CASE STUDY: ATLANTA REGIONAL FREIGHT MOBILITY PLAN

Introduction and Background

Atlanta is an important regional and national freight node for rail and trucking, with major railroads and important interstate routes traversing the region. Under the suggestions from the Atlanta Regional Freight Task Force, the Atlanta Regional Commission (ARC) and the Georgia DOT (GDOT) developed the Atlanta Regional Freight Mobility Plan (ARFMP or the Plan). ARC is the regional MPO, covering a 10-county region, and has authority to structure and develop plans, and in some instances, finance facilities. Issues addressed by ARC include land use, disposal of solid waste, water management and conservation, law enforcement agencies, planning for provision of health, and feasibility of consolidation of common services of political subdivision.

The ARFMP study began in October 2005 and was completed in early 2007. Funding was provided by ARC and GDOT. The study started shortly after the release of a study by the State Road and Tollway Authority suggesting that urban congestion could be substantially cut by converted HOV lanes to truck-only toll lanes.[1] The Plan later received an award from the Association of Metropolitan Planning Organizations for is breadth.[2]

The ARFMP was to be a complete documentation of the freight sector within the Atlanta area, covering everything from mapping the network to providing policy analysis and recommendations. The Plan was the region's first comprehensive examination of goods movement and freight mobility. The Plan's goals were to "enhance regional economic competitiveness by providing efficient, reliable and safe freight transportation while maintaining the quality of life in the region's communities." Plan objectives were:[3]

- Facilitation of understanding of freight mobility to the region's economy
- Development of dialogue between public and private sector for freight needs and strategies
- Integration of freight considerations into the public planning process
- Identification of the regional freight system; and
- Development of a goods movement action plan driven by data analysis and stakeholder input

[1] Janet Frankston, "Trucks Could get Toll Lanes on Interstates," *The Atlanta Journal - Constitution*, August 1, 2005.
[2] Ariel Hart, "Community News: ARC Honored for Anticipating Transportation Shortfalls," *The Atlanta Journal - Constitution*, November 8, 2008.
[3] Atlanta Regional Commission, *Atlanta Regional Freight Mobility Plan: Executive Summary*, May 2008. Accessed at http://www.atlantaregional.com/File%20Library/Transportation/Roads%20and%20Highways/tp_ARFMP_exec_summary_5-30-08.pdf

The development of the Plan was considered as "essential to the identification and prioritization of improvements that accommodate mobility of both people and good while mitigating the negative impacts on congestion, safety and communities."[4]

The Plan shows significant awareness of problems related to encroachment, giving much needed attention to land use compatibility issues. Five case studies were used to evaluate the potential for future land use conflicts. In order to accomplish the goals of the ARFMP, ARC solicited the input of various private sector entities, from major trucking companies to distribution center operators. The case studies focused on identifying land use conflicts as well as elements that were considered to be working well in the region. The plan also reviewed environmental justice issues and impacts that are often associated with freight facilities and corridors. The environmental justice analysis reviewed the externalities associated with freight such as noise, emissions, air quality, and safety concerns.

Atlanta's freight planning effort is made up of not only the final Plan report, but also of additional supporting documents that led to the finalized Plan. The Plan's development was assisted by committees that were set up to provide input. Further guidance was delivered by the Atlanta Freight Task Force, whose participation was broadened to include: steering and technical committee guidance, participation in a goals and objectives, input into project selection and prioritization processes that were the output of the ARFMP, and identification of quick-start projects. The steering committee met five times and the technical advisory committee nine times throughout the study's duration. The final report consists of chapters that:

- Describe the stakeholder outreach
- Identify existing conditions
- Describe the economic role of freight transportation
- Develop freight forecasts
- Evaluate projects and strategies for improving regional goods mobility, and
- Provide plan strategies and recommendations
- Provide an implementation plan with identified projects to begin improving mobility

Freight mobility Needs Assessment and Priority Freight Highway Network

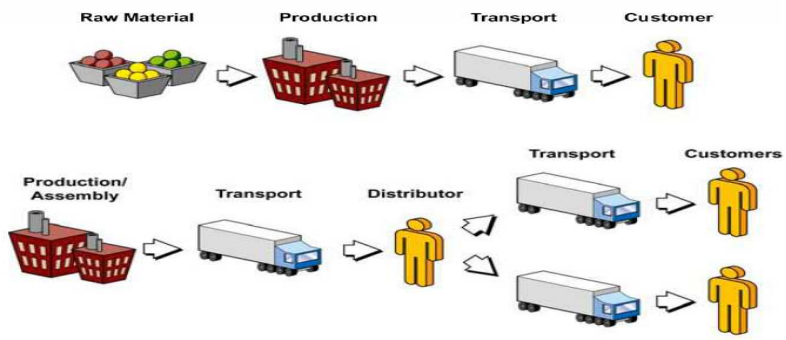
One critical element of the ARFMP was the Freight Mobility Needs Assessment (FMNA), an inventory of existing conditions within ARC's region. FMNA provided a baseline to analyze the economic impact of freight within the region, as well as land use and environmental justice impacts. Within this inventory, a profile of the region's freight system was created as well as a schematic of the modal segmentation of freight movements in the Atlanta region.[5] The ARFMP also developed schematics to show how distribution chains operated both internationally and regionally. These are illustrated in Figure 1.

[4]Ibid, p. 1.

[5] For example, the regional rail market segment estimated that 18 percent of the rail freight in the region was transported via truck to/from a regional rail yard. This highlighted how important 'access' to rail yards and intermodal connections was for the overall freight network. The truck market segment was classified into a regional and local component and analyzed from this standpoint. The local truck market segment it was noted represents the least opportunity for strategically directing regional solutions and funding options due to the its use of the local roadways and the number of users that it had to serve throughout a very large region.

FIGURE 1

DISTRIBUTION SCHEMATICS[6]

