



CAMBRIDGE
SYSTEMATICS

CORE MPO REGIONAL FREIGHT TRANSPORTATION PLAN UPDATE

presented to

CORE MPO

*Economic Development and Freight Advisory
Committee Meeting*

presented by

Cambridge Systematics, Inc.

with AECOM and Symbioscity



June 26, 2023

AGENDA

- Overview of Key Findings
- Stakeholder Outreach
- Needs Assessment and Draft Recommendations
- Next Steps

Regional Freight Transportation Goals and Objectives



Safety and Security

- Provide a safe, secure, and resilient multimodal freight system



State of Good Repair

- Maintain a state of good repair of infrastructure critical to multimodal freight movement



Accessibility, Mobility, and Connectivity

- Improve connectivity to regional freight and industrial hubs, connectivity between freight modes, and reduce barriers to mobility



System Performance

- Improve the reliability of freight movements to improve efficiency and support economic competitiveness



Intergovernmental Coordination

- Build regional and statewide freight partnerships to help maximize freight funding opportunities and the transportation and economic development impacts of the investments brought by those funds



Environment and Quality of Life

- Minimize adverse impacts of freight operations on communities and the environment while increasing community awareness of freight's importance





OVERVIEW OF KEY FINDINGS



KEY FINDINGS

Safety

- Multiple corridors with hotspots for truck crashes
- About 6.5% of all crashes involved trucks and 2.2% resulted in a serious injury or fatality

Congestion and Reliability

- Freight corridors experience some of the most significant congestion and reliability challenges
 - This results in higher costs for businesses and negatively impacts other roadway users

At-Grade Rail Crossings

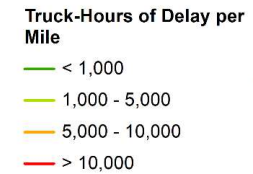
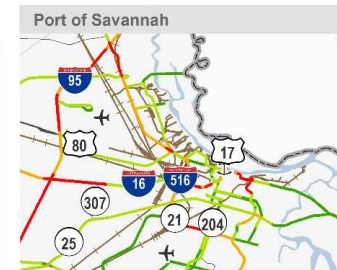
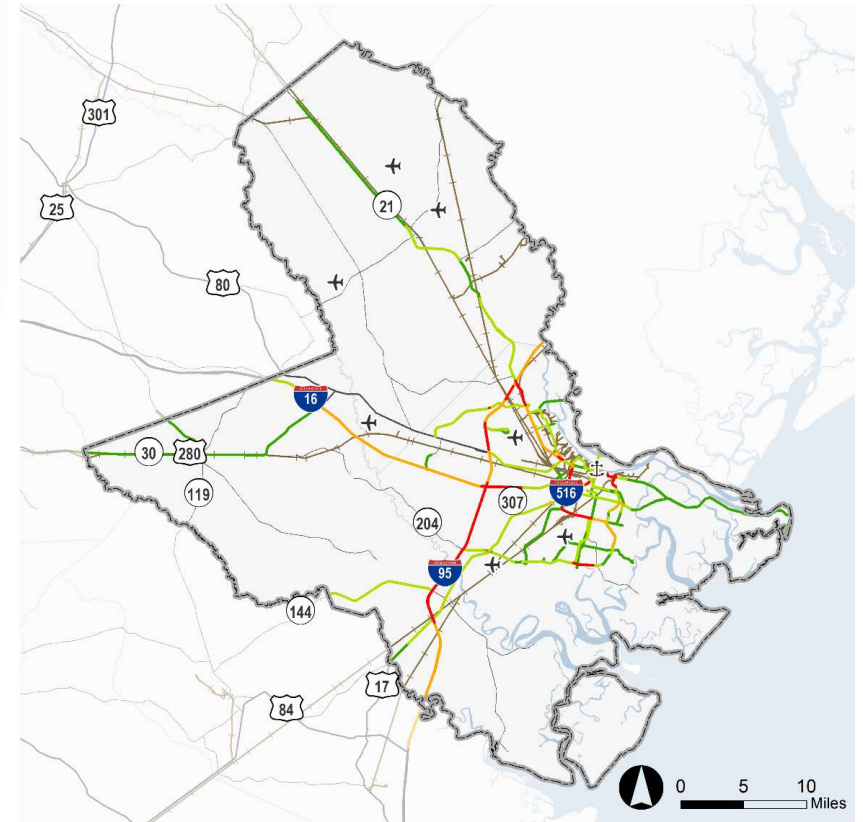
- Nearly 200 at-grade crossings contribute to safety and congestion challenges
- Highway-rail crashes were concentrated at 34 of these crossings

