2040 Statewide Transportation Plan / 2015 Statewide Strategic Transportation Plan: Data Collection Plan

Technical Memorandum 2

prepared for

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1.0 Objectives

The objective of the data collection task of the Statewide Transportation Plan/Statewide Strategic Transportation Plan (SWTP/SSTP) is to gather all data needed to support the assessment of existing conditions in Task 3 across all modes of travel, and to provide a foundation for subsequent planning analyses. Primarily, the data collection task is an integration of existing geographic information system (GIS) data maintained by GDOT and other agencies (Federal, state, or local). Other field data collection activities may be needed to fill gaps in the understanding of transportation flows and motivations around the State. In particular, truck freight distribution at the Port of Savannah and at various intermodal facilities in the Atlanta area will need targeted field data collection. The main products of the data collection task will be a series of GIS databases and data tables that will be posted for the team’s use and will be maintained and supported throughout the life of the project. The details provided in this report build directly on the material in the Task 1 Methodology Report.

The team will make full use of the data collected and improved from other past or existing GDOT planning projects. In particular, data elements from the following studies were used in full or part to build the SWTP/SSTP database:

- GDOT Statewide Transportation Plan 2005;
- GDOT Truck Lanes Needs Identification Study 2007;
- GDOT Project Prioritization Project 2009;
- GDOT Statewide Freight and Logistics Plan 2011; and
- GDOT Interstate Risk Assessment Plan (current).

These projects all had data elements that were collected or improved/validated for their specific objectives and had an element potentially relevant to the analysis planned for this study.

Given the variety of sources, format, and structure of GIS data needed to support the subsequent planning efforts of the SWTP/SSTP, a consolidated database design was developed to maximize data integration across modes and topics.

The following sections describe the source data collected for each mode, the methods used for any adaptation or improvement, and the final database design.

2.0 Highways

The highway network developed for this project will be based on the GDOT roadway centerline GIS database and is the primary database for organizing all data for the State’s roadways. Attributes regarding classification, geometry, operations, and other categories are stored in GDOT’s Federated Road Enhanced Database (FRED) built from the Road Classification (RC) File, and are directly compatible with the centerline GIS file through a
route and mile-point reference system. Both the FRED and centerline GIS data collected for this project will be from 2012.

The original centerline GIS file contains all roads in Georgia, including local roads, and contains several hundred thousand individual road segments. The scope of this project is limited to all Federal aid-eligible roads which eliminates the need to include local and rural collector roads. Figure 2.1 shows a sample of the level of road classification and density that will be available in the federal aid eligible road database. Once the non-Federal aid-eligible road segments were removed, the final count of road segments in our Base Road Network is 28,970. Each road segment was assigned its primary GDOT route and mile-point IDs to ensure all other data using this same referencing scheme can be joined to the database. This includes all of the FRED road, operations, and performance characteristics data as well as all crash and other data such as pavement condition, usage, and performance (such as speed, capacity, and level of service).

This new Base Road Network created specifically for the SWTP/SSTP is the core GIS representation for road-based data. All effort, described in the ensuing sections, will be made to connect other data (environmental, transit, bicycle/pedestrian, etc.) to this GIS representation. This connection will allow queries across these modes as needed by the team later in the project.

- **Original Data Sources:** GDOT Statewide LRS Geodatabase, 2012.
- **Major Edits:** Eliminated all non-Federal aid eligible roads, selected single primary route and mile-point value, and dissolved segments to be a single entity between major intersections. Corrected route IDs for divided highways (“1” for primary route direction, “D” for reverse direction).

The following sections describe data tables that are associated with the highway network.

### 2.1 Roadway Classifications

There are several different state and Federal classification schemes for Georgia roads, each with a targeted purpose. These classification schemes are included in the highway network geodatabase as a table and can be used to extract all Federal aid eligible roads meeting each
classification. The Federal classifications for the strategic highway network (STRAHNET) and the national highway system (NHS)) were collected from Federal sources and verified for accuracy as part of the 2011 GDOT Freight and Logistics Study.

