is in an advantageous location for industrial usage because of its proximity to the interstate, railroad and availability of labor and tools, which allow for a variety of industries. The town is home to multiple industries, including clothing manufacturing, chicken processing, electronics manufacturing, among other industries.

City of Cayce

The City of Cayce is a suburban city in Lexington County. Cayce is on the easternmost side of Lexington County, with the City of Columbia directly to its east. The Cities of Cayce and Columbia are divided by the Congaree River. The intersection of I-26 and I-77 is located at the southwestern part of the city. I-26 runs along the west side while I-77 heads east along the south side. The city contains 16.65 square miles and has an estimated population of 14,233 as of 2016, according to the U.S. Census.

The existing land uses are the City of Cayce's future land uses.

The City's manufacturing base is centered on the 12th Street Extension and is the City's primary industrial center. The City's position at the intersection of I-26 and I-77 serves as an opportunity to attract additional manufacturing companies.

Industrial and support uses are located primarily along and parallel to the City's major arterials and rail lines. The older, traditionally heavier and unenclosed facilities are located along Frink Street and Old State Road. The newer, enclosed and lighter facilities locate in the periphery and growing areas, on 12th Street Extension, and the service roads next to the interstates. CSX Corporation and Norfolk Southern railroads own and operate rail lines within the City.

Town of Chapin

The Town of Chapin is a small town located in the northern part of Lexington County. The town is 1.8 square miles and has an estimated population of 1,575 as of 2016, according to the U.S. Census. It attracts many recreational boaters and tourists seeking water-related activities. Lake Murray separates the town from the rest of the county. I-26 is located to the east of the Town.

One of the Town's economic goals from the Comprehensive Plan is to encourage more light-industrial and office employment opportunities. Currently, there is one light manufacturing facility on East Boundary Street near the CSX rail line.

In 2011, SCDOT and the Columbia Area MPO announced the commitment of \$10.8 million for the widening of S-48 with the intent to improve peak hour congestion. The project will widen the road from 2 to 5 lanes from approximately I-26 to approximately Roland Shealy Court and widen the road from 2 to 3 lanes between Roland Shealy Court and U.S. 76. This widening project may improve freight transit for the two industrial parcels located along S-48.

Town of Gaston

The Town of Gaston is a rural community of 3.4 square miles in the southeastern part of Lexington County. The town's estimated population in 2016 was 1,657 citizens based on U.S. Census estimates. I-26 runs to the east of Gaston and U.S. 321 bisects the town.

Gaston has a strong agricultural history, which is evident in the existing development pattern of the town. A majority of the town is still assessed by Lexington County as currently used for agriculture. The uses permitted include croplands, pastures, and timber lands. Most of this agricultural land is on the periphery of town. The county has approximately 2,106 acres of land within Gaston that are under the special agriculture assessment. Land use goal two in the Comprehensive Plan calls for agricultural lands to remain in agricultural uses. Related to this, a goal of the natural resources element is to preserve agricultural land and to create an agriculture zoning district.

Town of Irmo

The Town of Irmo is a suburb of the City of Columbia and located within Lexington County. The town has an area of 6.3 square miles with an estimated population of 12,177 people as of 2016 based on the U.S. Census. The town is located east of Lake Murray and is directly on the western side of I-26, with some parts of the town on the eastern side of I-26. Overall, the town is in the northeastern part of the county.

Industrial land uses are not prominent within the Town of Irmo. The only industrial activity in the town is Southland Log Homes which manufactures log cabin kits and homes. However, CSX operates a daily service freight line that runs through town.

One of the objectives of the industrial land use in the Town of Irmo is to promote industrial development where it is designated. A policy associated with this is to designate industrial areas to those areas with the ability to accommodate such uses.

Town of Lexington

The Town of Lexington is in Lexington County. It contains 8.87 square miles and, in 2016, had an estimated population of 20,988 residents based on U.S. Census estimates. The town is located between Lake Murray to the north and I-20 to the south. U.S. 1 and U.S. 378 converge in the town. Generally, the town is located approximately at the center of the county.

The town uses the zoning designations to portray the existing land uses.

The town implements specific Industrial Special Overlay districts. The purpose of these districts is to accommodate industrial uses where they are most beneficial to the welfare of the public. In addition, the town utilizes a Railroad Industrial Special Overlay district. It is intended to accommodate industrial uses along railroad corridors. The town also defines an “industrial district” as a remote area that predominately has businesses of a nonservice nature and is not located on a route that serves pedestrian traffic.