<table>
<tr>
<td> 
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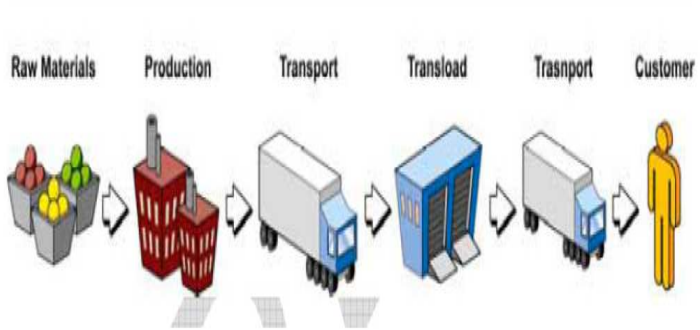
<td> 
</td>
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<tr>
<td>Domestic Distribution Local/Regional</td>
<td>Domestic Regional Distribution</td>
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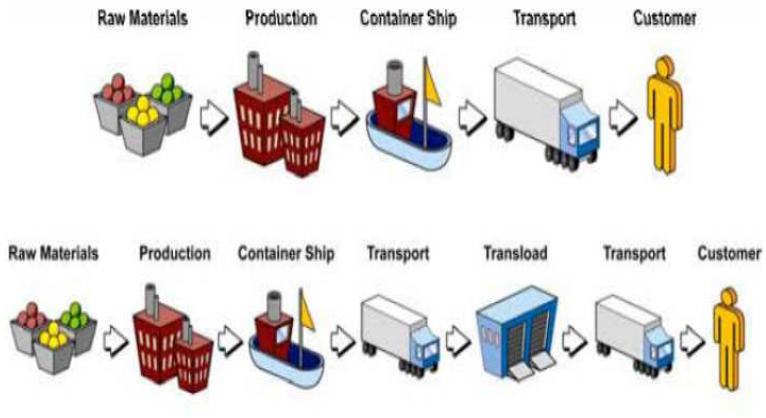
<td> 
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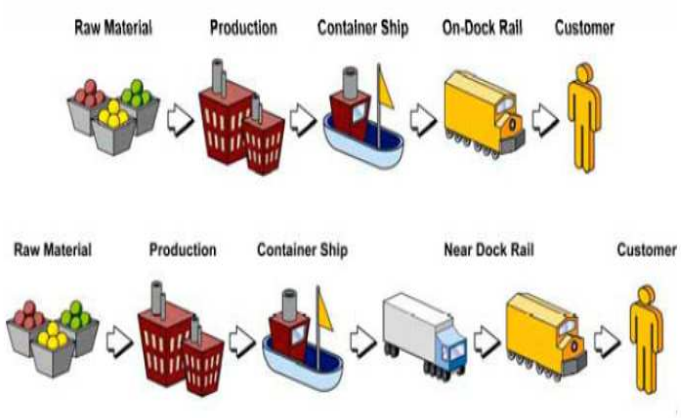
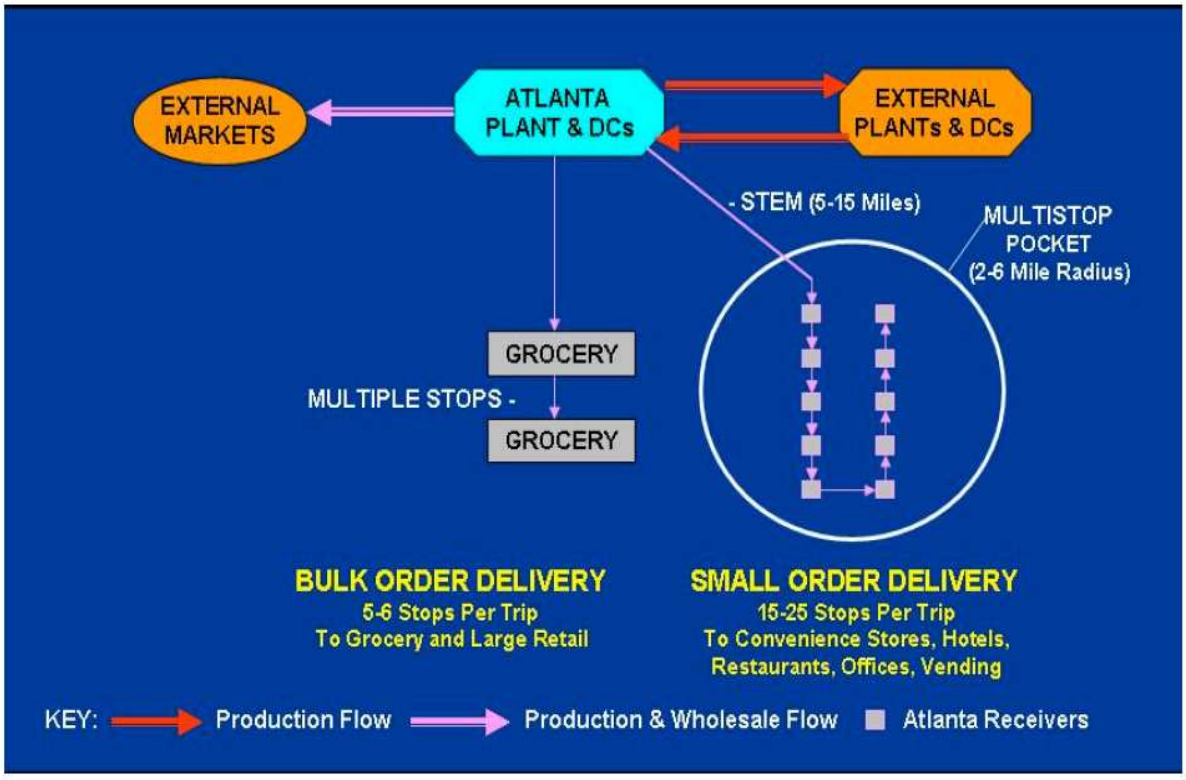
<td> 
</td>
</tr>
<tr>
<td>International Local Regional Distribution</td>
<td>International Rail Distribution</td>
</tr>
</table>

[6] Wilbur Smith Associates, Global Insight, Georgia Institute of Technology, and Street Smarts, *Atlanta Regional Freight Mobility Plan*, February 2008. Retrieved from Atlanta Regional Commission website: http://www.atlantaregional.com/documents/tp_ARFMP_final_report_2-6-08.pdf , pp. 17-18.

Figure 2 shows a flow chart that depicts the food distribution supply chain.

FIGURE 2
FOOD DISTRIBUTION SUPPLY CHAIN[7]

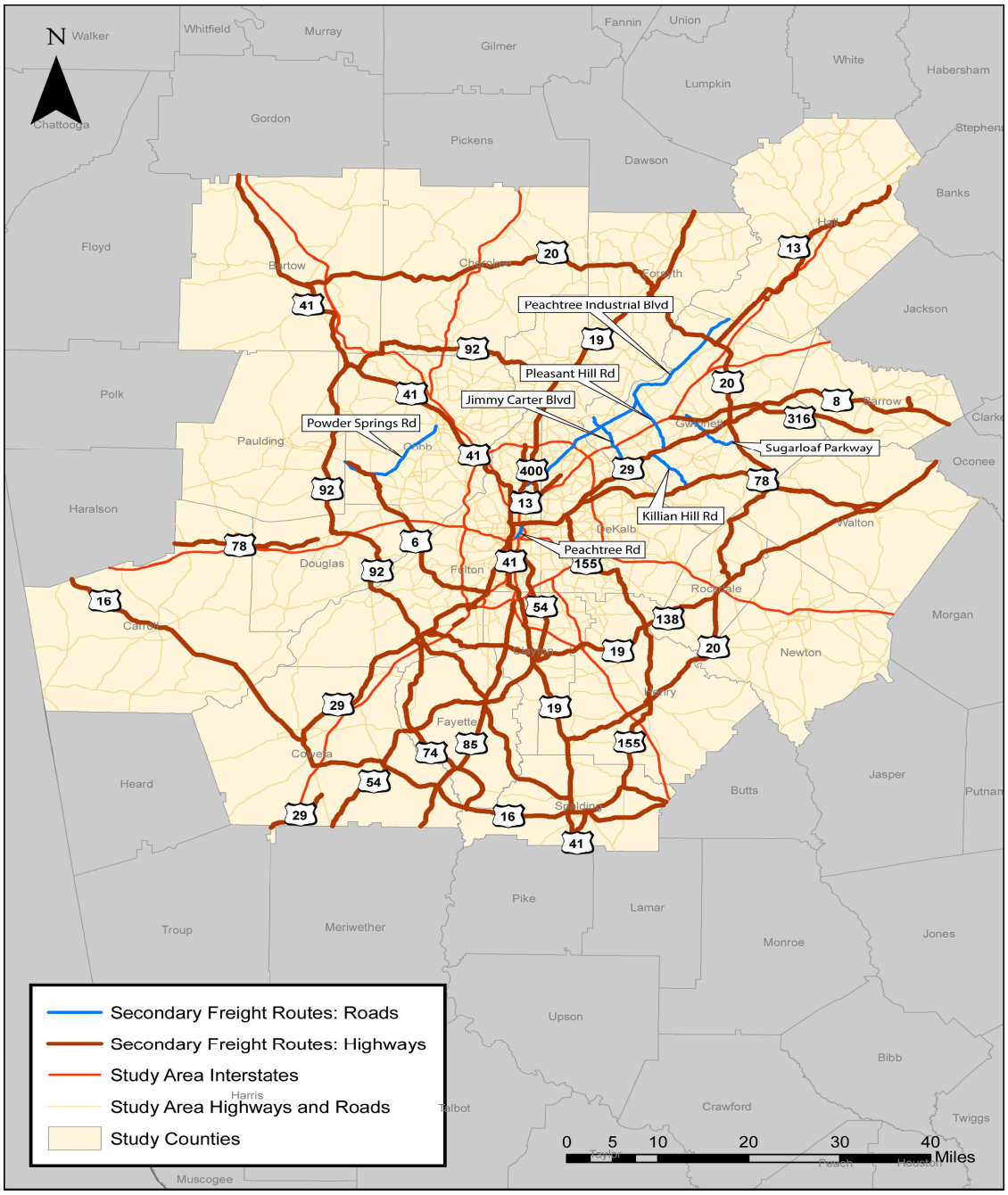


The final ARFMP concluded that operational enhancements to regional and local highways, as well as local land use and zoning regulations, provided the most effective approach to improving mobility and reducing emissions. The Plan recommended a regional priority freight highway network. Figure 3 shows the current strategic freight highway subsystem.

