



CAMBRIDGE  
SYSTEMATICS

# CORE MPO REGIONAL FREIGHT TRANSPORTATION PLAN UPDATE

*Public Meeting*

*presented by*

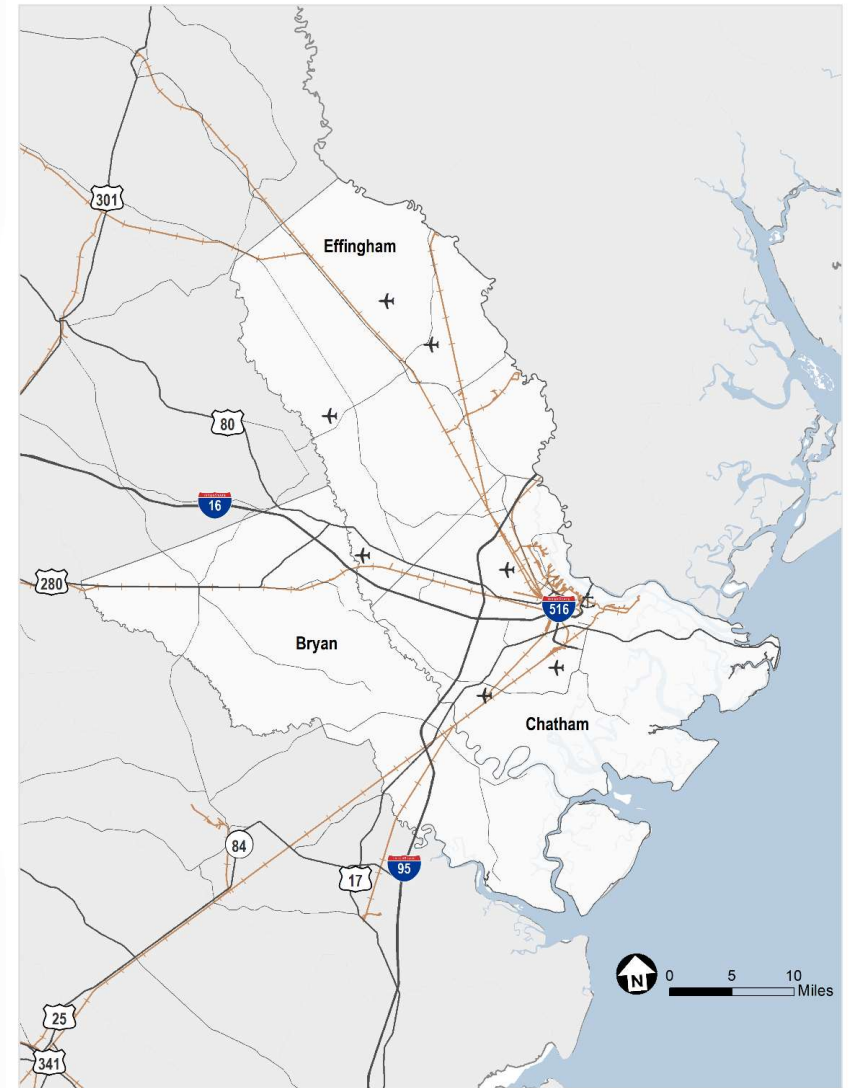
*Chatham County – Savannah Metropolitan  
Planning Commission/ Coastal Region MPO  
with Cambridge Systematics,  
AECOM, and Symbioscity*



March 6, 2023

# PURPOSE

- As more goods move throughout the Savannah region, it is critical to improve safety, mobility, and access for people and freight – trains, trucks, and other modes
- Purpose of today's meeting
  - » Provide an overview of the Regional Freight Transportation Plan
  - » Gather feedback on items that set the foundation for recommendations
    - Draft Identification of Needs
    - Draft Prioritization Factors
    - Potential Strategies
  - » Outline next steps and remaining tasks



# WHAT IS FREIGHT?

- Freight includes goods such as groceries, furniture, appliances, fuel, and nearly every item in our homes or place of business.
- These goods are transported via tractor trailers on highways, locomotives on railroads, cargo ships, and other modes.
- Freight mobility considers how these goods get to and from the places they are needed.



# AGENDA

*Why Study Freight in the Savannah Region?*

*The Planning Process*

*Key Findings*

*How do we Move Forward?*

*What are the Next Steps?*





# WHY STUDY FREIGHT IN THE SAVANNAH REGION?



# WHY STUDY FREIGHT IN THE SAVANNAH REGION

- The purpose of a freight plan is to address transportation planning, traffic operations, community impacts, and other needs to identify projects, policies, and programs to address those needs.
- A freight plan comprehensively analyzes and assesses the freight transportation system so that it may identify improvements that enhance freight-related economic development while limiting negative impacts to communities, the environment, and the broader transportation network.