In addition to the STRAHNET and NHS classifications, this table also shows the Federal functional classification, hazardous material routes, state routes, and others which may be warranted such as Hurricane Evacuation Routes.

- **Original Data Sources:** GDOT FRED 2012, National Transportation Atlas Database (NTAD) 2011.
- **Major Edits:** None.

### 2.2 Operations and AADT

Operational information regarding the base road network are provided in a table included in the highway network geodatabase. These values were extracted from the highway performance monitoring (HPMS) data and the GDOT FRED. Average annual daily traffic volumes, truck percentages, speed limits, the number of lanes, and the number of traffic signals are provided for each base road segment. Figure 2.2 presents a sample of AADT on federal aid eligible roads.

- **Original Data Sources:** GDOT FRED 2012, 2010 HPMS.
- **Major Edits:** AADT data was distance-weighted for each base road network segment. Other values were aggregated as needed to provide the best representation of conditions on that road segment. Count information will be identified as sampled or synthetic (inferred), short-term or continuous, vehicle classification counts, etc.

### 2.3 Travel Demand Models

The Statewide Travel Demand Model (SWM) and the 15 MPO models will be the primary sources for existing and forecast future travel volumes on the State roadways. With the exception of the Atlanta Regional Commission’s (ARC) model, all are maintained by GDOT. Model volumes will be checked for reasonableness against AADT count data and for any
significant anomalies in underlying growth factors for future conditions. We will work with GDOT and ARC modeling staff to adjust any significant problems, without attempting to reinvent the State’s modeling base which would be beyond the resources of this project.

- **Original Data Sources:** GDOT SWM and 14 MPO models, ARC model.
- **Major Edits:** Adjust existing volumes and future growth factors where significant anomalies are identified.

### 2.4 Physical Characteristics, Pavement Condition, and Geometry

Roadway physical characteristics are provided in a single table included as part of the highway network geodatabase. These fields include the number of lanes, shoulder widths, pavement condition (CoPACES and/or PSR/ISI), and sidewalk presence. These values were extracted from the highway performance monitoring (HPMS) data and the GDOT FRED. Figure 2.3 displays a sample of “Poor” pavement on federal aid eligible roads.

- **Original Data Sources:** GDOT FRED 2012, 2010 HPMS.
- **Major Edits:** None.

### 2.5 Environmental and Protected Conditions

Environmental conditions data are provided in a single table included as part of the highway network geodatabase. This table identifies protected or potentially sensitive conditions for each road segment. Most of these databases were assessed using a 200-foot buffer from each roadway centerline under the assumption that this buffer would capture both the legal right-of-way and a general proximity. These additional fields provide an estimate and are based on non-GDOT statewide datasets:

- **Land Cover:** Land cover is estimated based on the identification of the predominant land cover value within a 200-foot buffer of each base road network segment. The database used is USDA’s 2012 Georgia Cropland Data Layer that was generated using Landsat 5 imagery and other sources.
• **National Wetlands Inventory:** The national wetlands inventory database was used to establish the percent coverage of wetlands within a 200-foot buffer of each base road network segment.

• **Critical Habitats:** Endangered species have been identified from the U.S. Fish and Wildlife Services Critical Habitat data. Major critical species within a 200-foot buffer of each base road network segment.

• **Historical Features:** Historical and archeological sites were gathered from various sources and compared to the base roadway network using a 400-foot buffer. The databases used come from the national historic registry, the USGS cultural features layer, and the 2011 National Park Service historical features data. Additionally, major archaeological sites in Georgia were gathered from various on-line sources. These databases were defined in their original format as point locations. Major sites were verified to ensure that the points were accurate and within the buffer area. See Figure 2.4 as the historical sites in Georgia.

