



Recent Freight Mobility Advances in Metro Atlanta

GPA Spring Conference 2011

Michael Kray

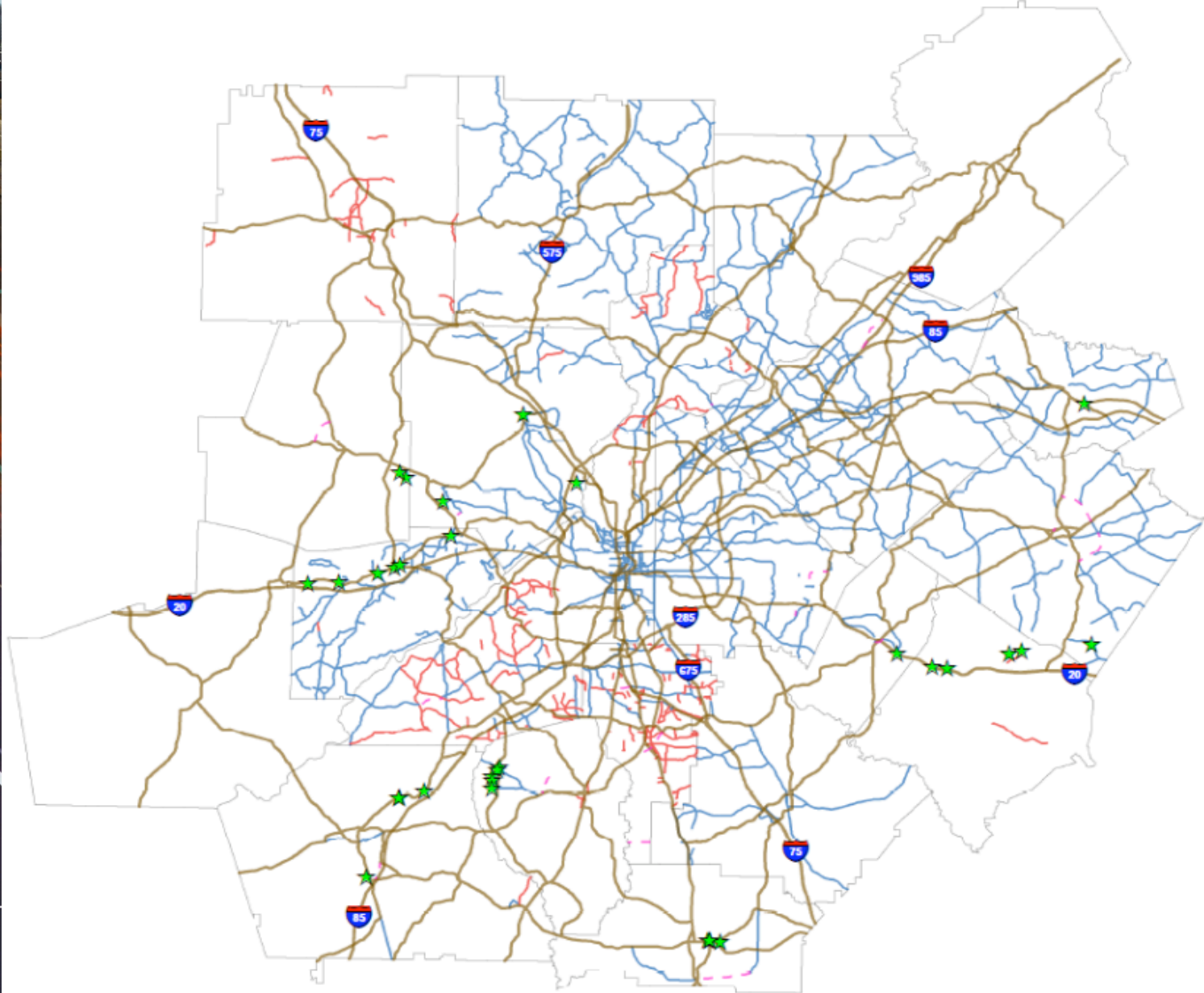
Atlanta Regional Commission

An aerial photograph of a multi-lane highway interchange in Atlanta, Georgia. In the foreground, a large red semi-truck is driving on the road. The image is overlaid with a digital map showing various freight routes in orange and green, with highway shields for I-285, I-20, I-875, I-85, and I-75. The Atlanta skyline is visible in the background under a clear blue sky. There are small green squares in the top-left and bottom-left corners of the image area.