# MULTIMODAL FREIGHT TRANSPORTATION SYSTEM



- **Marine** – Port of Savannah and the Savannah River



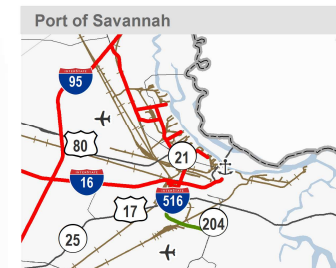
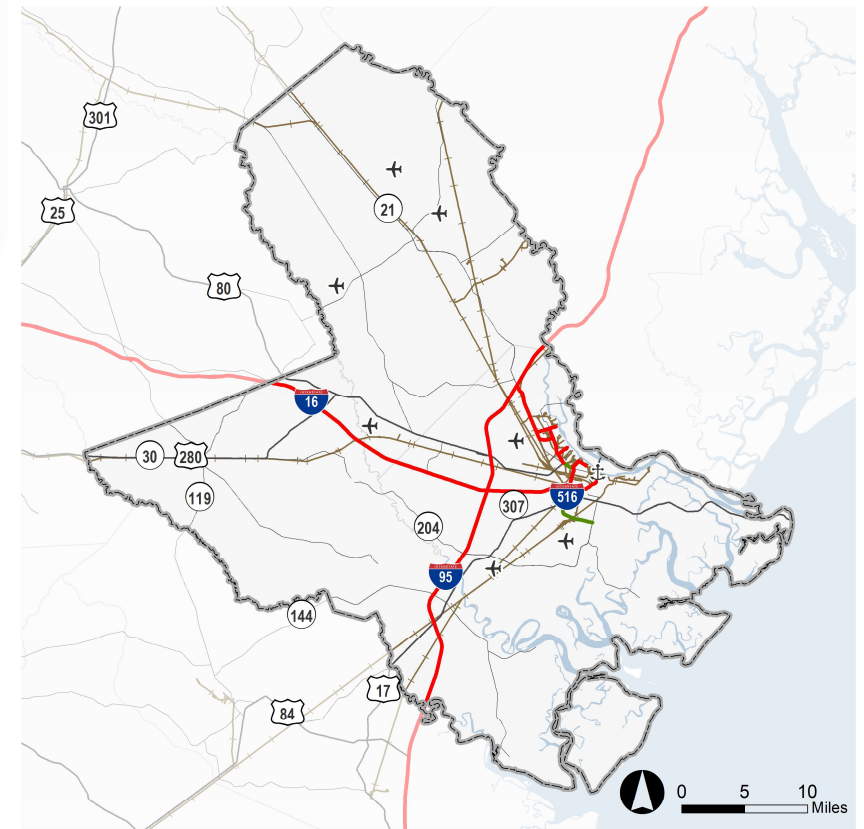
- **Aviation** - 1 commercial service airport that serves freight; 6 privately owned airports that do not handle cargo.



- **Roadway** - 8,700 miles and connects multimodal and intermodal facilities while providing truck access.



- **Rail** - Spans 279 miles with 2 Class I and 7 Class III railroads, 3 intermodal rail terminals including the Mason Mega Rail Terminal, several bulk and other rail terminals



- Primary Highway Freight System
- Interstate Non-Primary Highway Freight System
- Railroads
- ⚓ Ports
- ✈ Airports



# THE SAVANNAH REGION'S UNIQUE POSITION

*A global gateway and center of commerce positioned within a modest-sized, but rapidly growing region.*

*Third busiest gateway for U.S. global sea trade and largest gateway for agricultural exports*

*A substantial and growing manufacturing base*

*Rapid growth with a 13% increase in MSA population between 2010-2019*

*Port of Savannah to increase capacity from about 6 million to 10.7 million containers annually*

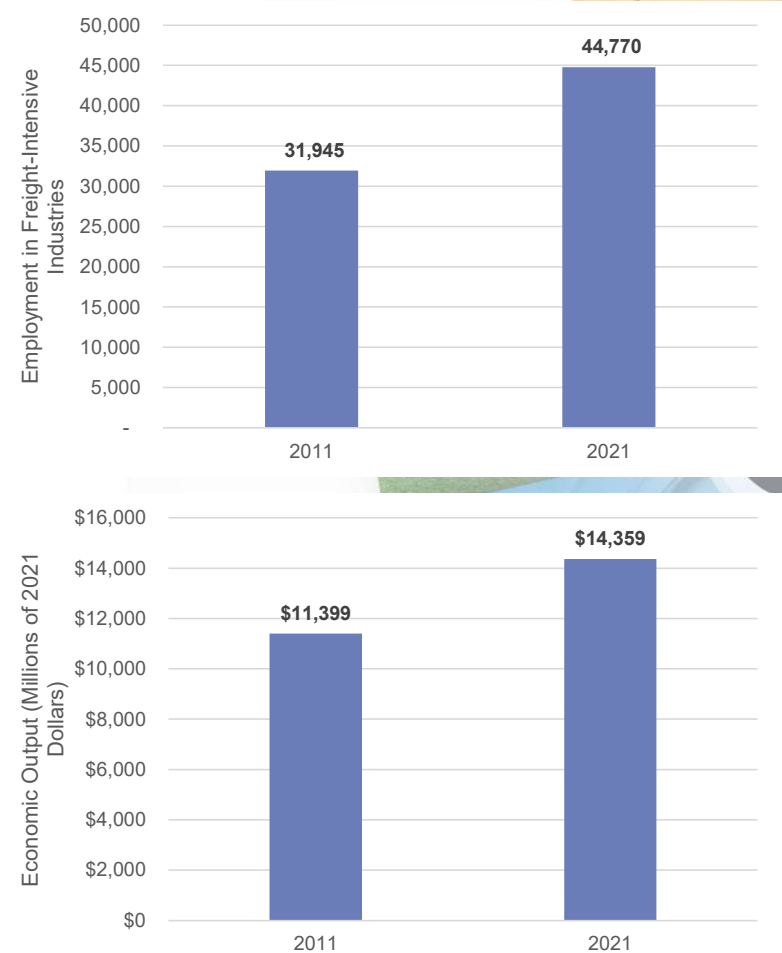




# FREIGHT IS ESSENTIAL TO THE REGIONAL ECONOMY

- Over half of the region's workers are employed in industries that generate freight in some form or fashion <sup>1</sup>
  - » E.g., retail trade, manufacturing, accommodation and food service, and transportation and logistics
- Industries that are intensive users of the freight system are also important to the regional economy
  - » i.e., construction, manufacturing, logistics and other industries where the freight network is essential to their daily operations
- Freight-intensive industries increased their economic contribution to the region between 2011-2021 <sup>2</sup>
  - » 12,000 jobs added
  - » Share of total employment increased from 16% to 18%
  - » Economic output increased from \$11.4B to \$14.3B

