

# METRO ATLANTA FREIGHT AND LOGISTICS ECOSYSTEM

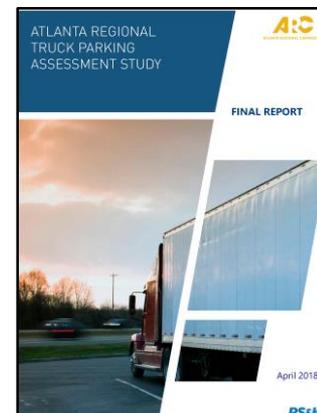
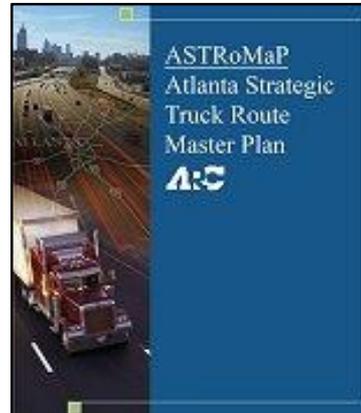
Georgia Freight and Logistics Commission

October 16, 2019

Daniel Studdard, AICP  
Principal Planner  
Atlanta Regional Commission



# Core ARC Freight Planning Work Activities



Freight Advisory Task Force Formed

Atlanta Regional Freight Mobility Plan

Truck Route Master Plan

Atlanta Regional Freight Mobility Plan Update

Truck Parking and Freight Cluster Studies

2003

2005-2008

2010

2015-2016

2017-2021

Next FATF Meeting is **November 20<sup>th</sup>**, 2019, 8:30-10:00 AM at ARC's Office, 229 Peachtree Street NE, Suite 100, Atlanta, GA

# Land Use and Industrial Growth



**BISNOW** CITIES EVENTS JOBS EDU ABOUT CONTACT US

News

## 1B SF Of New Industrial Deliveries Not Enough To Satisfy Demand

February 20, 2019 | Dees Stribling, Bisnow National ✉

Want to get a jump-start on upcoming deals? Meet the major players at **one of our upcoming national events!**



"In recent years, the impact of e-commerce has brought about an explosion of demand in Atlanta, from 1M SF distribution facilities to smaller infill locations, to assist with local delivery. Based on current trends, we see strong demand continuing for the foreseeable future." Transwestern Director of Research (Atlanta) Keith Pierce said.

*1B SF Of New Industrial Deliveries Not Enough To Satisfy Demand, Dees Stribling, Bisnow National, 2/20/19*

# Land Use and Industrial Growth



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National Industrial

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## Industrial Development

2018, 4th Quarter	Metro Atlanta
Inventory (SF)	617,954,832
Overall Vacancy Rate	5.20%
12-Month Absorption (SF)	18,075,179
Under Construction (SF)	15,574,803

Transwestern Real Estate Outlook, US Market, Industrial, Fourth Quarter 2018

# Freight Data to Inform Planning

## Decisions...Goods Movement



- **Over 151 million tons of freight** moved into, out of, and within the Atlanta Region in 2013
- **76% increase to 266 million tons** is projected from 2013 to 2040

### Freight Flows (2013 tonnage) in the Atlanta Region

Direction	Inbound	Outbound	Local	Total	% of Total
Truck	54,222,761	31,406,110	40,274,889	125,903,760	<b>83%</b>
Rail	16,825,270	8,202,260	179,200	25,206,730	<b>17%</b>
Air	107,077	110,312	-	217,389	<b>&lt;1%</b>
<b>Total</b>	<b>71,155,108</b>	<b>39,718,682</b>	<b>40,454,089</b>	<b>151,327,878</b>	<b>100%</b>
<b>% of Total</b>	<b>47%</b>	<b>26%</b>	<b>27%</b>	<b>100%</b>	

Source: 2013 Transearch Database. (Note: Numbers may not sum to total due to rounding.)

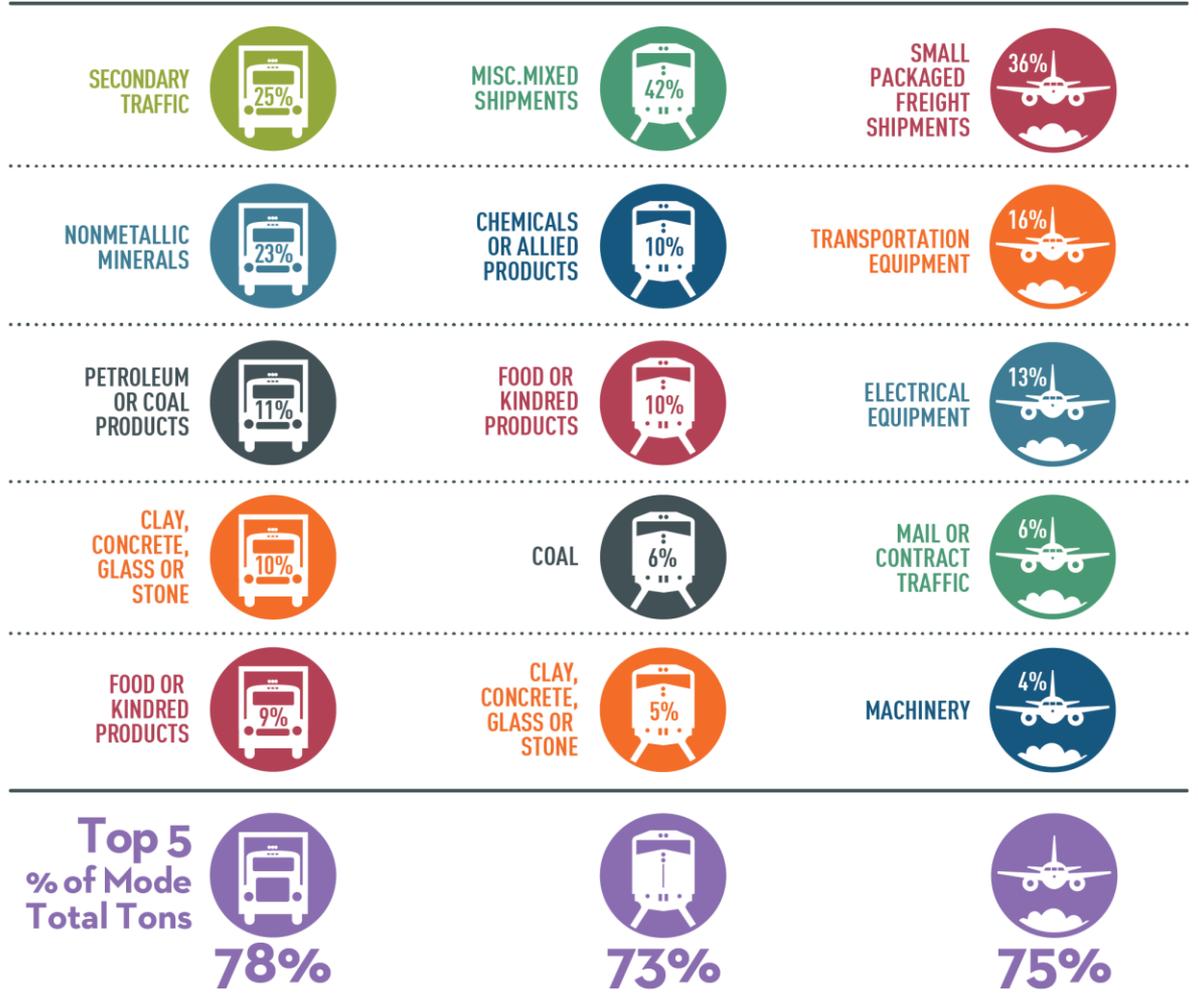
# Freight Commodity Movement



Major commodities moved in the Atlanta Region include:

- Goods for stores
- Food
- E-commerce shipments
- Construction materials
- Petroleum and Coal

## Atlanta Region: Top 5 Commodities by Mode



# Freight Data – Savannah Connection



<b>MODE</b>	<b>BETWEEN METRO ATLANTA AND PORT OF SAVANNAH</b>	<b>BETWEEN METRO ATLANTA AND REST OF CHATHAM COUNTY</b>	<b>TOTAL BETWEEN METRO ATLANTA AND CHATHAM COUNTY</b>
Loaded Trucks Annual	71,532	31,967	103,499
Loaded Trucks per Day	286	128	414
Total Trucks Annual	162,500	72,750	235,250
Total Trucks Per Day*	650	291	941
Number of Intermodal Trains Per Day	3	0	3

Note: Data represent both directions of traffic. Daily figures based on 250 workday year  
Source: 2013 ARC Transearch Data, \*2015 Draft GDOT Truck Survey, GDOT OTD, consultant analysis

# Freight Data – Truck Trips in Metro Atlanta



On an average weekday . . .

- **17,500** heavy trucks pass through the Atlanta Region
- This is about **12%** of the **146,100** total heavy truck trips in the Region

## Vehicle Types



# Freight Data – Truck Trips in Metro Atlanta



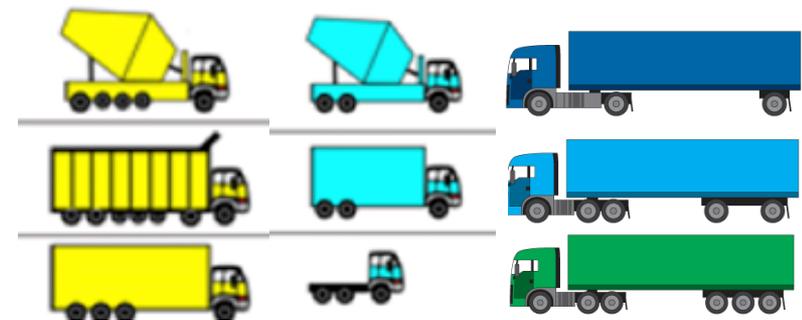
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## Vehicle Types



- **19,900** total commercial/truck trips pass through the Atlanta Region
- This is about **1%** of the **1,795,100** total commercial/truck trips



# Freight Data – Truck Trips in Metro Atlanta



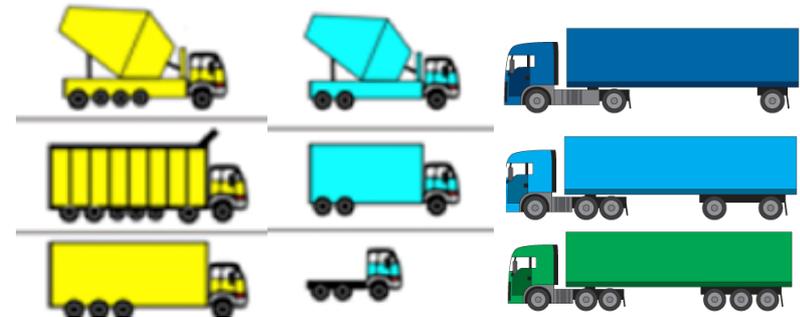
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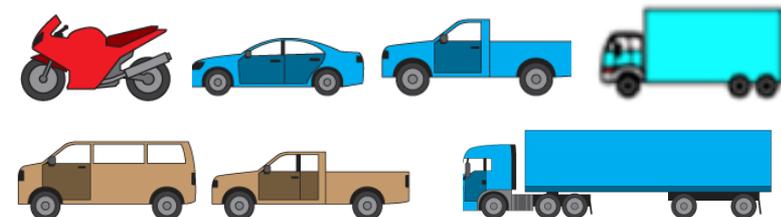
## Vehicle Types



- **19,900** total commercial/truck trips pass through the Atlanta Region
- This is about **1%** of the **1,795,100** total commercial/truck trips



- There are about **15,811,100** total vehicular trips daily in the Region



# Freight Data – Vehicle Miles Traveled in Metro Atlanta



On an average weekday . . .

- Heavy trucks travel **1,613,000** miles passing through the Atlanta Region
- This is **32%** of the **5,037,000** total heavy truck miles in the Region

## Vehicle Types



# Freight Data – Vehicle Miles Traveled in Metro Atlanta



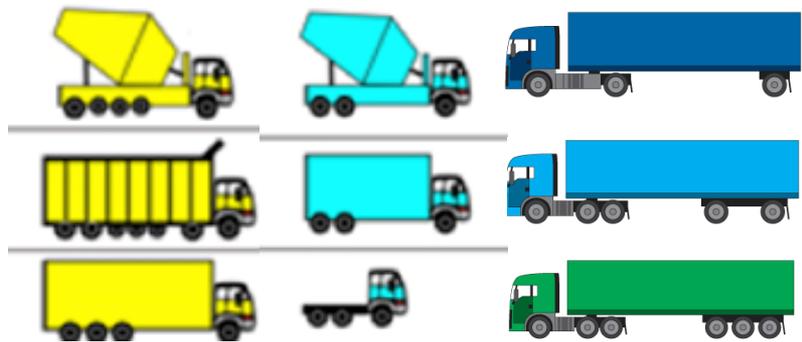
On an average weekday . . .