Equity and Environment

- Certain communities are overburdened by freight – i.e., more intense truck congestion, poorer reliability, and 90% of at-grade rail crossings
- Wetlands and environmentally sensitive areas have been impacted by freight-related development

Land Use

- Freight-related development has accelerated, and facilities are becoming larger
- New freight activity centers are emerging and will add over 15,000 acres of industrial space to the region



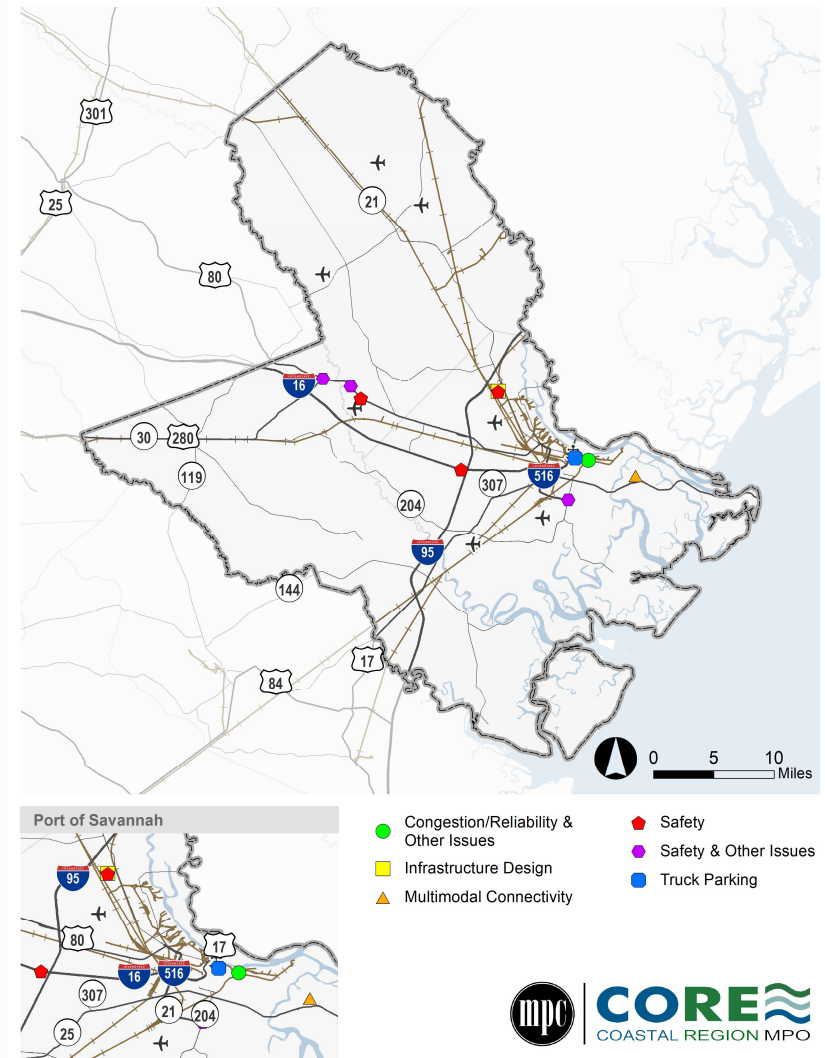


STAKEHOLDER OUTREACH



PUBLIC OUTREACH

- Public outreach consisted of interviews with freight stakeholders, an online survey, and a public forum
- Key findings included
 - » Preserving efficient access to the Port is crucial to the region's long-term economic success
 - » Freight-oriented growth along I-16 to the west, SR 21 to the north, and President St. to the east
 - Hyundai will accelerate western growth
 - » Need for east-west connectivity across Savannah and Effingham County (e.g., SR 21 to I-16)
 - » At-grade crossings remain an issue – Garden City and President St.
 - » Land use conflicts in Effingham County due to warehousing developments



FREIGHT PRIORITIES

- **Safety and Security**
 - » Reducing crashes, improving safety at rail crossings and on roadways that carry truck traffic
 - » Providing safe spaces for truck drivers so that they do not park on roadway shoulders, on-/off-ramps, side streets or other unauthorized locations.
- **Accessibility, Mobility, and Connectivity**
 - » Reducing congestion and travel times on roadways with substantial truck volumes or rail crossings through capital improvements such as road widenings, new facilities, etc.