2.6 Safety

Safety data originates from the crash data that is processed by GDOT and provided by the Office of Traffic Safety and Design. Multiyear extractions from previous studies have been gathered and used as a core database to address specific questions. Crash data from 2007 to 2009 for the Interstates was gathered from the GDOT Interstate Risk Assessment Plan. This data has been previously corrected for the common geocoding errors that are evident on many of the crash databases. Further, crash data for these interstates was directionally matched to the correct side of the highway. Crash data from other parts of the State is available from 2001 to 2012 in databases collected from other GDOT planning projects. The most recent three-year period (2010 to 2012) is available as point shapefiles and includes limited fields. Prior to 2010, raw crash tables are available that allow more comprehensive analysis.

For the SWTP/SSTP, the Interstate crash data will be used to identify base road network segment crash rates (fatalities, injuries, property damage). For non-Interstate crash rates, the most recent three years of crash data will be used (2010 to 2012). These crash data elements will be available in a table included in the base highway network geodatabase.
Additional crash information may be needed for more detailed queries and the raw crash tables may be needed to support these analyses.

- **Major Edits**: Point data aggregated to the base line road segment level.

### 2.7 Bridges

Bridge data was collected from the Federal Highway Administration (FHWA) from the National Bridge Inventory. This set of bridge data is provided to the FHWA by each state and includes a long list of bridge attributes available for analysis. This database provides geographic coordinates of bridge locations that can be integrated with other GIS databases. In particular, the bridge data was analyzed and processed to ensure that the bridge records are properly aligned with the base road network and centered over the primary crossing feature. Figure 2.5 demonstrates a sample of the bridges by deck area in Georgia.

- **Original Data Sources**: National Bridge Inventory 2011 and GDOT’s Bridge Inventory System.
- **Major Edits**: Point locations adjusted to match the base road network.

### 3.0 Transit

Transit data for the State of Georgia has been gathered in two specific ways. First, all fixed bus routes, paratransit service areas, or rural on-demand service areas have been coded to the base road network. Second, all existing GIS shapefiles and PDF reports regarding transit service areas and operational statistics have been gathered from agencies around the State and been made available to planners and analysts. This includes the existence of a rail transit shapefile.

The geographic coverage of on-road transit routes and operational areas have been coded to tables and included in the geodatabase for the base road network. This connection will allow analysts to combine transit coverage with other planning databases.
Ridership numbers and other documents describing the various transit services have been collected and provided as a library of PDF documents for use as a reference during the SWTP/SSTP.

Rail-based routes (existing MARTA subway and planned streetcars) or commuter rail lines are included in the data inventory as separate shapefiles. Additionally, a point shapefile of park-and-ride lots around the State was created from lists available through the GDOT Intermodal Office.

- **Original Data Sources:** Individual transit system operator route maps and descriptions (2013), GDOT Intermodal Programs (Transit).
- **Major Edits:** All fixed bus routes coded to the base road network. All on-demand service areas coded to the base road network.

## 4.0 Air

Data regarding the location of private, public, and commercial airports in Georgia was collected from the Federal Aviation Administration (FAA) and verified with the GDOT Intermodal Office’s list of airports. Data regarding usage (annual operations and passengers served) is available for those airports with commercial service. Figure 4.1 shows the airports by level in Georgia.

- **Original Data Sources:** 2002 FAA Airports Database.
- **Major Edits:** None.

## 5.0 Passenger Rail

Amtrak rail provides service to Georgia along two rail lines that serve Toccoa, Gainesville, and Atlanta in the north and Savannah and Jesup in the south. Data regarding these rail lines was collected from the Bureau of Transportation Statistics (BTS). Operational statistics and station information were collected directly from Amtrak. Figure 5.1 presents the AMTRAK rail lines in Georgia.
• **Original Data Sources:** 2012 BTS Amtrak data layer.

• **Major Edits:** None.

### 6.0 Ferry Service

There are five small ferry operations along the Georgia coast operated by three different companies. Data regarding the routes, schedules, and travel times were recorded in a ferry shapefile created by the project team.

• **Major Edits:** None.