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- This is **32%** of the **5,037,000** total heavy truck miles in the Region

## Vehicle Types



- Commercial/truck trips travel **1,824,000** miles passing through the Atlanta Region
- This is **6%** of the **31,772,000** total commercial/truck miles in the Region



# Freight Data – Vehicle Miles Traveled in Metro Atlanta



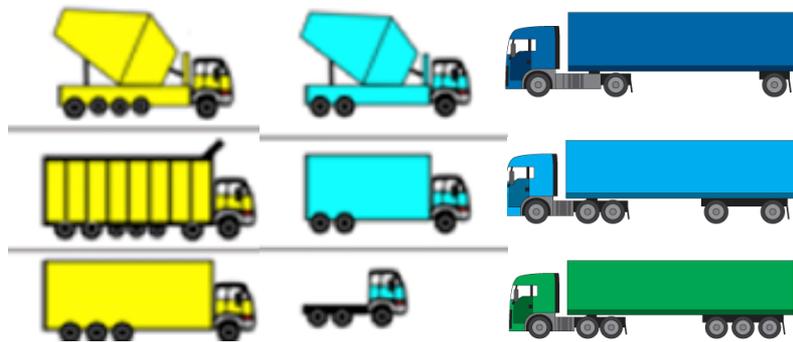
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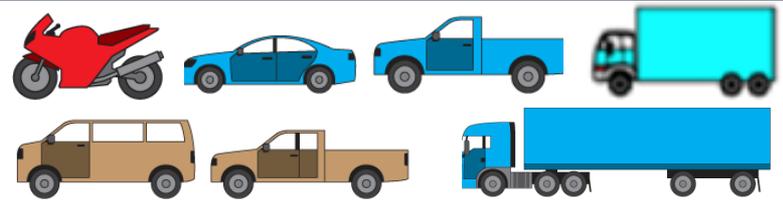
## Vehicle Types



- Commercial/truck trips travel **1,824,000** miles passing through the Atlanta Region
- This is **6%** of the **31,772,000** total commercial/truck miles in the Region



- There are about **152,750,000** total vehicle miles traveled in the Region

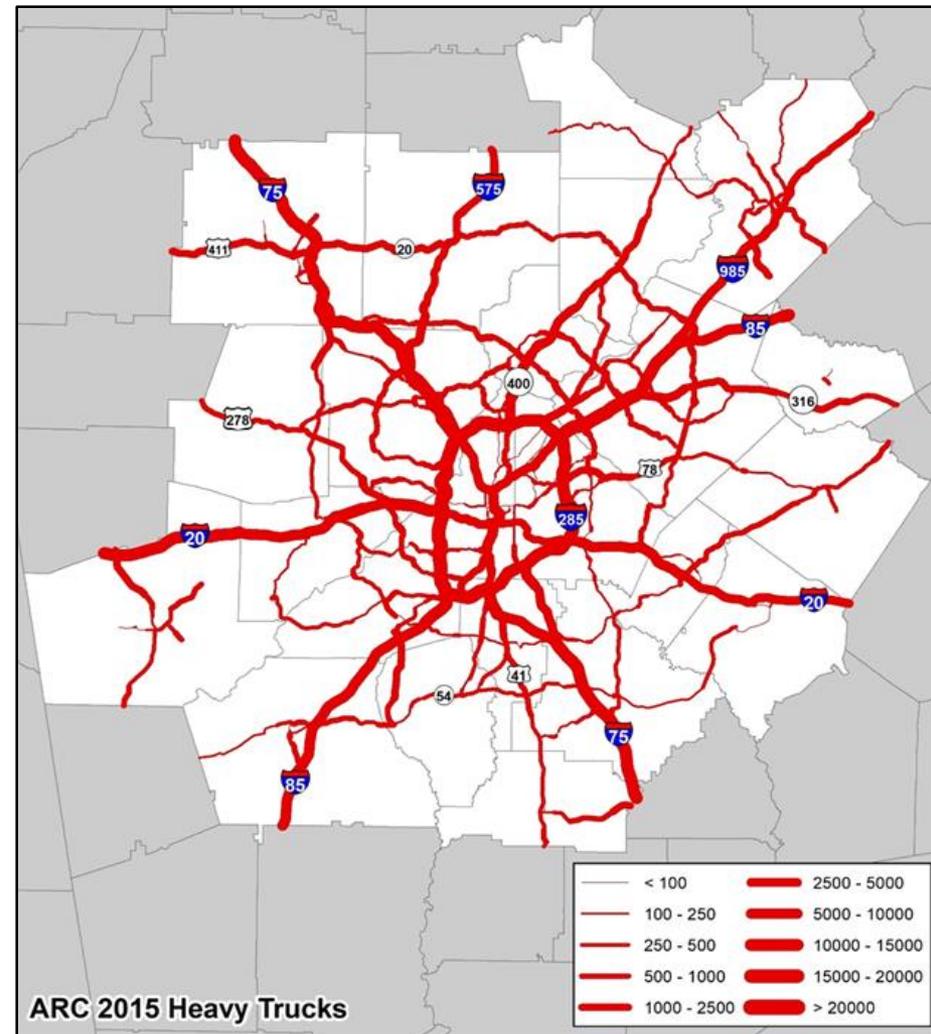


# Freight Data – Congestion Cost in Metro Atlanta



## Annual Congestion Cost:

- Commercial Vehicle (all trucks) Congestion Cost: \$1.665 Billion
- Passenger Vehicle Congestion Cost: \$3.660 Billion
- Total Annual Congestion Cost \$5.325 Billion
- Commercial Vehicle Congestion Costs are about 31% of total Congestion Costs



Source: ARC 2015 Base Year Model

# GDOT Major Mobility Investment Program



4 Major Interchange Projects



5 Major Express Lanes Projects



4 Major Interstate Widening Projects



1 Commercial Vehicle Lanes Project



4 Bridge Replacement Projects



## Interchange Reconstruction:

1. I-16/I-95
2. I-285/I-20 West
3. I-285/I-20 East

## Express Lanes:

4. I-285 Eastside
5. I-285 East Metro
6. I-285 West Metro
7. I-285 Westside
8. SR 400

## Interstate Widening:

9. I-85 Phase I
10. I-85 Phase II
11. I-16

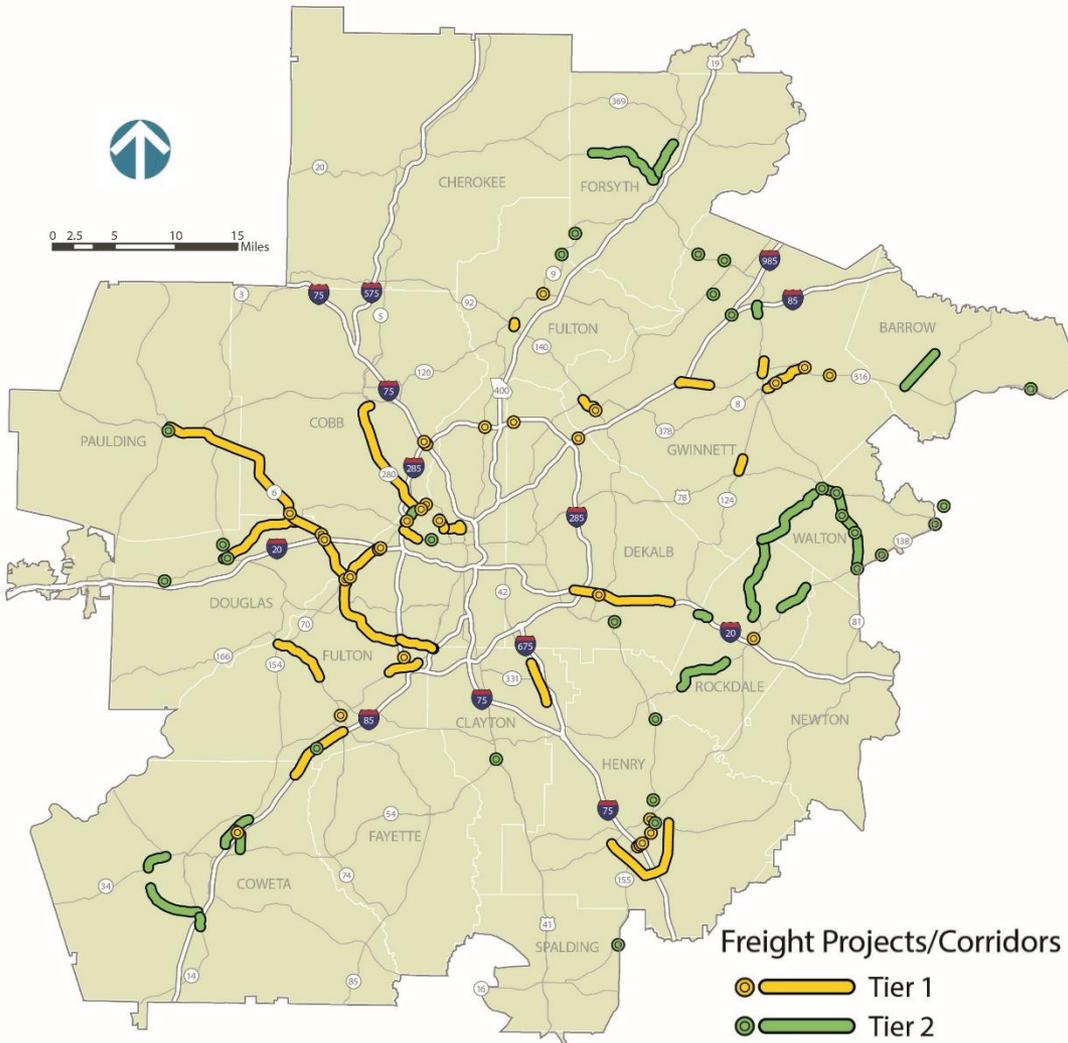
## Commercial Vehicle Lanes:

12. I-75

## I-285 Advanced Improvement Projects:

13. I-285 Westbound Collector-Distributor Lanes
14. I-285/Peachtree Industrial Boulevard Interchange Improvements
15. I-285 Westside Railroad Crossings
16. I-285 Westside Bridge Replacements
17. I-285 Eastside Bridge Replacements
18. I-285 Westbound Auxiliary Lane Extension

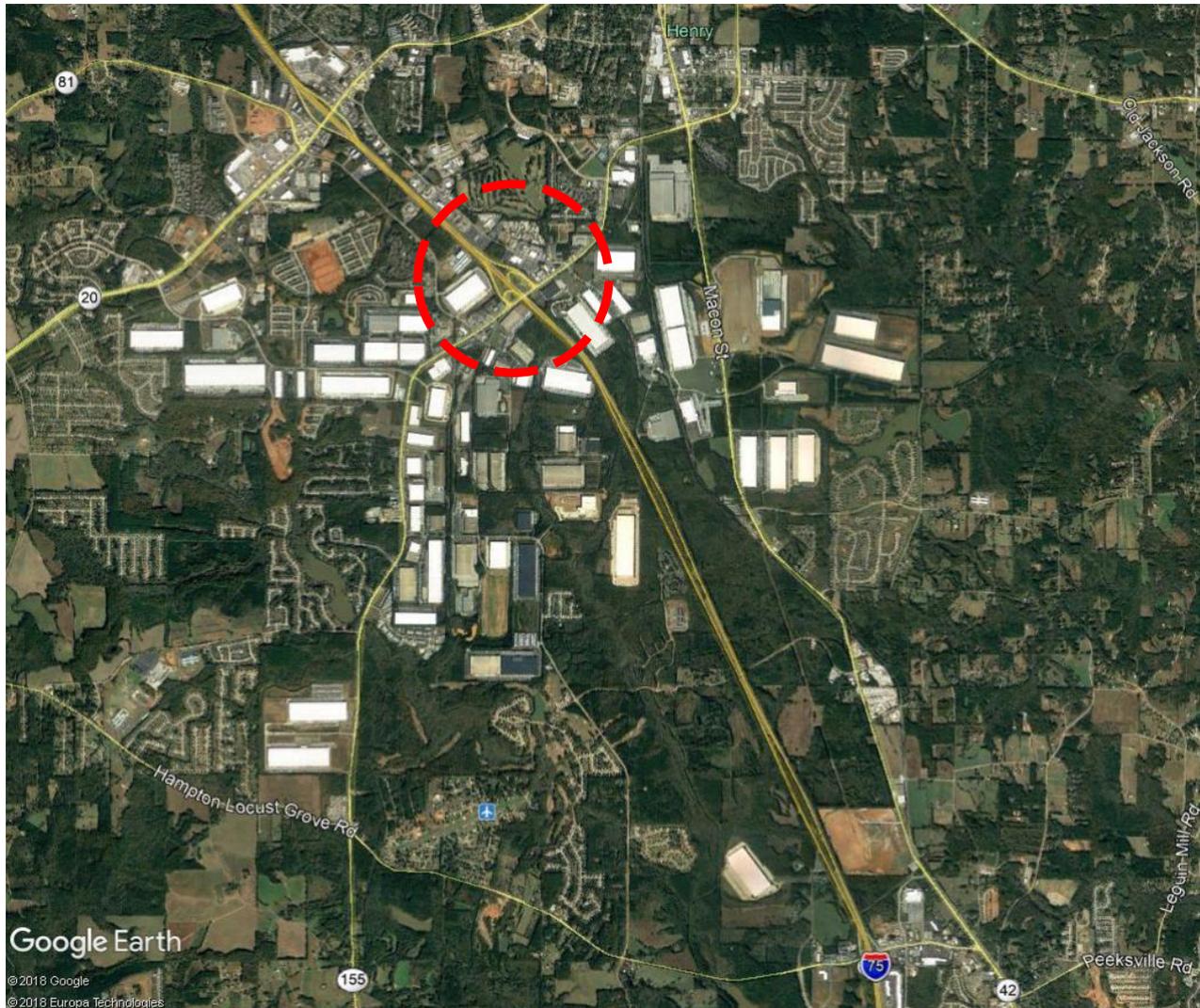
# The Planning Foundation: Regional Freight Mobility Plan



