# Georgia Statewide Freight and Logistics Plan

#### **Modal Profile Meetings**

August/September 2011





### **Purpose of Today's Meeting**

- Present highlights of GDOT Freight Modal Profiles
- Discuss accuracy of data included in analysis
- Discuss issues and needs for each freight mode





### Agenda



- Review Georgia Freight and Logistics Plan task structure
- Describe content of modal profiles
- Provide summary of modal profile documents
  - » Statewide perspective
  - » Key freight hubs Savannah and Atlanta
  - » Issues and needs
    - Capability, capacity, connectivity framework builds off of Commission for a New Georgia F&L Task Force
- Summary of Key Findings



### **Task Structure**





Georaia



## **Description of Modal Profiles**

- Separate draft modal profiles developed for each freight mode
  - » Truck, rail, ports, air cargo
- Each modal profile includes
  - » Institutional analysis
  - » Infrastructure (supply)
  - » Economic and freight forecasts
  - » Demand
  - » Issues and needs
- Draft multimodal summary document complete
  - » Stitches together key findings of each mode in a multimodal framework



#### Statewide Perspective Georgia's Freight Infrastructure



#### GEORGIA'S FREIGHT INFRASTRUCTURE



• 4<sup>th</sup> largest and fastest growing port in the U.S.

 Extensive Class I rail network connecting the state and the region

#### • Premier road infrastructure

- » Well maintained Interstates connect major metro regions
- State highway system with extensive intrastate connectivity
- 10<sup>th</sup> busiest air cargo airport

Source: Consultant analysis.

Genetia de Planaportation Cilisco al Planning



#### Statewide Perspective Freight Mode Distribution

- Trucks dominate freight movement across the country
- Georgia's modal distribution is characterized by
  - Higher truck mode share due to regional distribution truck activity
  - » Higher rail mode share due to SE rail hubs
  - » Lower water flows due to limited inland waterways
  - » Low air cargo mode share relative other freight modes
    – similar to other regions





Georgia Source: FHWA FAF 2007 data. 7

#### Statewide Perspective Georgia's Primary Freight Hubs



 The vast majority of freight flows in the state are generated in two hubs

- » Savannah
- » Atlanta Metro Region

Source: 2007 TRANSEARCH data.



Georgia

8



#### Key Freight Hubs - Port of Savannah Largest Discretionary Port in the U.S.



							Growth 1980-	Growth 2008-
Port	1980	1990	2000	2008	2009	2010	2010	2010
Los Angeles	0.6	2.1	4.9	7.9	6.7	7.8	1,200%	-1%
Long Beach	0.8	1.6	4.6	6.4	5.1	6.2	675%	-3%
PANYNJ	1.9	1.9	3.1	5.3	4.5	5.3	179%	0%
Savannah	0.2	0.4	0.9	2.6	2.4	2.8	1,300%	8%
Oakland	0.8	1.1	1.8	2.2	2.1	2.3	188%	5%
Seattle	0.8	1.2	1.5	1.7	1.6	2.1	163%	24%
Hampton Roads (VA)	0.4	0.8	1.3	2.1	1.7	1.9	433%	-10%
Houston	0.3	0.5	1.1	1.8	1.8	1.8	498%	0%
Tacoma	n/a*	0.9	1.4	1.9	1.5	1.5	n/a	-21%
Charleston	0.2	0.8	1.6	1.6	1.2	1.4	586%	-13%
Total U.S. (Mainland)	7.4	14.4	27.5	39.7	34.3	42.3	436%	6%

Number of TEUs (millions)

Source: American Association of Port Officials, Consultant Analysis.

\* Tacoma did not track container data in 1980



Georgia

#### Key Freight Hubs - Port of Savannah Truck O-D Patterns





- Port generates over 5,000 trucks daily
- 63% of trucks connect with a DC in Savannah
  - » Later distributed across GA and U.S.
- Most other truck trips end in Georgia
- Local and long-haul routes are critical to the port's continued growth

Georaia

Source: GDOT Statewide Truck Lane Needs Identification Study Truck Origin-Destination Surveys, 2005.