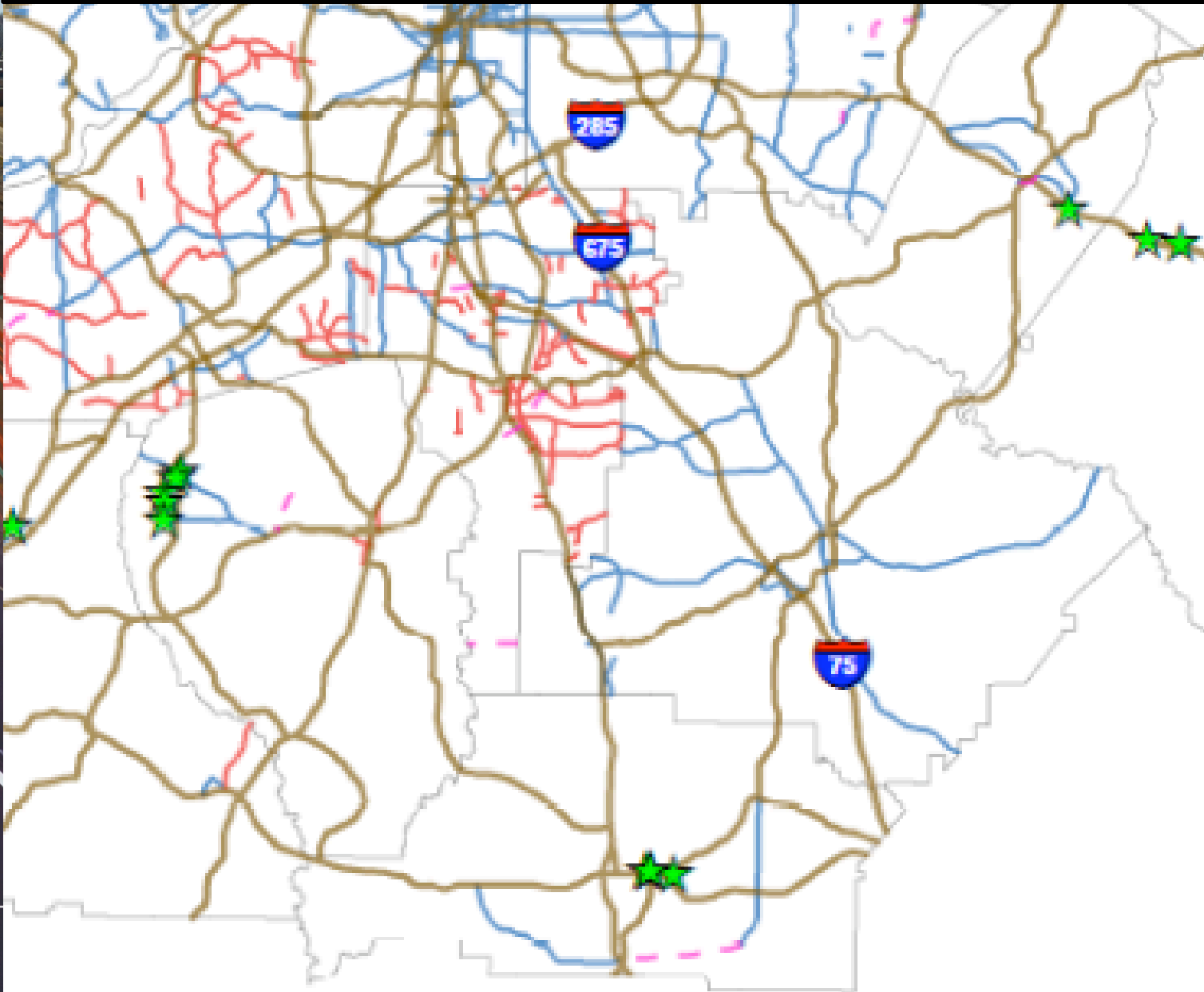
Study Background

- **Atlanta Regional Freight Mobility Plan**
 - Completed in 2007
 - First major freight study in the region
 - Macro level understanding of freight flows and industry needs
 - During stakeholder outreach identified major regional need for regional truck route system.