[7] Wilbur Smith Associates, Global Insight, Georgia Institute of Technology, and Street Smarts, *Freight Mobility Needs Assessment*. Accessed at http://www.atlantaregional.com/File%20Library/Transportation/Roads%20and%20Highways/tp_ARFMP_needs_assessment_8-24-07.pdf, p. 123.

FIGURE 3

ATLANTA REGIONAL STRATEGIC FREIGHT HIGHWAY SUBSYSTEM[8]



[8] Wilbur Smith Associates, Global Insight, Georgia Institute of Technology, and Street Smarts, *Freight Mobility Needs Assessment.* Accessed at http://www.atlantaregional.com/File%20Library/Transportation/Roads%20and%20Highways/tp_ARFMP_needs_assessment_8-24-07.pdf, p. 84.

Two rationales underpinned the recommendation for a regional priority freight highway network: (1) to focus the freight plan's scope, and (2) to guide limited resources. Figure 4 shows the proposed Atlanta Regional Priority Freight Highway Network (PFHN).

FIGURE 4

RECOMMENDED PRIORITY FREIGHT HIGHWAY NETWORK[9]

The PFHN was based these criteria:

- Average annual truck volume
- Average annual truck percentage
- Connectivity to significant freight generator
- Designation as truck route

[9] Wilbur Smith Associates, Global Insight, Georgia Institute of Technology, and Street Smarts, A*tlanta Regional Freight Mobility Plan*, February 2008, p. 22.

- Stakeholder identified route
- Intermodal connectors
- Role in terms of servicing local versus regional freight needs.

PFHN stem routes bear close relationship to economic geography and are routes for getting between businesses, as opposed to routes that businesses grew up around. This was considered a crucial consideration for network and land use management, because cross-town corridors from a trucking perspective are most efficient when they are not heavily laden with local turning traffic from roadside development. Congestion and bottlenecks were identified in the stakeholder interviews as barriers to economic growth, and as sources of critical conflict that arises. A distribution group, for example, noted that they have turned away business due to bottlenecks. Stakeholders provided detailed views of areas that had slow operations to assist in GIS mapping development. The stakeholders noted that the region's network of surface routes contribute to the region's congestion and air quality issues. Atlanta's road network is radial in nature. While north-south trips are relatively fluid, east-west trips are a major source of delay. The absence of adequate traverse surface arterials leads to over-use of the interstate system and resultant back-ups from off ramps and merging ramps back into local communities.

Assessing Land Use

The ARFMP looks at both non-industrial and industrial land uses to ensure a sustainable coexistence. For NCFRP 24's interests, the major focal points are the Plan's land use documentation and recommendations, incorporation of both public and private stakeholder survey responses, the cataloging of freight network and infrastructure within the Atlanta area.[10] Also important from the perspective of NCFRP 24 are ARFMP's recommendations regarding the development of freight-supportive land use guidelines at the local level starting with the development of a freight zoning regulation, site layout, and guidance on design standards as a quick reference guide for local planners.

Although the documentation of freight infrastructure and the inclusion of various stakeholders in the process are extremely important, the main component of the Plan of interest for purposes of NCFRP 24 is the focus on land use and encroachment issues. As Figure 5 shows, the freight mobility plan and scope of land use assessment was a critical component that was reviewed.

[10] Wilbur Smith Associates, Global Insight, Georgia Institute of Technology, and Street Smarts, A*tlanta Regional Freight Mobility Plan*, February 2008, pp. 43-46, and pp. 67-68.

FIGURE 5
ARFMP SCOPE OF WORK[11]

The "Land Use Evaluation" section (which is found within the Existing Conditions chapter) gives a brief overview of Atlanta's land use situation in terms of existing freight conditions. It identifies how key freight corridors are experiencing encroachment by non-industrial uses, which is driving freight operations to the fringe of the city. It notes that with 'explosive' growth and land development, the ARC region faces major challenges in accommodating future freight facilities and associated movements, while preserving residential and commercial mobility. Key identified land conflicts include:

- Local attention to freight in the ARC region is currently inadequate to effectively address freight needs.
    - Specifically, intra-municipal and corridor-level impact considerations were considered to be de minimus.
- Current comprehensive planning and zoning tools do not take into account the unique nature of freight and industrial uses and, instead, focus on traffic volume and congestion associated with those types of uses.
- Few planning documents or processes discuss characteristics and impacts of freight-intensive land uses in terms of the actual conflicts that occur, mobility impacts, or quality of life impacts.

[11]Wilbur Smith Associates, Global Insight, Georgia Institute of Technology, and Street Smarts, A*tlanta Regional Freight Mobility Plan*, February 2008, p. 2.

    - Without addressing the development of these types of facilities and their specific and unique characteristics, the potential for poorly-coordinated land use and negative impacts.
- Recognition that the design of communities, the transportation network and the region of goods movement can improve mobility and access for all.
- Predictability of where logistics and freight facilities will locate in the future is a function of just-in-time distribution and logistics management, land costs and availability, and access to corridors and intermodal facilities.
    - Therefore, it is possible to take a proactive approach to planning for inevitable growth in freight.
- Freight supportive land use is critical to sustaining the Atlanta region's mobility, economic vitality, and quality of life.

The land use section ends with a list of objectives for future transportation planning efforts, these are:

- Preserve freight mobility as the region continues to develop
- Coordinate freight and non-freight land uses and mobility needs
- Ensure adequate segregation and protection of different land uses
- Build goods movement and logistics needs into land development and site design[12]

The Plan later focuses on discussing land use conflicts and encroachment of residential use upon freight areas in the "Land Use Conflicts" section (which is found in the Future Freight Forecasts and Needs chapter). The Plan highlights the need for local governments to adequately plan for the potential inclusion of freight operations regardless of whether these developments are currently expected.

Two areas are reviewed within this section—encroachment of residential use into traditional industrial corridors/areas and freight district redevelopment. The encroachment subsection briefly discusses the impact of encroachment and land use conflicts upon freight operations. Such development, if done without adequate considerations for freight needs, often leads to poor access for freight facilities with increased traffic during peak travel periods and mitigation controls that negatively constrain freight activities, such as noise abatement policies.[13] The freight district redevelopment subsection discusses current key areas of growth, identifies a few future areas of growth, and identifies existing freight and commercial areas that will need upgraded investments for future viability.

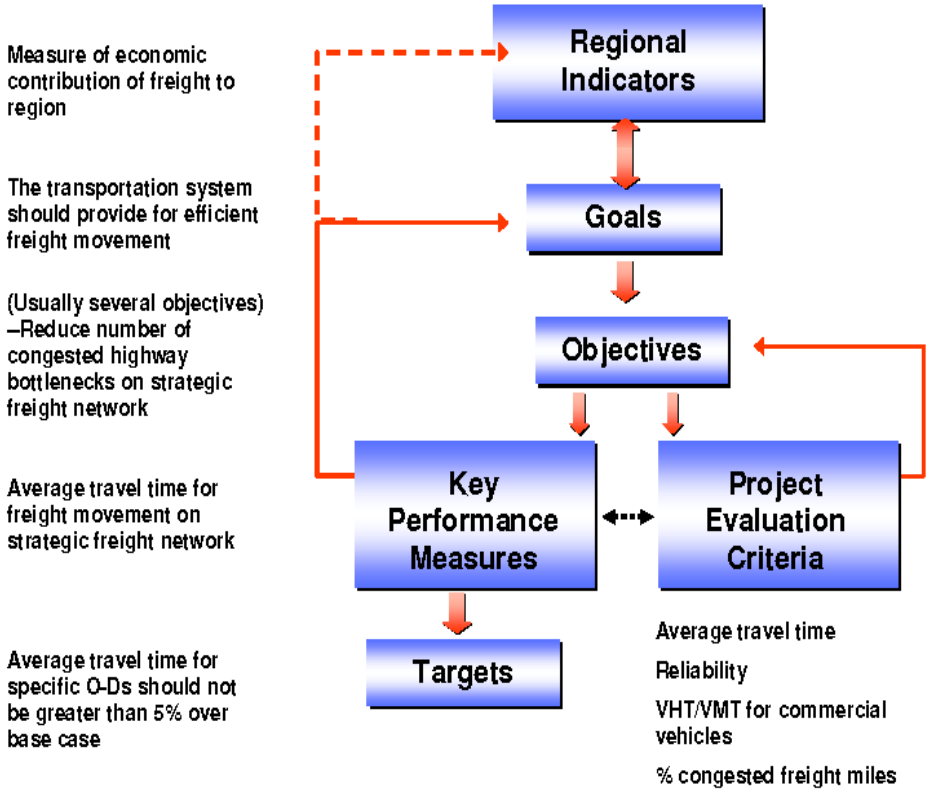
The Plan also highlights the need for education and influence efforts by ARC. It suggests that relaying documented benefits of freight operations will help reduce the ever-increasing NIMBY ("Not in My Backyard.") attitude. Additionally, because ARC doesn't have direct control over