### 7.0 Freight

The primary source of freight data in the SWTP will be the data assembled and analyzed for the GDOT Freight and Logistics (F&L) Plan which was completed in 2011. Information on commodity flows for all modes is primarily provided by using the Global Insight TRANSEARCH database in combination with the FHWA Freight Analysis Framework growth rate data. Additionally, Task 3 of the F&L Plan included separate modal profiles for truck, rail, marine, and air cargo. Each modal profile included an institutional analysis, a description of freight transportation infrastructure, and a description of needs. In addition to the TRANSEARCH and FAF databases, sources of mode-specific information include:

- **Truck** – Truck count data from GDOT’s Office of Transportation Data, Origin-Destination surveys conducted for the GDOT Truck Lane Needs Identification Study and updated for the SWTP/SSTP (see Section 10.0 below), and ARC Atlanta Regional Freight Mobility Plan, State of Georgia crash data. Truck count data, including data on origins and destinations and commodities carried, will be updated by means of gate surveys to be conducted at the CSX and Norfolk Southern (NS) intermodal yards in the Atlanta region, and at the Georgia Ports Authority’s (GPA) Savannah container facility.

- **Rail** – Rail Waybill sample data, interviews with Class I railroads, congestion data from the American Association of Railroads (AAR) National Rail Freight Infrastructure Capacity and Investment Study.

- **Marine** – Port volume data from GPA terminals and the American Association of Port Authorities, import-export data from U.S. Census, and monthly reports from GPA.

- **Air Cargo** – Volume and forecast data from the International Air Transport Association.

In summary:
• **Original Data Sources:** All of the above.

• **Major edits:** Truck volume data will be coded to the base roadway network.

### 8.0 Bicycle/Pedestrian

Bicycle and pedestrian facilities have been collected from a variety of state and local sources with the following goals:

- Link all GDOT-defined bike routes to the base road network;
- Link all marked or special bike routes to the base road network (if along Federal aid-eligible roads and confirmed as existing);
- Link all AADT, shoulder width, and sidewalk conditions for the base road network to allow analysts to generate recommended routes according the statewide bike map; and
- Generate a list of all MPO and RC bicycle/pedestrian documents for use by the planners and analysts during the study.

The bike and pedestrian data for the State comes primarily from the GDOT Bike and Pedestrian Program and the Statewide Bike Route map. The numbered routes identified in the statewide bike network were coded to the base road network. Other marked or special routes from local or regional agencies have been gathered and coded to the base road network (if available and confirmed as existing). Figure 8.1 displays the Bike Route 95 (yellow line) in Coastal Georgia.

- **Original Data Sources:** 2010 GDOT Official Bike Map, various regional and local agencies.
- **Major Edits:** Coded to the base road network.

### 9.0 Current and Planned Transportation Projects

Current and planned transportation projects throughout the State will be linked to the base road network using the route and mile-point reference system and as a separate shapefile. This data includes existing and planned projects at the MPO and RDC level. The database
of projects will be extracted from GDOT’s TPro database in the early stages of Task 5 – Evaluation of Future Deficiencies, to ensure that we will only use one extraction which is the most current at the time of the future conditions analysis.

### 10.0 Planned Field Data Collection – Intermodal Terminals

#### 10.1 Truck Origin-Destination Surveys

The team determined that field data should be collected regarding truck freight operations at the Port of Savannah and at the four major intermodal railyards in the Atlanta area. Information regarding truck trip origins and destinations and vehicle and commodity attributes will be collected using roadside truck surveys at the terminal gates for the Garden City Terminal in Savannah, the Fairburn and Hulsey CSX intermodal railyards in Atlanta, and the Austell and Inman Norfolk Southern intermodal railyards in Atlanta. Two days of surveys will be conducted at each location.

The following information will be observed for each truck:

- Truck Configuration (number of axles and units);
- Truck Configuration (Straight Truck, Straight Truck and Trailer, Tractor Only, Tractor and Trailer, Tractor with Two Trailers);
- Trailer Style (Animal Carrier, Car Carrier, Concrete Mixer, Container, Dump, Flatbed, Hopper, Logging, Tanker, Van, Other);
- Hazardous Materials Placard (yes/no); and
- State of Registration (if visible).