Jurisdictional Outreach: Locally Designated Truck Routes



Local Planning: Regional Truck Route Conflicts





Study Process

- **Data Collection**
 - Public Sector
 - Private Sector
- **Needs Assessment**
- **Criteria Matrix**
- **Route Identification**
- **Public Outreach**
- **Strategies and Recommendations**

Roadway Features Considered

To evaluate the original RPFHN,

Ten attributes are considered to determine viability and benefit.

Each attribute can be:

- Continuous
- Point or
- Interpretive

Identifiable Attribute

- Proximity to Land Use features [Interpretive]
- Functional Class (defined by GDOT Design Standards) [Continuous]
- Lane Width (redefined as Actual Travel Lane Width) [Continuous]
- Shoulder Width (refined as Actual Shoulder Width) [Continuous]
- Posted Speed [Continuous]
- Bridge Conditions [Point]
 - Weight Restrictions
 - Minimal Vertical Clearance
 - Sidewalk Width
- Railway At-Grade Crossings [Point]
- Crash History [Continuous]

Inferred Attribute

- Design Speed [Continuous]
- Stopping Sight Distance [Continuous]
- Turning Radii [Point]
- Clear Zone [Continuous]
- Grade [Continuous]

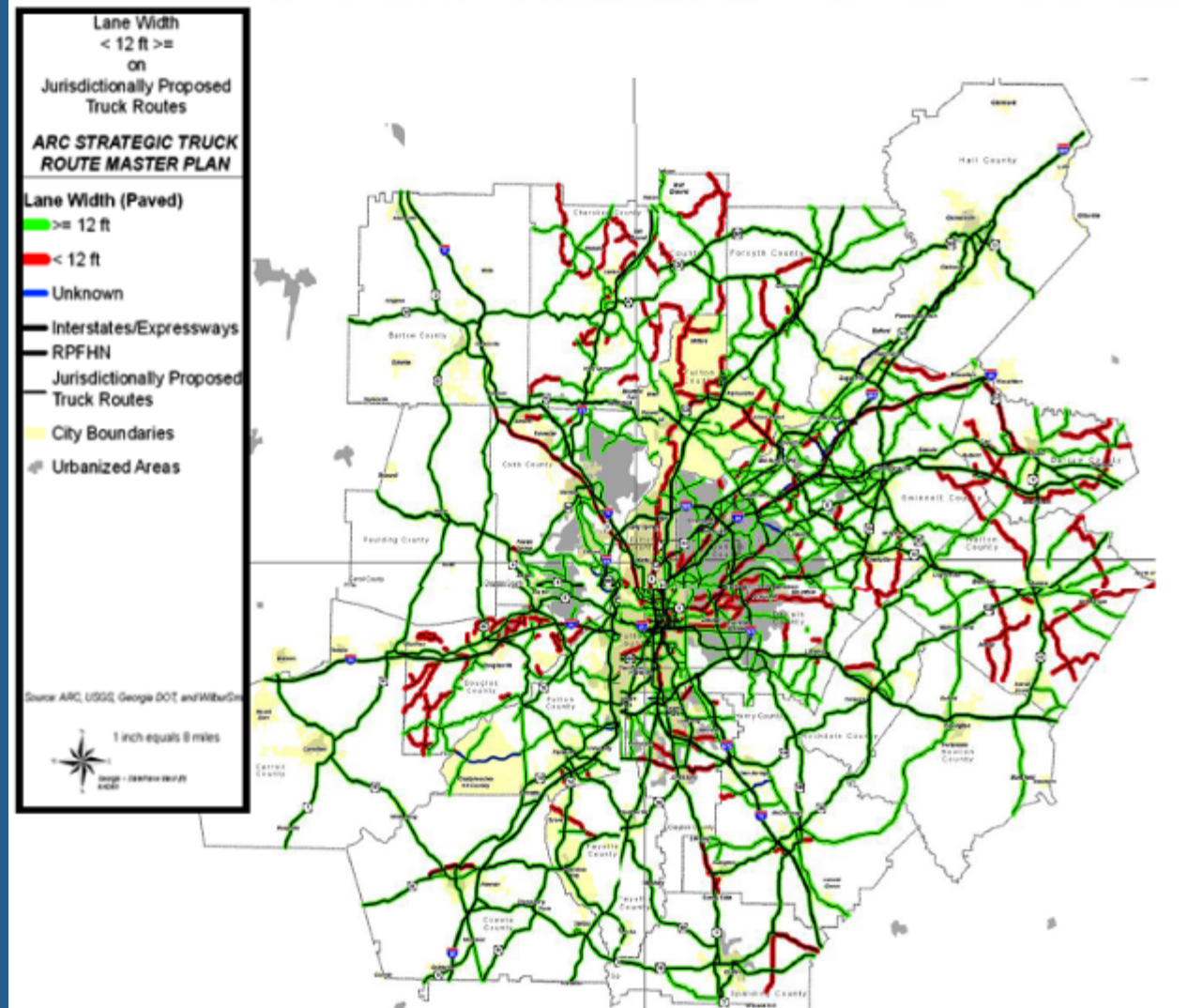
Non-Supported Attribute

- Roadway Weight Capacity
- Curve Off Tracking

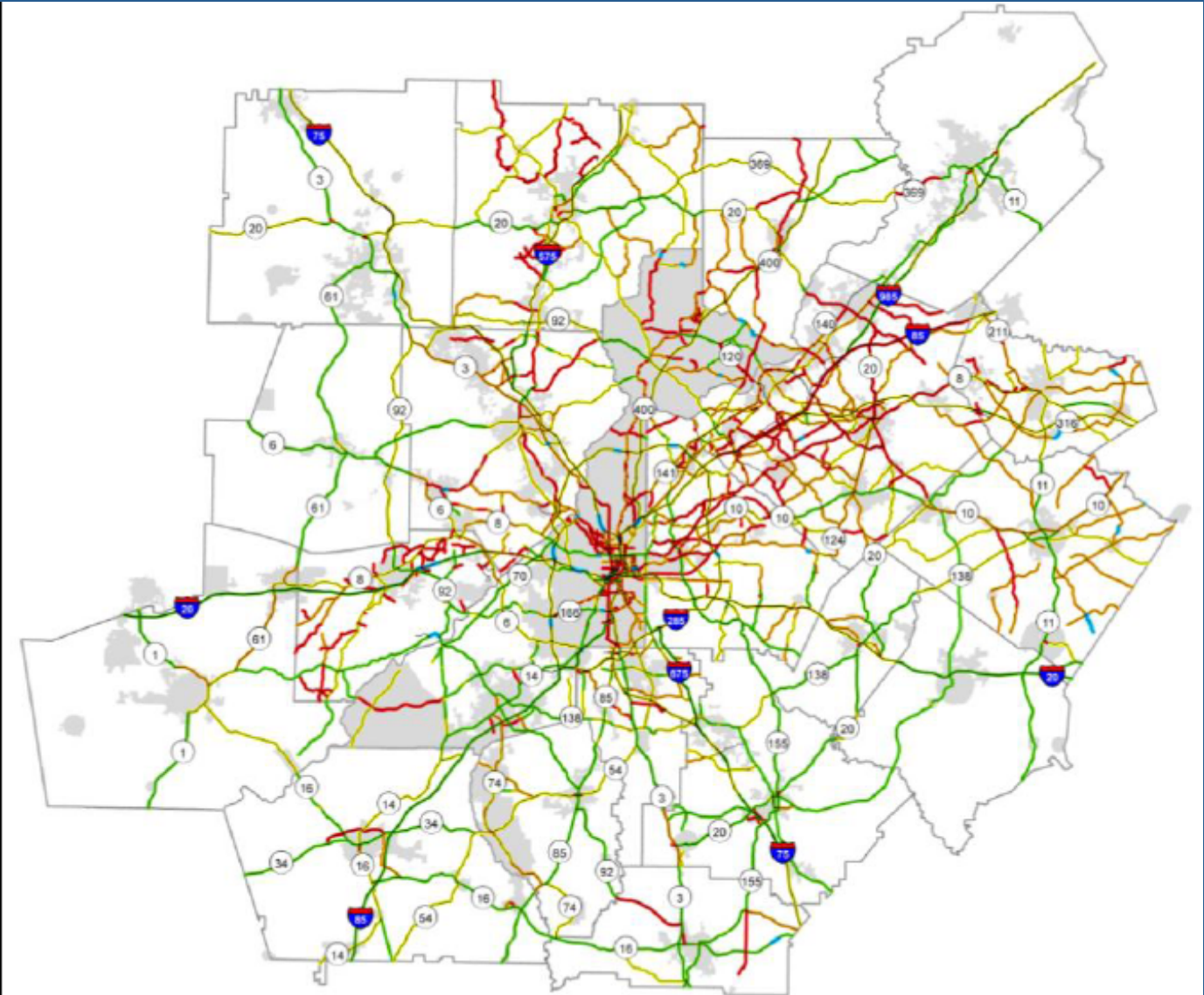
Other

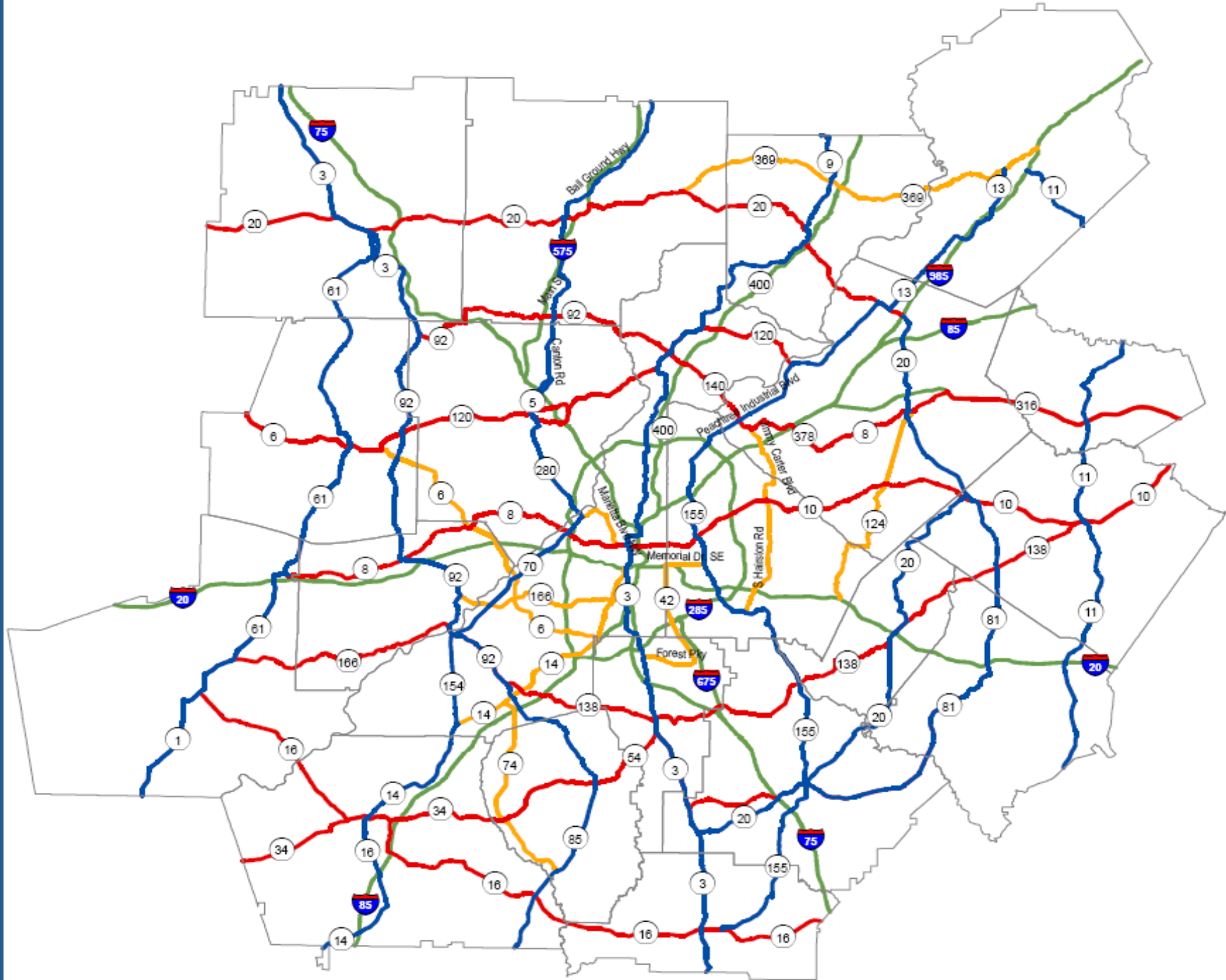
- Continuity/Connectivity/Accessibility (subjective assessment) [Interpretive]