[12] Wilbur Smith Associates, Global Insight, Georgia Institute of Technology, and Street Smarts, At*lanta Regional Freight Mobility Plan*, February 2008, pp. 43-45.
[13] Wilbur Smith Associates, Global Insight, Georgia Institute of Technology, and Street Smarts, At*lanta Regional Freight Mobility Plan*, February 2008, pp. 67-68.

land uses, it needs to offer its resources to assist local governments in their planning efforts in order to influence a greater awareness of freight planning and land use considerations.[14]

The Plan incorporates a large GIS component to map freight facilities throughout the 10-county ARC region. As part of the needs assessment process, a set of performance measures was utilized to guide the evaluation of the proposed freight transportation plan for the region. Figure 6 shows the performance measure framework that was utilized.

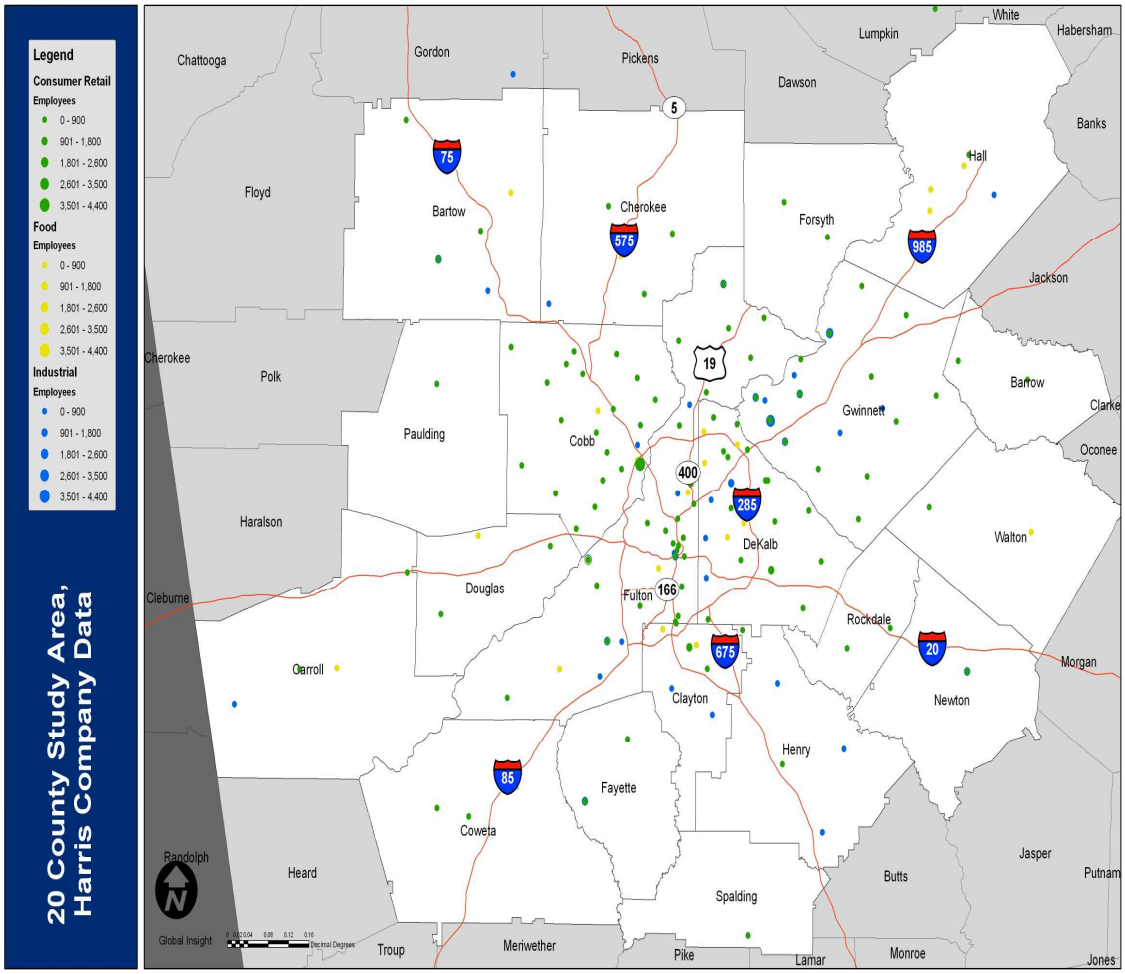
FIGURE 6
PERFORMANCE MEASURES FRAMEWORK[15]



Figures 7 through 12 show a snapshot of the types of GIS mapping that was conducted and can be found in the both the ARFMP and FMNA documents.

[14] Wilbur Smith Associates, Global Insight, Georgia Institute of Technology, and Street Smarts, A*tlanta Regional Freight Mobility Plan*, February 2008, pp. 69-70.
[15] Wilbur Smith Associates, Global Insight, Georgia Institute of Technology, and Street Smarts, *Freight Mobility Needs Assessment*, p. 5.

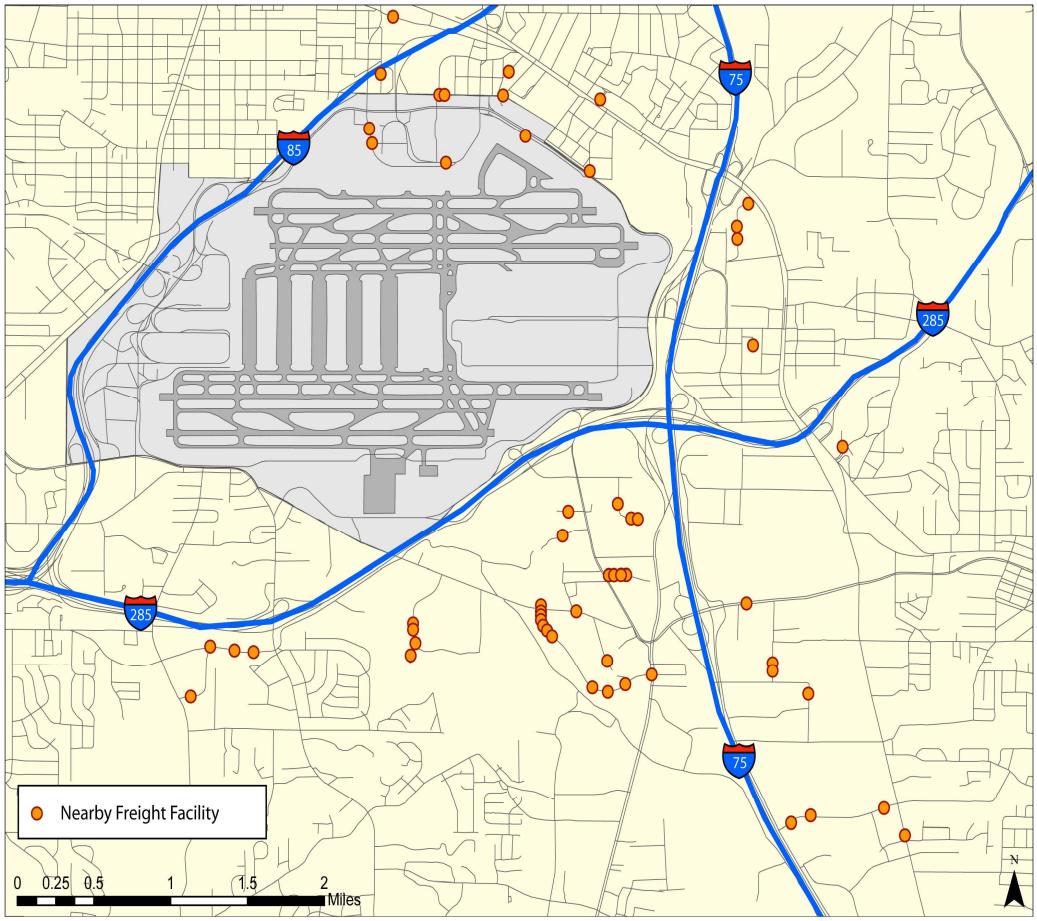
FIGURE 7
DISTRIBUTION CENTERS[16]



[16] Wilbur Smith Associates, Global Insight, Georgia Institute of Technology, and Street Smarts, A*tlanta Regional Freight Mobility Plan*, February 2008, p. 35.