## Project List:

- 16 projects programmed to begin construction in the 2016-2021 Transportation Improvement Program
- 91 additional freight projects recommended
- Timeframes include:
  - 2021-2030
  - 2031-2040
  - Unconstrained – Beyond 2040

# Henry County Congestion at I-75

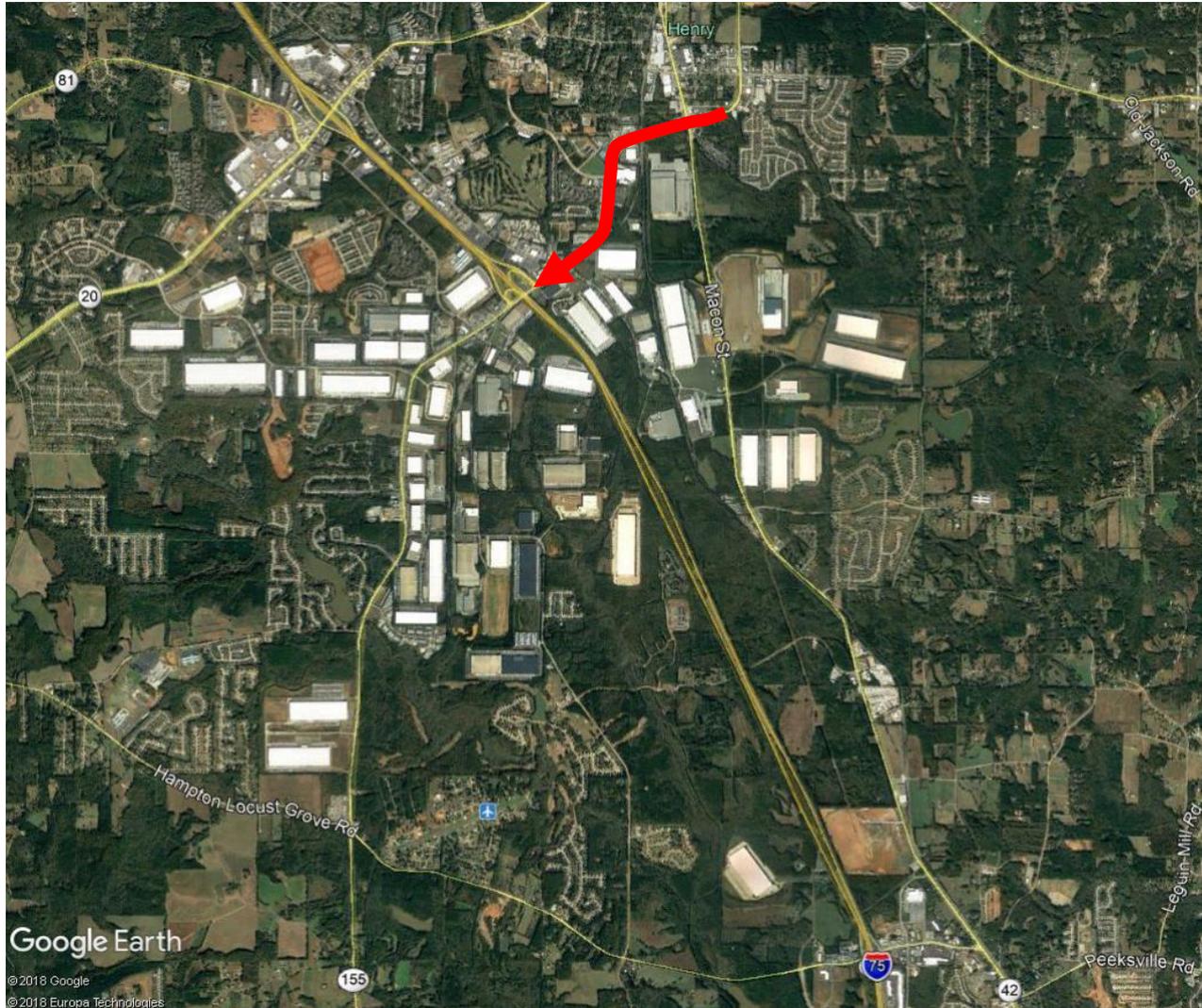


SR 155

Interchange:

- Key location for distribution from the Port of Savannah
- Truck drivers can drive to Savannah and back in one day and meet their Hours-of-Service Requirements

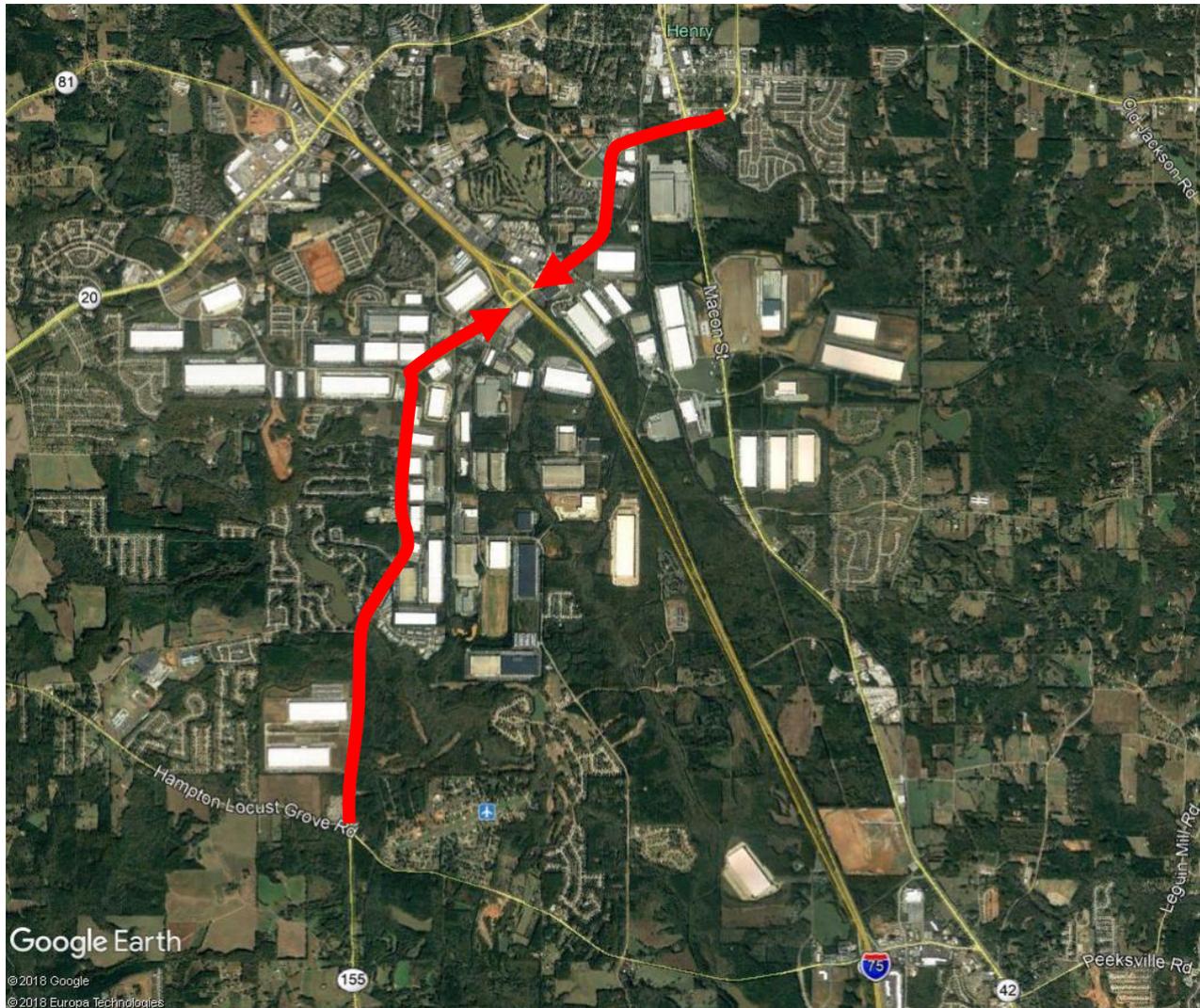
# Henry County Congestion at I-75



Peak hour  
congestion:

- SR 155  
Southbound  
maximum average  
queue length of  
1.77 miles

# Henry County Congestion at I-75



Peak hour  
congestion:

- SR 155  
Southbound  
maximum average  
queue length of  
1.77 miles
- SR 155  
Northbound  
maximum average  
queue length of  
3.59 miles

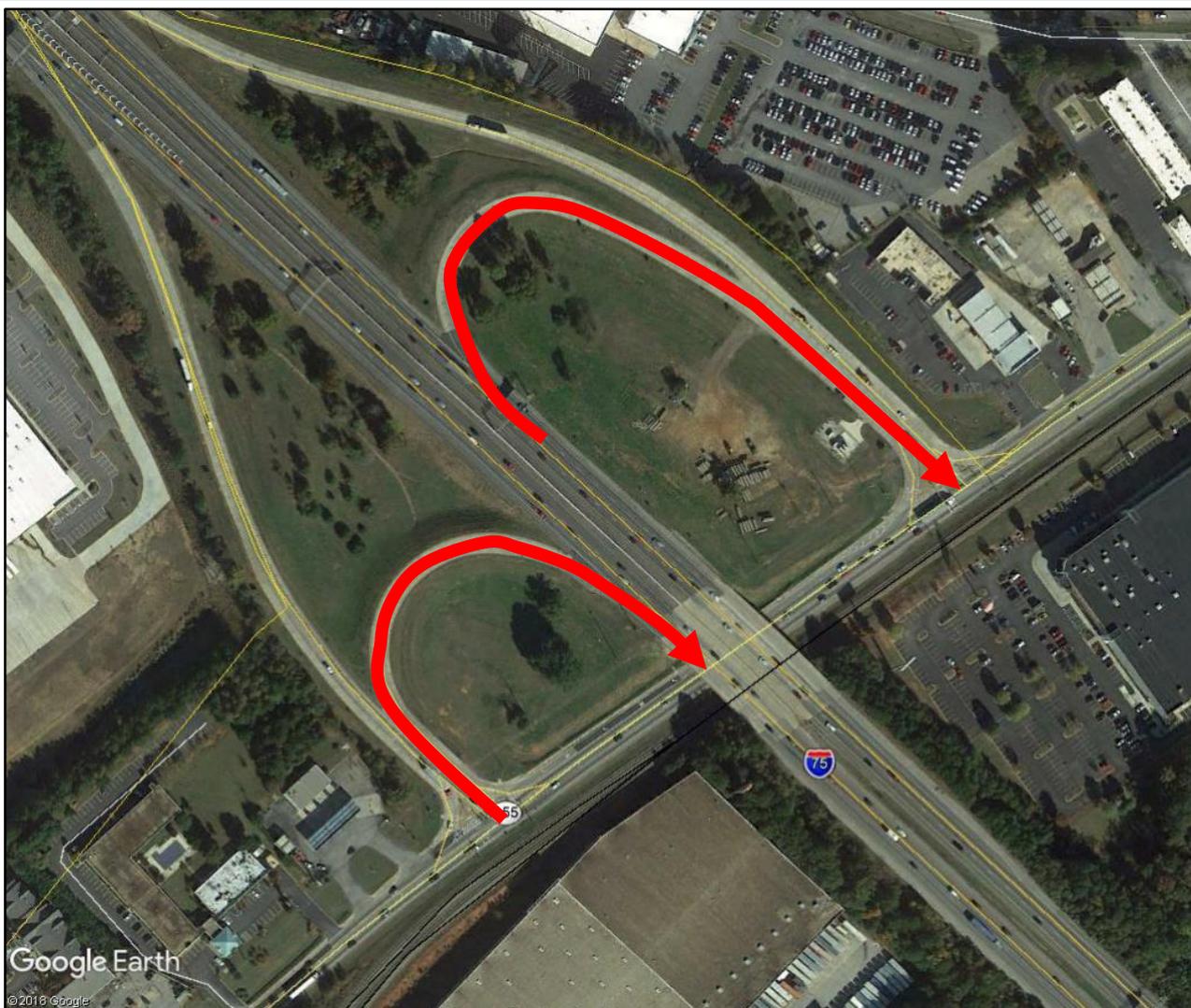
# Henry County Congestion at I-75



## Interchange Constraints:

- Inadequate space under I-75 to accommodate through lanes and turn lanes

# Henry County Congestion at I-75



## Interchange Constraints:

- Inadequate space under I-75 to accommodate through lanes and turn lanes
- Loop ramps slow all traffic
- Trucks must drive even slower on tight loop ramps

