Funding and Programming Transportation Projects For Your Community

What you need to know and questions you need to ask

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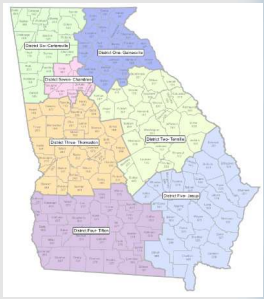
GDOT
Georgia Department of Transportation

Project Identification: The District Perspective

Corbett S. Reynolds
Director of Field Districts



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Overview

- Navigating GDOT
- Identification of Projects
- Planning and Programming Process

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GDOT in Your Community

There to Serve You

- General Office
- District Offices
- Area Offices
- Routine Maintenance Headquarters
- Project Offices

http://www.dot.ga.gov/AboutGDOT/Districts

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Plan Development Process-PDP Manual

Anyone can propose a transportation improvement project and can submit the request to GDOT....

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Program a Project

What are the options?

- Identify the need
- Possible solutions
- What funding sources are available?
- Who can help?

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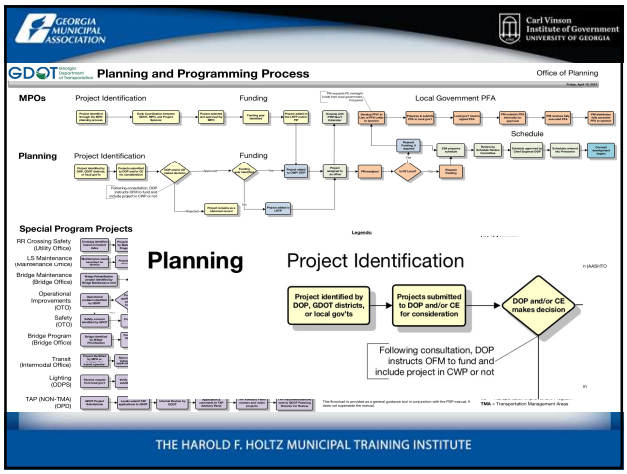
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GDOT Georgia Department of Transportation
Planning and Programming Process
Office of Planning
MPOs
Project Identification
Funding
Local Government PFA
Schedule
Planning
Project Identification
Funding
Special Program Projects
RR Crossing Safety (Utility Office)
LS Maintenance (maintenance Units)
Bridge Maintenance (Bridge Office)
Operational Improvements (OTO)
Safety (OTO)
Bridge Program (Bridge Office)
Transit (Intermodal Office)
Lighting (ODPS)
TAP (NON-TMA) (OPD)
Planning
Project Identification
Project identified by DOP, GDOT districts, or local gov'ts
Projects submitted to DOP and/or CE for consideration
DOP and/or CE makes decision
Following consultation, DOP instructs OFM to fund and include project in CWP or not
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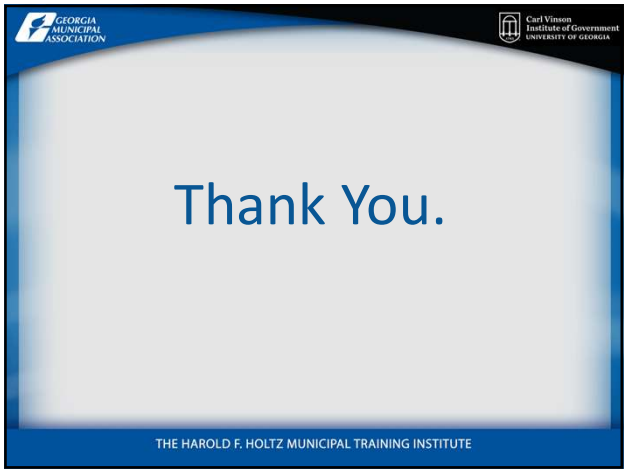
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Thank You.
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GDOT
Georgia Department of Transportation
GMA – Cities United Summit
Local Grants Office
Charity Belford
Assistant Local Grants Administrator
June 28, 2022
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Local Grants Office Contact Info

District Office	State Aid Coordinator	Phone Number
District One - Gainesville	Shane Giles	770-533-8491
District Two - Tennille	Matthew Sammons	478-553-3383
District Three - Thomaston	Brandy Spillers	706-646-7505
District Four - Tifton	Shannon Bradford	229-391-5438
District Five - Jesup	Jeremy Barwick	912-530-4396
District Six - Cartersville	Carla Ham	678-721-5293
District Seven - Chamblee	Chartrae (Trae) Kent	770-216-3880

Bill Wright	Local Grants Administrator	404-631-0231
Charity Belford	Assistant Local Grants Admin	404-347-0235
Lakeshia Osborn	Local Grants Program Manager	404-347-0237
Lewis Brooker	Local Grants Coordinator	404-347-0236

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Local Maintenance and Improvement Grant Program (LMIG)

- LMIG Funding set by GA Code at 10%-20% of the Annual Transportation Budget
- Formula Set Yearly by GDOT Director of Planning

(Local Pop/State Pop)**(1/3)** + (Local CL Miles/State CL Miles)**(2/3)** = FACTOR

FACTOR X ANNUAL ALLOCATION = LG FORMULA AMOUNT

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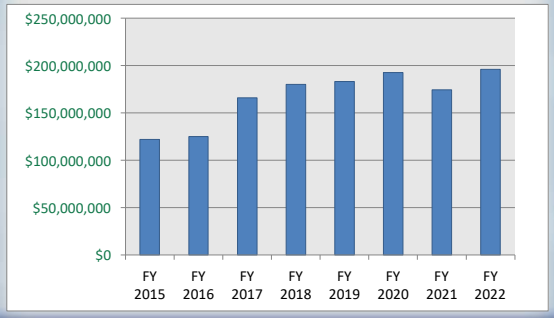
LMIG Annual Allocations