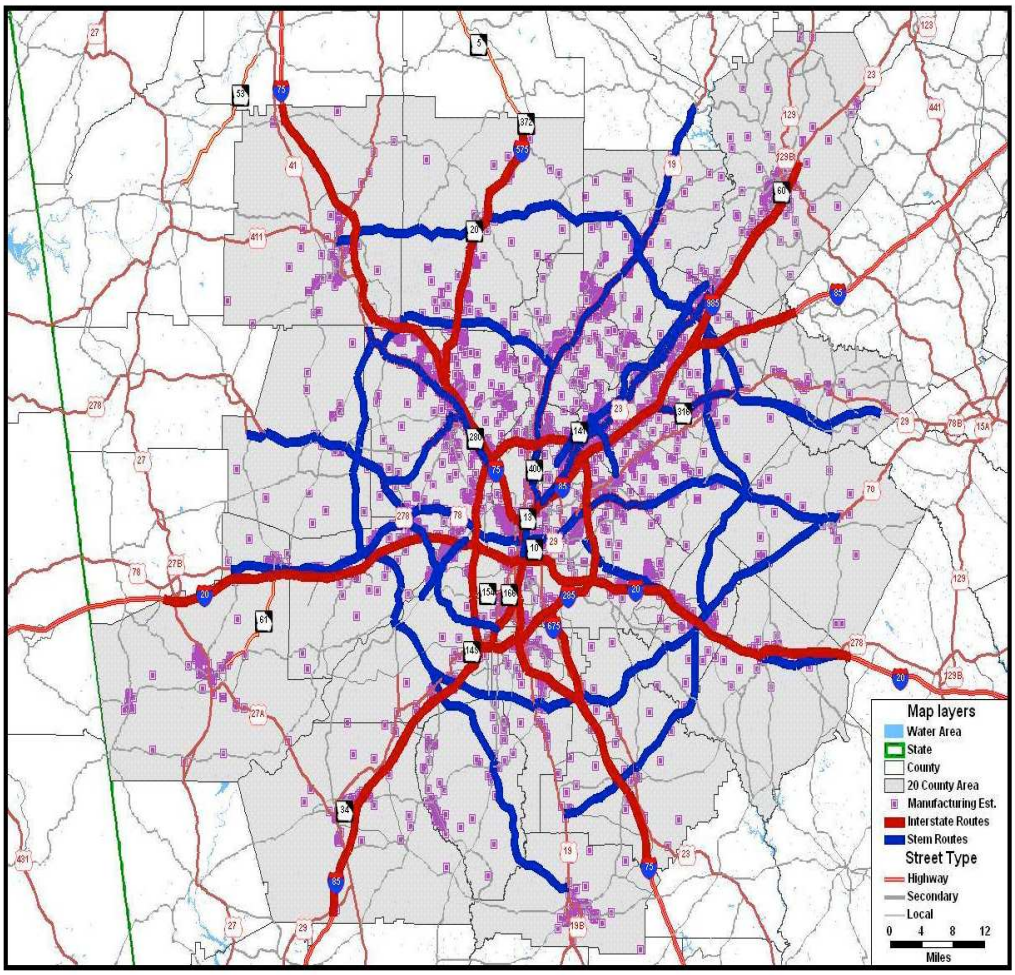
FIGURE 8

AIR CARGO ACCESS ROUTES[17]



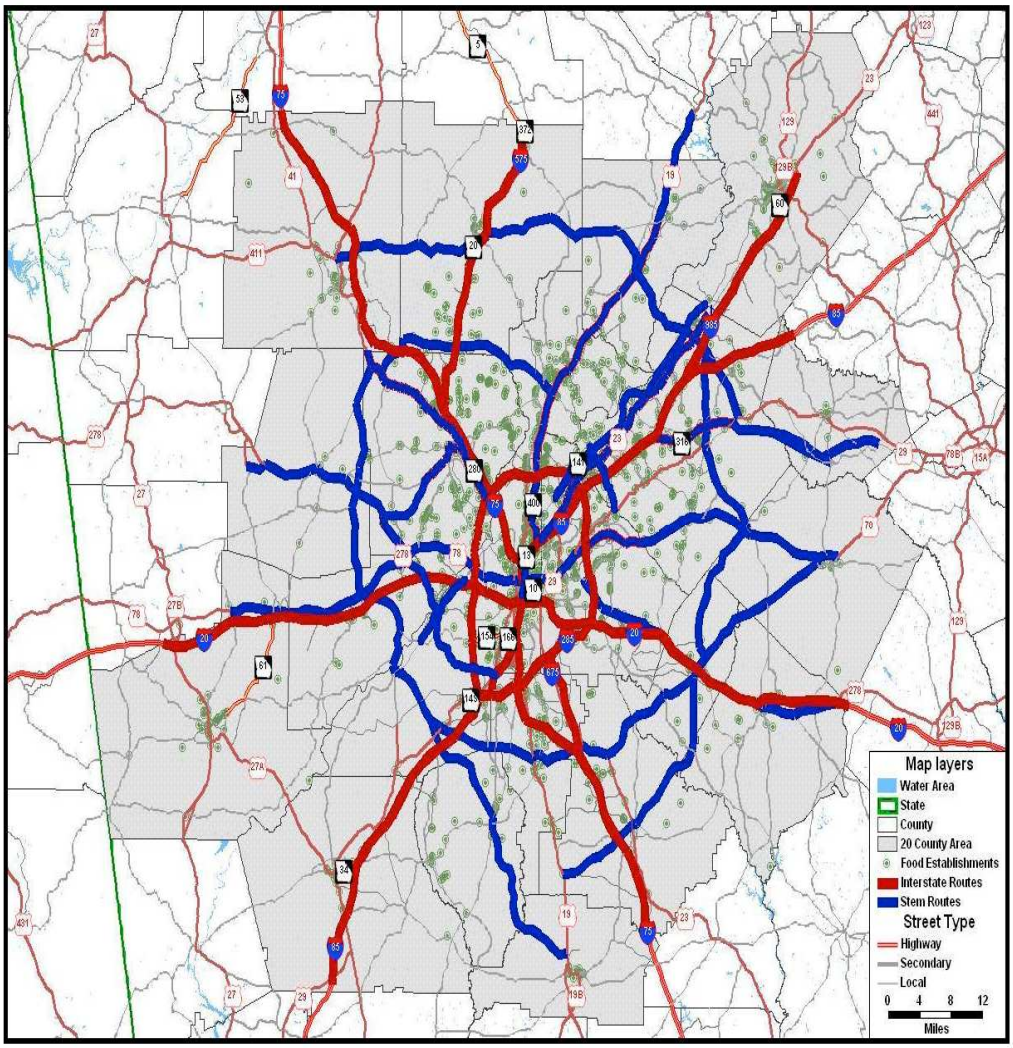
[17] Wilbur Smith Associates, Global Insight, Georgia Institute of Technology, and Street Smarts, A*tlanta Regional Freight Mobility Plan*, February 2008, p. 32.

