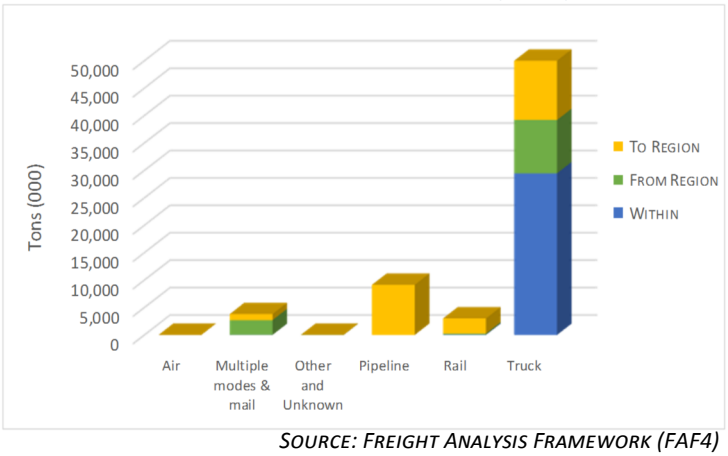
Existing Conditions Summary

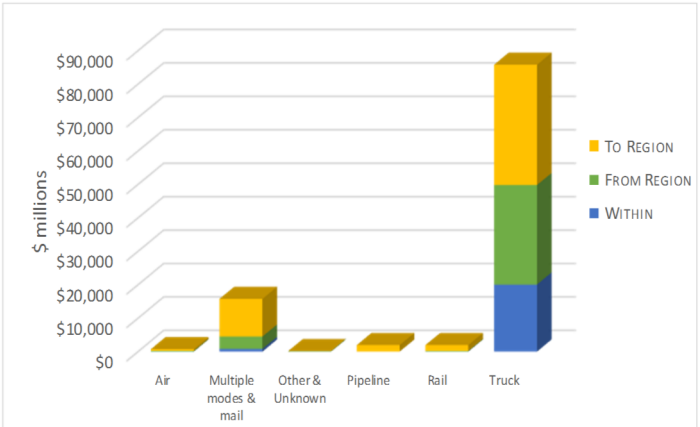
This existing conditions report is the starting point for understanding what actions and investments will help meet the Greater Charlotte Region's freight-related economic competitiveness goals and objectives. This report identifies, inventories, and assesses the current condition and performance of the freight transportation system in addition to other relevant background data and information.

Freight Tonnage by Mode (2012)



Source: Freight Analysis Framework (FAF4)

Freight Value by Mode (2012)



Source: FAF4

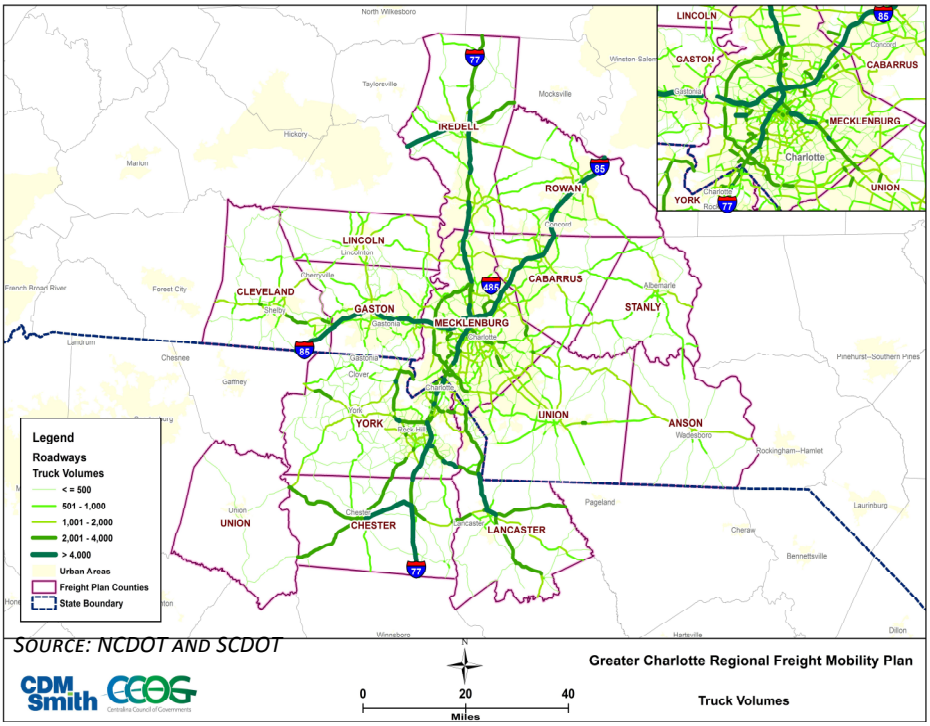
Truck Volumes

The interstates carry the bulk of the region's daily truck traffic. I-85 and I-77 constitute the critical freight corridors throughout the region. Other roadways that play a critical role in the movement of truck freight are I-485, US 74, US 321, NC 160 (near the airport), and SC 9 through Chester and Lancaster, SC.