The following questions will be asked of each driver agreeing to participate in the survey:

- Where did you start this trip?
- Where did/does this trip end?
- How often do you travel to/through Georgia for this same type of trip?
- How many times do you expect to travel to the terminal today (including trips earlier today)?
- Which roadway(s) did you take through/to Georgia on this trip?
- Which roadways(s) will you take on your trip out of the terminal?
- What activities are you performing at this terminal?
- What type of facility best characterizes where you started your trip prior to arriving at this terminal?
- What type of facility best characterizes where you will end this trip?
- Is your truck empty or loaded?
• If loaded, what type of commodity are you transporting?
• Who made the routing decision for this trip?
• What type of trucking company best describes your operations (private, owner-operator, LTL, TL)?

This survey design is very similar to the 2006 truck survey conducted for the GDOT Truck Lanes Needs Identification Study and can be used as an update to that data.
Appendix A – GIS Data Dictionary

Base Roadways

**Data Item Name:** OBJECTID  
**Code Values and Positions:** Long integer  
**Definition:** The unique ID for each roadway segment.

**Data Item Name:** RID  
**Code Values and Positions:** 10-character string  
**Definition:** RID is formed by three-character county FIPS, one-character route type, four-character route number, and a two-character suffix type.

**Data Item Name:** BEG_MEA  
**Code Values and Positions:** Double  
**Definition:** The begin mile-point measure for the roadway segment.

**Data Item Name:** END_MEA  
**Code Values and Positions:** Double  
**Definition:** The end mile-point measure for the roadway segment, and geographic entity (i.e., MPO, county, Congressional District, etc.).

**Data Item Name:** County  
**Code Values & Positions:** Double  
**Definition:** Name of the MPO the road segment is located within.

**Data Item Name:** MPO  
**Code Values & Positions:** String  
**Definition:** Name of the MPO the road segment is located within.

**Data Item Name:** GDOT_DIST  
**Code Values & Positions:** Integer  
**Definition:** The GDOT district number the road segment is located within.

**Data Item Name:** CONG_DIST  
**Code Values & Positions:** Integer  
**Definition:** The congressional district number the road segment is located within.
Roadway Classifications

Data Item Name: URCODE
Code Values & Positions: String
Definition: flag for urban or Rural where the line segment is located

Data Item Name: Functional
Code Values and Positions: String
Definition: Flag for functional classification of roadways
- 1 – Interstate;
- 2 – Principal Arterial – Other Freeways and Expressways;
- 3 – Principal Arterial – Other;
- 4 – Minor Arterial;
- 5 – Major Collector;
- 6 – Minor Arterial; or
- 7 – Local.

Data Item Name: STRAHNET
Code Values and Positions: Integer
Definition: Flag for Strategic Highway Network:
- 2 – Connector;
- 1 – Yes regular STRAHNET; or
- 0 – No.

Data Item Name: NHS
Code Values and Positions: Integer
Definition: Flag for National Highway System:
- 1 – Yes; or
- 0 – No.

NHS Intermodal Connectors
- 2 – Airport;
- 3 – Port Facility;
- 4 – Amtrak Station;
- 5 – Rail/Truck Terminal;
- 6 – Intercity Bus 2 Terminal;
- 7 – Public Transportation or Multimodal Passenger Terminal;
- 8 – Pipeline Terminal; or
- 9 – Ferry Terminal.
Data Item Name: HAZMAT
Code Values and Positions: Integer
Definition: Flag for Hazardous Material Routes:
   • 1 – Yes; or
   • 0 – No.

Data Item Name: EVACUATION
Code Values and Positions: Integer
Definition: Flag for hurricane evacuation routes in Georgia:
   • 1 – Yes; or
   • 0 – No.

Data Item Name: SR
Code Values and Positions: Integer
Definition: Flag for Georgia State Routes:
   • 1 – Yes; or
   • 0 – No.