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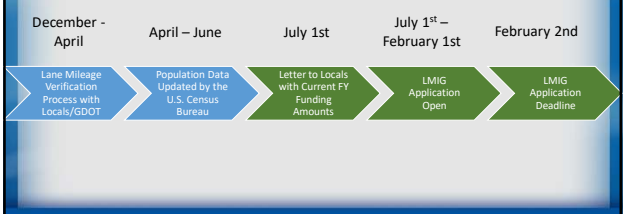
Local Maintenance and Improvement Grant Program (LMIG)

LMIG Timeline



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LMIG

- 10% or 30% Match (TIA Regions = 10% match)
- A Project List that shows projects that total Formula Amount PLUS match required
- A Cover Letter and Signed/Sealed Application page is required

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Local Maintenance and Improvement Grant Program (LMIG)

LMIG = State Motor Fuel $

Eligible LMIG Items Include:

- Aggregate Surface Course for Dirt Road Maintenance
- Bridge Repair or Replacement
- Construction Supervision & Inspection
- Grading, Drainage, Base, and Paving Existing or New Roads
- Intersection Improvements Including Signal Installation
- Patching, Leveling, and Resurfacing a Paved Roadway
- Replacing Storm Drain Pipe or Culverts
- Roadway Signs, Striping, Guardrail Installation
- Sidewalk (within Right of Way and adjacent to a public street)

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Local Maintenance and Improvement Grant Program (LMIG)

LMIG = State Motor Fuel $

Items That Are NOT Eligible for LMIG Include:

- Right of Way Acquisition for a County or City Road
- Street Lighting or Pedestrian Lighting
- Beautification & Streetscapes
- Walking Trails and Tracks
- Alley
- Landscaping
- Administrative Services
- Equipment
- Parking Lots

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LMIG

- Resurfacing, striping, and maintenance type projects to be completed within a year of receiving the LMIG Grant.
- Larger LMIG Projects may be completed within 3 years.
- Funds may be rolled up to 3 fiscal years.
- FY2019 Projects should be complete for FY2022 funds

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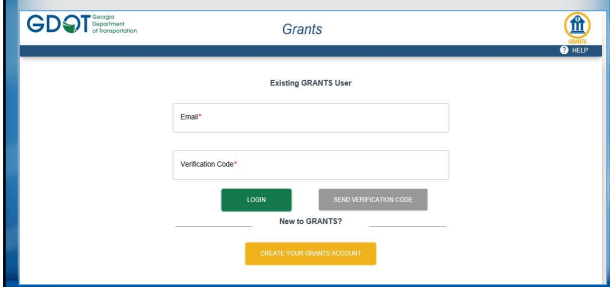
FY 2023 Online LMIG

www.dot.ga.gov/PS/Local/LMIG



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Georgia Department of Audits and Accounts (DOAA)

https://www.audits.ga.gov/NALGAD/resource.html

Georgia Department of Community Affairs (DCA)

https://apps.dca.ga.gov/LocalGovStatus/planning.asp

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Off System Safety Program

- Striping
- Sign Replacement
- Rumble Strips
- Raised Pavement Markers
- Minor Shoulder Widening
- Minor Intersection Improvements

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Safety Action Plan

State Funded – Safety Action Plan (SAP)

- LMIG process with the Locals letting
- A 10% or 30% Local Match is required

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Off System Safety Program

Federal Funds

- Follows GDOT letting schedule and federal processes
- No local Match is required.
- Field work assistance by locals if resources available
- Projects that can be completed within one year

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Bacon County
4th Street

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Quick Response Program

A Mechanism to Quickly Identify, Approve, and Construct Traffic Operational Improvements on the STATE ROUTE System

- Identify Needed Projects, Solicit Bids, and then Award the Project to the Lowest Bidder
- $200,000 Maximum Project Budget
- Built within the Existing Right of Way with minimal Utility and Environmental Conflicts
- Annual Statewide Budget Varies ($15 Million for FY 2022)

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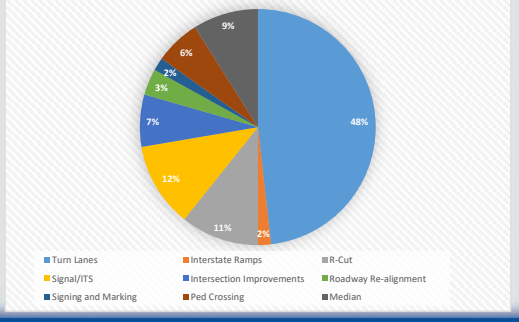
Quick Response

FY 2021 Quick Response Projects by Type



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Quick Response

Temple – Left Turn Lanes on SR 113 at SR 8

Dublin - Left Turn Lane on SR 26 at Lancaster Rd

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Quick Response

Peachtree City - R-Cut on SR 74 at Lexington Pass

Waynesboro – Install Right Turn lane on SR 121 at Four Points Road West

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Georgia's Bridge Programs

~ 14,800 bridge structures
~ 8,000 structures locally owned
~ 1,400 posted bridges
~ 1,350 locally owned posted

Low Impact Bridge Program (LIBP)
- Streamlined Delivery
- 6-9 month Off Site Detour Required

State Funded Local Bridges
- Like LIBP except can include ROW purchase

Local Bridge Replacement Program (LOCBR)
- Locals Agree to Pay Portion of Right of Way Phase based on the Assigned Level of Complexity

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LIBP – Basics

Simplest of bridge replacements with minimal impacts

- Federally funded program – no local contribution, off-site detour required
- Locally owned, posted bridges (weight restricted) over water

Harris County – Bethany Church Road over Turkey Creek

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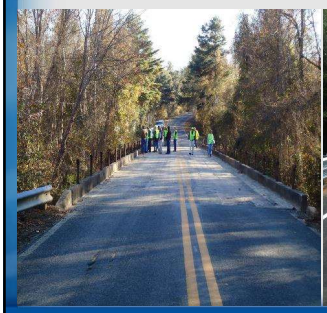
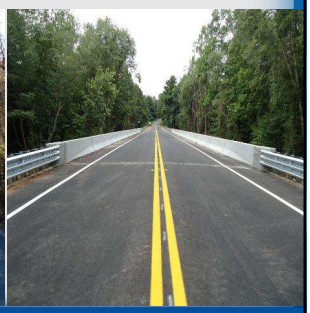
Low Impact Bridge Program (LIBP)





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LIBP – Low Impact Bridge Program

What qualifies for LIBP?