Percent of Total

49%

7%

#### Key Freight Hubs - Port of Savannah Rail O-D Patterns

Trading

Partner

NC

**Rest of GA** 

Trading Partner	Intermodal Tons	Percent of Total
Atlanta	1,056,240	33%
TN	889,600	28%
FL	375,240	12%
NC	234,800	7%
AL	159,840	5%
LA	153,800	5%
IL	59,280	2%
Rest of GA	0	0%
Rest of U.S.	252,640	8%
Total	3,181,440	100%

731,932	7%
583,613	6%
460,128	4%
400,396	4%
371,560	4%
339,860	3%
305,872	3%
269,920	3%
869,868	8%
10,509,462	100%
	731,932 583,613 460,128 400,396 371,560 339,860 305,872 269,920 869,868 10,509,462

**Carload Tons** 

5,181,072

775 212

Source: 2007 TRANSEARCH data.

- Over 60% of the intermodal rail tonnage leaving Savannah goes to or through Atlanta metro
- Roughly half of the carload tons goes to locations in Georgia, but outside of Atlanta metro

<del>Z C - -</del>

Georgia

#### Key Freight Hubs - Port of Savannah Unconstrained Container Growth





 Number of containers moving through Savannah could more than triple depending on growth of the Savannah port complex

Source: Moffat & Nichol.



### Key Freight Hubs - Atlanta Metro Freight 2<sup>nd</sup> Largest "Inland Port" in U.S.



	Total Tons	
Metropolitan Region	(millions)	
Houston, TX	976,088	
Los Angeles-Long Beach, CA	860,836	
Chicago, IL*	636,160	
San Francisco-Oakland, CA	431,578	
Atlanta, GA*	428,103	
New Orleans, LA	406,461	
Dallas, TX *	361,445	
New York, NY	344,832	
Miami, FL	324,128	
Seattle, WA	294,384	

Source: 2007 BTS Commodity Flow Survey.

\* Inland ports

Atlanta is a southeast distribution hub for many supply chains

Atlanta is southeast rail hub for both Class I railroads

Atlanta has the 10<sup>th</sup> busiest air cargo airport in U.S.





#### Key Freight Hubs - Atlanta Metro Freight Intermodal Rail O-D Patterns

	Carload Tons	
State	Atlanta	Percent of Total
AL	3,789,178	24%
Rest of U.S.	3,078,776	20%
KY	1,989,623	13%
VA	1,495,970	10%
IL	1,158,458	7%
LA	841,480	5%
TN	703,034	4%
Rest of GA	655,760	4%
SC	567,932	4%
ОН	455,968	3%
NC	369,428	2%
Savannah	305,872	2%
FL	267,424	2%
Total	15,678,903	100%
Courses 2007 D		

Intermodal Tons			
		Percent of	
State	Atlanta	Total	
AL	1,159,640	13%	
IL	1,129,560	13%	
Savannah	1,056,240	12%	
LA	969,320	11%	
Rest of U.S.	839,880	10%	
TN	818,560	9%	
ТХ	641,280	7%	
FL	613,320	7%	
ΡΑ	483,680	6%	
SC	462,320	5%	
CA	376,200	4%	
NC	67,640	1%	
Total	8,617,640	100%	

Source: 2007 BTS Commodity Flow Survey.

• Alabama is a major trade partner for Atlanta rail flows

Remainder of flows are dispersed throughout the country



#### Key Freight Hubs - Atlanta Metro Freight Truck Trip Generation





 GPS-equipped truck data identifies that Atlanta is the source of the vast majority of truck trips

Source: FHWA/ATRI Freight Performance Data, 2010



#### Key Freight Hubs - Atlanta Metro Freight Truck Volumes



2009 Truck AADT



Highest truck volumes are also in the Atlanta metropolitan region

 » Long-haul truck traffic intersects with local distribution traffic

Georaia

Source: 2009 GDOT Vehicle Classification Data

congin Proportional of Record of Advancements Chiles of Flanning

#### Key Freight Hubs - Atlanta Metro Freight Truck Trip O-D Patterns





- Florida is the top trading partner with Georgia for truck trips
  - Largest economy in SE, 4<sup>th</sup> largest in U.S.
- Neighboring states are the primary trading partners served by truck
  - » Includes AL, SC, NC, TN

Source: 2007 TRANSEARCH data.