Operations

Data Item Name: AADT
Code Values and Positions: Long integer
Definition: Distance-weighted average daily traffic counts from HPMS.

Data Item Name: TruckPer
Code Values and Positions: Integer
Definition: Percentage of truck volume in AADT.

Data Item Name: SpeedLimit
Code Values and Positions: Two-character string
Definition: Speed limit of roadways.

Data Item Name: NumSignals
Code Values and Positions: Integer
Definition: Number of traffic signals on roadways.

Physical Structure, Pavement Condition, and Geometry

Data Item Name: DIV_HWY_SHLDR_WIDTH_LFT
Code Values and Positions: Integer
Definition: The left shoulder width in feet for divided highway.
Data Item Name: DIV_HWY_SHLDR_WIDTH_RT
Code Values and Positions: Integer
Definition: The right shoulder width in feet for divided highway.

Data Item Name: DIV_SIDEWALK_LEFT
Code Values and Positions: String
Definition: Flag for the left sidewalk:
   • S – Sidewalk present.

Data Item Name: DIV_SIDEWALK_RT
Code Values and Positions: String
Definition: Flag for the right sidewalk:
   • S – Sidewalk present.

Data Item Name: UDIV_HWY_SHLDR_WIDTH_LFT
Code Values and Positions: Integer
Definition: The left shoulder width in feet for undivided highway.

Data Item Name: UDIV_HWY_SHLDR_WIDTH_RT
Code Values and Positions: Integer
Definition: The right shoulder width in feet for undivided highway.

Data Item Name: UDIV_SIDEWALK_LEFT
Code Values and Positions: String
Definition: Flag for the left sidewalk:
   • S – Sidewalk present.

Data Item Name: UDIV_SIDEWALK_RT
Code Values and Positions: String
Definition: Flag for the right sidewalk:
   • S – Sidewalk present.

Data Item Name: NumLanes
Code Values and Positions: Integer
Definition: Number of lanes for roadways.

Data Item Name: COPACES
Code Values and Positions: Integer
Definition: Distance-averaged COPACES rating for pavement.

Data Item Name: PSR-IRI
Code Values and Positions: Integer
Definition: Distance-averaged PSR rating for pavement.
Environmental Conditions

Data Item Name: Land_Class
Code Values and Positions: String
Definition: The major land cover within 200 feet of the roadway.

Data Item Name: Wetland_Per
Code Values and Positions: Double
Definition: The percent of wetland area within 200 feet of the roadway.

Data Item Name: Flood_Per
Code Values and Positions: Double
Definition: The percent of FEMA flood zone area within 200 feet of the roadway.

Data Item Name: Conservation_Per
Code Values and Positions: Double
Definition: The percent of conservation land within 200 feet of the roadway.

Data Item Name: EPA_ECS
Code Values and Positions: integer
Definition: The number of environmental concerns sites defined by U.S. Environmental Protection Agency within 200 feet of the roadway.

Data Item Name: Species1, Species2, Species3
Code Values and Positions: String
Definition: The name of endangered species within 200 feet of the roadways.

Historical Sites

Data Item Name: REF_1, REF_2, REF_3
Code Values and Positions: String
Definition: Eight-digit unique identifier that is used by the National Register of Historic Places (NRHP) to catalog sites worth preserving.

Data Item Name: SITE_1, SITE_2, SITE_3
Code Values and Positions: String
Definition: Official name of the historical site within 400 feet of the roadways.

Data Item Name: CDATE_1, CDATE_2, CDATE_3
Code Values and Positions: String
Definition: Date that the site was inducted into the National Register of Historic Places.
Data Item Name: CITY
Code Values and Positions: String
Definition: City in which the site is located.

Data Item Name: County
Code Values and Positions: String
Definition: County in which the site is located.

Data Item Name: Arch_Site
Code Values and Positions: String
Definition: Name of archaeological sites within 400 feet of the roadways.

Data Item Name: Arch_NRHP_RFE
Code Values and Positions: String
Definition: Reference number for the site in National Register of Historical Places.