77%

Of tonnage moved by Truck

Average Annual Daily Truck Traffic (2012)



SOURCE: NCDOT AND SCDOT

Truck Bottlenecks

Truck GPS data was employed to analyze truck bottlenecks. Locations were analyzed where truck bottlenecks cause significant problems on interstates and on major regional roads.

Five on-interstate bottlenecks and three off-interstate bottlenecks were found based on one month of truck speed data from October 2015:

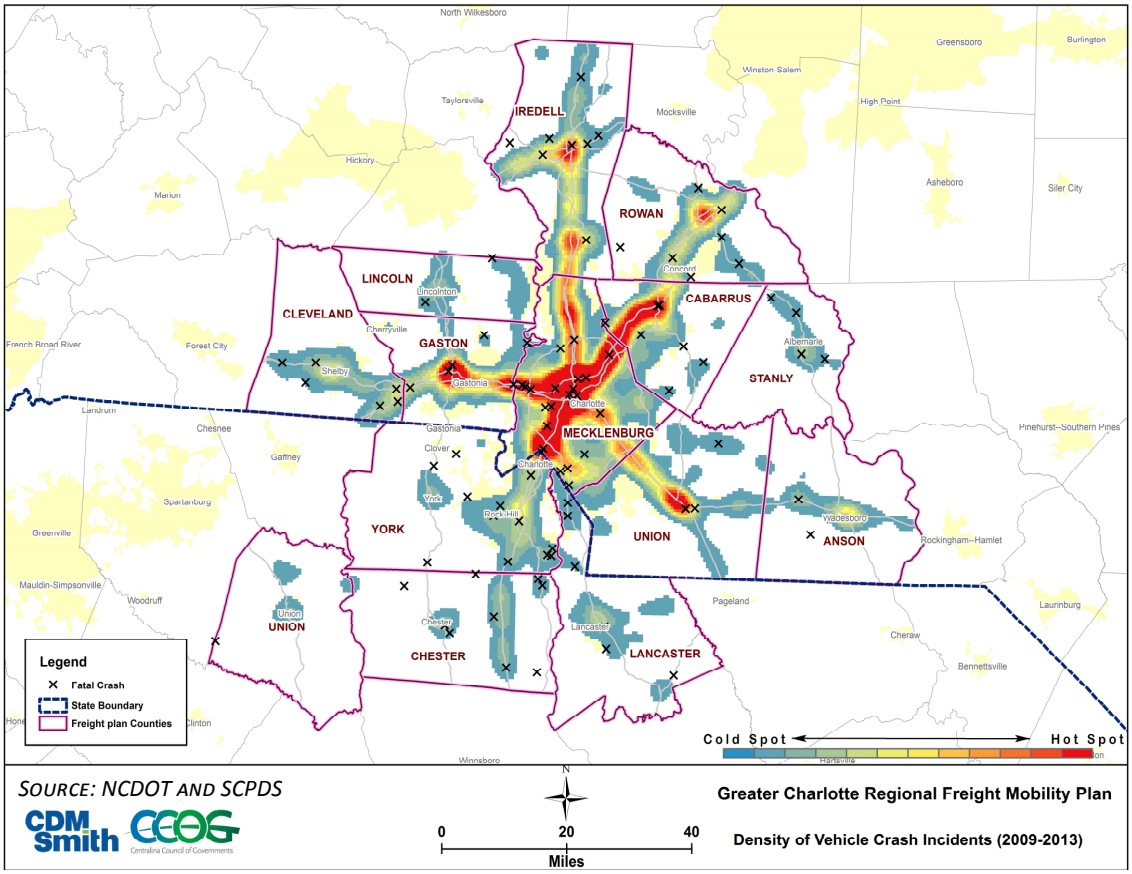
- I-77 near Lake Norman
- I-85 at I-485
- I-77 at I-485 (South)
- US 21 near I-77
- US 29 near I-85
- I-77 at I-85
- I-77 at I-277/ US Hwy 74
- US 74 at US 601

Truck Safety

Corridors with particularly high densities of crashes involving commercial vehicles include I-85 from Kannapolis to Charlotte and I-77 from Charlotte to Ft. Mill, SC. Other crash hotspots are in more densely populated areas such as Gastonia, Statesville, Mooresville, Salisbury and Monroe.