What is the biggest priority for addressing the region's freight transportation challenges?





NEEDS ASSESSMENT AND DRAFT RECOMMENDATIONS



OVERVIEW OF NEEDS



Congestion and Reliability

- Multiple freight routes exhibit high levels of congestion or unreliable travel times.
- The prevalence of at-grade crossings contributes to the region's congestion and reliability challenges.



Freight Network Connectivity

- The lack of network connectivity and redundancy contributes to congestion and reliability challenges.



Safety

- Some freight corridors exhibit crash rates that exceed region-wide averages.
- Certain at-grade rail crossings have experienced multiple crashes over the past ten years.



Infrastructure Conditions

- Several freight corridors have poor pavement conditions; some bridges have low vertical clearances and constrain freight mobility.



Truck Parking

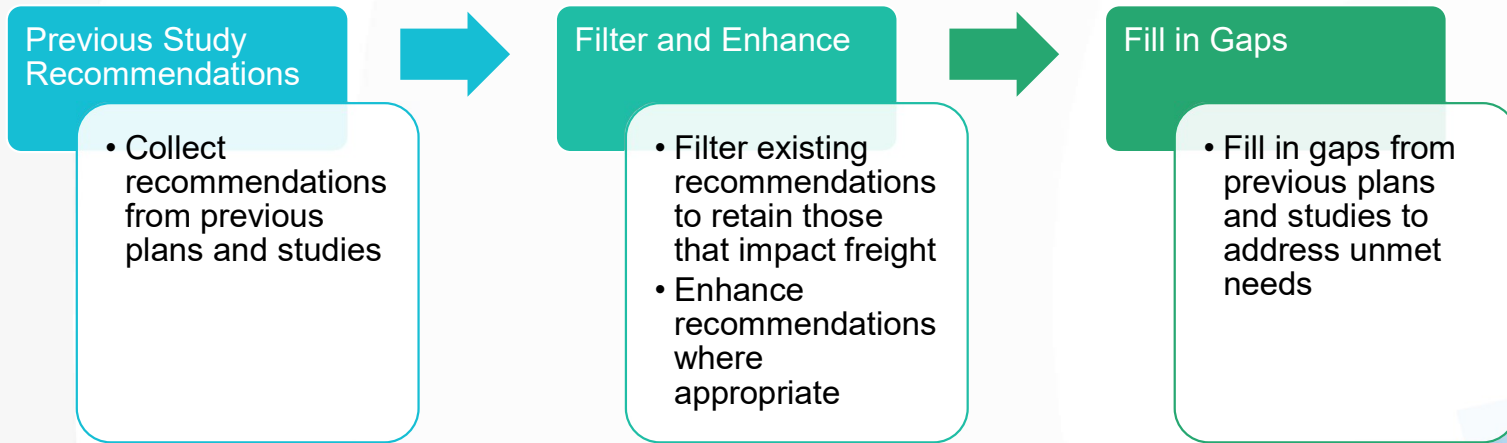
- Future growth in trucking activity may quickly consume existing truck parking capacity.



Resiliency

- Several of the region's freight assets are at risk to disruption from multiple hazards.

DEVELOPING FREIGHT PLAN RECOMMENDATIONS



Recommendation	Description
Project	Capital, technology, and operational investments
Policy	Guidelines or principles that shape the way the region approaches freight needs
Program	Ongoing actions, initiatives, or activities

PRIORITIZATION FRAMEWORK

- Initiatives prioritized along 3 dimensions
 - » Time frame = Complexity + Cost
 - » Group A or B = CORE MPO Boundaries
 - » Tier = Impact (Score)

Safety and Security (25 pts)

- Rate of truck crashes (5)
- Rate of serious injury truck crashes (5)
- Rate of fatal truck crashes (5)
- Highway-rail crashes (5)
- Amount of public truck parking (5)

Accessibility, Mobility, and Connectivity (25 pts)

- Truck delay (10)
- Truck Travel Time Index (10)
- Percentage of freight corridors actively managed with ITS (5)