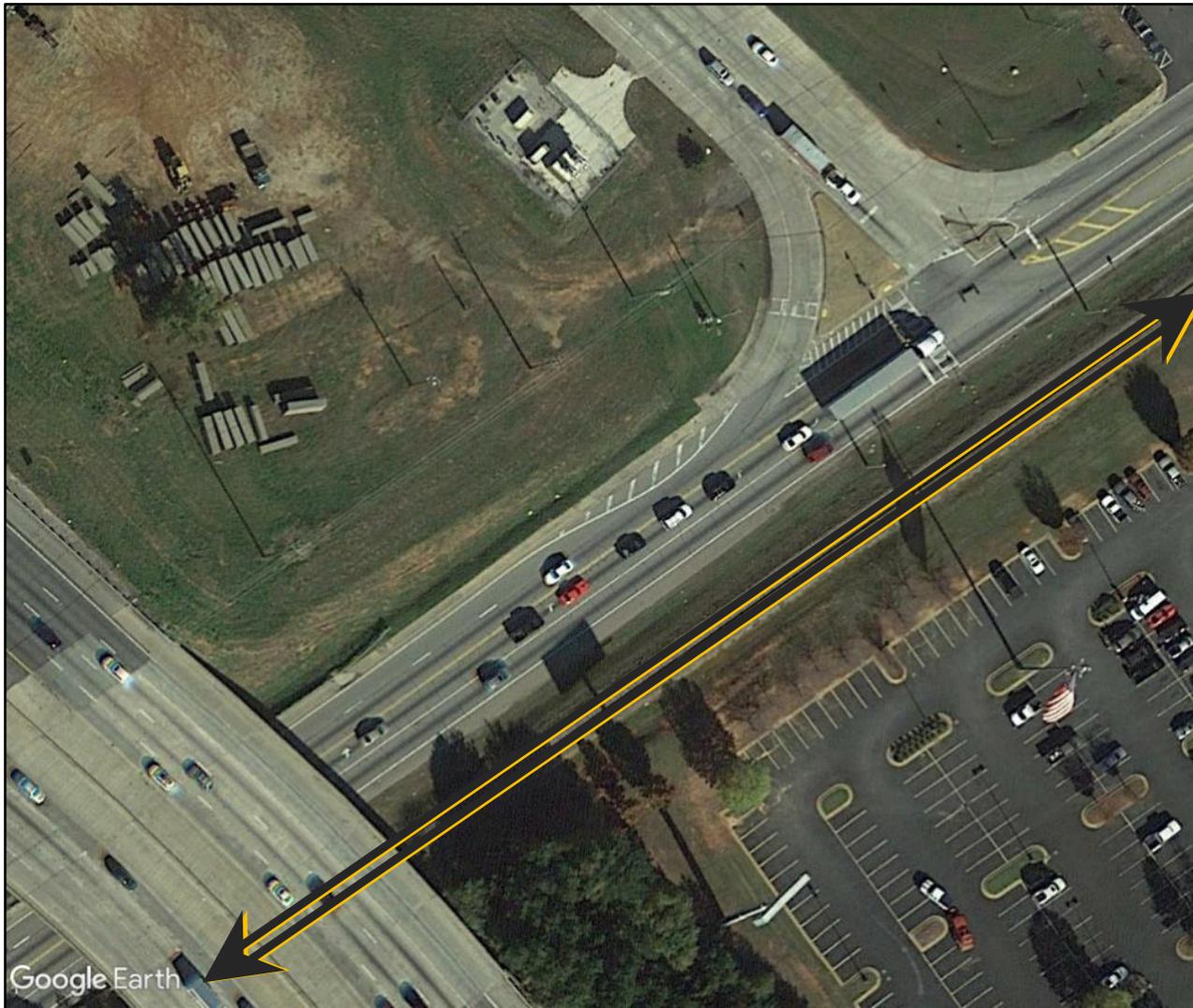
# Henry County Congestion at I-75



Interchange  
Constraints:



# Henry County Congestion at I-75



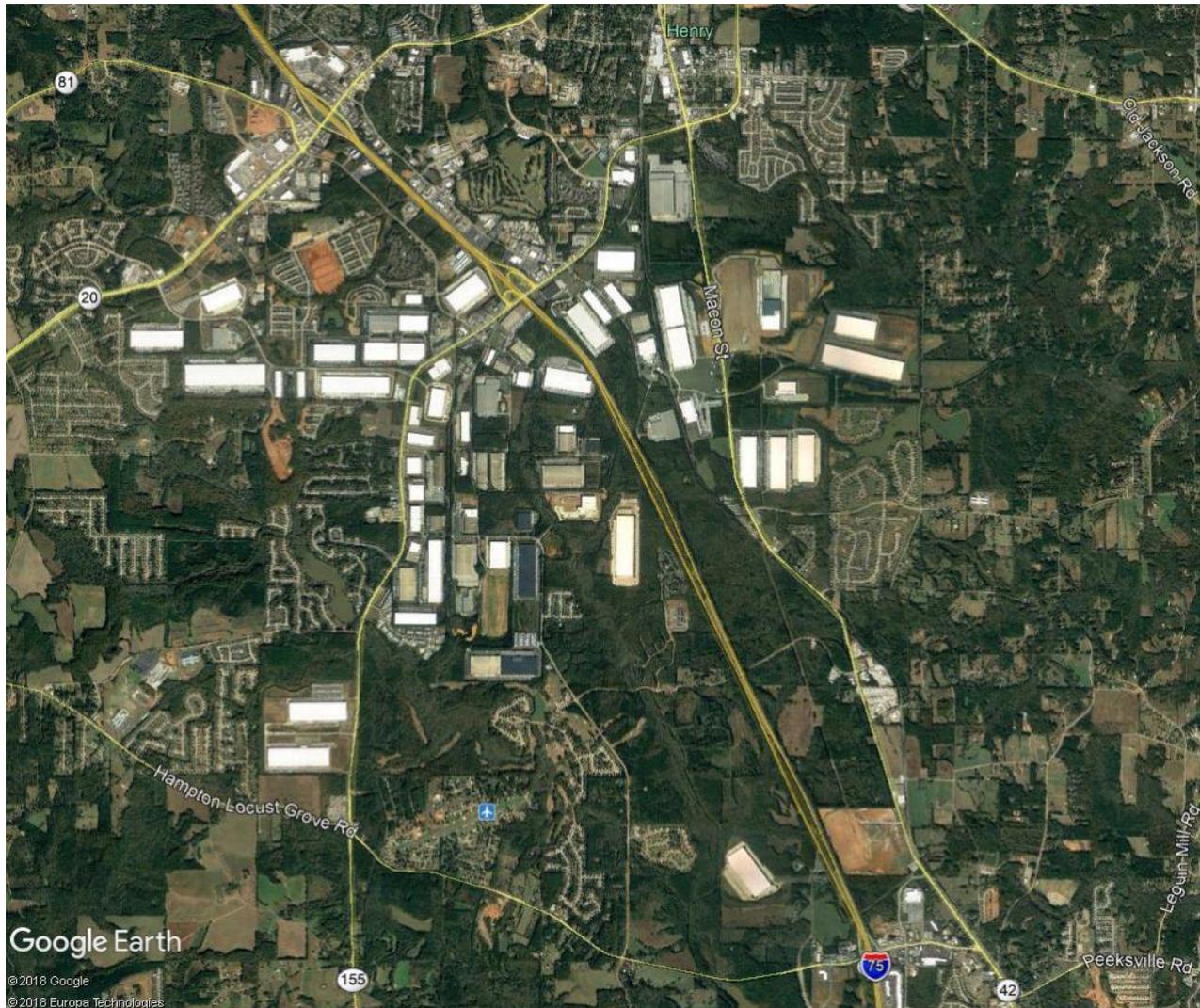
## Interchange Constraints:

- Railroad tracks are parallel to SR 155
- This prevents construction of a standard diamond interchange
- Flyover ramps are expensive
- Wider loop ramps would decrease delay

# Henry County Congestion at I-75



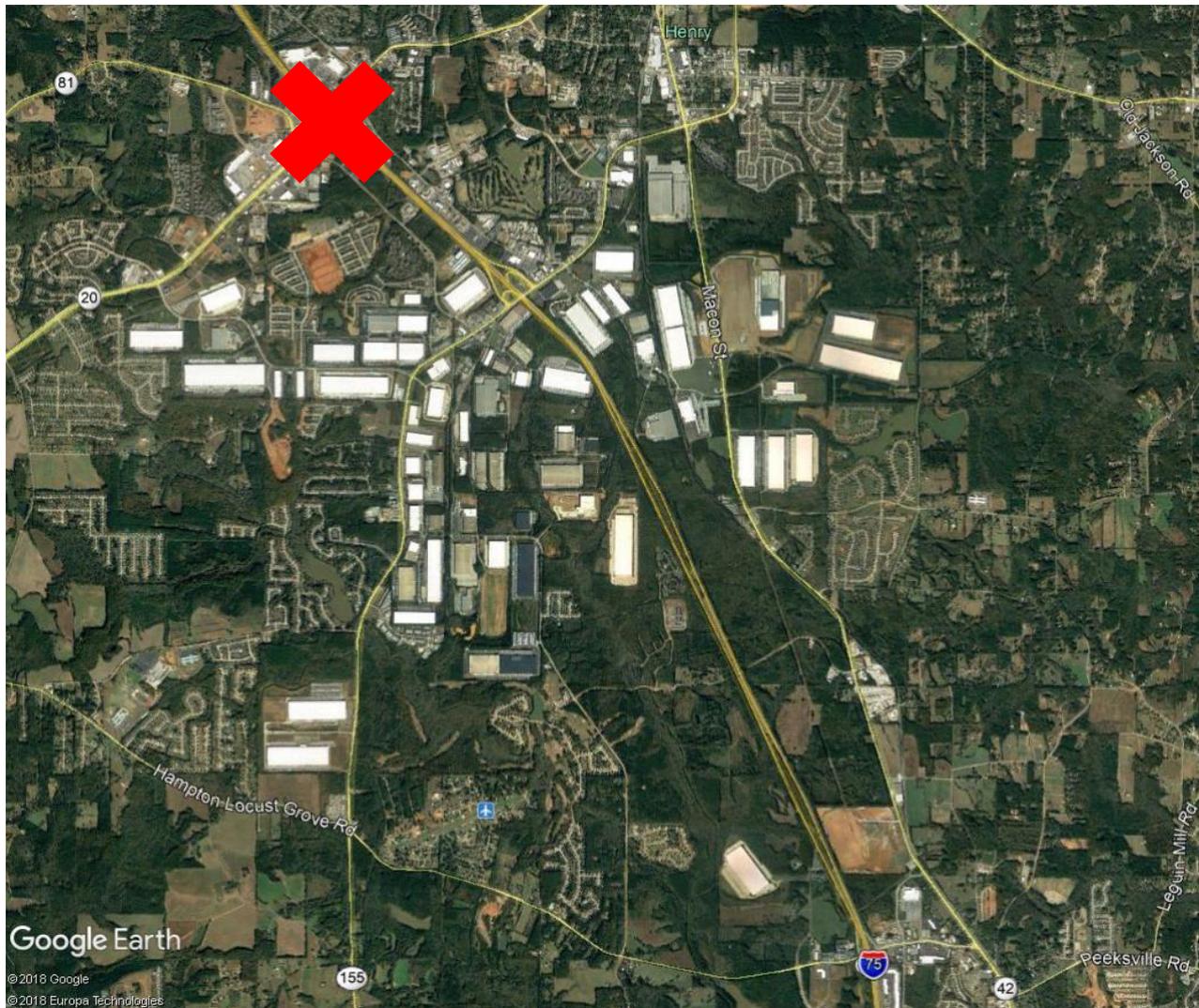
I-75 Access:



Google Earth

© 2018 Google  
© 2018 Europa Technologies

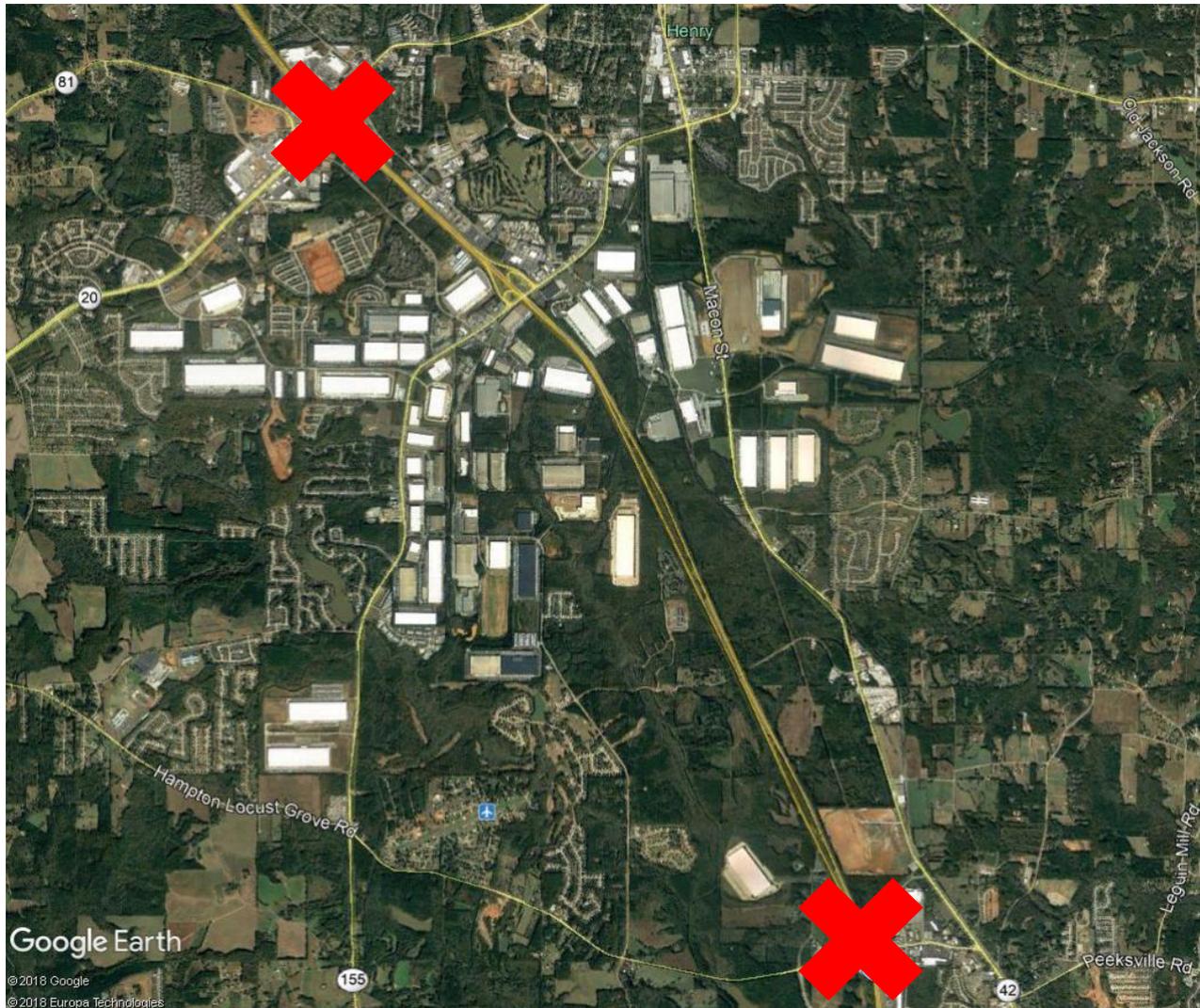
# Henry County Congestion at I-75



## I-75 Access:

- SR 20 interchange is congested
  - Serves significant amount of retail, restaurant, and commuter traffic

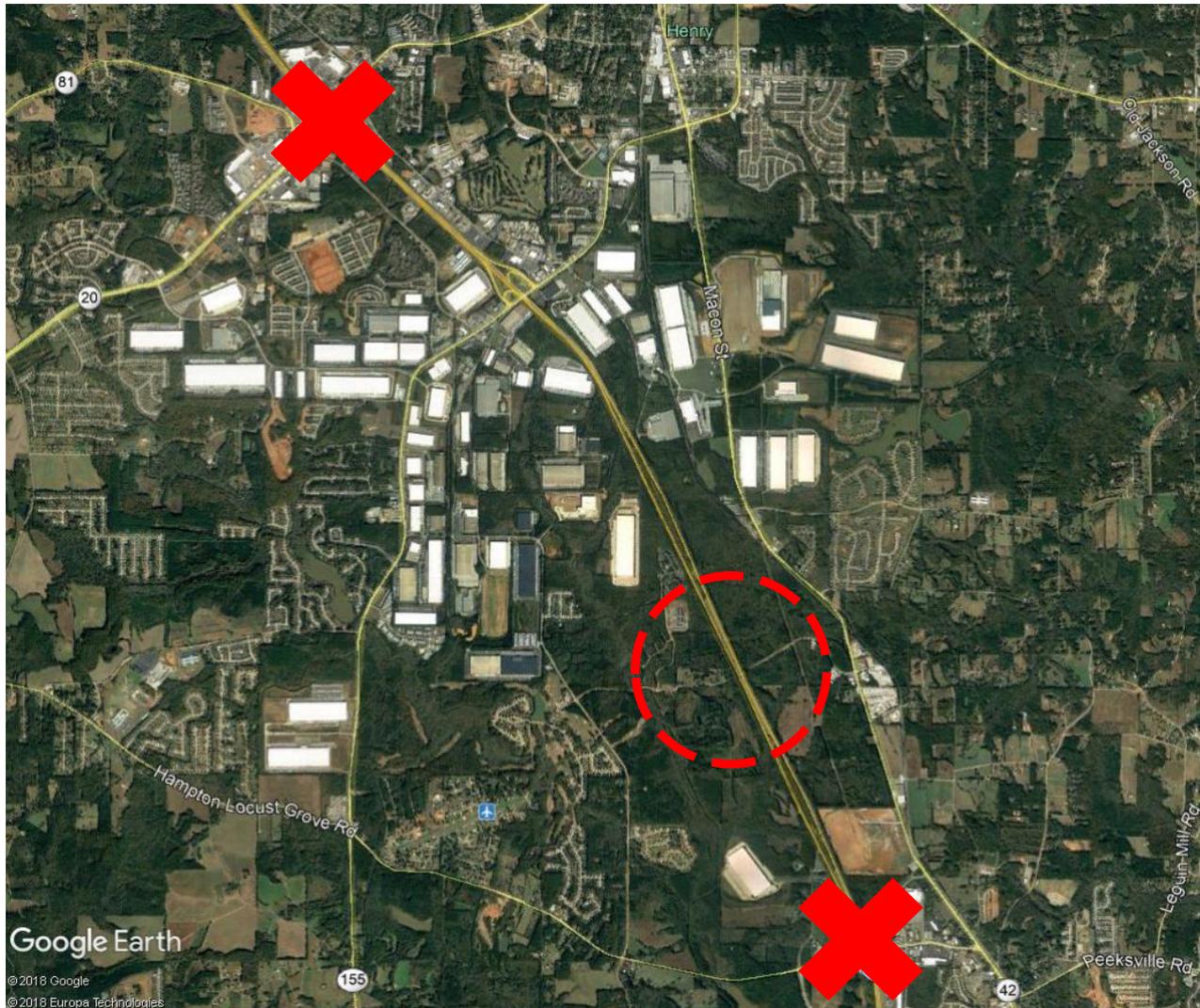
# Henry County Congestion at I-75



## I-75 Access:

- SR 20 interchange is congested
  - Serves significant amount of retail, restaurant, and commuter traffic
- Bill Gardner Parkway
  - Further from industrial development
  - Growing congestion from retail and commuter traffic

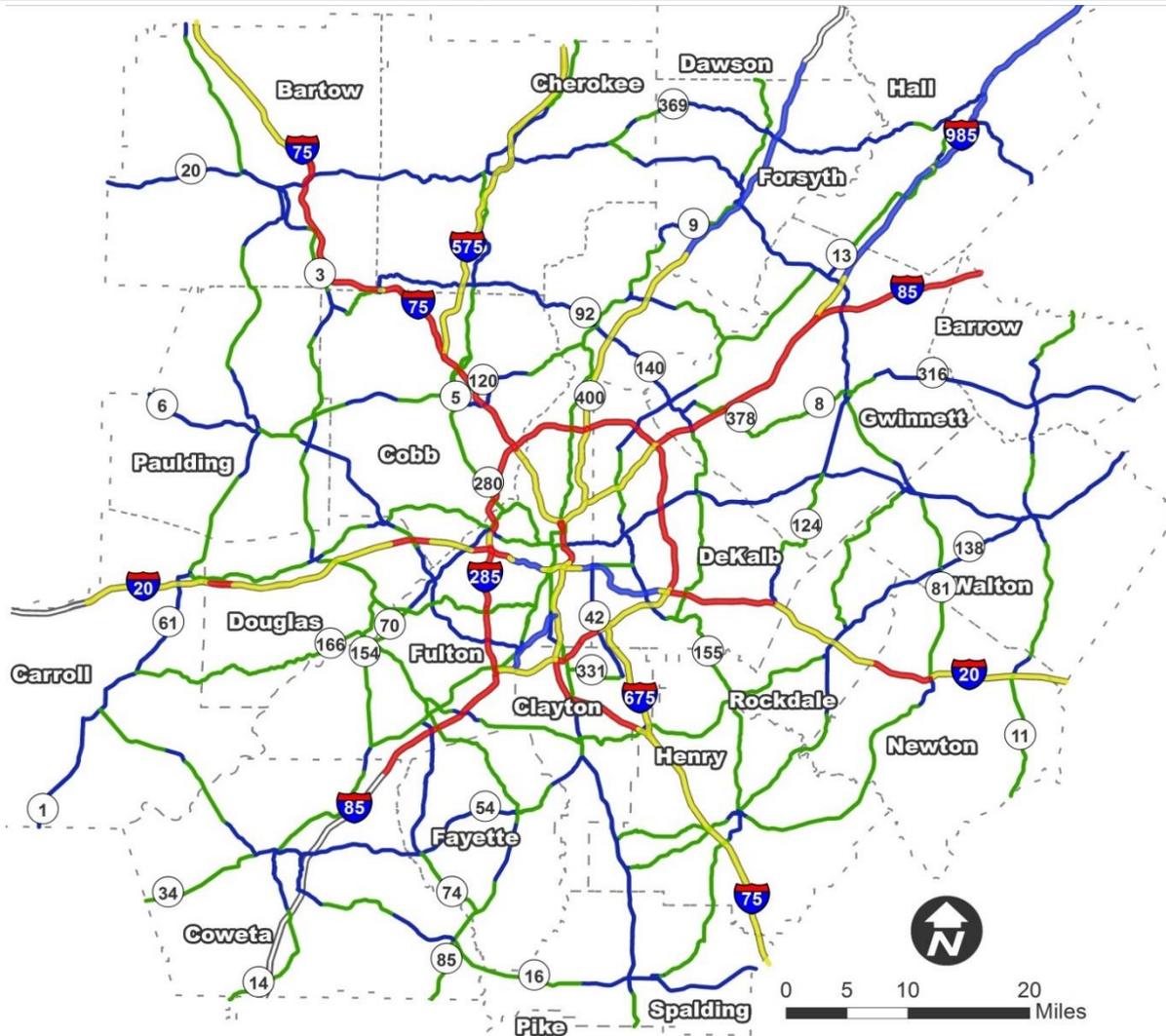
# Henry County Congestion at I-75



## I-75 Access:

- 4.5 miles between SR 155 interchange and Bill Gardner Parkway interchange
- Proposed Bethlehem Road interchange

# Regional Truck Routes “ASTRoMaP” System



“ASTRoMap” is the Atlanta Strategic Truck Route Master Plan. It assists in regional freight and goods movement planning.