One of the industrial policies of the Comprehensive Plan discusses that the industrial designation allows for a variety of industrial, manufacturing, warehousing, and storage uses.

The main industrial corridor in the town is along the Norfolk Southern rail line. This rail line extends from east-west along the town’s southern border, running parallel to I-20. This corridor spans approximately from the I-20 and U.S. 1 interchange to the I-20 to SC 215 (Long’s Pond Road) interchange. Industrial Drive and Glassmaster Road are the primary access roads for this corridor. This area has become the town’s unofficial industrial park because of its access to the interstate and railway.

Town of Pelion

The Town of Pelion is a rural town in the southern part of Lexington County and contains 3.6 square miles. As of 2016, Pelion had an estimated population of 706 people based on U.S. Census estimates. U.S. 178 runs through the town. The table below shows the existing zoning designations for the town and which will permit freight uses.

The Town of Pelion uses zoning districts instead of designating future land use categories.

One of the goals mentioned in the Comprehensive Plan is to implement zoning regulations to prevent future mines from locating within town limits to maintain the small-town landscape and atmosphere of the town.

The Town listed future growth and development goals regarding industrial land use. These policies are located in the 2013 Town of Pelion Comprehensive Plan Update on page 72 and include:

- One, is to develop commercial and light industrial manufacturing along specified corridors.
- Second, to set aside lands for the future development of commercial and industrial uses.
- Lastly, to concentrate industrial development on the fringe of town (industrial parks) in designated areas.

A general land use objective listed in the Comprehensive Plan is that the continuation of agriculture and forestry as industries in the areas surrounding the town should be productive or adaptable to the needs of the area. This objective was listed on the 2013 Town of Pelion Comprehensive Plan Update on page 74.

Town of Pine Ridge

The Town of Pine Ridge is a primarily rural town in Lexington County and contains 3.7 square miles. It is located on the eastern side of Lexington County, west of I-26, located near the I-26 and I-77 junction. The town has an estimated population of 2,265 people as of 2016 according to the U.S. Census.

The Town has not designated any future land uses in their Comprehensive Plan.

In the town's 2014 Comprehensive Plan, it was noted that the economy is dominated by the sand mine where there are a few services located at the Pine Ridge and Fish Hatchery Roads intersection. The owners of the mine are planning to reclaim it starting with the property at that intersection.

Town of South Congaree

The Town of South Congaree is a small suburban town in Lexington County. South Congaree is located west of the Town of Pine Ridge and south of the Columbia Metropolitan Airport. The City of Columbia is to the town's northeast. SC 302 runs through the town and is a short distance from the junction of I-26 and I-77 to the town's east. The U.S. Census estimates that as of 2016, the town had an estimated population of 2,410 people.

Town of Springdale

The Town of Springdale is a suburb of the City of Columbia in Lexington County. It is on the eastern side of Lexington County, adjacent to the City of Cayce. Springdale has an area of 4.1 square miles and an

estimated population of 2,791 people as of 2016 based on U.S. Census estimates. I-26 runs through the town on the eastern side of town.

When the Comprehensive Plan was written in 2013, industrial uses only comprised about 2% of total land use in the town. The facilities present were small operations located on Old Barnwell Road and Silistar Drive. No industrial activities were planned for the town at the time the Comprehensive Plan was written, but a 104-acre tract west of the Ermine Road and Platt Springs intersection was marked for industrial development. Also, industrial development is increasing in areas around the Columbia Metropolitan Airport.

Town of Summit

The Town of Summit is a small town in the western part of Lexington County. In 2016, the U.S. Census estimated the population of the town was 438 people. The Town of Batesburg-Leesville is to the west of Summit, with U.S. 1 running north above the town.

Town of Swansea

The Town of Swansea is a small town in the southern portion of Lexington County. The town has an area of 1.2 square miles and an estimated 2016 population of 903 people according to the U.S. Census. U.S. 321 runs north to south through the town, while SC 6 and 692 passes through as well.

City of West Columbia

The City of West Columbia is a suburban community directly adjacent to the west of Columbia. West Columbia has an area of 6.99 square miles and a population of 16,282 citizens as of 2016 based on estimates from the U.S. Census. The city is bounded by I-26 to the west, I-126 to the north, the Congaree River and the City of Columbia to the east, and the City of Cayce to the south. The city is on the easternmost boundary of Lexington County.

The Light Manufacturing and Heavy Manufacturing land use are located mostly in the area between Sunset Boulevard and Augusta Road. There is also a manufacturing property along Sunset Boulevard near the Congaree River as well as industrial activities in proximity to rail lines on Williams and Dreher Roads.