State of Good Repair (15 pts)

- Percentage of bridges on freight corridors in good condition (5)
- Percentage of pavements on freight corridors in good condition (10)

System Performance (15 pts)

- Truck Travel Time Reliability (TTTR) Index on Interstate corridors (15)

Environment and Quality of Life (10 pts)

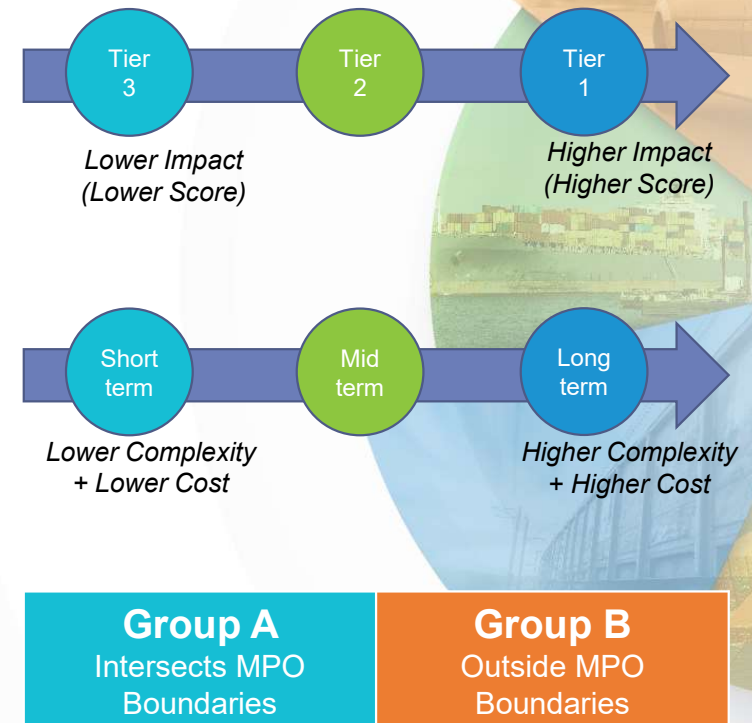
- Rate of truck crashes in EJ/Disadvantaged communities (5)
- Highway-rail incidents in EJ/Disadvantaged communities (5)

Intergovernmental Coordination (5 pts)

- Project is multi-jurisdictional or involves a private sector partnership (5)

Project Readiness (5 pts)

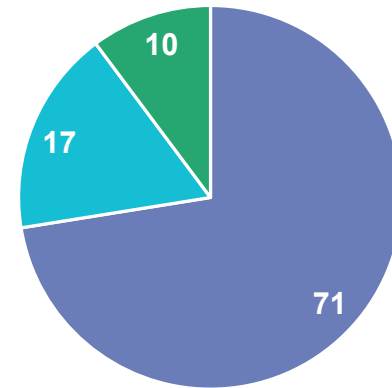
- Project lacks constraints (e.g., funding, environmental) and can proceed relatively quickly (5)



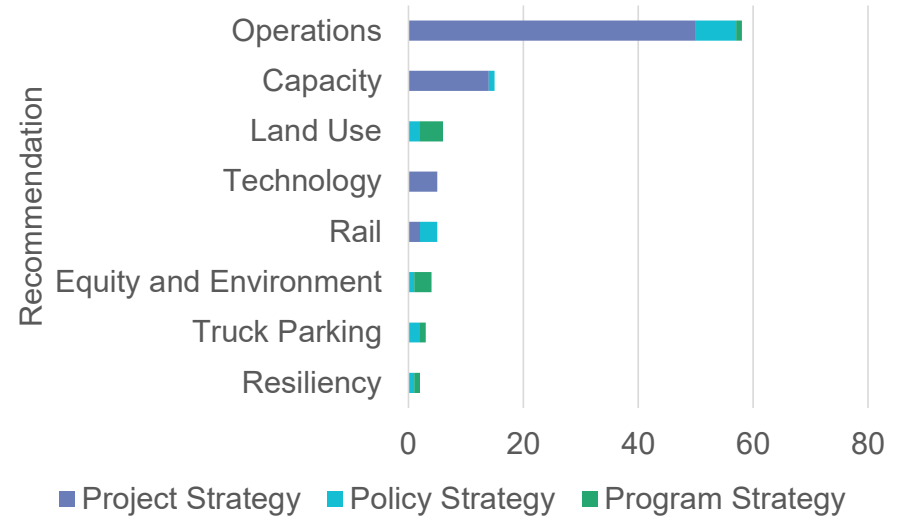
DRAFT REGIONAL FREIGHT PLAN RECOMMENDATIONS



98 Recommended Strategies



■ Project Strategy ■ Policy Strategy ■ Program Strategy



HOW DO THE RECOMMENDATIONS ADDRESS THE REGION'S NEEDS?