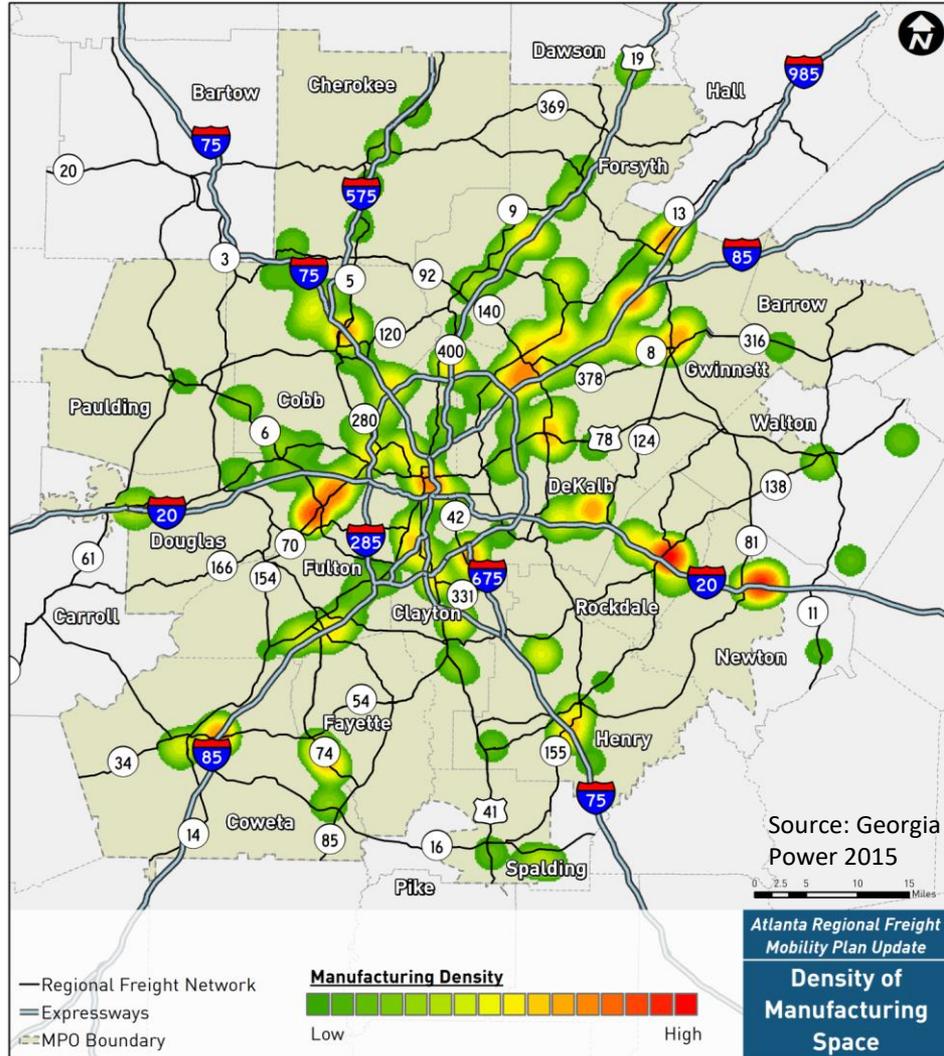
## Truck Counts

- Less than 1k
- 1k to 5k
- 5k to 10k
- More than 10k
- Regional Truck Routes
- Expressways
- Counties

# Industrial Development - Manufacturing



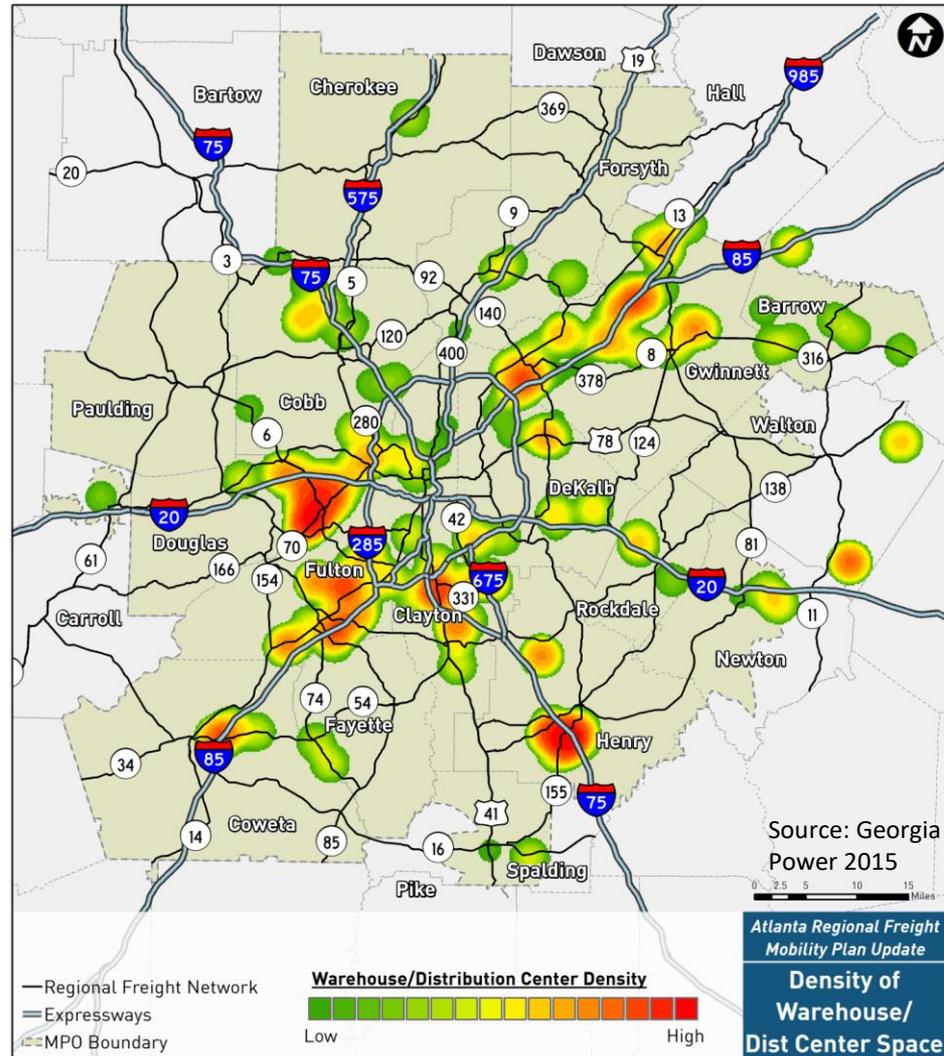
- Includes buildings and operations of all sizes
- Spread throughout the region
- Key locations include:
  - Fulton Industrial Boulevard
  - Along I-20 in Rockdale and Newton Counties
  - I-85 in Gwinnett and DeKalb Counties



# Industrial Development - Warehouses



- Older buildings tend to be smaller, while new buildings are larger
- Focused along interstate highways
- Key locations include:
  - South and west sides of the region
  - Airport Area
  - Henry County
  - Gwinnett County

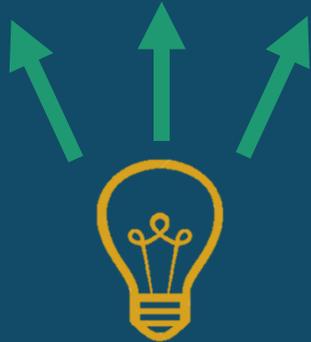




# Freight Cluster Plans Scope Content



Regional  
Transportation Plan

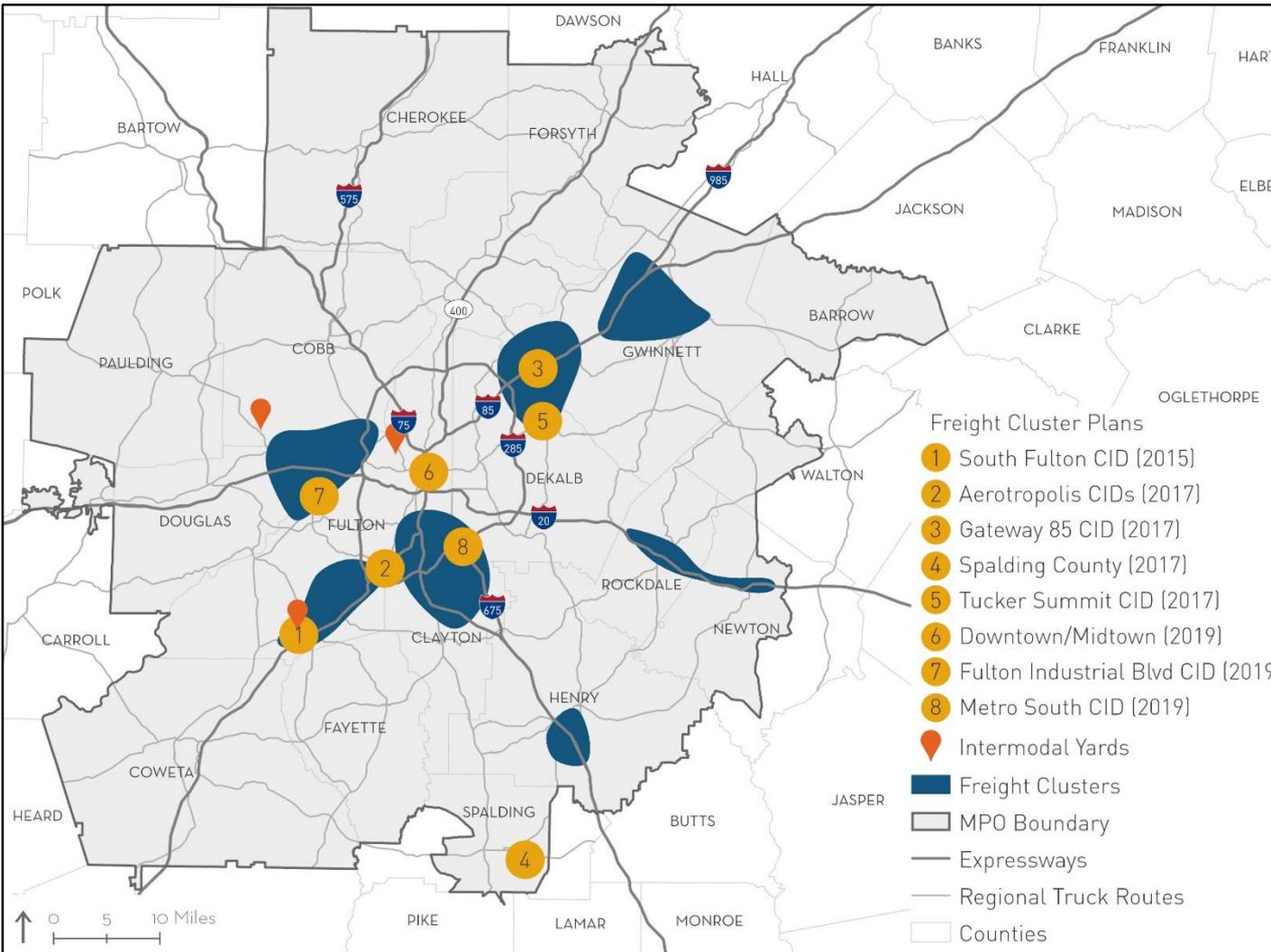


Freight Cluster  
Plan

## Local Plans in Industrial Areas

- Roadways/Connectivity/Traffic
- Safety/Crash Data Review
- Access to Jobs – Bike/Ped/Transit
- Changing freight/logistics industry
- Technology Impacts
- Growth potential
- Land use conflicts
- Truck Parking
- Alternative fuels
- Bridges
- Signage
- Rail Activity
- Lighting

# Freight Cluster Plans Underway in 2019



- South Fulton CID Multi-Modal Plan: Completed in 2018
- Four plans kicked off this year
- More plans kicking off in 2020

# Atlanta Regional Truck Parking Assessment Study



ATLANTA REGIONAL  
TRUCK PARKING  
ASSESSMENT STUDY



FINAL REPORT

April 2018



*2016 Atlanta Regional Freight Mobility Plan Update* identified the need for a truck parking study

- Elected officials and planners in the Atlanta Region noted that they had more trucks parking in unauthorized locations
- Lack of data on truck parking
- It was not possible to know if truck parking was a widespread problem
- FHWA was focused on truck parking via Jason's Law
- *The Atlanta Regional Truck Parking Assessment Study* was conducted in 2017-2018