FIGURE 9
MANUFACTURING FACILITIES[18]



[18] Wilbur Smith Associates, Global Insight, Georgia Institute of Technology, and Street Smarts, A*tlanta Regional Freight Mobility Plan*, February 2008, p. 96.

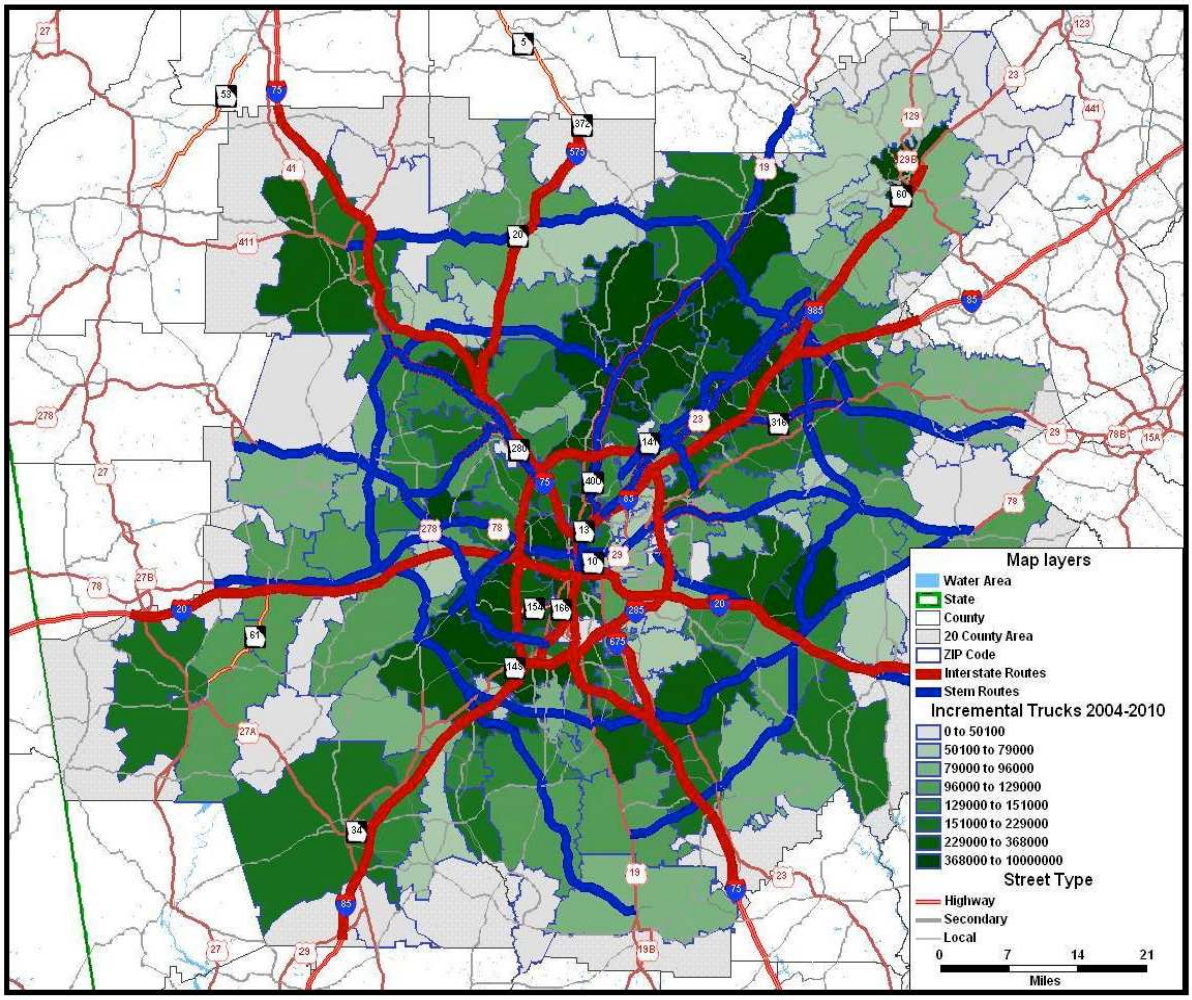
FIGURE 10
FOOD SECTOR ESTABLISHMENTS[19]



[19] Wilbur Smith Associates, Global Insight, Georgia Institute of Technology, and Street Smarts, *Freight Mobility Needs Assessment*, p. 98.

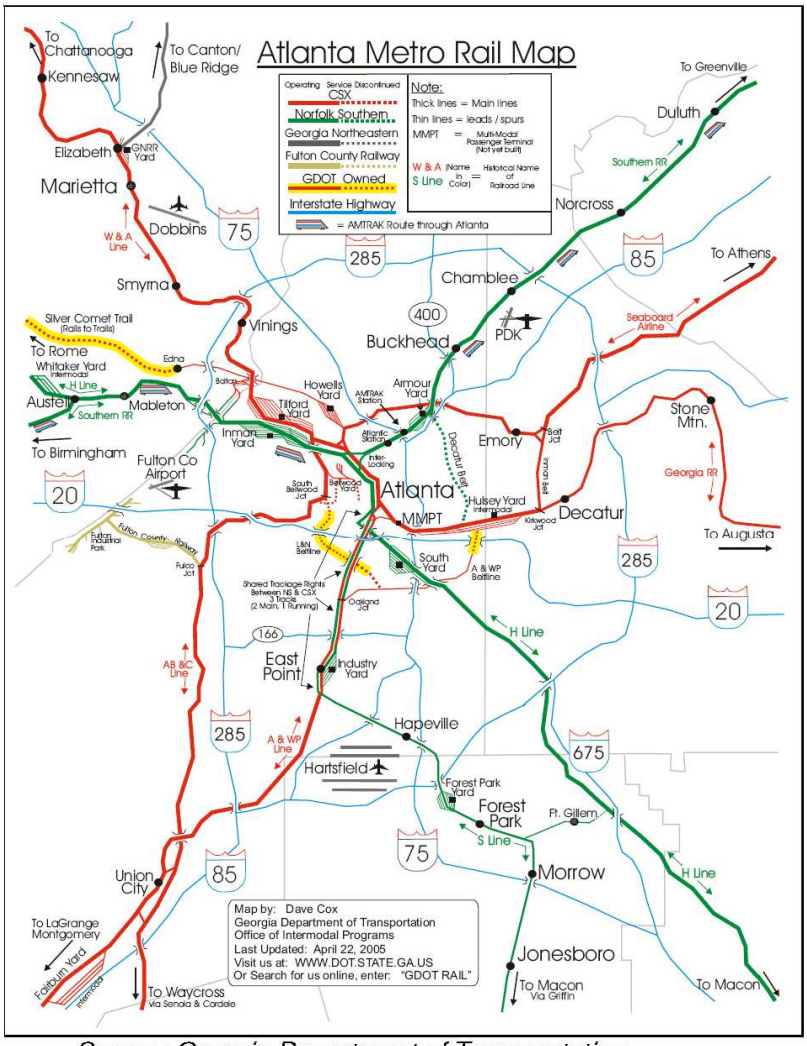
FIGURE 11

FREIGHT HIGHWAY SUB SYSTEM AND TRAFFIC GROWTH BY ZIP CODE[20]



[20] Wilbur Smith Associates, Global Insight, Georgia Institute of Technology, and Street Smarts, *Freight Mobility Needs Assessment*, p. 88.

FIGURE 12
REGIONAL RAIL NETWORK[21]



Source: Georgia Department of Transportation

Plan Strategies and Recommendations

After the Plan's analysis of the Atlanta region's current freight situation, it goes through a screening process for potential strategies and recommendations. The screening process that was developed created types of projects and specific examples that were organized into 14 categories:

1. Mitigation of interchange bottlenecks
2. Maintain and enhance intermodal connectors
3. Addition of mainline rail capacity
4. Rail grade separation

[21] Wilbur Smith Associates, Global Insight, Georgia Institute of Technology, and Street Smarts, A*tlanta Regional Freight Mobility Plan*, February 2008, p. 26.