Advance Strategic Capacity Expansions, Proactively Increase Network Connectivity

• These actions provide relief to existing bottlenecks and get ahead of new demand by expanding the physical footprint of the network.

Implement Operational Strategies to Enhance Freight Mobility and Safety

• These strategies improve the ease, efficiency, and safety of freight operations with minimal impacts to the footprint of the network.

Support Increased Capacity, Enhanced Operations, and Safety on the Freight Rail Network

• Rail-focused solutions ensure that shippers have an alternative to trucking and support economic competitiveness.

Implement Technology Strategies to Enhance Freight Operations and Safety

• The strategies use technology and information to ease freight-related congestion and improve the mobility and efficiency of freight operations.

Increase Access to Safe Truck Parking

• These actions improve safety for truck drivers and provide relief for areas that experience unauthorized truck parking.

Improve Freight Network Resiliency

• These steps improve the freight network's ability to withstand and recover from disruptions.

Mitigate Freight Impacts on Communities and the Environment

• Avoid where possible and limit the negative impacts of freight to communities and the environment.

Integrate Freight Considerations into Land Use Planning

• These steps help to guide where and how freight-generating land uses are developed, so that certain challenges may be limited or avoided.

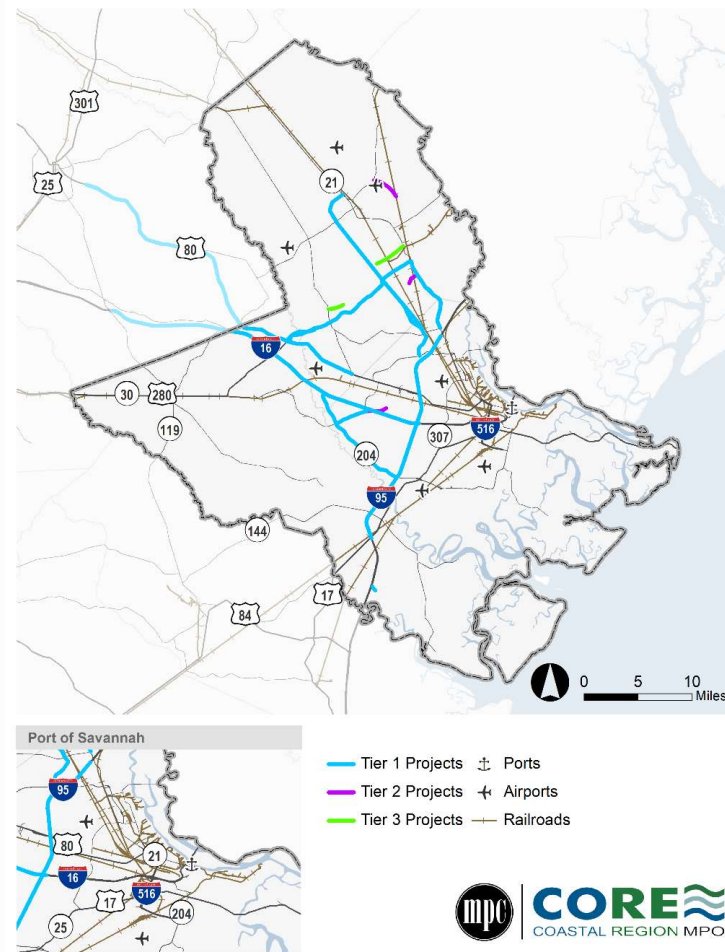
ADVANCE STRATEGIC CAPACITY EXPANSIONS, PROACTIVELY INCREASE NETWORK CONNECTIVITY

New/Revised Recommendations to Consider

Alternative Southern
Alignment for
Effingham Pkwy.