Example Feature Lane Width



Criteria Matrix Scoring







Policy or Design Strategies

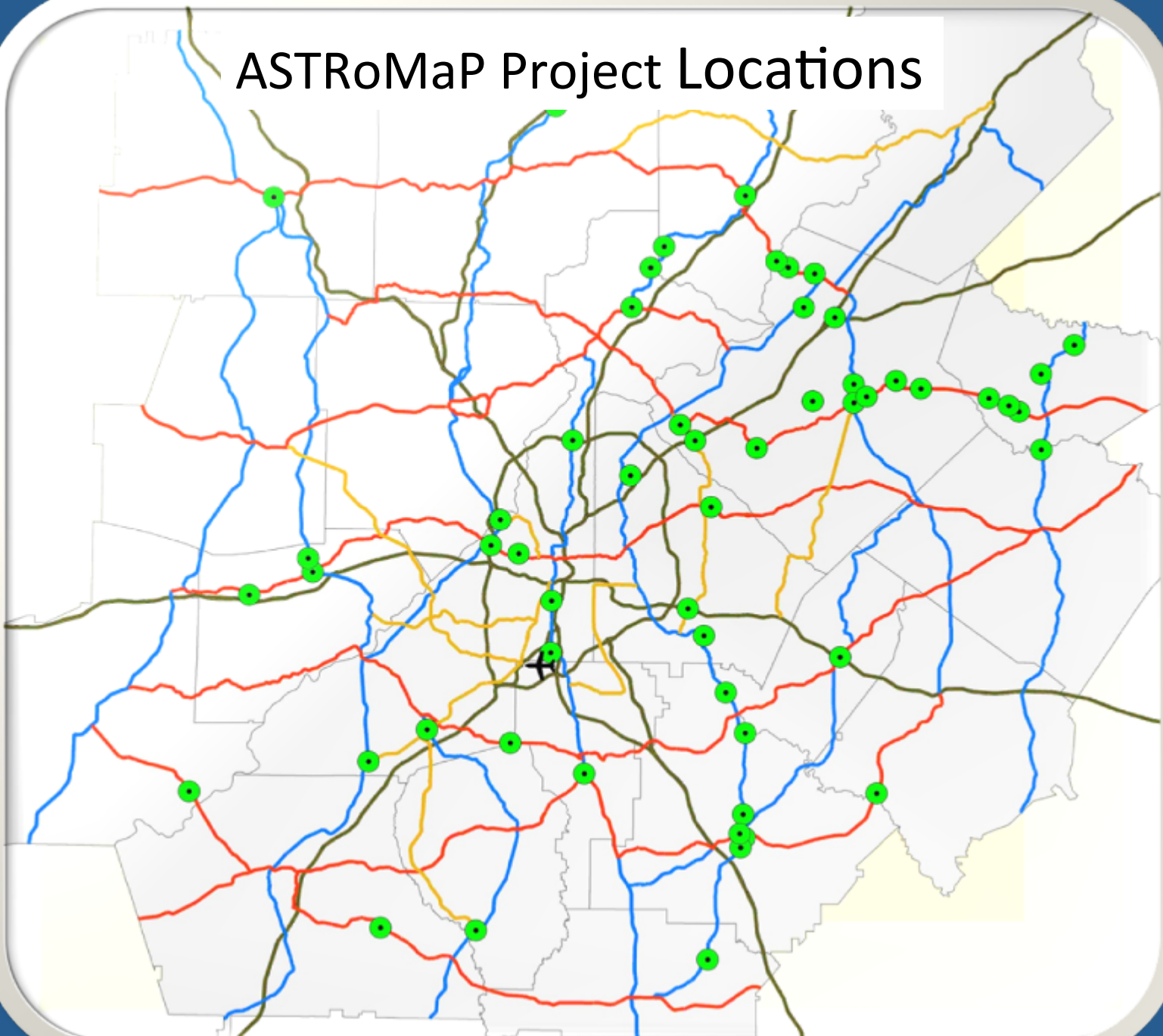
- **Context Sensitivity**
- **EJ and Health Impact Mitigation Strategies**
- **Access Management**
- **Roundabouts**
- **Signage Practices**
- **At-Grade Rail Crossings**