The City's comprehensive plan discusses the widening of U.S. 1 from I-26 to I-20, as it is listed in the 2035 Long Range Transportation Plan.

NEWBERRY COUNTY

Newberry is one of the four counties in the Central Midlands region. It is the westernmost county and borders Lexington County to the south and Fairfield County to the east. Recently, the county has grown as a manufacturing base and is served well by the region's multimodal network including easy access to I-26, U.S. 76 and U.S. 176. The county has an estimated population of 38,079 people as of 2016 based on U.S. Census estimates and a total land area of 630.04 square miles.

Currently, twelve international companies have located in Newberry County. These companies hail from Canada, Germany, Japan, the Netherlands, the United Kingdom, and the Republic of Korea. The Canadian companies are ArctiChill, Dalkotech, and West Fraser Timber. The German company is Fresenius. Komatsu and ISE America are Japanese companies. The Dutch companies are Carsonite

Composites and Shakespeare Composite Structures. The companies from the United Kingdom are Doncasters Trucast, Nasmyth Precision Products, and PSM Fastner. Lastly, the Korean company is Kiswire.

Some of the major employers in the county are the companies listed above. Nine of the eighteen major employers in the county are manufacturing based industries. These include Kraft Foods, Georgia-Pacific Corp., Caterpillar, Pioneer Frozen Foods, West Fraser, Shakespeare Composite Structures, Komatsu America, ISE Newberry, and Trucast Inc. Industrial and manufacturing plants currently employ about one in four residents of the County's non-agricultural labor force.

The County implements an Airport Land Use and Height Restriction Overlay (AP). This is intended to encourage compatible land uses between the airport and nearby land uses that is beneficial to both airport operations and the public welfare.

Newberry County has a large industrial economic base, and the county hopes to improve upon that. As written in the County's Comprehensive Plan in Chapter 4, Economic Strategy 4.1.1.5 states that the county should conduct a targeted industry study. To further support the growing industrial prominence of this area, Economic Objective 4.3.1 in the County's Comprehensive Plan is to ensure adequate services and capacity at existing industrial parks and new potential sites. Strategy 4.3.1.1 expands on this objective, stating that the county should expand water and sewer service to support future residential, commercial, and industrial development. Strategy 4.3.1.2 states that the county should support commercial and industrial employment growth in the municipalities through the promotion of infill and redevelopment in existing developed areas to utilize existing infrastructure.

To attract more industries, Economic Objective 4.3.2 states that the county should increase the availability of quality buildings and sites to meet the needs of prospective industries. Associated strategies with this objective include Strategy 4.3.2.1, which is to examine land use regulations to ensure that there is adequate lands and infrastructure available for industrial and commercial uses. Strategy 4.3.2.3 also supports this by stating that the county should work with municipalities to identify and inventory vacant, underutilized, and available commercial and industrial properties and prioritize them for redevelopment.

Population Strategy 2.1.2.1 states that the County should continue to create economic opportunities for residents and future residents through the recruitment and retention of industries and businesses. Similar to this strategy is Economic Strategy 4.1.1.6, which states that the County should continue to draw from State and regional efforts in order to attract industries in advanced materials and manufacturing, including biomass, food processing, forestry and wood products, and recreation. To support these potential industries, Economic Strategy 4.3.1.3 states that the county should ensure the adequacy and completeness of transportation planning and capacities for economic development in the region. A strategy that supports this is Transportation Strategy 8.3.1.2, which states that the county should seek partnerships and funding for the preservation and enhancement of major corridors for residents, visitors, and potential commercial and industrial investors.

CSX and Norfolk Southern both provide rail service in Newberry County. The CSX rail line bisects the County from east to west and runs parallel to U.S. 76 through the City of Newberry, and towns of Prosperity and Little Mountain. Another CSX line runs through the northern part of the County through

the Town of Whitmire. The Norfolk Southern line runs from the City of Newberry to the International Paper chip mill near the Town of Silverstreet.

Town of Little Mountain

The Town of Little Mountain is a small town in Newberry County. According to the U.S. Census 2016 population estimates, the Town of Little Mountain has a population of 296 people. The town is in the southeastern part of the county. I-26 runs to the north of the town and U.S. 76 passes east to west through it.

The Town of Little Mountain does not have their own Comprehensive Plan as their planning activities are consolidated with Newberry County.

According to Newberry County's Comprehensive Plan, almost two-thirds of the land in the Town of Little Mountain is in Agricultural or Forestry use.