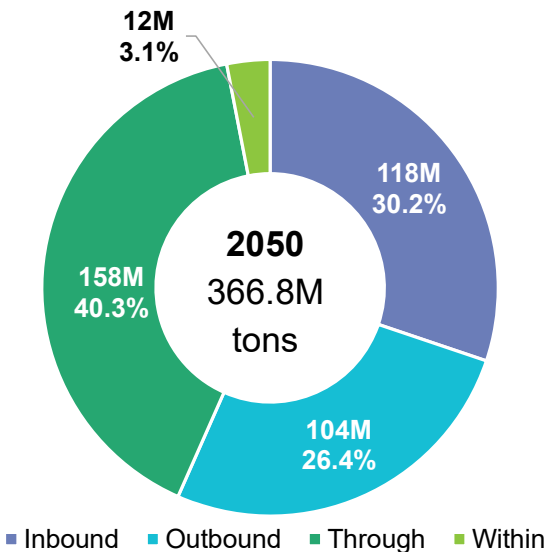
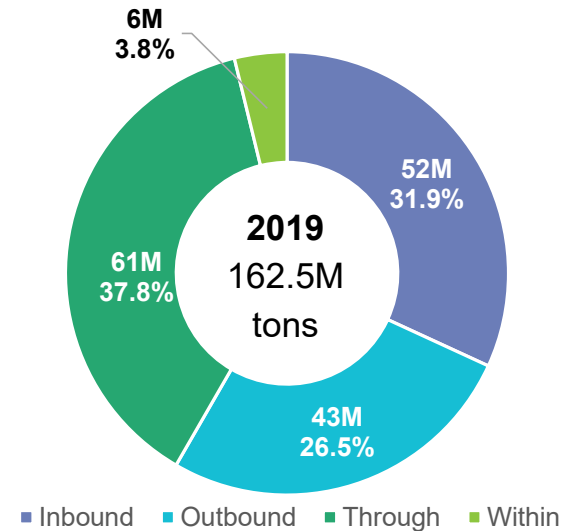
1. Source: Georgia Department of Labor, Local Area Profile- Savannah Metropolitan Statistical Area. November 2022.



2: Source: REMI TranSight.

# GROWING FREIGHT VOLUMES

- Over the next 30 years, the total tonnage of goods transported throughout the Savannah region will more than double
- This will impact the region's roadways, railroads, and development patterns
- Planning for this growth is essential to maintaining and improving the region's quality of life and economic competitiveness



Source: S&P Global, TRANSEARCH.



# THE PLANNING PROCESS



# WHAT IS FREIGHT PLANNING?

- Freight planning is about analyzing the condition and performance of the freight network in relation to land use and other aspects of the built and natural environment, so that we may develop solutions that enhance safety for people and goods, improve the ease of freight travel, and limit or avoid negative impacts to communities and the environment.
- The process is multi-jurisdictional and collaborative between the public and private sectors.
- Freight planning is beneficial because it helps communities adapt to the changing nature of shopping, supply chains, and transportation to get goods and products to people and businesses efficiently and cost effectively. It can also lead to positive economic impacts like good jobs and new businesses.



# KEY CHANGES SINCE 2016 REGIONAL FREIGHT TRANSPORTATION PLAN

- Completed and Planned Infrastructure Investments
  - » Completion of Savannah Harbor Expansion Project (SHEP)
  - » Mason Mega Rail Yard
  - » Port of Savannah Planned Capacity Investments
  - » GDOT 16@95 Improvement Projects
- New Employment Centers
  - » Planned Hyundai Motor Co. development of Bryan County Megasite with numerous automotive suppliers locating in the 3-county region
  - » New developments at Rockingham Farms Industrial Park in Chatham County, Belfast Commerce Park in Bryan County, and Gateway Industrial Hub in Effingham County, among others



DRAFT

# KEY TASKS OF THE REGIONAL FREIGHT TRANSPORTATION PLAN UPDATE



Project Management & Coordination/  
Stakeholder Outreach

Freight Needs Assessment  
and Analysis



Land Use Assessment

Economic Development  
and Market Assessment



Environmental and Community  
Impact Scan and Analysis

Recommendations for  
Future Land Uses



Final Recommendations

Final Report



# REGIONAL FREIGHT PLAN VISION & GOALS

## Regional Freight Transportation Plan Vision

The vision for the Regional Freight Transportation Plan is to promote sustainable economic growth throughout the region by ensuring quality access and connectivity and safe and efficient mobility of people and goods on a shared multimodal network.