# Safety Impacts – Unauthorized Parking Locations

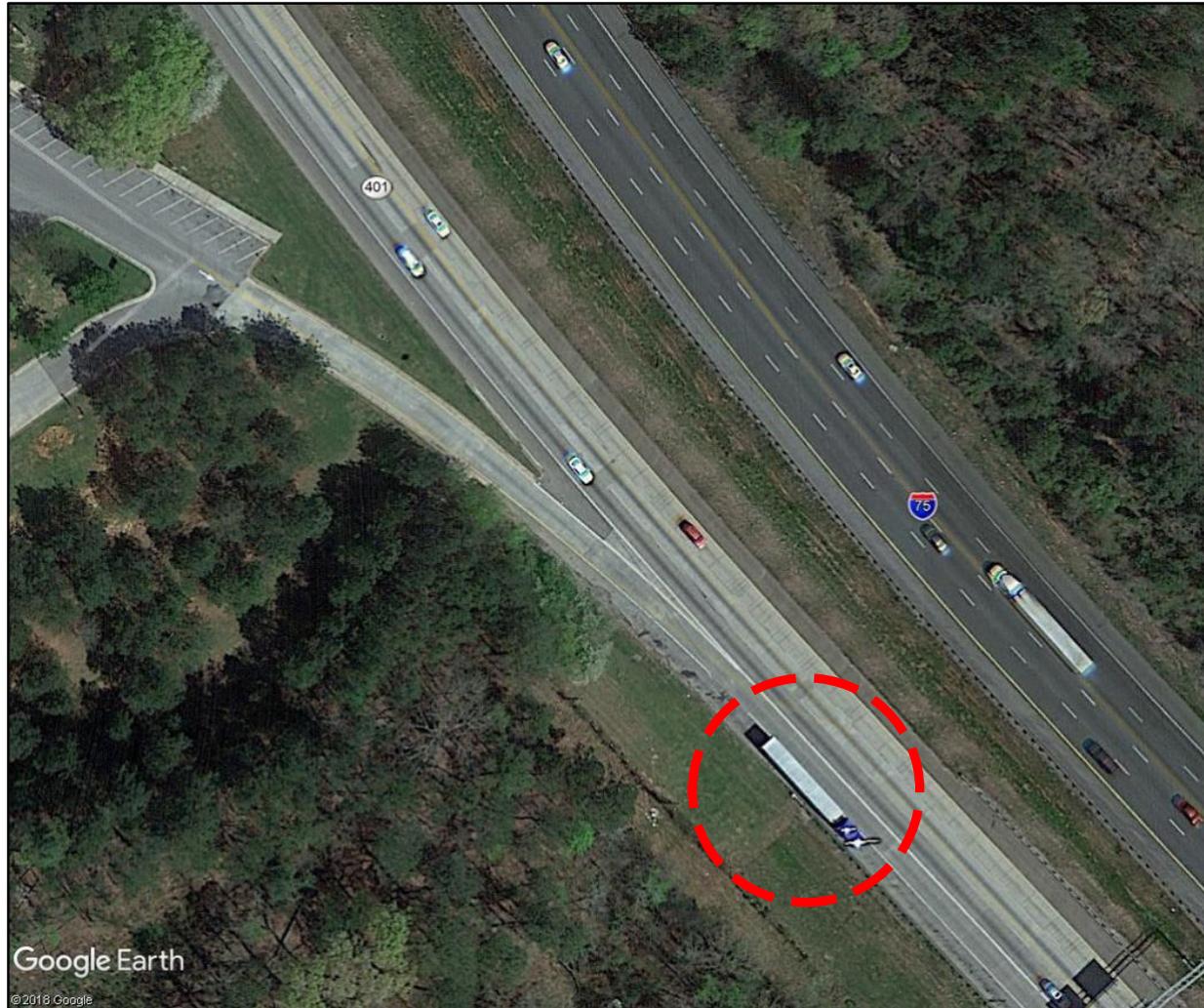


## Parking on highway ramps

- Creates a crash risk
- These crashes are rare, but significant

## Parking on the side of a road

- Creates a crash risk
- Causes sight distance issues for vehicles turning from nearby cross streets/ driveways



# Jason's Law - Safety for Truck Drivers



- Section 1401 of MAP-21  
"Jason's Law" (10/1/2012)
- "National priority on addressing the shortage of long-term parking for commercial motor vehicles on the National Highway System to improve the safety of motorized and non-motorized users and for commercial motor vehicle operators."

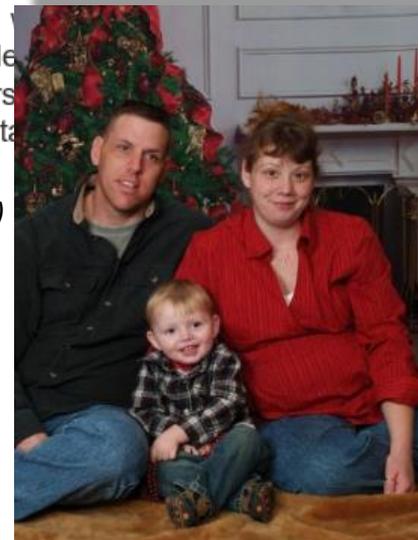
## Jason H. Rivenburg Obituary



Rivenburg, Jason H. FULTONHAM Jason H. Rivenburg, 35, of Tetterbark Rd., died unexpectedly Thursday, March 5, 2009 in Orangeburg, S.C. Jason was born in Cobleskill, N.Y. on October 28, 1973 the son of Dawn (Cater) and Hezekiah Rivenburg Jr.

Jason was a 1991 graduate of Schoharie Central School. He was a construction worker Local 106 in Albany, N.Y. He tractor trailers for many years own vehicle cleaning and deta

*Albany, NY Times  
Union (3/10/2009)*



# Regional Truck Parking Study



## Regulatory “Perfect Storm”



**Hours of  
Service (HOS)  
Requirements**



**Electronic Logging  
Devices (ELDs)  
Dec. 2017**

### **Property-Carrying Commercial Vehicle Drivers:**

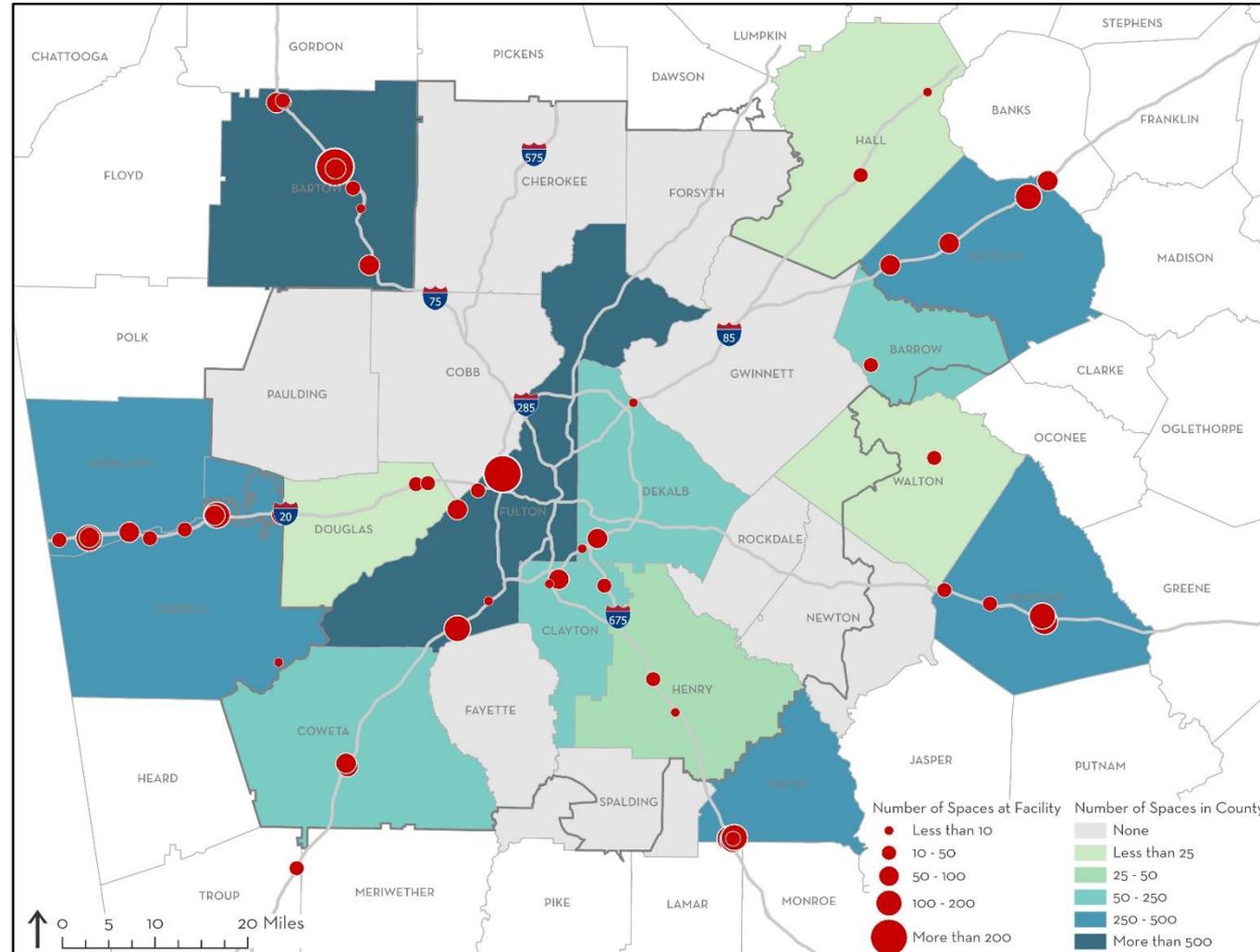
- Daily 11-hour Driving Limit: May drive a maximum of 11 hours after 10 consecutive hours off duty
- 14-Hour Limit: May not drive beyond the 14th consecutive hours after coming on duty, following 10 consecutive hours off-duty. Off-duty time does not extend the 14-hour period.

# Regional Truck Parking Study - Inventory



## Parking Space Inventory

County	Spaces
Fulton	698
Bartow	575
Butts	450
Carroll	360
Haralson	332
Jackson	309
Morgan	259
Coweta	165
DeKalb	114
Clayton	105
Barrow	85
Henry	40
Walton	25
Douglas	20
Hall	19
<b>Total</b>	<b>3,556</b>



# Regional Truck Parking Study

## Truck Driver Survey



- 277 Responses
- How long does it usually take you to find truck parking in the Atlanta region?

Length of time	Response
Less than 15 minutes	1.3%
15 – 30 minutes	6.5%
30 minutes – 1 hour	41.3%
More than 1 hour	51.0%

# Supply Expansion Example: Pilot Parking Program



## Drivers Requirements:

- Wear safety vests at all times
- Carry a flashlight at night
- Follow safety rules
- De-couple tractor from trailer
- May not move tractor
- Preferential treatment for no-idle cabs

**truck news.com**

News

## Kriska partners with Unilever to create safe haven parking program

December 15, 2015

How one shipper took a challenging run and made it a driver favourite

PRESCOTT, Ont. — A successful pilot project that allows Kriska Transportation Group drivers to park overnight at a major customer's facility is proving that collaboration between shippers and carriers can be more than just a buzzword.

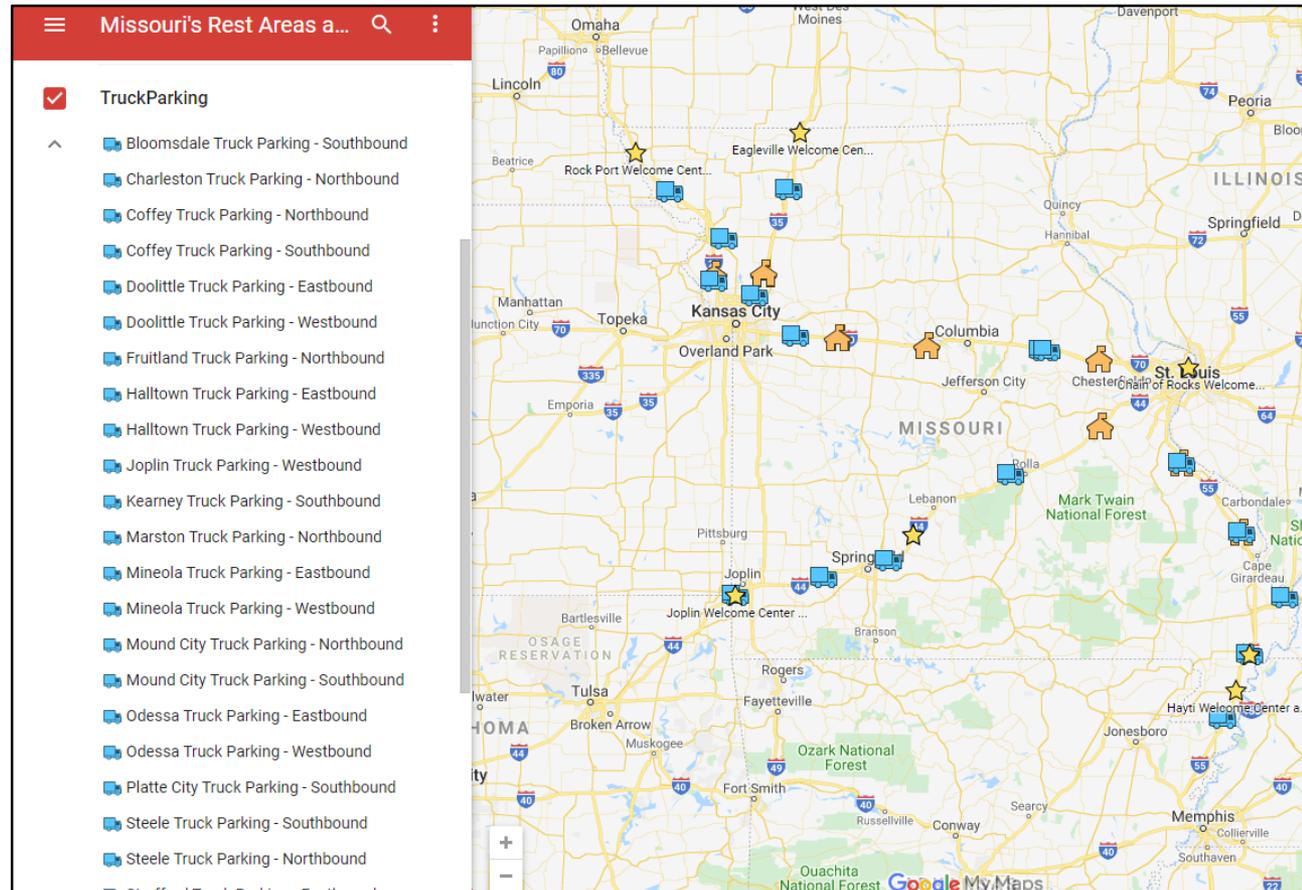
# Regional Truck Parking Study



## MoDOT Truck Parking

### Missouri DOT

- Converted rest areas and weigh stations to truck parking facilities
- Total of 23 truck-only parking sites across the state
- Online map shows locations of spaces, amenities, etc.
- Similar approach in South Dakota



# Regional Truck Parking Study



## Nebraska Truck Parking



### Nebraska DOT

- Converted interior of a large loop ramp to truck parking
- Up to 200 trucks can park in the lot
- Stabilized the interior and then surfaced with gravel



Aerial view of parking area at Big Springs, Nebraska.