Data Item Name: Arch_GA_RFE
Code Values and Positions: String
Definition: Reference number for the site in Georgia register of archaeological sites.

Transit

Data Item Name: FixedRoute
Code Values and Positions: Integer
Definition: Flag for fixed-route transit routes:
- 1 – Yes; or
- 0 – No.

Data Item Name: FixedPara
Code Values and Positions: Integer
Definition: Flag for fixed paratransit routes:
- 1 – Yes; or
- 0 – No.

Data Item Name: AsNeeded
Code Values and Positions: Integer
Definition: Flag for as-needed transit routes:
- 1 – Yes; or
- 0 – No.
Data Item Name: BusAgency
Code Values and Positions: String
Definition: Name for the bus agency operating the transit route.

Data Item Name: AnnualHours
Code Values and Positions: Long integer
Definition: Number of annual operation hours for the transit route (only available for Metro Atlanta).

Data Item Name: AnnualRidership
Code Values and Positions: Long integer
Definition: Number of annual ridership for the transit route (only available for Metro Atlanta).

Bicycle/Pedestrian

Data Item Name: BikeRoute1, BikeRoute2, BikeRoute3
Code Values and Positions: Integer
Definition: Bike route ID for Georgia’s statewide bicycle routes.

Data Item Name: Factype
Code Values and Positions: string
Definition: Type of bike facility:
  - Bike Lane;
  - Bike Shoulder;
  - Golf Cart Path;
  - Greenway;
  - Hard Surface Greenway;
  - Hard Surface Multiuse Path;
  - Hard Surface Side Path;
  - Multiuse Path;
  - Path Route;
  - Side Path;
  - Signed Bike Route;
  - Signed Shared Roadway;
  - Soft Surface Multiuse Path;
  - State Bike Route;
  - Unknown; or
  - Unknown off-road.
Data Item Name: Signed_Rte  
**Code Values and Positions:** string  
**Definition:** Flag for signed bike routes:  
- Yes – Signed bike routes; or  
- No – Not signed bike routes.

**Freight**

Data Item Name: TR_RTE  
**Code Values and Positions:** One-character string and geocode  
**Definition:** Flag for freight routes designated by GDOT:  
- A – Designated Access Routes for oversized trucks allowing single and twin trailers;  
- B – Designated Access Routes for oversized trucks allowing single trailers only;  
- C – Designated Access Routes for oversized trucks allowing twin trailers only. These are routes with sharp turns that long single trailers cannot negotiate, but shorter, articulated twin trailer combinations can use; or  
- T – Federally Designated National Network Truck Routes other than Interstate.

Data Item Name: Freight Rail  
**Code Values:** GIS layers and ID crossings (FRA data)  
**Definitions:**  
- B – 286,000-pound capacity: yes or no.  
- C – Overhead clearance issues: yes or no.

Data Item Name: Inland Waterways  
**Code Values:** Navigable Channels

Data Item Name: ARC  
**Code Values and Positions:** Integer  
**Definition:** Flag for freight routes designated by Atlanta Regional Commission:  
- 1 – Yes; or  
- 0 – No.

Data Item Name: Valdosta  
**Code Values and Positions:** Integer  
**Definition:** Flag for freight routes designated by Valdosta-Lowndes Metropolitan Planning Organization:  
- 1 – Yes; or  
- 0 – No.
Data Item Name:  Albany  
**Code Values and Positions:** Integer  
**Definition:** Flag for freight routes designated by Doughterty Area Regional Transportation Study:
- 1 – Yes; or  
- 0 – No.

Safety

Data Item Name:  NumCrash  
**Code Values and Positions:** Integer  
**Definition:** Number of crashes from June 1, 2009 to May 31, 2012.

Data Item Name:  NumFatalCrash  
**Code Values and Positions:** Integer  
**Definition:** Number of fatal crashes (a crash with fatality >0) from June 1, 2009 to May 31, 2012.