## Regional Freight Transportation Plan Goals



### 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





# KEY FINDINGS





# KEY FINDINGS

Safety

Congestion  
and Reliability

At-Grade  
Crossings

Equity and  
Environment

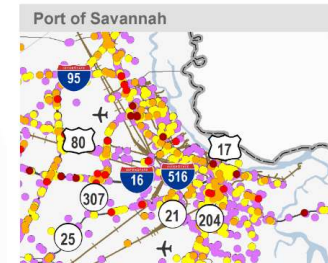
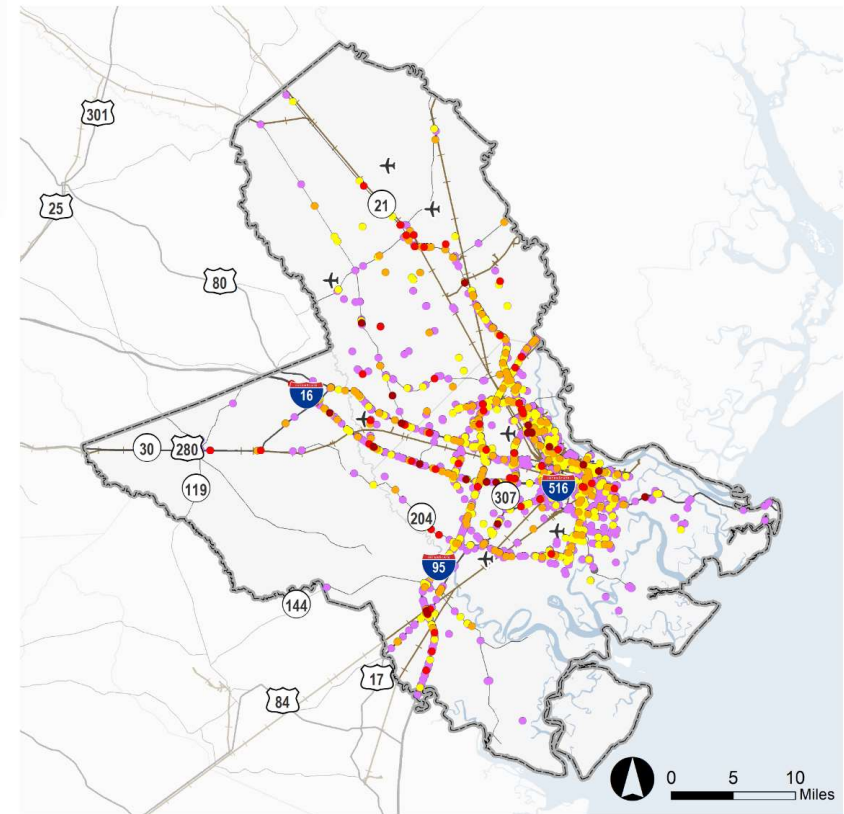
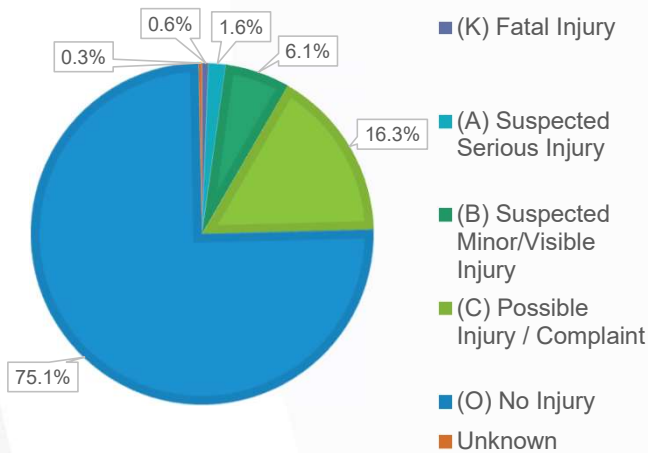
Land Use and  
Freight-Related  
Development



# SAFETY

- Multiple corridors throughout the region experience relatively high proportions of truck crashes
- From 2016-2020, there were 3,716 truck crashes – about 6.5% of all crashes
- About 2.2% truck crashes resulted in a serious injury or fatality

## TRUCK-INVOLVED CRASHES

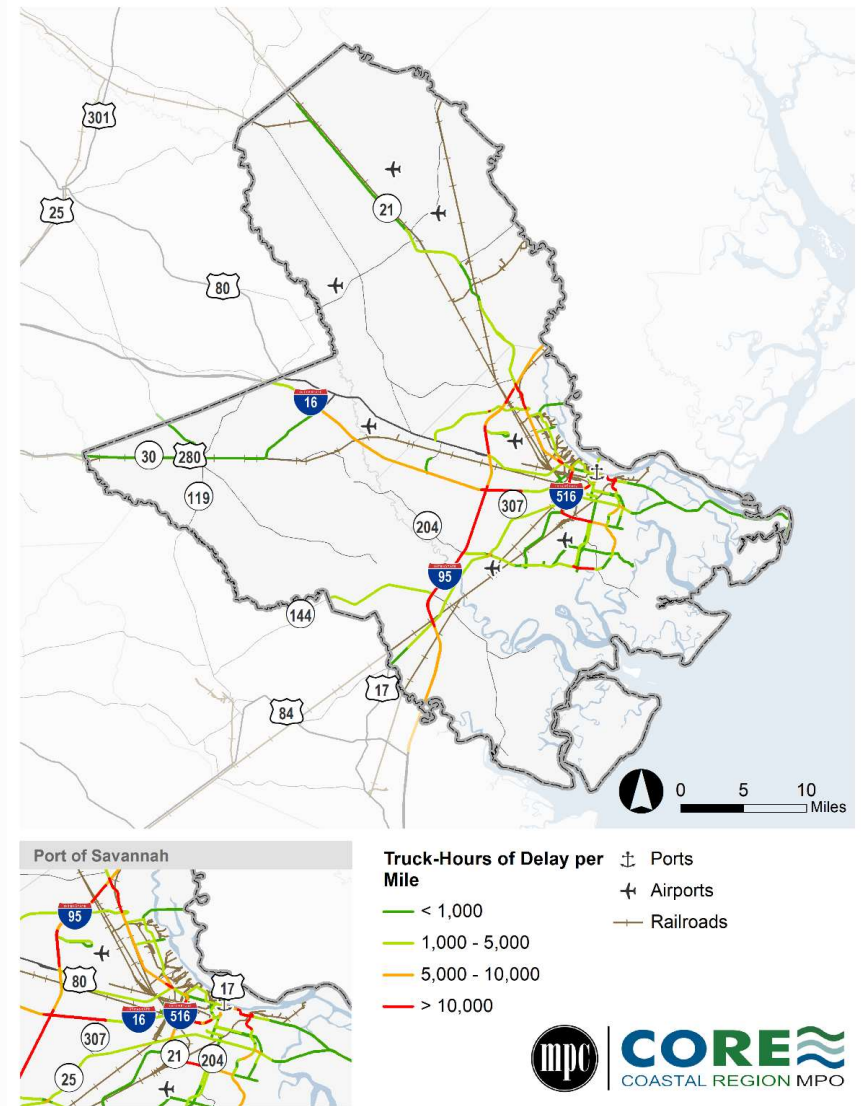


Source: GDOT, Numetrics Crash Database, 2016-2020; Cambridge Systematics analysis.