- **Cannot :**
  - Purchase additional ROW
  - Cross RR-xings
  - Have FEMA Regulatory Floodway
  - Have complex utility issues
  - Have complex environmental issues – Formal Section 7
  - Have major road geometry concerns
- **Can and Must Have:**
  - Acquire construction easements
  - Agreed Off-site detour
  - Field Scoping / Constructability Meeting

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State Funded Local Bridge Program

State Funded Local Bridge is like LIBP

State Funded Facts – more flexible than LIBP

- Prescriptive ROW workable
  - Local government can assist GDOT with ROW acquisitions if able
- Formal Section 7 workable
  - Reduced environmental oversight
- Off-site Detour required
  - Approval needed like LIBP

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Local Bridge Replacement Program - LOCBR

Complex design / utility/ environmental / detour issues

- Full Federal Bridge Replacement Schedule –not expedited
- Requires Local support and financial participation
- Program improvements related to Tier Assignments

Level of complexity	Local Government Contributing Amount to ROW Phase[1]	Notes
Tier 1	$50,000	Utilizes offsite detour with candidate bridge restored in-place.
Tier 2	$75,000	Likely on-site detour or potentially stage construction with greater footprint than Tier 1.
Tier 3	TBD ($100,000 or as determined by ROW recommendation)	Defined as more complex bridge replacement, (potentially off-set alignment) with larger impacts than Tier 2.

[1]Right-of-way impacts will be minimized by way of practical bridge design and any additional right-of-way costs or needs determined after the execution of the MOA will be the Department's responsibility. Any unused portion of the requested amount will be refunded to the local government.

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How to request a bridge / help GDOT

Make Bridge Request

- Contact GDOT Bridge Office – Carol Kalafut – ckalafut@dot.ga.gov
- Contact District Office
- Local Grants Office

Provide information about bridge site

- Existing ROW limits / known flooding / replacement priority

Detour Comments and Forms

- Return regardless of concerns or not – required for certification

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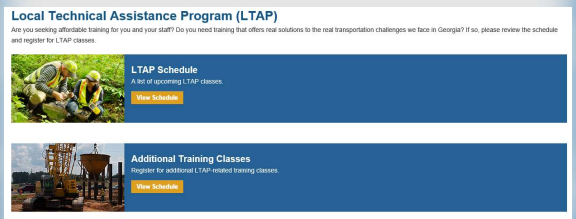
Local Technical Assistance Program (LTAP)

http://www.dot.ga.gov/PS/Local/LTAP



Email: ltap@dot.ga.gov

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GTIB | Georgia Transportation Infrastructure Bank

- Additional funding source
- Work in partnership with other types of funding:
  - LMIG, TIA, SPLOST, Federal

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Questions

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Georgia Department of Transportation

TRANSPORTATION FUNDING RESOURCES & OPTIONS

Kathy Zahul, P.E.
Assistant Director for Strategic and Systems Planning

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Federal legislation and terminology

- Infrastructure Investment and Jobs Act (IIJA)
  - $1.2 trillion, $550 billion of which are for new programs
  - Much broader than transportation funding
  - Energy and power infrastructure
  - Broadband internet
  - Water infrastructure
  - …and more

"I'm Just a Bill", Schoolhouse Rock, Wikipedia

- Bipartisan Infrastructure Law (B.I.L.)
  - Name for IIJA bill after it was signed into Law on November 15, 2021
  - Funding for federal fiscal year 2022 was made available in March 2022
  - State fiscal year ends in June 2022
  - STIP and TIP amendments required to access funding

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Bipartisan Infrastructure Law (BIL)

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BIL Programs

Georgia's Additional Highway Trust Fund Formula Apportionment by Program

Federal Transportation Programs	Increase over FAST Act FY21 to FY22	Annual Growth FY23 to FY26	
National Highway Performance	+$137M (+17.1%)	+2.0%	
Surface Transportation Block Grant	+$55M (+13.9%)	+2.0%	
Highway Safety Improvement	+$19M (+23.8%)	+2.2%	
Railway-Highway Crossing	No Increase	No Increase	
Congestion Mitigation & Air Quality	+$1.6M	+2.0%	
Metropolitan Planning	+$1.9M	+2.0%	
National Highway Freight Program	-$3.4M	+2.0%	
Carbon Reduction	+$41M	+2.0%	New Program
PROTECT Formula	+$46M	+2.0%	New Program

Georgia's In Additional Federal General Fund (Non-HTF) Formula Apportionment by Program

Poor/Fair Bridge Rehab/Replacement	+$45M	No Increase	New Program
Electric Vehicle Charging Infrastructure	+$20M	No Increase	New Program

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New Carbon Reduction Formula Program

Purpose	Provide funding for projects to reduce transportation emissions or the development of carbon reduction strategies.
Funding	• ~$6.4 B (FY 22-26) to States • ~$40.5M/year to Georgia
Distribution	• Apportioned to States by formula • 65% of funds are suballocated (certain areas based on population)

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New Carbon Reduction Formula Program – Eligible Uses