#### Key Freight Hubs - Atlanta Metro Freight HJAIA Dominates Georgia Air Cargo

Airport Name	Airport Location	Tonnage (2009)	Percent of Tonnage Total
Hartsfield-Jackson Atlanta International Airport	Atlanta	663,724	95.3%
Southwest Georgia Airport	Albany	26,076	3.7%
Savannah International	Savannah	5,666	0.8%
Hunter Army Air Field	Savannah	521	< 0.1%
Columbus Metropolitan	Columbus	175	< 0.1%
Rollins Air Force Base	Macon	141	< 0.1%
Bush Field	Augusta	19	< 0.1%
Others (14 included)	Various	8	< 0.1%
Total		696,330	100.0%

Source: U.S. DOT, Schedule T-100.



#### Key Issues and Needs - Capability Deepening Savannah Harbor



9

Several container ports on the east coast already have deeper harbors than Savannah

Port	Terminal	Channel Depth Range (Feet)	Berth Depth Range (Feet)
Savannah	Garden City	42	42-48
Charleston	Columbus Street	47	40
	North Charleston	47	40
	Wando Welch	47	45
Jacksonville	Blount Island	38	38
	Talleyrand	38	38
Miami	Lummus Island	36-44	42
	Seaboard Marine Terminal	36-44	50
NY/NJ	Maher Terminals	40	45
	АРМТ	40	45
	Port Newark	40	40-50
	Red Hook Marine	45	42
	Global Terminal	45	42
	NY Container Terminal	45	35-42
Virginia	APM Terminals (Portsmouth)	50	49-56
	Newport News	40	36-40
	Norfolk International Terminal	50	50-55
	Portsmouth	43	40
Source: Moffatt & Nichol.	Songla Paper line in a Remonstration	Georgia	

#### Key Issues and Needs - Capability Rail Height and Weight Clearances



- Vast majority of the Class 1 rail lines in Georgia are capable of handling 286k and double-stack service
- Shortest distance Atlanta-Savannah rail line is neither 286k capable nor can it handle double-stack service



CAPABILITY DEFICIENT RAIL LINES



Georgia

#### Key Issues and Needs - Capacity Rail Bottlenecks





- Most rail track in Georgia is single-track
- Key Class 1 rail lines are already experiencing significant bottlenecks
  - » Volumes on many of these lines are forecast to grow significantly





#### Key Issues and Needs - Capacity Long-Haul Interstate Corridors

- Today, most severe congestion is focused in the Atlanta region
- Today, localized peak hour congestion occurs at points throughout GA
- By 2050, entire long-haul corridors will experience severe congestion under current capacity conditions
- Similar, corridor-level congestion is expected throughout the U.S.



2050 Model V/C Ratio on Interstates

Source: GDOT Travel Demand Model Output, February 2010 version.

Georaia

Forgin Reportment of Recorgonited Collise of Planning



#### Key Issues and Needs - Connectivity Intermodal Facilities

- Atlanta is home to critical intermodal facilities
  - » Airport
  - » 4 Intermodal railyards
- Connectivity to these facilities will be impacted by urban congestion
- Continued rapid growth at the Port of Savannah will strain landside connections







## **Key Findings in Freight Modal Profiles**

• Georgia has top-tier freight facilities across all modes

» Port of Savannah is the key distinguishing freight feature in Georgia

#### • Freight is concentrated in two freight hubs

- » Atlanta and Savannah
- Key freight issues and needs in the state include
  - » Capability Port of Savannah, railroads
  - » Capacity continued freight growth will strain landside freight infrastructure
  - » Connectivity performance of last-mile connectors in Atlanta and Savannah will be impacted by local congestion





### Q&A

- Does the presentation describe the key freight flows in Georgia?
  - » Completeness, Accuracy?
- Does the presentation identify the primary issues and needs for Georgia's freight modes?
  - » Are some overemphasized? Are there some that are missing?