5. ITS technologies
6. Management and operational strategies public sector
7. Management and operational strategies private sector
8. Preserve lands for freight use
9. Implement institutional changes to improve feasibility of freight projects of regional significance
10. Enhance freight network safety
11. Improve data and analytical methods
12. Promote regional approaches and leadership
13. Enhance public awareness of freight transportation
14. Expand highway infrastructure

Within this section is a list of questions asked during the screening criteria evaluation. This list provides some excellent questions that planning organizations and local governments can use when evaluating potential projects. Examples include:[22]

- **Community Impacts**: How much will the project or strategy reduce community impacts associated with goods movement along transport corridors and freight intensive areas, including those in dense areas?
- **Land Use Impacts – Transport Corridors**: How much will the project or strategy reduce land use impacts associated with goods movement along transport corridors?
- **Land Use Impacts – Intermodal/Warehouse/Distribution Facilities**: How much will the project or strategy reduce land use impacts associated with goods movement between intermodal yards, warehouse and distribution facilities?

Figure 13 shows the screening process matrix.

[22] Wilbur Smith Associates, Global Insight, Georgia Institute of Technology, and Street Smarts, A*tlanta Regional Freight Mobility Plan*, February 2008, pp. 80-81.

FIGURE 13
SCREENING PROCESS FOR PROJECT CATEGORIES[23]

Project category	Evaluation Criteria															
	Truck Diversion	Highway Congestion	Rail Congestion	Travel Time Reliability	Freight Trip Times	Off-peak Shift	Freight Vmt	Freight Vht	Safety	Emissions	Community Impacts	Land Use-corridors	Land Use - Industrial Centers	Economic Competitiveness	Job Opportunities	Project Costs
Highway Capacity	●	●	◒	◒	●	◒	○	◒	◒	○	○	○	○	◒	○	●
Interchange Bottlenecks	○	●	○	◒	◒	○	○	◒	●	◒	○	○	○	○	○	●
Intermodal Connectors	○	○	○	○	○	○	○	○	○	○	◒	◒	◒	○	○	◒
Mainline Rail Capacity	●	◒	●	○	○	○	○	○	○	○	○	○	○	◒	○	●
Grade Separation	○	○	○	○	○	○	○	○	◒	○	●	○	○	○	○	●
ITS Technology	○	○	○	○	◒	○	○	○	○	○	○	○	○	○	○	○
Public Sector Operations	○	○	○	○	◒	○	○	○	◒	○	○	○	○	○	○	○
Private Sector Operations	○	◒	○	◒	◒	●	○	○	○	○	○	○	○	○	○	○
Institutional Changes for Regional Projects	●	●	●	○	◒	○	○	◒	◒	○	○	●	●	●	◒	○
Safety	○	●	○	●	●	○	○	○	●	○	○	○	○	◒	○	◒
Preservation Of Freight Lands	○	◒	○	○	○	◒	◒	◒	○	◒	●	●	●	●	●	○
Improve Data And Analysis	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○
Regional Leadership	◒	◒	◒	○	◒	○	◒	◒	◒	◒	●	○	●	●	○	○
Public Awareness	○	○	○	○	○	○	○	○	◒	○	◒	◒	◒	○	○	○

Legend:
● High
◒ Medium
○ Low

After the screening section, the report puts forth its recommendations. The beginning of the chapter outlines various aspects of projects that affect freight operations, such as planning and programming, land use planning, transportation planning, and stakeholder involvement. Included are directives to improve freight operations. Notable directives include:[24]

- Making freight an integral component of the regional planning and programming processes (Planning and Programming)
- Preservation of existing freight-intensive areas (Land Use Planning)
- Promotion of integrated logistic centers/freight villages—the clustering of freight uses
- Development and implement freight supportive land use guidelines (Land Use Planning)

[23] Wilbur Smith Associates, Global Insight, Georgia Institute of Technology, and Street Smarts, At*lanta Regional Freight Mobility Plan*, February 2008, p. 82.
[24] Wilbur Smith Associates, Global Insight, Georgia Institute of Technology, and Street Smarts, At*lanta Regional Freight Mobility Plan*, February 2008, pp. 83-84.

- Need for foresight in long range transportation and land use planning, and the shared interests of the private and public sector (Transportation Planning)
- Incorporate county-level freight needs assessments and strategies into the country transportation plan

Specific policy and approach recommendations follow, including:[25]

- Provide local government freight-related training and capacity building
- Educate the public about the existence, role, and benefits of freight within the community
- Prepare a regional truck route plan and identify freight districts
- Incorporate the Land Use Coordinating Committee (LUCC) into the discussion in order to help identify opportunities to preserve freight-related areas and corridors
- Produce freight-related land use guides and site design standards
- Implement an off-peak delivery pilot program promoting off peak deliveries in key commercial areas

Lastly, the Plan puts forth an implementation plan that documents freight-related projects that should be undertaken, along with a description, cost estimate, and list of potentially responsible agencies for each project. Notable projects include:[26]

- Incorporating freight-supportive policies in future transportation-related plans, which include preserving current freight-focused land uses. This may include the promotion of land acquisition and private sector incentives for redevelopment of outdated or undesirable freight facilities.
- Adding "ex-officio" freight industry representatives to relevant committees, such as LUCC.
- Develop a freight planning newsletter.
- Coordinate with peer regions to exchange information, ideas, and strategies.
- More detailed studies of areas with land use conflicts and what can be done to protect freight land use.
- Preserve in-town terminals.[27]

The report notes that congestion mentioned by real estate advisors was not often factored into site location by distribution centers. One real estate advisor addressed the issue by avoiding a particular area of town if it was deemed that the distribution center would rely heavily on a known congested freeway.[28] The Plan does not further explore this interesting detail. Thus, a potential recommendation is to work with and educate real estate advisors about land use and location selection so that they can better-assist distribution operations in selecting more suitable

[25] Wilbur Smith Associates, Global Insight, Georgia Institute of Technology, and Street Smarts, At*lanta Regional Freight Mobility Plan*, February 2008, pp. 84-88.
[26] Wilbur Smith Associates, Global Insight, Georgia Institute of Technology, and Street Smarts, At*lanta Regional Freight Mobility Plan*, February 2008, pp. 108-119.
[27] Wilbur Smith Associates, Global Insight, Georgia Institute of Technology, and Street Smarts, At*lanta Regional Freight Mobility Plan*, February 2008, p. 105.
[28] Wilbur Smith Associates, Global Insight, Georgia Institute of Technology, and Street Smarts, At*lanta Regional Freight Mobility Plan*, February 2008, p. 43.

locations. This could also be an opportunity to decrease the likelihood of a large operation moving into an area where incompatible uses currently "peacefully" coexist due to the relatively small size of current or former industrial tenants.

In summary, the Plan recognizes that "simply implementing larger infrastructure investments will not achieve the goal of both enhancing freight mobility and mitigating the negative community impacts associated with freight movement."[29] It analyzes and puts forth various recommendations and directives, of which, many are specifically related to land use awareness when dealing with freight operations. Due to the ARFMP's completeness and keen focus on land use pertaining to freight operations, the Plan can serve as a model for other organizations to begin a freight planning and documentation effort.

Various studies and analysis were conducted prior to the final report, which were used in its formulation. Much of this information is contained within the *Draft Needs Assessment Report* and the *Community & Environmental Impact Scan and Assessment* reports.[30] The latter is particularly impressive, as it provides five case studies on current and potential land use conflicts and encroachment potential within the studied localities.

Atlanta Freight Advisory Task Force

An important precursor to the development of the ARFMP was the establishment of the Atlanta Freight Advisory Task Force (FATF) in 2003. The task force was established as part of ARC regional planning process. The FATF meets quarterly, and its membership consists of public and private freight representatives, including railroads, trucking, airport, chambers of commerce and community improvement districts. The FATF goals were to:

- Improve goods and services movement in the region
- Improve reliability of goods movement
- Minimize the cost of goods movement
- Improve characteristics of transportation system for freight movement

Objectives for the FATF were to:

- Provide input on policies and improvements for freight mobility
- Identify freight mobility characteristics and needs
- Highlight the importance of freight to the region
- Improve safety of the transportation system
- Prioritize freight transportation needs and investments

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[29] Wilbur Smith Associates, Global Insight, Georgia Institute of Technology, and Street Smarts, At*lanta Regional Freight Mobility Plan*, February 2008, p. 72.