Proactively Increase
Network
Redundancy in
Emerging Freight
Clusters

John Carter Rd.-
Pine Barren Rd.
Connector

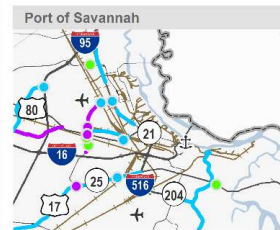
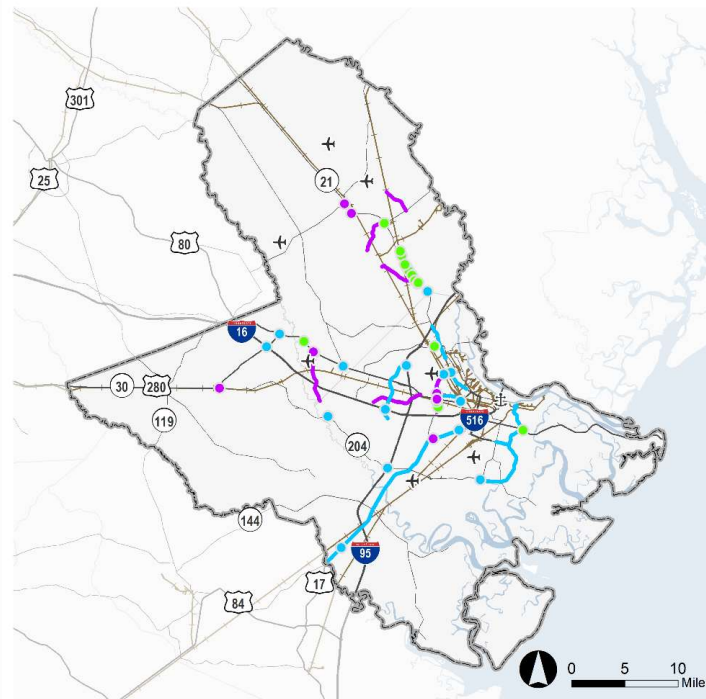


IMPLEMENT OPERATIONAL STRATEGIES TO ENHANCE FREIGHT MOBILITY AND SAFETY

New/Revised Recommendations to Consider

East-West
Connectivity
Improvements

US 17
Corridor Study
Phase II



- Tier 1 Projects
- Tier 2 Projects
- Tier 3 Projects
- ⚓ Ports
- ✈ Airports
- Railroads



SUPPORT INCREASED CAPACITY, ENHANCED OPERATIONS, AND SAFETY ON THE FREIGHT RAIL NETWORK

Support Expansion of Local Freight Rail Capacity

- Partner with the private sector to perform a feasibility study that identifies potential locations for shared rail yards and engages rail operators to determine the feasibility of leasing space at nearby rail yards.

Support Expansion of Regional Freight Rail Capacity

- Partner with rail operators to identify existing sidings that could be extended or potential development sites for new sidings as a strategy for increasing the region's rail capacity.

Implement Rail Quiet Zones

- Identify candidate crossings for quiet zones and work with the region's rail operators to upgrade to meet the quiet zone requirements.

Rail Crossing Safety Improvements

- Highway-rail incidents were concentrated at 34 crossings. The region should upgrade the safety equipment at these locations.

Rough Rail Crossing Improvements

- Partner with the region's railroads to improve pavement conditions at rough crossings throughout the region

INCREASE ACCESS TO SAFE TRUCK PARKING

Regional Truck Parking Demand Study

- Conduct a study to estimate the truck parking demand generated by new commercial and industrial developments.

Incorporate Truck Parking into Traffic Impact Assessments

- Revise traffic impact assessment processes to include anticipated truck volumes at a site, the impacts of staging near the site, and the potential for truck parking demand generated farther from the site.

Revise Planning Ordinances and Policies to Include Truck Parking

- Encourage local governments to revise ordinances to include on-site truck parking minimums.

IMPROVE FREIGHT NETWORK RESILIENCY

Freight Supply Chain Resilience Study

- Conduct a Freight Supply Chain Resilience Study to identify supply chains for critical goods and services, potential effects on these supply chains from disruptions, and recommended actions to mitigate impacts.

Implement Action Plan for Handling Disruptions to Freight Assets

- As a next step, develop an action plan that implements the recommendations of the Resilience Study and identifies the entities and their roles and responsibilities for managing a supply chain disruption.