# CONGESTION AND RELIABILITY

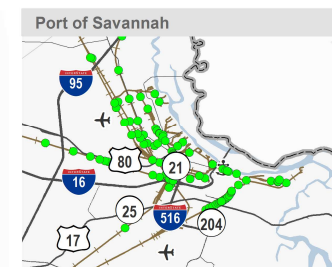
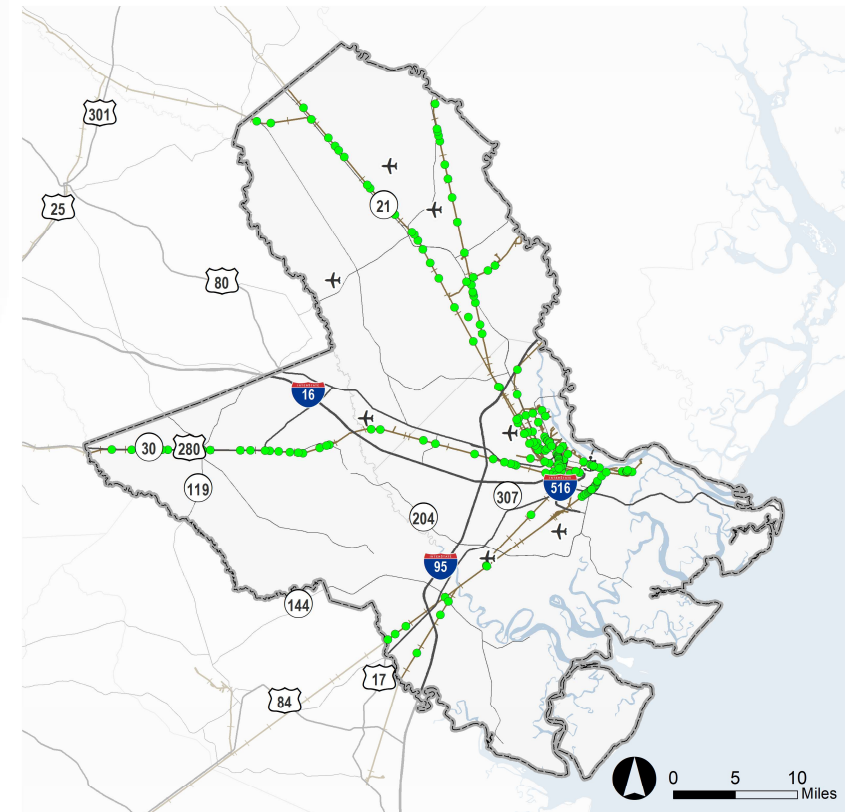
- Congestion and poor travel time reliability results in higher costs for businesses and negatively impacts other roadway users.
- These higher costs are often passed on to consumers in the form of more expensive goods and services.
- Portions of I-16, I-95, and non-interstate corridors such as SR 21, Jimmy Deloach Pkwy., and US 17 experience some of the most significant congestion and reliability challenges in the region.



Source: INRIX, 2021; Cambridge Systematics analysis.

# AT-GRADE RAIL CROSSINGS

- 192 public at-grade rail crossings in the region
- At-grade crossings create challenges for the region including:
  - » **Delays** to trucks and other vehicles
  - » **Emissions** from vehicles idling at crossings
  - » **Safety** as trains may collide with vehicles, pedestrians, or other roadway users



- Public At-Grade Rail Crossings
- ⚓ Ports
- ✈ Airports
- ✚ Railroads



Source: Federal Railroad Administration; AECOM.

# EQUITY AND ENVIRONMENT

## Equity and Community Impacts

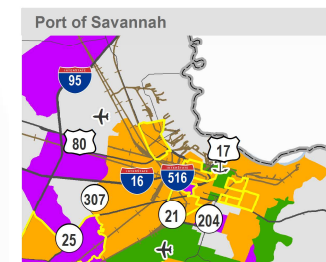
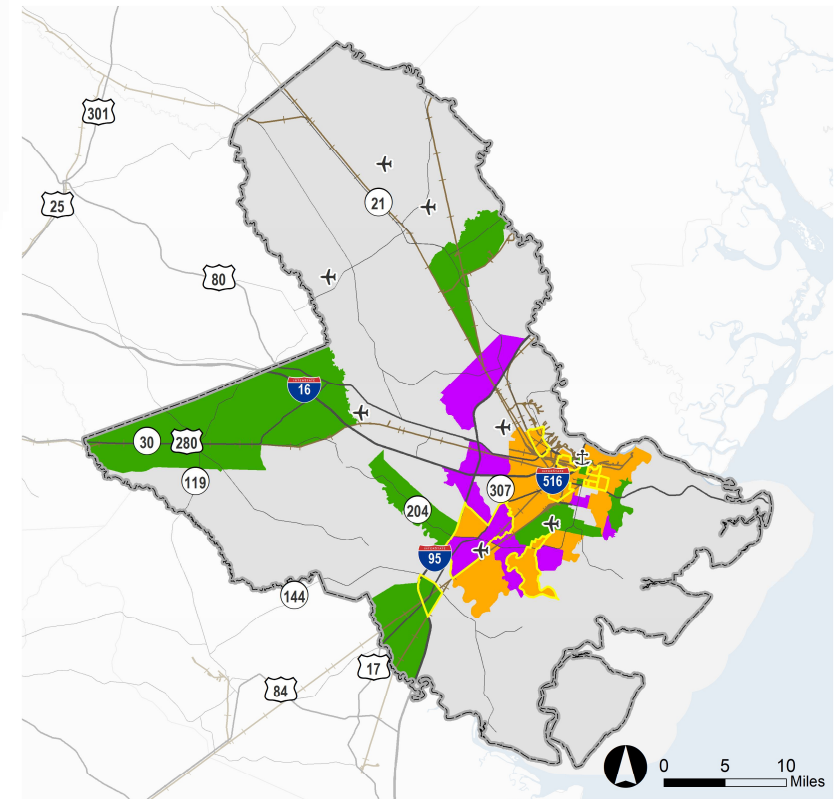
- » Environmental Justice Areas and Historically Disadvantaged Communities are areas that historically have been overburdened by the transportation system.
  - E.g., more intense truck congestion, poorer travel time reliability, and greater levels of freight activity other communities
  - 90% of the region's at-grade rail crossings are in these communities

## Environmental Impacts

- » Wetlands are areas where water covers is or near the surface of the soil all year or for varying periods of time during the year.
- » They are a vital part of the region that provide benefits for people (e.g., erosion control, flood control) and wildlife (e.g., food, habitat).
- » Wetlands have often been targeted for development.