[30] http://www.atlantaregional.com/html/1767.aspx; http://www.atlantaregional.com/File%20Library/Transportation/Roads%20and%20Highways/tp_ARFMP_needs_assessment_8-24-07.pdf; http://www.atlantaregional.com/File%20Library/Transportation/Roads%20and%20Highways/tp_community_assessment_report_8-16-07.pdf

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GDOT has also commissioned a statewide freight committee, and this group is now developing a statewide freight plan.

Truck Route Master Plan

As already noted, the ARFMP found that the region has discontinuous routes serving freight truck traffic. Many truck routes are not logical in that they may stop at jurisdictional boundaries or conflict with restrictions placed in adjacent communities. It was also found that the official truck route map for Atlanta had not been formally updated in over 25 years. Additional study was recommended to address issues pertaining to truck routing and operations. Figure 14 shows the designated truck routes in the region prior to the study.

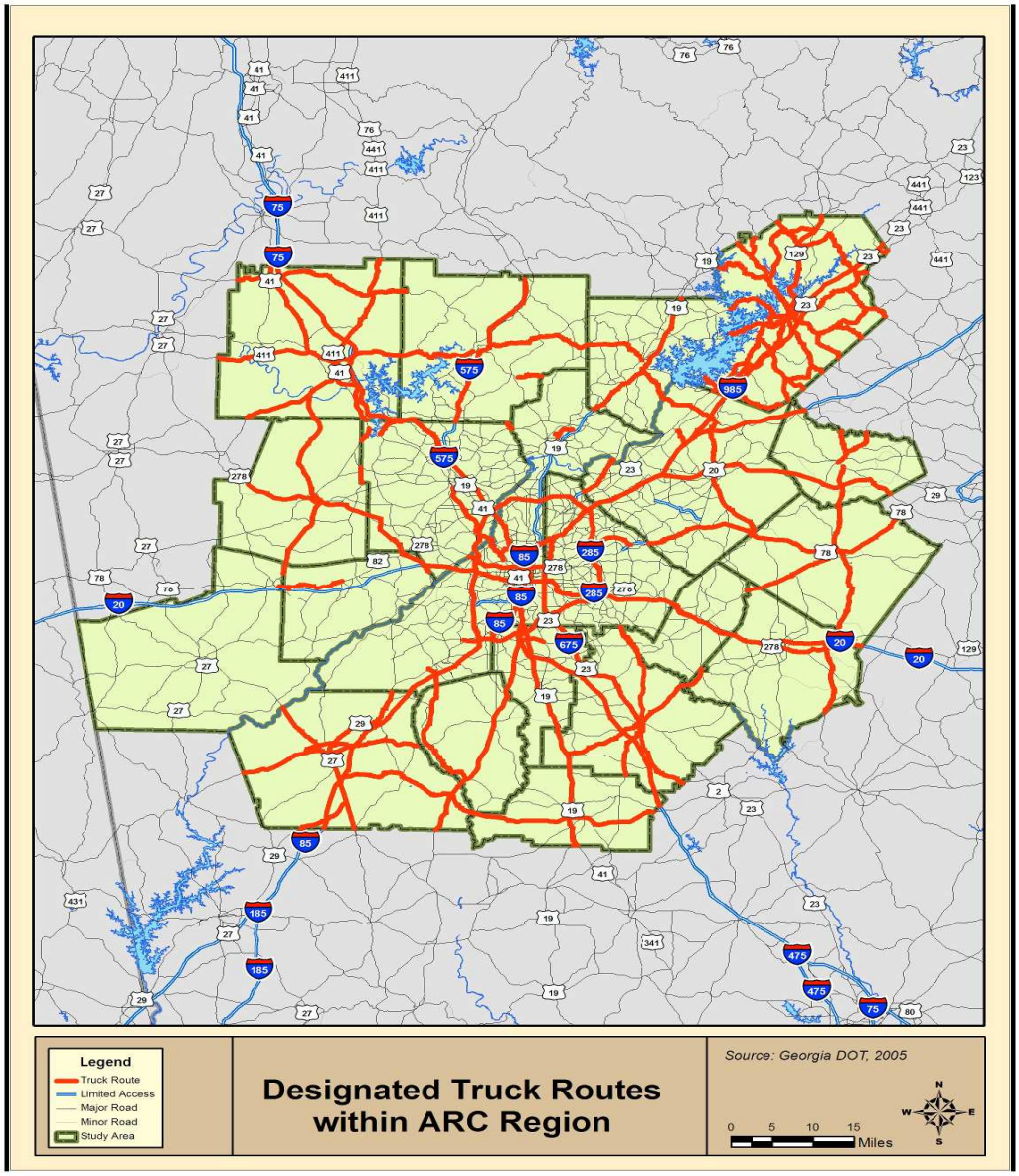
This follow-up activity included the development of a regional truck route network as well as associated policies and guidelines. It is known as the Atlanta Strategic Truck Route Master Plan (ASTRoMaP).

The objectives for this study included:

1. Implement follow-up recommendations from the Atlanta Regional Freight Mobility Plan to ensure that truck traffic is directed to roadways whose physical and operational characteristics can effectively accommodate truck traffic.
2. Identify a Regional Strategic Truck Route Network concept to direct and manage freight movement.
3. Identify supportive improvement strategies to implement the regional truck route concept, including identifying priority road-railway at-grade crossings for removal.
4. Develop access management best practices to protect freight corridors.

The truck route plan was issued in early 2009 and was adopted by ARC in June 2009.

FIGURE 14
EXISTING TRUCK ROUTES IN REGION[31]



Comments and Criticisms

The Atlanta experience shows that establishing a clear understanding of the regional freight network, its benefits, and the GIS mapping of facilities and corridors, is an expensive proposition. In 2005, ARC established a system to track regional, state, and local studies that were occurring in its 10-county area. This database is updated every quarter. As can be seen in

[31] Wilbur Smith Associates, Global Insight, Georgia Institute of Technology, and Street Smarts, A*tlanta Regional Freight Mobility Plan*, February 2008, p. 65.

Table 1, since 2005, $4 million has been spent developing freight studies and analyses for the Atlanta area. This does not include other studies that have focused upon specific corridors or the transportation plans that ARC has commissioned that include freight planning.

TABLE 1

FREIGHT STUDIES CONDUCTED BY ARC[32]

Study Name	Start Date	Cost	Contractor	Description
Regional Freight, Goods, and Services Mobility Strategy Study	2005	$1,000,000	Wilbur Smith	Comprehensive freight transportation plan for region
Statewide Truck Lanes Needs Identification Study	2005	$1,000,000	HNTB	Investigate benefits associated with truck only lanes at a statewide level
Atlanta Regional Strategic Truck Route Master Plan	2009	$500,000	Wilbur Smith	Develop regional strategic truck route master plan, including identification of supportive transportation improvement strategies
Rail Facilities Simulation Planning Study	2005	$1,500,000	HDR & Parsons Brinkerhoff	Rail capacity study.

The ARFMP did not make any modal shift assumptions in its freight forecasting assumptions or its analysis. Therefore, planning and other criteria assumptions that may be utilized for comprehensive planning or other zoning applications could be flawed if, for example, a modal shift from trucking to rail occurred.

The study's focus was heavily weighted to trucking and, therefore, many recommendations may have been based upon a single-mode type focus. At the time the study was being undertaken, Atlanta was promoting a truck-only toll route across Atlanta, so one could question whether this played into the truck focus and recommendations of this study.

Finally, while this study is an excellent first step, out of the 118 pages of the final report, only five pages were formally listed as land use sections. On ARC's website a freight tab can be found under the transportation tab,[33] but there is no freight tab under the land use tab.[34] This illustrates the efforts that still need to be pursued to develop better lines of communication and understanding between the freight and planning communities.

[32] Source: Atlanta Regional Commission.
[33] http://www.atlantaregional.com/transportation/freight
[34] http://www.atlantaregional.com/land-use