- Traffic Monitoring, Management, Control
- On/Off Road Trail facilities for non-motorized uses
- Advanced Transportation and Congestion Management Technologies
- ITS (Intelligent Transportation Systems) project; Connected Vehicle Deployment/Retrofit*
- Street Lighting/Energy Efficient
- Transportation Demand Management
- Others

*CR funds could be used on connected vehicle expansion

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New Carbon Reduction Formula Program – Key Provisions

- Carbon Reduction Strategy
- Requires states, in consultation with MPOs, to develop a carbon reduction strategy and submit to USDOT/FHWA for approval
  - Support efforts to reduce emissions
  - Identify Projects and Strategies
- 65% Suballocation
  - Coordination in Urban areas
  - Consultation in Rural areas
  - Planning leading Coordination
  - Remaining amount (Any area) ~$14.1M/year
- Funds can be 'flexed' to FTA to fund transit projects

*CR funds could be used on projects similar to above

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New PROTECT* Formula Programs

Purpose	Planning, resilience improvements, community resilience and evacuation routes, and at-risk coastal infrastructure
Funding	• $7.3B (FY 22-26) to States • ~$46M/year to Georgia
Distribution	• Apportioned to States by formula

*Promoting, Resilient Operations for Transformative, Efficient, and Cost-saving Transportation

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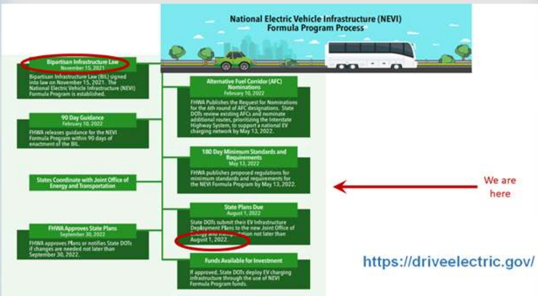

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Federal Requirements for State EV Charging Station Plan

- ❑ **State Agency Coordination** with State's energy and/or environment department
- ❑ **Public Engagement**
- ❑ **Plan Vision and Goals**
- ❑ **Contracting** (including engagement of third-party entities)
- ❑ **Existing and Future Conditions Analysis**
- ❑ **EV Charging Infrastructure Deployment**
- ❑ **Implementation**
- ❑ **Civil Rights & Equity Considerations**
- ❑ **Labor and Workforce Considerations**
- ❑ **Cybersecurity**

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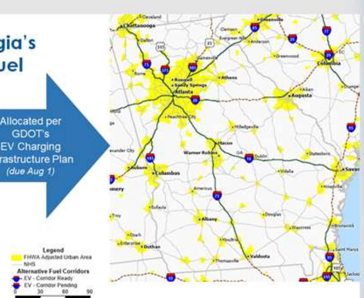
Building Out Georgia's EV "Alternative Fuel Corridors"

Federal Fiscal Year	Formula Allocation to GDOT (*$ millions*)	
2022	$ 20.0	
2023	$ 24.3	*
2024	$ 24.3	*
2025	$ 24.3	*
2026	$ 24.3	*

Allocated per GDOT's EV Charging Infrastructure Plan *(due Aug 1)*



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Federal Funding Facts

- Almost all federal funds require a match
  - Typical match is 20%
  - Highway Safety Improvement Program 10%
  - Certain project types (up to statewide maximum) can be 100% federal
    - Roundabouts
    - Connected Vehicle Technology Implementation
- State & local share for specific projects are based on agreements between the state & local project sponsor
- Local Sponsor must be LAP-certified to administer federally funded projects
- Transportation Management Areas receive their own apportionment for distribution
- Formula funding through GDOT is subject to Congressional District Balancing in Georgia by state statute

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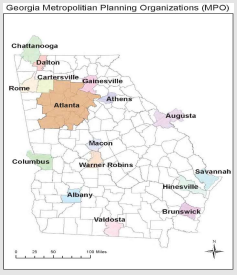
16 MPOs in Georgia

- **5 TMAs in Georgia**
  - Savannah
  - Augusta
  - Atlanta (ARC)
  - Columbus
  - Chattanooga



- Metropolitan Planning Organizations (MPOs) – geographic areas with a pop. of 50,000 or more as designated by the Census
- Transportation Management Areas (TMAs) – MPO urbanized area with a pop. over 200,000

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Federal Funding for MPOs/TMAs

MPOs receive

Federal Metropolitan Planning Funds (PL Funds) to support activities required to carry out the transportation planning process, such as:

- Assist local governments with development and updates to their Comprehensive Transportation Plans (CTPs)
- Master Transportation Plans
- Studies

TMAs also receive

funding to select projects in the following categories:

- STBG/Y230
- TAP/Y301
- CMAQ [only ARC & Cartersville]

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State Transportation Block Grant (STBG) Urban Attributable (Y230) & Transportation Alternatives Program/TAP (Y301)Funding

TMAs conduct the Calls for Projects & competitive project selection processes for these funds based on their respective project ranking methodology

Y230

- FAST ACT converted the long-standing Surface Transportation Program (STP) into the STB
- The block grant program allows more flexible funding to best address State & local transportation needs
- As a general rule, cannot be used on a road functionally classified as a local road or rural minor collector; however, there are exceptions to this
- Can be used on most project types

Y301

- Set-aside of STBG funding
- Encompasses a variety of smaller-scale transportation projects such as bike/ped facilities, rec trails, SRTS, community improvements such as historic preservation & vegetation management, & environmental mitigation related to stormwater & habitat connectivity

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Other Federal Funding Programs of Local Interest - Contact District Planning Specialist

- Federal Lands Access Program [FLAP]
- Transportation Alternatives [TA] Funding
- Recreational Trails Program [RTP]
- Lump Sum Programs
  - Safety
  - Operational Improvements
  - Traffic Signal Upgrades
  - ITS
  - Bridges
  - Maintenance