In addition, truck parking remains an issue throughout the region. At the 28 public and private truck parking locations, there are a total of approximately 1,100 truck parking spaces in the 14-county region. Ninety-six percent of all the truck parking spaces were observed being used with 23 of the parking locations observed being over capacity.

Commercial Vehicle Crash Hotspots (2009 through 2013)



Challenges

- Roadway maintenance and improvement needs in the Greater Charlotte Region far outweigh available funding.
- In addition to funding constraints, limited truck parking, and highway bottlenecks are impacting the efficiency of the freight transportation network.
- Incident management has also become an increasingly hot topic regarding major corridors such as I-77 and I-85.

Air Cargo

Though small in terms of total tonnage, airborne freight has by far the highest value per ton of any mode. Typical commodities include goods from the pharmaceutical, automotive, and high-tech manufacturing sectors. Charlotte-Douglas International Airport (CLT) handles virtually all air cargo in the Greater Charlotte Region.

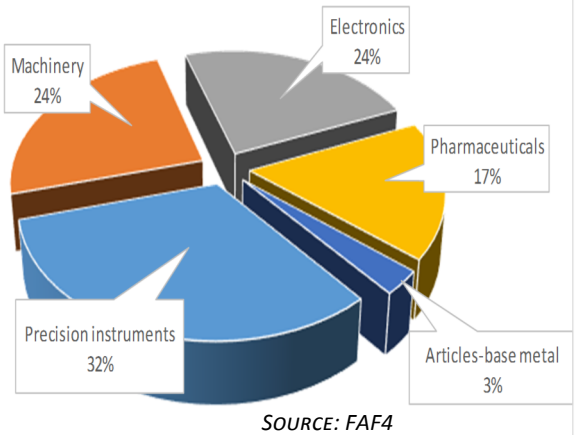
Challenge

While airborne freight movement is minimal in the region, the national trend of declining air cargo space in domestic airplanes will continue to inhibit the growth of airborne freight.

42%

Of all NC air cargo is handled by CLT

Regional Air Cargo Top Commodities (by Value)