City of Newberry

The City of Newberry is a centrally located city in Newberry County. Portions of the city are adjacent to or contain I-26, while U.S. 76 and S-34 intersect its jurisdictional area. Newberry had a 2016 population of 10,372 according to U.S. Census estimates. The city has an area of 8.57 square miles and is home to Newberry College.

Access to I-26 and U.S. 76 provide opportunities for freight and industrial activities for Newberry's three industrial parks. CSX and Norfolk Southern Railroad have rail lines that cross the city from the north, parallel to College Street. The rail lines then run southwest past Nance Street then southeast and continuing parallel to CR Koon Highway running south of the city.

One of Newberry's land use policies is that vacant land targeted for industrial use should have the required infrastructure before construction to attract new industries.

Town of Peak

The Town of Peak is a rural town in Newberry County. It is located on the eastern-most border of the county and touches the Broad River. The U.S. Census estimated the 2016 population to be 65 people. The town is about a mile and a half from U.S. 176 to the west and SC 213 runs north to the town.

The Town of Peak does not have their own individual Comprehensive Plan as their planning activities are consolidated with Newberry County.

According to Newberry County's Comprehensive Plan, agricultural and forestry uses are the dominant land use in the Town of Peak, with nearly 163.62 of the total 224.96 acres comprising agricultural uses.

Town of Pomaria

The Town of Pomaria is a rural town on the eastern side of Newberry County. U.S. 176 passes through the town and the Parr Shoals Reservoir is about 4 miles to the town's east. In 2016, the population was estimated to be at 181 people according to the U.S. Census.

The Town of Pomaria does not have their own individual Comprehensive Plan as their planning activities are consolidated with Newberry County.

According to Newberry County's Comprehensive Plan, agricultural and forestry uses comprise more than 75 percent of the Town of Pomaria's land use.

Town of Prosperity

The Town of Prosperity is a town in the southern area of Newberry County. The U.S. Census 2016 population estimated the population to be at 1,205 people. U.S. 76 passes through the town and I-26 runs a few miles to the north of town. Prosperity is about four miles to the southeast of Newberry.

The Town of Prosperity does not have an individual Comprehensive Plan as their planning activities are consolidated with Newberry County.

According to Newberry County's Comprehensive Plan, approximately 40 percent of the Town of Prosperity's land use is comprised of agricultural and forestry uses.

Town of Silverstreet

The Town of Silverstreet is a rural town in the eastern part of Newberry County. SC 34 runs through the town and is five miles to the southwest of Newberry. The U.S. Census estimate the population to be at approximately 164 residents as of 2016.

The Town of Silverstreet does not have an individual Comprehensive Plan as their planning activities are consolidated with Newberry County.

Town of Whitmire

The Town of Whitmire is a small town in the northern-most boundary of Newberry County. The town borders the Enoree River and is the junction of U.S. 176 and SC 72. As of 2016, the U.S. Census estimated the population to be at 1,475 people.

The Town of Whitmire does not have their own Comprehensive Plan as their planning activities are consolidated with Newberry County.

According to Newberry County's Comprehensive Plan, almost 20 percent of the Town of Whitmire's land use is comprised of agricultural and forestry uses. Only approximately three percent is used for industrial purposes.

RICHLAND COUNTY

Richland County is the most urbanized county in the Central Midlands region. It is in the southeastern part of the Central Midlands area. It shares a county boundary with Fairfield County to the north and Lexington County to the west. It is home to the state capital of Columbia and has an estimated population of 409,549 people based on 2016 U.S. Census estimates. It has an area of 757.07 square miles and is a hub of transportation activity with I-26, I-77, I-126, and I-20 intersecting within the county.

In terms of freight-related activities, the county has an Airport Height Restrictive Overlay District that applies to the vicinities of Jim Hamilton-L.B. Owens Airport and McEntire Air National Guard Base. The Crane Creek Neighborhood District has an Industrial sub-district that is aiming to minimize potential negative impacts of existing and future industrial uses on adjacent land uses by encouraging additions or enhancements to site buffers, landscaping, open space, and other site elements. The sub-district is intended to accommodate wholesaling, distribution, storage, processing, and light manufacturing which

are controlled operations that are relatively clean, quiet, and free of objectionable or hazardous elements.

The number of farms and farm acres in production within the county increased between 2007 and 2012. Currently, about 50% of the county's land is used for agricultural operations.