Source: Georgia Department of Natural Resources.



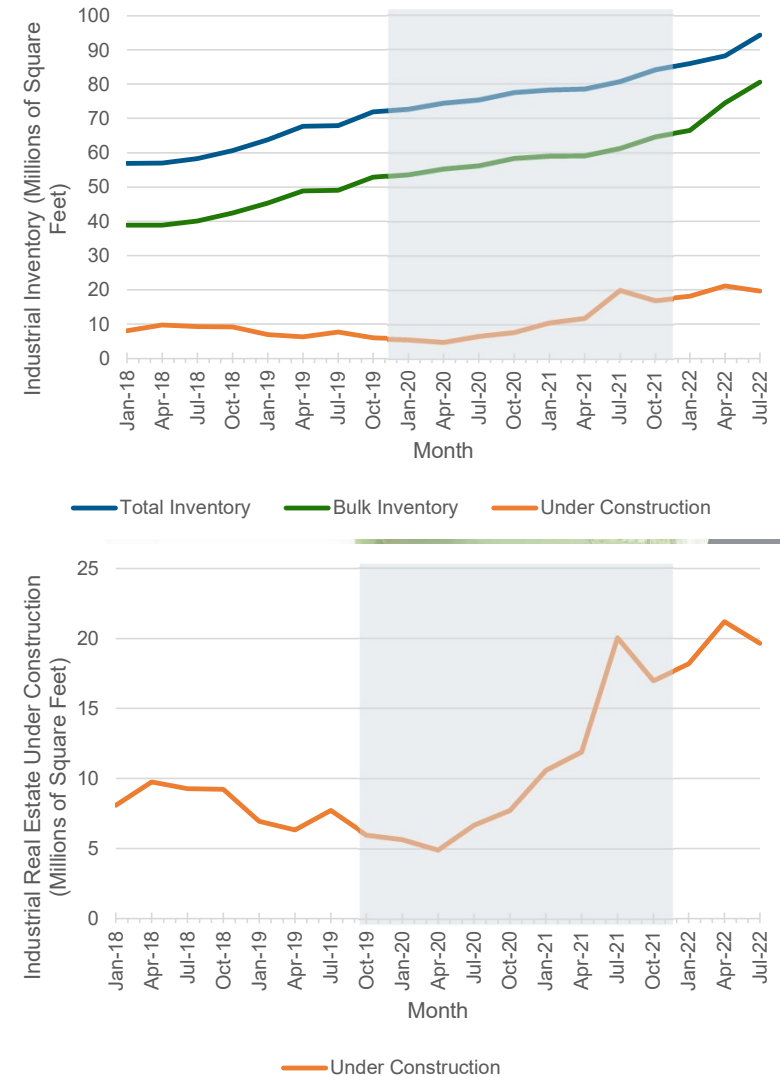
- Historically Disadvantage Community
- Environmental Justice (EJ) Areas**
- Minority
- Low Income
- Minority and Low Income
- Non EJ Areas



Source: U.S. Census Bureau; U.S. Department of Transportation; Cambridge Systematics.

# LAND USE & FREIGHT-RELATED DEVELOPMENT

- Development of new warehouse inventory has accelerated since 2018
  - » From July 2018 – July 2022, inventory increased from 57M SF to 94M SF (about 9.3M SF annually)
- Facilities have become larger
  - » Bulk inventory (100K SF or larger) increased from 39M SF to 81M SF (about 10.5M SF annually)
  - » The prior five-year period (2013-2018) saw a total increase of 13.8M SF (about 2.8M SF annually)
- Development is being driven by growth in population, employment, and freight volumes



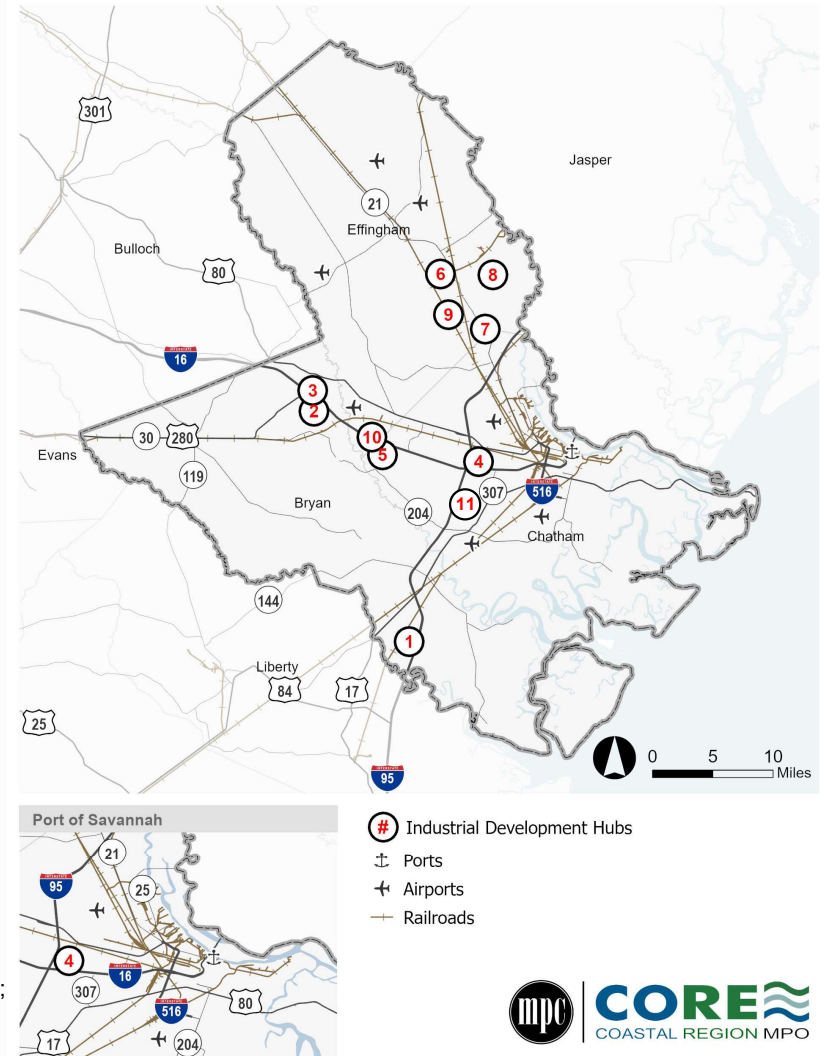
Source: Colliers Quarterly Industrial Market Reports, 2018-2022; AECOM.