# Regional Truck Parking Study



## Municipal Parking Lots

### Elmira, NY

- Industrial-zoned parcel adjacent to a carpool parking lot
- Provides 25 truck parking spaces, for which the city charges \$5 per day
- Trucks are permitted to park for up to 30 days

### City of Weed, CA

- Located on I-5
- 30 truck parking spaces on industrial zoned parcels
- Trucks are permitted to park for up to 72 hours



Aerial view of municipal truck parking lot in Elmira, NY.  
Source: Map data ©2018 Google, DigitalGlobe

# FDOT Real Time Truck Parking Information, TPAS



## Florida DOT

- Truck Parking Availability System (TPAS)
- FASTLANE Grant from FHWA
- Installed sensors, known as “pucks” in truck parking spaces in rest areas and welcome centers
- Very accurate, but expensive
- Maintenance needs haven’t been determined yet
- FDOT’s Regional Transportation Management Centers (RTMCs) integrate and disseminate the TPAS information



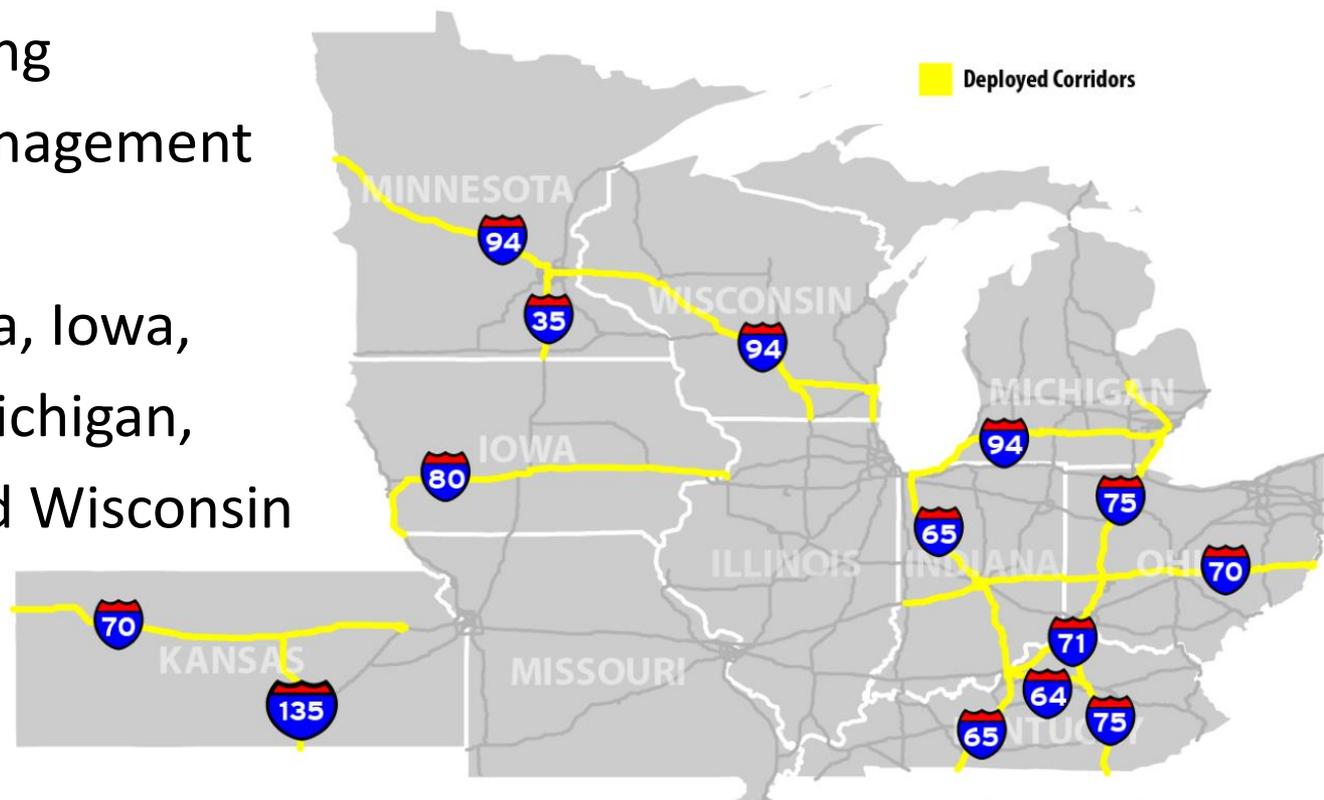
# TPIMS Real Time Truck Parking Information



Mid America Association of State Transportation Officials (MAASTO)

- Regional Truck Parking Information and Management System (TPIMS)
- Eight states – Indiana, Iowa, Kansas, Kentucky, Michigan, Minnesota, Ohio and Wisconsin
- \$25 million Federal TIGER grant
- \$28.6 million total cost

## TRUCK PARKING INFORMATION DEPLOYMENT CORRIDORS

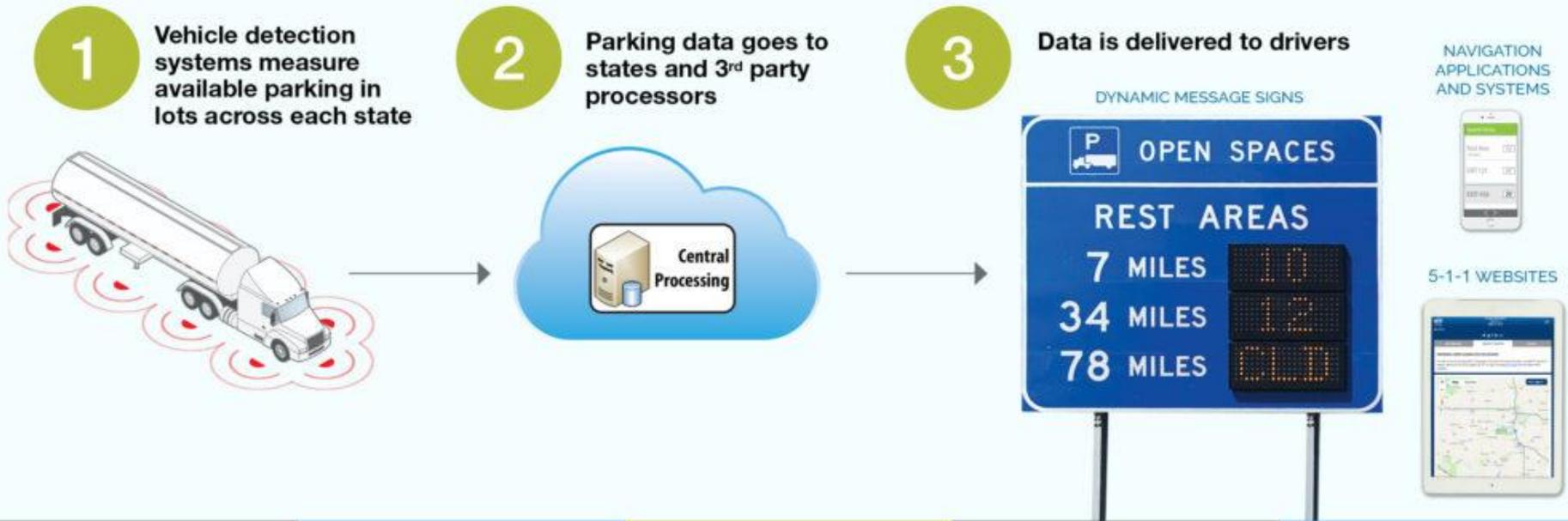


# TPIMS Real Time Truck Parking Information



- Parking availability is provided via road side signs, online, and via apps
- Parking data can be used by 3<sup>rd</sup> parties

## HOW TPIMS WORKS



# TPIMS Real Time Truck Parking Information



## Interchanges

**1**

	<b>P</b>	SPACES OPEN
EXIT 104	<b>15</b>	
EXIT 105 B	<b>10</b>	
EXIT 123	<b>35</b>	

## Unnumbered or Consecutive

**2**

	<b>P</b>	SPACES OPEN
NEXT RIGHT	<b>15</b>	
9 MILES	<b>10</b>	
19 MILES	<b>35</b>	

## Combination

**3**

	<b>P</b>	SPACES OPEN
EXIT 104	<b>15</b>	
REST AREA	<b>10</b>	
9 MILES		

## Rest Areas Only\*

**4**

	<b>P</b>	SPACES OPEN
REST AREAS		
5 MILES	<b>6</b>	
20 MILES	<b>10</b>	
39 MILES	<b>35</b>	

OR

OR

MAX. 2 SITES WHEN DISTANCE SHOWN WITH SITE.

MUST INCLUDE DISTANCE WHEN NOT WITHIN ADVANCE SIGN SEQUENCE IF NO EXIT NUMBER OR CONSECUTIVE EXIT NUMBERING USED.

**5**

	<b>P</b>	SPACES OPEN
5 MILES	<b>15</b>	
20 MILES	<b>10</b>	
39 MILES	<b>35</b>	

**6**

	<b>P</b>	SPACES OPEN
REST AREA	<b>6</b>	
5 MILES		
WEIGH STATION	<b>10</b>	
6 MILES		

OR

**7**

	<b>P</b>	SPACES OPEN
NEXT RIGHT	<b>15</b>	
EXIT 168	<b>10</b>	
EXIT 220	<b>35</b>	

# TPIMS Real Time Truck Parking Information



## Public Data Feed

Element	Type	Description
siteId	string	Unique fixed-length identifier including state, route number, route type, reference post, side of road and unique location number or name abbreviation. See more detailed description in appendix.
timeStamp	string	Provides the date and time that the site record was last updated. See more detailed data and time representation description in appendix.
timeStampStatic	String	Provides the date and time that the site static record was last updated. See more detailed data and time representation description in appendix.
reportedAvailable	string	Number of available spots shared through the data feed. The number is capped at the total number of parking spots at the site and "Low" is reported if the low threshold is reached.
	string	Optional. Reports whether the site is emptying, steady or filling. Accepted values: <b>"CLEARING"</b> / <b>"STEADY"</b> / <b>"FILLING"</b> / <b>null</b> . See more detailed description in appendix.
	boolean	Will report open unless the parking site is closed to parking for maintenance or another situation. Possible values: <b>true</b> / <b>false</b> / <b>null</b>
	boolean	This flag will report that the site is operating normally. Possible reasons for a "false" value include periods where the site is under construction while open to traffic, IT maintenance windows, or equipment failures. Possible values: <b>true</b> / <b>false</b> / <b>null</b>

### Dynamic Public Feed - example

#### JSON format

```
[{"siteId":"WI00094IS0012400ERSTARE53","timeStamp":"2016-08-15T20:35:15Z","timeStampStatic":"2015-05-03T12:24:19Z","reportedAvailable":"25","trend":"FILLING","open":true,"trustData":"true"}]
```

### Dynamic Public Feed - live URL

<https://transportal.cee.wisc.edu/TPIMS/dynamic>

# Truck Parking Next Steps



- Gwinnett County Truck Parking Study
- National Economic Partnership Study
- Real-time truck parking information?
- Potential zoning code changes?
- Private sector companies have shown interest in operating truck parking lots in the region
- County Comprehensive Transportation Plans (CTPs) and local Freight Cluster Plans will analyze truck parking





# QUESTIONS?

METRO ATLANTA FREIGHT AND  
LOGISTICS ECOSYSTEM  
GEORGIA FREIGHT AND LOGISTICS  
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