MITIGATE FREIGHT IMPACTS ON COMMUNITIES AND THE ENVIRONMENT

Adopt and Track Freight Equity Indicators

- Define a set of freight equity indicators that may be tracked over time as part of a freight equity impacts program.

Develop a Freight Equity Analysis Screening Tool

- Develop and deploy an equity analysis and evaluation screening tool to help the region proactively address freight transportation equity concerns.

Partner with Chatham Area Transit (CAT) to Incorporate Industrial Hubs into the Transit Network

- Partner with CAT to include industrial employment centers in the transit network.

Install Green Infrastructure along Freight Routes and in Industrial Hubs

- Incorporate green infrastructure such as bioswales, planter boxes, and street trees into freight corridor designs to help to filter roadway surface pollutants from stormwater runoff and serve as another layer of flooding control.

INTEGRATE FREIGHT CONSIDERATIONS INTO LAND USE PLANNING

Conduct a Regional Freight Efficient Land Use Plan

Support Freight-Intensive Clustering, Infilling, and Land Banking

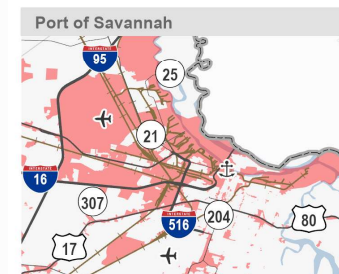
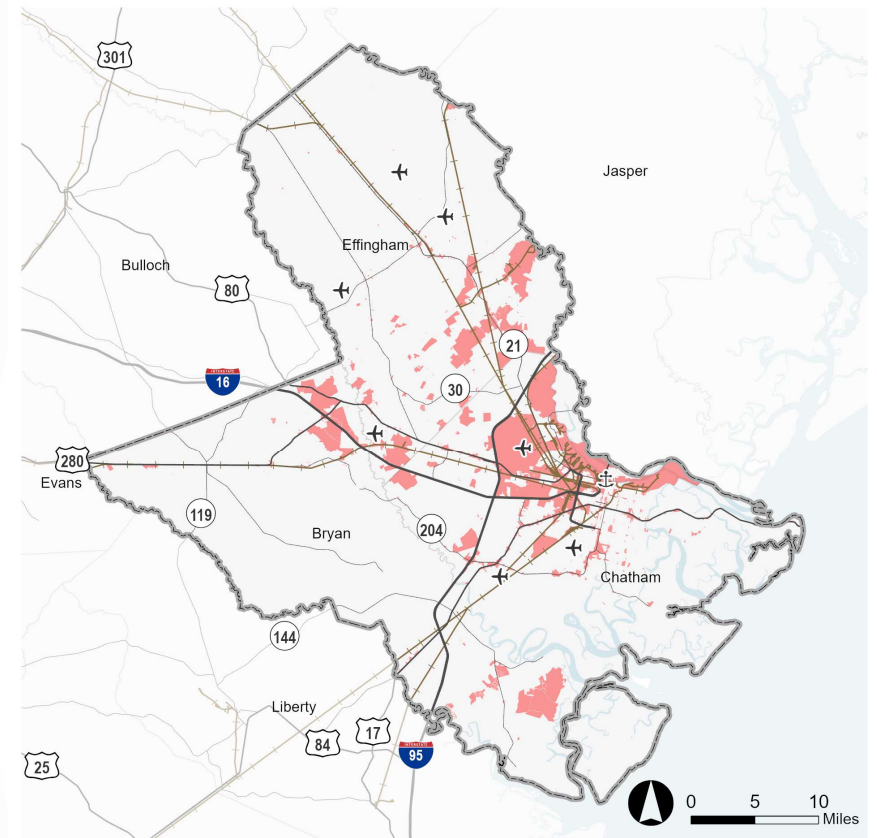
Encourage Consistent Land Use Categories

Concentrate New Developments along Freight Corridors

Discourage Greenfield Freight Development to Specific Strategic Sites

Study the Impacts of Potential Industrial Expansion into South Carolina

Encourage Community Improvement Districts to Support Freight Operations and Address Challenges in Freight Clusters



- Freight-Related Zoning
- Airports
- Railroads



NEXT STEPS



NEXT STEPS

- Present draft recommendations for feedback
 - » June 28, 2023 MPO Board Meeting
- Finalize recommendations and complete the Final Report