Infrastructure Improvements

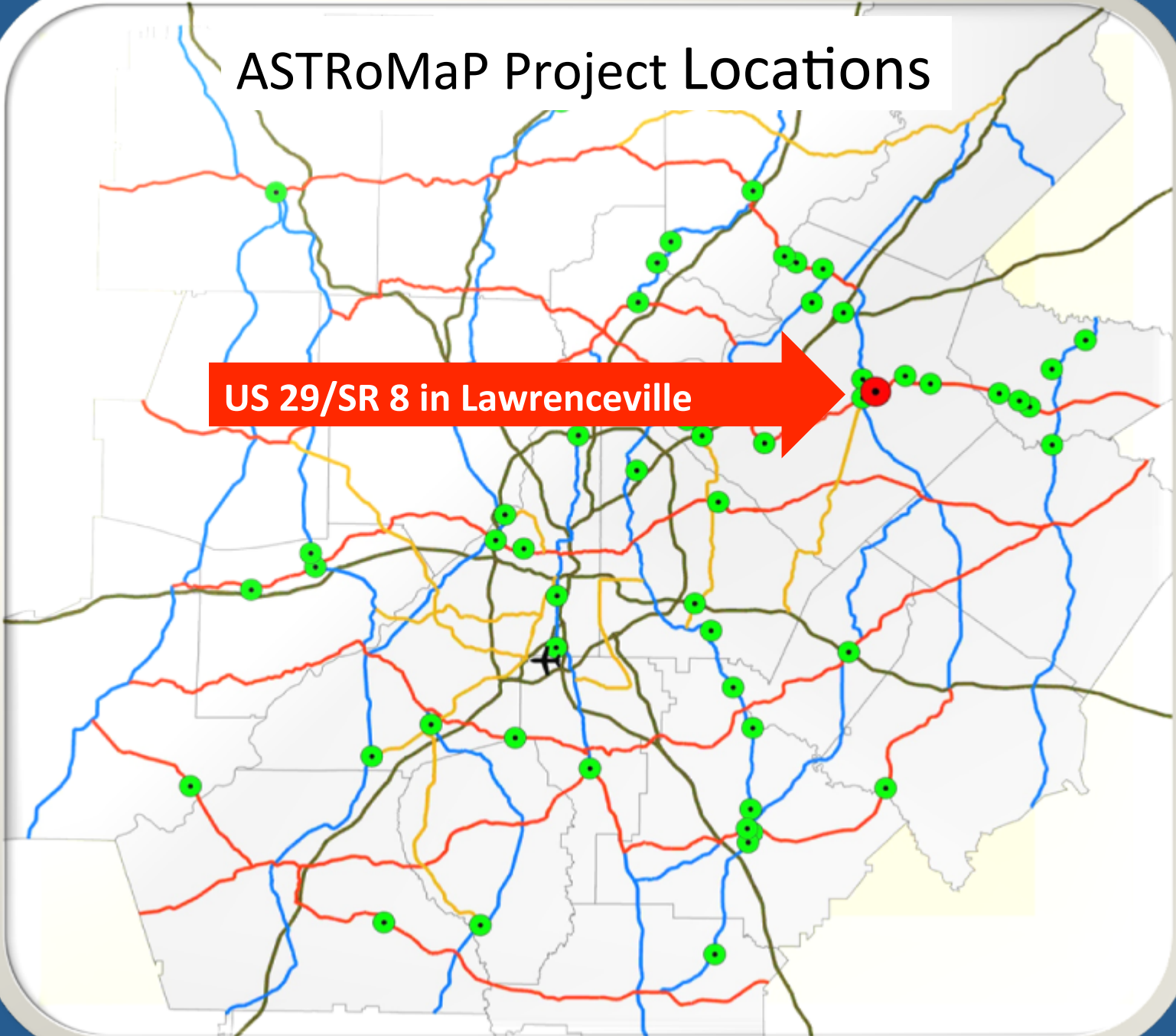
- **Emphasis on Smaller Scale Projects**
 - Turning Radii
 - Auxiliary Lanes
 - Roundabouts
 - Safety
- **New Approaches**
 - Diverging Diamond Interchanges