# EMERGING FREIGHT ACTIVITY CENTERS

- New activity centers are emerging to the north, south, and west and will add over 15,000 acres
- The emergence of these freight activity centers will impact freight traffic patterns throughout the region.
- The upcoming Hyundai EV plant is accelerating the emergence of these centers as automotive parts suppliers have already begun acquiring land.

#	County	Site	Total Area (Acres)	Rail (Y/N)
1	Bryan	Belfast Commerce Park	1,065	Y
2	Bryan	Bryan County Mega-Site	2,284	Y
3	Bryan	Interstate Centre	1,100	N
4	Chatham	Chatham County Economic Development Site	1,557	Y
5	Chatham	Savannah Manufacturing Center	744	N
6	Effingham	Georgia International Rail Park	1,500	Y
7	Effingham	Georgia International Trade Center	1,150	Y
8	Effingham	Grande View	448	N
9	Effingham	Savannah Gateway Industrial Hub	2,640	Y
10	Effingham	Savannah Portside International Park	1,550	Y
11	Chatham	Rockingham Farms Industrial Park	1,037	Y
<b>Total</b>			<b>15,075</b>	

Sources: Development Authority of Bryan County; Effingham County Industrial Development Authority; Savannah Economic Development Authority; Savannah Harbor-Interstate 16 Joint Development Authority; AECOM.





# HOW DO WE MOVE FORWARD?





# 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

- Related to congestion and reliability challenges is the lack of roadway connectivity in certain parts of the region.
- At-grade crossings and infrastructure conditions (i.e., pavement conditions and low vertical clearances) contribute to access challenges for existing multimodal connections.



## Safety

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



## Infrastructure Conditions

- Several freight corridors have poor pavement conditions.
- Some bridges crossing freight routes have low vertical clearances and act as physical constraints to freight mobility.



## Truck Parking

- Truck parking capacity appears to satisfy current demand, but capacity is becoming constrained. Future growth in trucking activity may quickly consume existing capacity and worsen the existing need.



## Resiliency

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

# POTENTIAL STRATEGIES

- **Infrastructure**
  - » Project specific and general infrastructure strategies to enhance the safety, maintenance, and efficiency of the freight network.
- **Technology & Operations**
  - » A collection of technology and operation strategies that improve the efficiency, safety, and mobility of the freight network.
- **Policies & Programs**
  - » Broad policy, coordination, outreach, and programmatic recommendations to help change the way freight transportation needs are addressed.

## Examples

### Infrastructure

- Increase capacity
- Build new connections
- Maintenance and rehabilitation

### Technology & Operations

- Signal re-timing
- Access management
- Incident management

### Policies & Programs

- Public-private partnerships
- Multi-jurisdiction projects and programs
- Public education and awareness
- Freight-specific design guidelines
- Strategic freight planning initiatives and studies

# INFRASTRUCTURE STRATEGIES EXAMPLES

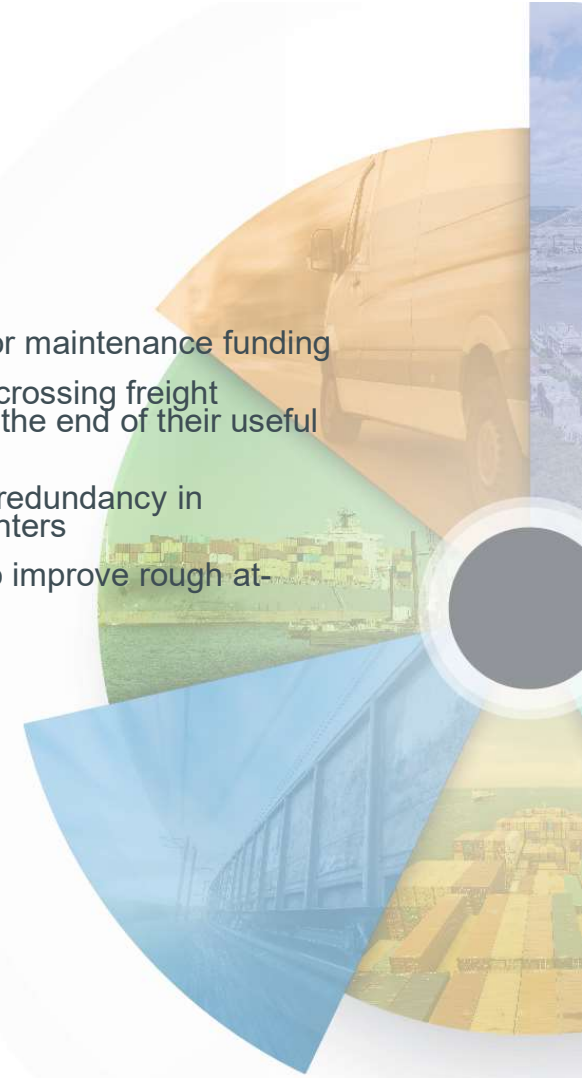
## Issues & Opportunities

- Poor pavement conditions on freight corridors
- Some bridges crossing freight routes have low vertical clearances
- Lack of roadway connectivity in certain parts of the region
- Prevalence of at-grade crossings
- Multiple freight routes with high levels of congestion or unreliable travel times