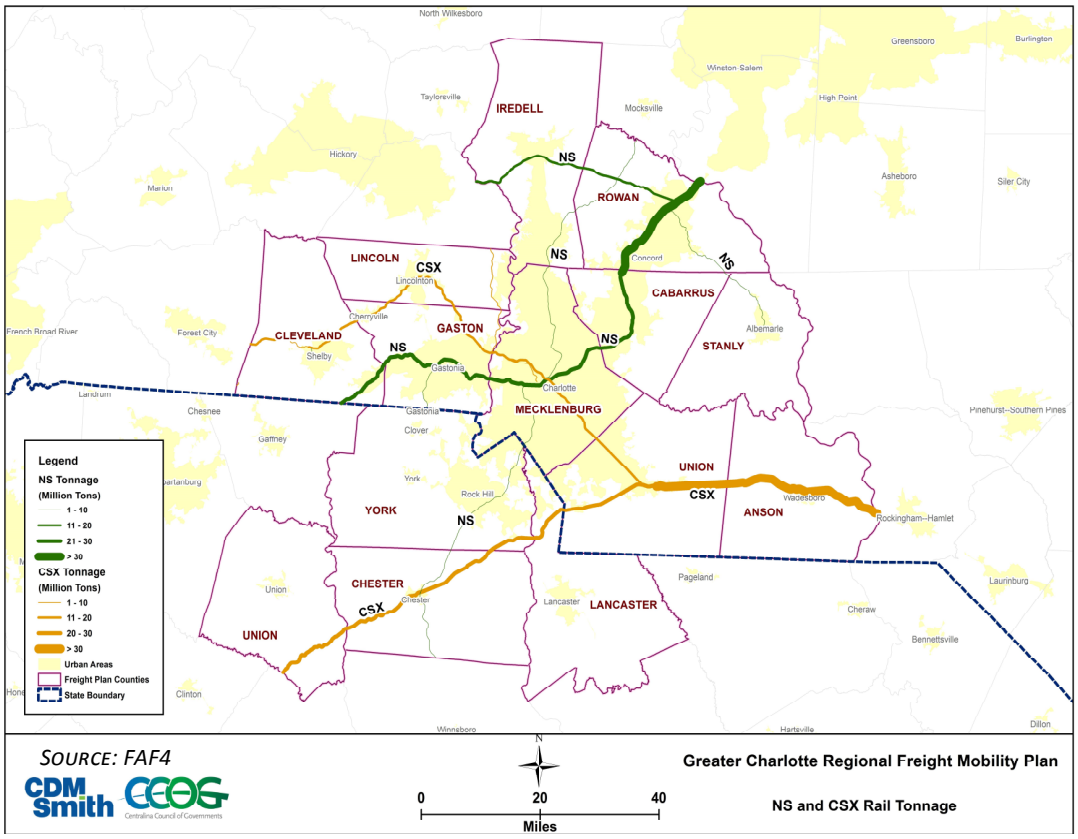


SOURCE: FAF4

Rail Tonnage

Within the Greater Charlotte Region there are a number of key rail freight corridors and facilities. Norfolk Southern's (NS) Main Line operating through Kannapolis, Charlotte and Gastonia serving the Charlotte-Douglas Intermodal Yard is one of the busier corridors on the east coast. The CSX Transportation (CSXT) SE Line connects to the Port of Wilmington and Hamlet Yard. Grains, Coal and chemicals make up the bulk of the regional rail tonnage.

Class I Rail Tonnages (2012)



Source: FAF4

Greater Charlotte Regional Freight Mobility Plan

NS and CSX Rail Tonnage

5%

Of freight tonnage moved by rail

Cereal Grains

Top commodity by weight moved by rail

9

Class I and Shortline Railroads serve the region

Challenge

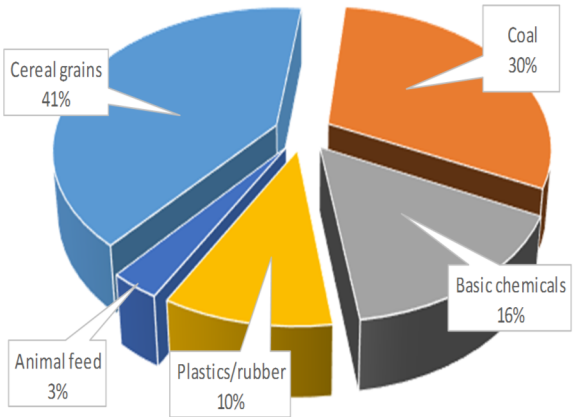
Although the region has 2 Class I railroads and 7 shortline railroads, only 5 percent of the freight tonnage is moved by rail.

Rail Bottlenecks

Freight bottlenecks can affect the operations and efficiency of freight movement within the study area and region. The following rail freight bottlenecks were identified:

- Charlotte Junction Wye—Impacts the connection between the NS Main line and the R line
- ADM rail crossing in downtown Charlotte—Impacts the NS Main line and the CSXT SF line
- The Aberdeen Carolina & Western Railway (ACW)—Operations create bottlenecks within CSXT's yard in North Davidson
- The CSXT terminal operation at the northwest yard — Impacts local roadway networks at numerous at-grade crossings

Regional Rail Freight Top Commodities (by weight)



Source: FAF4

Economic Development

Though not an economic development analysis, there is a nexus between economic development and freight transportation. There are freight transportation economic development impacts, evaluation methods, and strategies the region can initiate to achieve its economic development objectives.

Economic Development Strategies
Favor freight transportation policies and projects with greater job creation
Favor freight transportation policies and projects that reduce future fuel and vehicle expenditures
Choose transportation infrastructure projects with high return on investment or benefit/cost ratios
Improve access and travel conditions on the freight system to reduce negative impacts to businesses
Identify potential negative impacts and mitigation strategies to improving the transportation infra-structure for freight–reliant industries
Support freight infrastructure projects that spur freight industry land development and support more accessible, efficient land use development in support of land-use objectives

Greater Charlotte Region's Freight Goals

GOAL 1: Economic Competitiveness and Efficiency
Support economic competitiveness by making investment decisions for freight transportation modes that make the most efficient use of resources, and pursue sustainable funding possibilities.

GOAL 2: Safety and Security
Improve the safety and security of the freight transportation system.

GOAL 3: Infrastructure Preservation and Maintenance
Improve the state of good repair of the freight transportation system.

GOAL 4: Environmental Stewardship
Reduce adverse environmental and community impacts of the freight transportation system.

GOAL 5: Congestion and Reliability
Reduce travel times and increase the reliability of the freight transportation system.

GOAL 6: Performance and Accountability
Develop methods to track and improve performance and accountability of the operations and maintenance of the freight transportation system.