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Federal Lands Access Program (FLAP) program

- Federal grant program intended to improve transportation facilities that are within or provide direct access to federal lands.
- May consist of
  - planning studies
  - roadway capacity
  - Sidewalks, trails or bike lanes
  - roadway relocations, sidewalks,
  - operation and maintenance of transit facilities
  - bridge replacements
- Please see: https://flh.fhwa.dot.gov/programs/flap/

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Transportation Alternatives (TA) Funding

- NOT a grant - 80% federal, 20% local match
- For non-traditional transportation enhancements such as:
  - Bicycle and pedestrian facilities (sidewalks and trails)
  - Lighting
  - Streetscaping
- Annual Program
- FY23 GDOT TAP call was May 2, 2022 through June 17, 2022
- LAP certification requirement was removed for this round, but is always preferred
- TMAs have their own calls
- All eligibility and requirements can be found at: http://www.dot.ga.gov/IS/Funding/TAP#tab-2

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Recreational Trails Program (RTP)

- Federal grant program funded by FHWA & administered at the state level by the Georgia Department of Natural Resources (DNR)
- Purpose of the RTP is to provide & maintain recreational trails & trail-related facilities identified in, or that further a specific goal of, the Statewide Comprehensive Outdoor Recreation Plan (SCORP).
- Eligible applicants include qualified local governments, authorized commissions, & state & federal agencies.
- All eligibility and requirements regarding the call for projects can be found at: https://gadnr.org/RTP

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Congressional District Balancing

- Code Section: GA Code 32-5-30
- Following the decennial census & after CDs have been redistricted, GDOT will balance transportation funds, for a 5 year period, equally among all CDs of the state.
- Following that 5 year period, transportation funds are allocated for the remaining time until the next decennial census (5 years).
- At least 80% of total funds must be apportioned equally to satisfy state code
- If 2/3 members of STB approves, STB may authorize a reduction in the funds allocated to any CD if determined that a CD does not have sufficient projects available to expend funds. This would be done to avoid lapsing of federal funds

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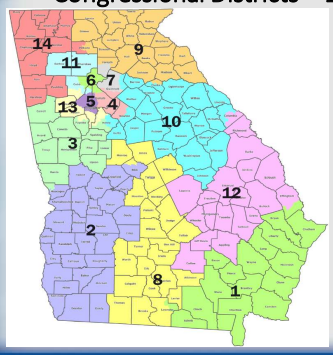
Congressional Districts - 14 in Georgia



4, 5, 6, 7, 11, 13 are entirely within ARC

Balancing Exemptions

- Designated State Freight Network
- Federal Earmarks
- Appalachian Development Highway System (ADHS)
- Federal Grants such as RAISE, INFRA, FLAP

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State Funding

- Transportation Funding Act (HB 170)
- Signed May 4, 2015, by Governor Nathan Deal
- Revenue generated from motor fuel tax and additional fees
- Must first be used to match federal funding
- More federal in FAST Act/B.I.L. = fewer state-only funded projects
- As of July 2017, any non-TIA county may impose a single-county 0.05% - 1% TSPLOST for transportation purposes for up to 5 years

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Transportation Investment Act (TIA Funding)

- This implements a 1% regional sales tax over a ten year period to fund transportation improvements.
- Referenda have passed in 4 regions so far.
- Total of 1,022 TIA projects valued at $1.90 billion
- GDOT manages budget, schedule, execution and delivery of all TIA Projects
- Planning ensures any Federal/State matching funds remain in place to ensure delivery of TIA Projects based on their delivery timeframe
- Reduces LMIG match from 30% to 10%

TIA website: http://www.ga-tia.com/

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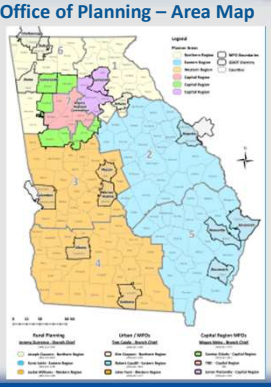
GDOT Office of Planning – Area Map



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District Planning and Programming Liaisons

District Office	Liaison	Phone Number
District One - Gainesville	Shelly Ramey	770-533-7340
District Two - Tennille	Ellen Wright	478-553-3383
District Three - Thomaston	Harland Smith	706-646-7566
District Four - Tifton	Dennis Carter	229-391-5504
District Five - Jesup	Katie Proctor	912-530-4453
District Six - Cartersville	Vacant	678-721-5257
District Seven - Chamblee	Joshua Higgins	770-216-3896

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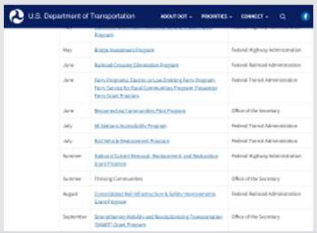
B.I.L. Discretionary Grant Opportunities

https://www.transportation.gov/bipartisan-infrastructure-law/upcoming-notice-funding-opportunity-announcements-2022

(or google USDOT NOFO schedule...)



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B.I.L. Discretionary Grant Opportunities

- Each NOFO will indicate project criteria, range of funding available, and who is eligible to apply
- Expect many to allow for local governments to be direct recipients
- Some exclude state transportation agencies
- FHWA Georgia Division willing to assist
- Some MPOs offering training
- GDOT's LAP training recommended to help ensure success
  - Understand basics of federal processes
  - Potential impacts to project costs, schedules, and delivery methods
  - Consultant procurement and property acquisition
  - Environmental studies, review and approval
  - Documentation and reporting

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Questions

http://www.dot.ga.gov/PartnerSmart/Local/Pages/LAP.aspx

For Manual, contacts, forms, schedule, application, and answers to Frequently Asked Questions

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DATA – A Critical Asset of the Entire Transportation Infrastructure Life Cycle

Seeing is believing.