ASTRoMaP Project Locations



ASTRoMaP Project Locations

US 29/SR 8 in Lawrenceville





EW-N2-09

Route	EW-N2
Location	Intersection SR 8/Hosea Rd
Source	AstroMap/Field Observation
Jurisdiction	GDOT
Concern	Insufficient radii which causes trucks to encroach into the left turn lanes and the shoulders
Proposed Actions	Interim Solution: Do nothing
	Long-term Solution: Increase intersection radii



Project ID	Concern	Project Type	County	Phase	Phase cost	Total Cost	Benefit cost ratio
EW-N2-09	Insufficient radii which causes trucks to encroach into the left turn lanes and the shoulders	Intersection Improvement	Owensett	CST	\$45,312.69	\$90,151.78	5.815
				PE	\$4,581.27		
				R.O.W	\$18,757.82		
				UTIL	\$21,000.00		

Segment	User Benefits from Operation			User Benefits from Construction		Total User Benefits	
	User Value of Time Benefits	Operating Cost Benefits	Accident Reduction Benefits	Agency Operating Benefits	Improved	Improved	Improved
All Segments	\$ 120,189	\$ 808	\$ 264,128	\$ (10,334)	\$ (89,110)	\$ -	\$ 395,600
SR 8 and Hosea Road	\$ 120,189	\$ 808	\$ 264,128	\$ (10,334)	\$ (89,110)	\$ -	\$ 395,600
	Capital Costs			Net Benefits		Benefit-Cost Ratio	
Segment	Improved			Improved	Improved		
All Segments	\$ 62,551	\$ -	\$ -	\$ 263,049	\$ -		6.815
SR 8 and Hosea Road	\$ 62,551	\$ -	\$ -	\$ 263,049	\$ -		6.815



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An aerial photograph of a multi-lane highway interchange in Atlanta, Georgia. A large red and white semi-truck is driving on the highway in the foreground. A digital map overlay is visible on the highway, showing various routes and highway shields (285, 29, 675, 55, 75). The Atlanta skyline is visible in the background under a clear blue sky. There are small green squares in the top-left and bottom-left corners of the image area.

Implementation

- **Communication**
 - Georgia Navigator
 - Dispatchers
 - Hard Copy Maps
 - GPS Data Providers
 - Signage
- **Local Adoption**
 - Regional Route Network
 - Access Management
- **PLAN 2040 Freight Program**

Freight Improvement Program

- The Freight Improvement Program will consist of a \$60 million federal set aside in the 2012 -2017 TIP. Funds will be available starting in FY 2014 through FY 2017. They will consist of:
 - \$10 million per year CMAQ funds
 - \$5 million per year of L240 funds
 - \$75 million total investment including the 20% state and local match over the 4 year time frame

Eligibility

- Projects will be focused on the regional freight infrastructure defined as
 - Limited Access Highway Network
 - ASTRoMaP System
 - NHS Intermodal Connectors
 - Railroads

Eligibility

- Projects must demonstrate a strong likelihood of completion within the TIP period
 - No or limited ROW acquisition needed
 - Project will likely receive a categorical exclusion from the federal NEPA process
 - Funds awarded must be used within a prescribed timeframe. The “use it or lose” provision is intended to encourage implementation and funding awards will be withdrawn if projects are not moved to construction.

Project Types

- Adding auxiliary lanes
- Increasing turning radii
- Intersection Signalization
- Shoulder improvements
- Median construction (access management)
- Signal timing
- Truck routing signage
- Truck friendly lanes
- Roundabouts