Data Item Name:  NumInjured  
**Code Values and Positions:** Integer  
**Definition:** Number of injured crashes (a crash with fatality=0 and injury>0) from June 1, 2009 to May 31, 2012.

Data Item Name:  NumPDOCras  
**Code Values and Positions:** Integer  
**Definition:** Number of PDO crashes (fatality=0 and injury=0) from June 1, 2009 to May 31, 2012.

Data Item Name:  NumTruckCrash  
**Code Values and Positions:** Integer  
**Definition:** Number of truck-involved crashes from June 1, 2009 to May 31, 2012.

Data Item Name:  NumPedCrash  
**Code Values and Positions:** Integer  
**Definition:** Number of pedestrian-involved crashes from June 1, 2009 to May 31, 2012.

Data Item Name:  CrashRate  
**Code Values and Positions:** Double  
**Definition:** Number of crashes per mile from June 1, 2009 to May 31, 2012.
Bridge

**Data Item Name:** NumBridgeIntersect  
**Code Values and Positions:** Integer  
**Definition:** Number of bridges intersected with the roadways.

**Data Item Name:** NumBridgeCarried  
**Code Values and Positions:** Integer  
**Definition:** Number of bridges carried by the roadways.

**Data Item:** NumCriticalIntersect  
**Code Value:** Integer  
**Definition:** Number of bridges intersected with roadways in critical condition (special inspection or emphasis needed).

**Data Item:** NumCriticalCarried  
**Code Value:** Integer  
**Definition:** Number of bridges carried by roadways in critical condition (special inspection or emphasis needed).

**Data Item:** MinLoadIntersect  
**Code Value:** String  
**Definition:** The minimum design load for bridges intersected with the roadways:
- M 9/H 10;
- M 13.5/H 15;
- MS 13.5/HS 15;
- M 18/H 20;
- MS 18/HS 20;
- MS 18+Mod/HS 20+Mod;
- Pedestrian;
- Railroad;
- MS 22.5/HS 25;
- Other or Unknown; or
- Miscoded data.

**Data Item:** NumCriticalCarried  
**Code Value:** Integer  
**Definition:** The minimum of design load for bridges carried by the roadways:
- M 9/H 10;
- M 13.5/H 15;
- MS 13.5/HS 15;
• M 18/H 20;
• MS 18/HS 20;
• MS 18+Mod / HS 20+Mod;
• Pedestrian;
• Railroad;
• MS 22.5/HS 25;
• Other or Unknown; or
• Miscoded data.

### Air

**Data Item Name:** AirportName  
**Code Values and Positions:** String  
**Definition:** Name of the airport within one mile of the roadways.

**Data Item Name:** AirportType  
**Code Values and Positions:** String  
**Definition:** Type of the airport:  
- Private;  
- Public; or  
- Commercial.

**Data Item Name:** Intensity  
**Code Values and Positions:** Long integer  
**Definition:** Annual operation and passengers served by the airport.

### Passenger Rail

**Data Item Name:** Amtrak  
**Code Values and Positions:** String  
**Definition:** Flag for Amtrak line within one mile of the roadways:  
- Yes – there is Amtrak rail line within one mile of the roadways; or  
- No – there is not any Amtrak rail line within one mile of the roadways.

**Data Item Name:** Subdiv  
**Code Values and Positions:** String  
**Definition:** Subdivision for the Amtrak rail line:  
- Atlanta North;  
- Atlanta Terminal A;  
- Atlanta Terminal B;  
- Charleston;
• Columbia;
• East End;
• Greenville-Atlanta;
• Nahunta;
• Norcross; or
• Savannah East Route.

Ferry

Data Item Name: Dock
Code Values and Positions: String
Definition: Name of the ferry dock within one mile of the roadways.

Data Item Name: Operator
Code Values and Positions: String
Definition: Name of the ferry operator in the ferry dock within one mile of the roadways.

Data Item Name: Route
Code Values and Positions: Integer
Definition: Number of ferry routes by each operator at the specific ferry dock.