That's why visualization technologies – particularly geospatial tools – are indispensable components of Government Services. Leveraging these technologies opens the door to Better Transportation Planning

Susan Miller - *Geospatial Information Officer*, for the State of Georgia

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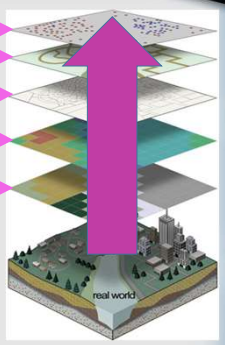
What is a GIS?

Ans: It's a Geographic Information System, which simulates (or models) the real world, in a computer



It's the space where data, often called 'spatial data' is:
(or should be, if it is not)

- Curated
- Used to simulate, analyze, and model scenarios (real or proposed)
- Visualized and used to communicate complex issues in easy to digest ways with a variety of stakeholders

…. All of which helps Cities to better understand relationships, patterns, and trends, and proactively plan and manage assets

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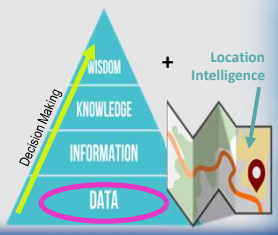
The data inside a GIS **is called 'Spatial Data'**

Spatial Data *is simply your existing data, with* ***location*** *added to it!*

Spatial Data is used throughout every level of government to improve decision-making; save time and money; and make governments more effective and efficient

The 'Location Intelligence' that underlies all spatial data, is the thread that ties all your City's assets together – enhancing ***all*** your operations
(including, but not limited to Transportation)



Pro Tip: *even when data may seem disparate, it is not, because it shares time and space with everything around it – so put your data to work, let it empower you!*

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Why should my City use a **GIS** to manage **Transportation Data?**

- Know your Assets
- Track/Manage your Assets
- Visualize your Assets (anywhere, anytime)
- Understand how all your City's Assets relate in time and space to each other… Example: Do my Public Works & Transportation teams know what each other are working on, and when?

GIS supports every step of the Life Cycle

Transportation Data Model
Could include things such as: Roads, Traffic, Street Intersections, Street Signs, Traffic Signals, Streetlights, Railroad Crossings, Bridges, Sidewalks, Cycling Paths, Pavement Markings, Guardrails, Street Furniture (barriers, benches, trash bins, trees), etc.

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A GIS: A sampling of the types of questions a GIS can help you answer …

Who?
- Is our current road network meeting the needs of the communities within our City? What are their current traffic patterns, and how might they change over time as population increases or decreases?
- Have we informed all the people and property owners who will be negatively impacted by a given construction project?

What?
- What needs to be included in our project to ensure compliance and safety (right-of-way, signage, signals, paths, sidewalks, drainage, etc.)
- What is negatively or positively impacting traffic patterns and accident counts?

When?
- What are the temporal, or time-related, patterns we must address (daily, seasonally)
- When will our population exceed currently carrying capacity for our roads?
- When will a road surface be due for replacement?

Where?
- Where might we place a new road? What are our options, and what are the positive and negative characteristics of each? Aka 'site selection'
- For the various options, which is most efficient given things like …
  - Existing traffic patterns, ingress and egress, etc.
  - Soil properties, drainage, flood risk, etc.
  - Geographic characteristics (elevation, slope, etc.)
  - Properties impacted, relevant costs, etc.

Why?
- Why are we seeing unexpected traffic congestion, road kills, or surface damage is certain locations?

How?
- How will the environment be impacted by a project?
- Which measures can we use to mitigate for high accident counts?

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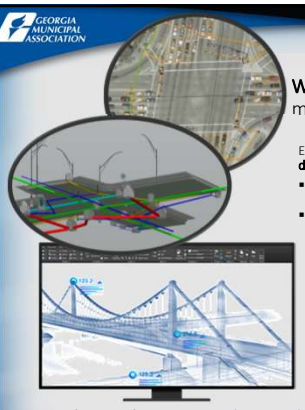

Why should my City use a **GIS** to manage **Transportation Data?**

Enable better, more deliberate **planning** and **decision-making**

- **Manage** and **Visualize** your City's Assets (including surrounding jurisdictions, assuming a common data standards)
- **Model** various scenarios and preform **Analysis**, such as:
  - Site selection – cost calculations
  - Construction simulations
  - Route planning
  - Traffic simulations
  - Accident analysis
  - Maintenance modeling
  - Environmental Impact Assessments
  - Optimize road features (smoothly connected ramps, overpasses, legal merge zones, and intersections)

Pro Note: please see the new Geospatial Data Standards – which includes Road Centerlines

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Why should my City use a **GIS** to manage **Transportation Data?**

Be more **efficient** and **effective** …. Do more with less

- Save valuable taxpayer dollars
- Retain valuable institutional knowledge
- Increase transparency – enable better communication (Project teams, field staff, officials, and constituents)
- Use location to integrate with related information management systems (project management systems, financial and enterprise resource planning (ERP) software, maintenance and work order management software, etc.)
- Make grant applications more appealing
- Break down data silos within and between offices/departments and uncover deeper insight into your City's assets, strengths and weaknesses so you can improve