## Potential Solutions

- Prioritize freight corridors for maintenance funding
- Replace and raise bridges crossing freight corridors as they approach the end of their useful life
- Increase roadway network redundancy in emerging freight activity centers
- Coordinate with railroads to improve rough at-grade crossings

E. Lathrop Ave. north of Louisville Rd.



# TECHNOLOGY & OPERATIONS STRATEGIES EXAMPLES

## Issues & Opportunities

- Freight corridors with high traffic volumes leading to congestion and unreliability
- Prevalence of at-grade crossings contributing to unreliable travel conditions
- Freight corridors with a high density of driveways
- Freight corridors with crash rates that exceed region-wide averages
- At-grade rail crossings with multiple crashes over the past ten years

## Potential Solutions

- Partner with GDOT to expand the number ITS-managed freight corridors
- Upgrade traffic signals
- Access management improvements – close or relocate driveways
- Close or separate at-grade crossings
- Deploy ITS solutions to manage traffic around at-grade crossings
- New intersection control - roundabouts



# POLICIES & PROGRAMS STRATEGIES EXAMPLES

## Issues & Opportunities

- Growing freight volumes and freight-intensive industries lead to growing demand for truck parking
- Freight assets are exposed to multiple risks that can disrupt supply chains
- Some communities are disproportionately impacted by goods movement

Jimmy Deloach Pkwy. near Morgan Lakes Ind. Blvd.



## Potential Solutions

- Support land use and other reforms to meet growing truck parking demand (i.e., truck parking impact assessments, truck parking/staging requirements for new developments)
- Information sharing to manage disruptions (e.g., coastal flooding, hurricanes)
- Strengthen and expand natural barriers to protect against risks
- Promote green infrastructure to manage stormwater runoff
- Strengthen workforce development initiatives for communities disproportionately impacted by goods movement so they can share in the economic benefits
- Develop freight equity screening tools to proactively address equity concerns



# PROPOSED EVALUATION & PRIORITIZATION FRAMEWORK ELEMENTS

## Safety & Security

- Reduces likelihood of crashes
- Improves access to truck parking

## Accessibility, Mobility, & Connectivity

- Addresses current and anticipated congestion
- Improves performance through technology/operations and connectivity between modes

## State of Good Repair

- Improves the condition of freight assets

## System Performance

- Improves reliability through technology/operations
- Improves resiliency by reducing the risk of disruptions

## Environment & Quality of Life

- Addresses needs in a disadvantaged community
- Anticipated emissions reduction
- Lessens environmental impact of goods movement

## Intergovernmental Coordination

- Support from implementing partners
- Potential for cost sharing across jurisdictions and with the private sector

## Project Readiness

- Project is anticipated to proceed relatively quickly due to limited engineering, funding, environmental, and other constraints

# DRAFT PRIORITIZATION FACTORS

Category	Performance Measures (Available Points)	Total Available Points
<b>Safety and Security</b>	<p>Projects that improve:</p> <ul style="list-style-type: none"> <li>• Annual rate of crashes involving heavy trucks (5)</li> <li>• Annual rate of serious injury crashes involving heavy trucks (5)</li> <li>• Annual rate of fatal crashes involving heavy trucks (5)</li> <li>• Annual number of highway-rail crashes (5)</li> <li>• Number of public truck parking facilities and spaces (5)</li> </ul>	25
<b>Accessibility, Mobility, and Connectivity</b>	<p>Projects that improve:</p> <ul style="list-style-type: none"> <li>• Truck delay (10)</li> <li>• Truck Travel Time Index (5)</li> <li>• Percentage of freight corridors actively managed with ITS (5)</li> </ul>	20
<b>State of Good Repair</b>	<p>Projects that improve:</p> <ul style="list-style-type: none"> <li>• Percentage of bridges on freight corridors in good condition (10)</li> <li>• Percentage of pavements on freight corridors in good condition (10)</li> </ul>	20
<b>System Performance</b>	<p>Projects that improve:</p> <ul style="list-style-type: none"> <li>• Truck Travel Time Reliability (TTTR) Index on Interstate corridors (15)</li> </ul>	15
<b>Environment and Quality of Life</b>	<p>Projects that improve:</p> <ul style="list-style-type: none"> <li>• Annual rate of total crashes, serious injury crashes, and fatal crashes involving heavy trucks in EJ/Disadvantaged communities (5)</li> <li>• Annual number of highway-rail incidents in EJ/Disadvantaged communities (5)</li> </ul>	10
<b>Intergovernmental Coordination</b>	<ul style="list-style-type: none"> <li>• Project is multi-jurisdictional or involves a private sector partnership (5)</li> </ul>	5
<b>Project Readiness</b>	<ul style="list-style-type: none"> <li>• Project lacks constraints (e.g., funding, environmental) and can proceed relatively quickly (5)</li> </ul>	5



# NEXT STEPS





# LEARN MORE AND GET INVOLVED

- Visit the project website at <https://www.thempc.org/Core/Fp> to learn more about the study.
- Take our surveys on freight-related challenges facing the region and for identifying locations with current or anticipated freight issues.



# NEXT STEPS



- Technical Tasks
  - » Land Use Recommendations
  - » Final Recommendations
  - » Final Report and Documentation
- Regional Freight Plan Update meeting planned for June 22, 2023

# CONTACT INFORMATION

Wykoda Wang, CORE  
MPO/MPC Project Manager  
[wangw@thempc.org](mailto:wangw@thempc.org)

Chris Lindsey, Consultant  
Project Manager  
[clindsey@camsys.com](mailto:clindsey@camsys.com)