As listed in Economic Development Goal #4 on page 74 in the Richland County 2015 Comprehensive Plan is to diversify the economic base attracting manufacturing and industry.

- The first strategy of this goal is to ensure there is an inventory of developable land for economic development.
- The second strategy is to promote strategic location. This can be achieved by actively promoting the County as a transportation crossroads for highways and rail service.

Maintaining vehicular access and capacity is the primary purpose within the economic development corridors. These areas ensure that trucks and industrial vehicles have adequate road capacity to and from employment centers.

In November of 2012, Richland County passed the Richland Penny, which is a county-wide one cent on the dollar sales tax that will generate \$1 billion over a 22-year period for transportation improvement throughout the county. It will be used for road widening projects by SCDOT roads, among other projects. The road widening projects brought about by this sales tax will help ease truck traffic and provide alternative transportation solutions.

Town of Arcadia Lakes

Arcadia is a small town in Richland County. The town has a total area of 0.7 square miles and an estimated population of 865 people as of 2016 according to U.S. Census estimates. It is located north of the center of the county and is approximately southwest of the 1-20 and 1-77 junction. U.S. 1 runs directly to the north of Arcadia Lakes. The town does not permit any freight land use activities.

The Town does not discuss future land uses in their Comprehensive Plan.

There are no freight activities in the town. Light commercial zoning is applicable, however.

Town of Blythewood

Blythewood is a town in Richland County, it has an estimated population of 3,099 people as of 2016 according to U.S. Census estimates and a total area of 9.8 square miles. I-26 bisects the town and U.S. 21 runs through portions of Blythewood.

There is currently no industrial property located within the town boundaries. However, Norfolk Southern owns an active rail line that passes through town's jurisdiction.

City of Columbia

Columbia is the capital city of South Carolina and the largest city in Richland County. The city is urban in nature. Columbia has an estimated population of 134,309 people as of 2016 U.S. Census estimates and a total area of 132.21 square miles. Parts of I-77, I-20, I-126, I-26 pass through Columbia's jurisdiction.

The Airport Height Restrictive Area is intended to restrict uses that may be harmful or dangerous to land near the Owens Field Airport. The overlay was designed to prevent hazardous conditions, land development conflicts, and promote compatible development with airport use characteristics.

One of the largest industrial uses in the Central Midlands area is the Fort Jackson Army Base and McEntire Joint National Guard Base in Columbia. According to the Fort Jackson-McEntire Joint Land Use Study, Fort Jackson spans 52,000 acres on the eastern side of Columbia. The McEntire Joint National Guard Base covers 2,400 acres and is located south of Fort Jackson along U.S. 378 to the east of Columbia.

Columbia's land use plan states that industrial, transportation, and utility centers need to provide properly maintained areas for production, transportation, and utility services. The city acknowledges that these hubs plan an important part in the city's economy and that encroachment by residential areas on these industrial uses must be avoided.

There are many industrial uses scattered throughout the city, but many are in the south and southeast areas of Downtown Columbia along Bluff and Shop Roads. These uses have rail and interstate access. This includes industries that have grown along I-77 between Bluff and Shop Roads as well as along I-20 between Monticello Road and Main Street. Pineview Industrial Park is located off Pineview Road in just outside of Columbia's boundaries.

The Fort Jackson/McEntire Joint Land Use Study states that the city has an identified a Military Buffer zone which permits low density residential and open space in their future land use plan.

Town of Eastover

The Town of Eastover is a small town in the southeastern part of Richland County. SC 263 and 764 intersect in the town while U.S. 601 runs east of the town. As of 2016, the U.S. Census estimated the population to be at 809 people. The Congaree National Park is to the south of the town and the McEntire Joint National Guard Base is to the west.

The Town of Eastover does not have their Comprehensive Plan or Zoning Ordinance in a digital format.

City of Forest Acres

The City of Forest Acres is an urban city within Richland County, located east of the City of Columbia. It shares a northern border with Arcadia Lakes. Forest Acres has an estimated population of 10,542 residents as of 2016 U.S. Census estimates and a total area of 4.6 square miles. I-77 runs to the east and I-20 is to the city's north. The city is also adjacent to U.S. 1.

Forest Acres has provided generalized land uses that do not list each individual land use, therefore it cannot be determined whether freight uses are included in specific land use categories.

There is no industry within the City of Forest Acres. However, the city has annexed the CSX rail lines up to the intersection of Two Notch Road and I-20. The City is working to address its goals and objectives in this capacity to develop an annexation plan to better provide services in this area.



DEVELOPED BY

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Smith.**