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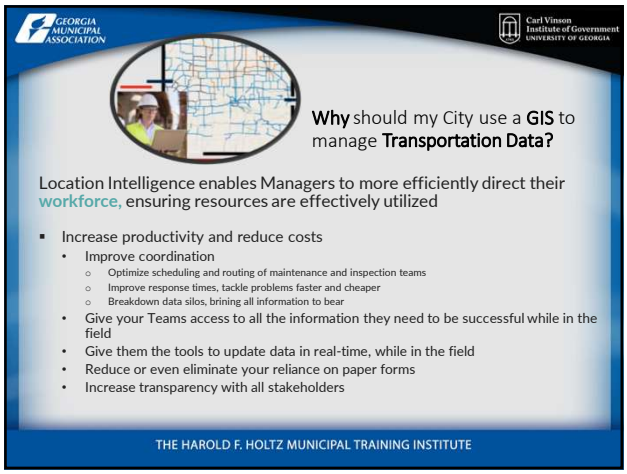
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Why should my City use a GIS to manage Transportation Data?
Location Intelligence enables Managers to more efficiently direct their workforce, ensuring resources are effectively utilized
Increase productivity and reduce costs
Improve coordination
Optimize scheduling and routing of maintenance and inspection teams
Improve response times, tackle problems faster and cheaper
Breakdown data silos, brining all information to bear
Give your Teams access to all the information they need to be successful while in the field
Give them the tools to update data in real-time, while in the field
Reduce or even eliminate your reliance on paper forms
Increase transparency with all stakeholders
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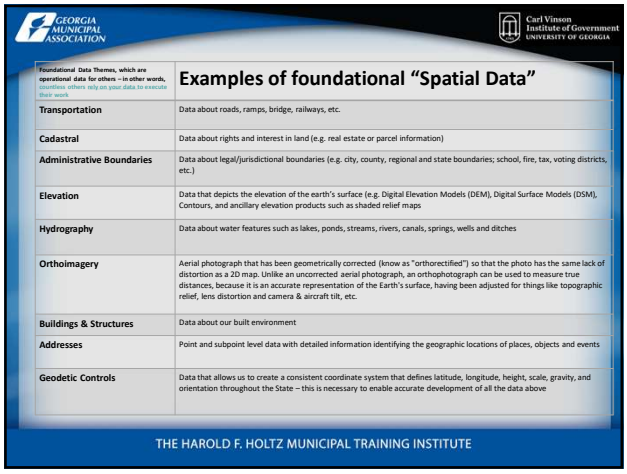
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Foundational Data Themes, which are operational data for others – in other words, countless others rely on your data to execute their work
Examples of foundational "Spatial Data"
Transportation
Data about roads, ramps, bridge, railways, etc.
Cadastral
Data about rights and interest in land (e.g. real estate or parcel information)
Administrative Boundaries
Data about legal/jurisdictional boundaries (e.g. city, county, regional and state boundaries; school, fire, tax, voting districts, etc.)
Elevation
Data that depicts the elevation of the earth's surface (e.g. Digital Elevation Models (DEM), Digital Surface Models (DSM), Contours, and ancillary elevation products such as shaded relief maps
Hydrography
Data about water features such as lakes, ponds, streams, rivers, canals, springs, wells and ditches
Orthoimagery
Aerial photograph that has been geometrically corrected (know as "orthorectified") so that the photo has the same lack of distortion as a 2D map. Unlike an uncorrected aerial photograph, an orthophotograph can be used to measure true distances, because it is an accurate representation of the Earth's surface, having been adjusted for things like topographic relief, lens distortion and camera & aircraft tilt, etc.
Buildings & Structures
Data about our built environment
Addresses
Point and subpoint level data with detailed information identifying the geographic locations of places, objects and events
Geodetic Controls
Data that allows us to create a consistent coordinate system that defines latitude, longitude, height, scale, gravity, and orientation throughout the State – this is necessary to enable accurate development of all the data above
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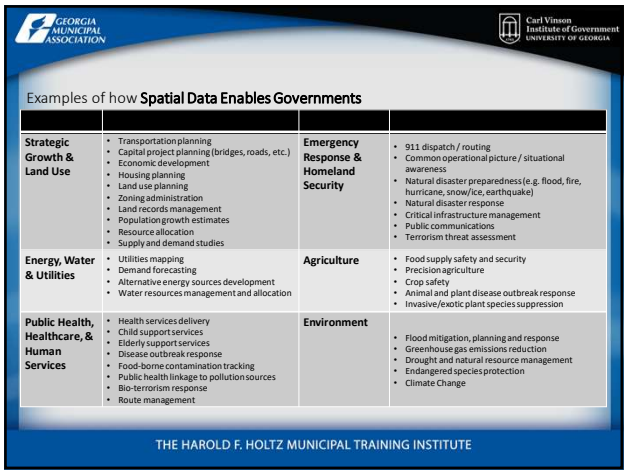
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Examples of how Spatial Data Enables Governments
Strategic Growth & Land Use
Transportation planning
Capital project planning (bridges, roads, etc.)
Economic development
Housing planning
Land use planning
Zoning administration
Land records management
Population growth estimates
Resource allocation
Supply and demand studies
Emergency Response & Homeland Security
911 dispatch / routing
Common operational picture / situational awareness
Natural disaster preparedness (e.g. flood, fire, hurricane, snow/ice, earthquake)
Natural disaster response
Critical infrastructure management
Public communications
Terrorism threat assessment
Energy, Water & Utilities
Utilities mapping
Demand forecasting
Alternative energy sources development
Water resources management and allocation
Agriculture
Food supply safety and security
Precision agriculture
Crop safety
Animal and plant disease outbreak response
Invasive/exotic plant species suppression
Public Health, Healthcare, & Human Services
Health services delivery
Child support services
Elderly support services
Disease outbreak response
Food-borne contamination tracking
Public health linkage to pollution sources
Bio-terrorism response
Route management
Environment
Flood mitigation, planning and response
Greenhouse gas emissions reduction
Drought and natural resource management
Endangered species protection
Climate Change
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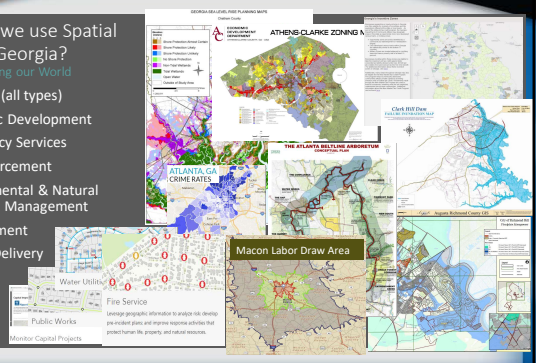
How do we use Spatial Data in Georgia?

Understanding our World

- Planning (all types)
- Economic Development
- Emergency Services
- Law Enforcement
- Environmental & Natural Resource Management
- Development
- Service Delivery
- …etc.…



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Shared Need: **Transportation data** are critical to most government functions

Examples…

- 911
- Emergency management
- Utilities (water, sewer, electric)
- Trash pickup
- Parcels / tax assessors
- District/ validation
  - Emergency Support
  - Service Delivery Support
  - School Districts
  - Zoning
- Business Licenses & Building Permits
- Mail Delivery
- Voting
- Sex Offender Registry
- Driver License

Statewide Initiatives Examples

- Broadband
- U.S. Census
- Emergency Response/Communications

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Use supporting GIS Data, such as Imagery or LiDAR

City manager comment regarding statewide Imagery Service

"In many cases where transportation infrastructure is being analyzed for improvement by widening or otherwise reconfiguring roads, rails, trails and other transportation media, the Imagery will be valuable in its clarity and accuracy to develop concept-level analysis and design. In the case of new road alignment and significant reconfiguration of a travel way, the Imagery will eliminate an initial investment in "concept level" imagery and will significantly reduce the time to begin meaningful analysis and review of alternate corridors during the concept phase."

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Imagery & LiDAR
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vertical view
oblique view
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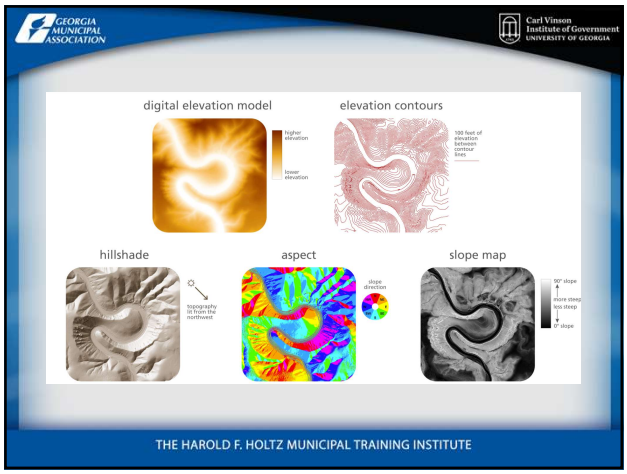
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digital elevation model
elevation contours
hillshade
aspect
slope map
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How do I get GIS Support if I don't already have it?

GIS can help transportation planners to integrate agency-wide information to achieve better operational efficiencies and results.

- Chances are high its in some department within your City ~ talk to them
- Engage your Regional Commission
- Use a Consultant
- … best of all, build your own internal capacity within your Transportation Department

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Questions

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Proper Planning of Infrastructure Improvements

- Coordination of Water and Sewer Line Projects
- Stormwater Projects
- Natural Gas Lines
- Underground Utilities and Telecom

Terrell Jacobs, GMA

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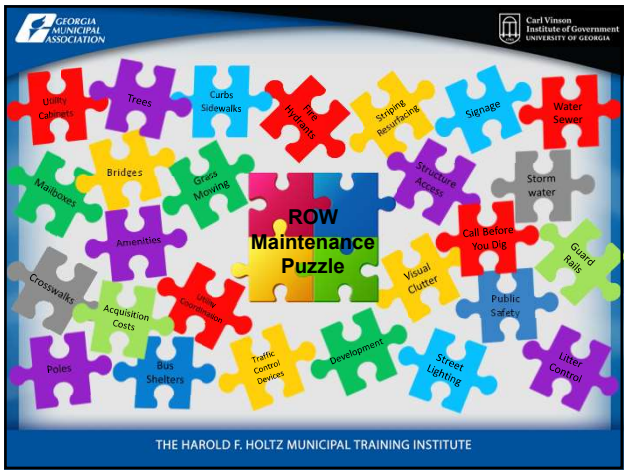
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Utility Cabinets
Trees
Curbs Sidewalks
Fire Hydrants
Striping Resurfacing
Signage
Water Sewer
Bridges
Grass Mowing
Structure Access
Storm water
Mailboxes
Amenities
ROW Maintenance Puzzle
Call Before You Dig
Guard Rails
Crosswalks
Acquisition Costs
Snow Accumulation
Visual Clutter
Public Safety
Poles
Bus Shelters
Traffic Control Devices
Development
Street Lighting
Litter Control
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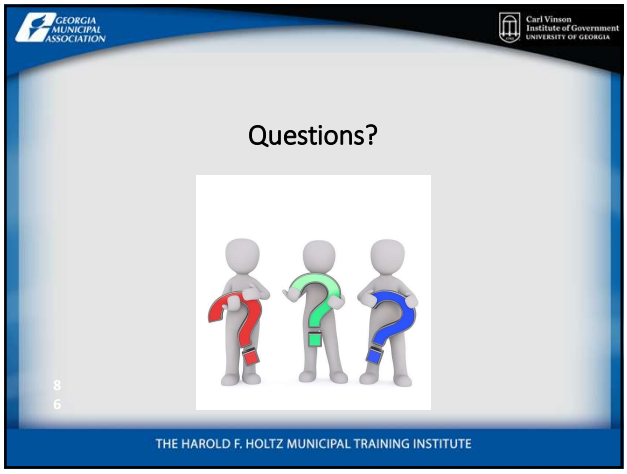
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