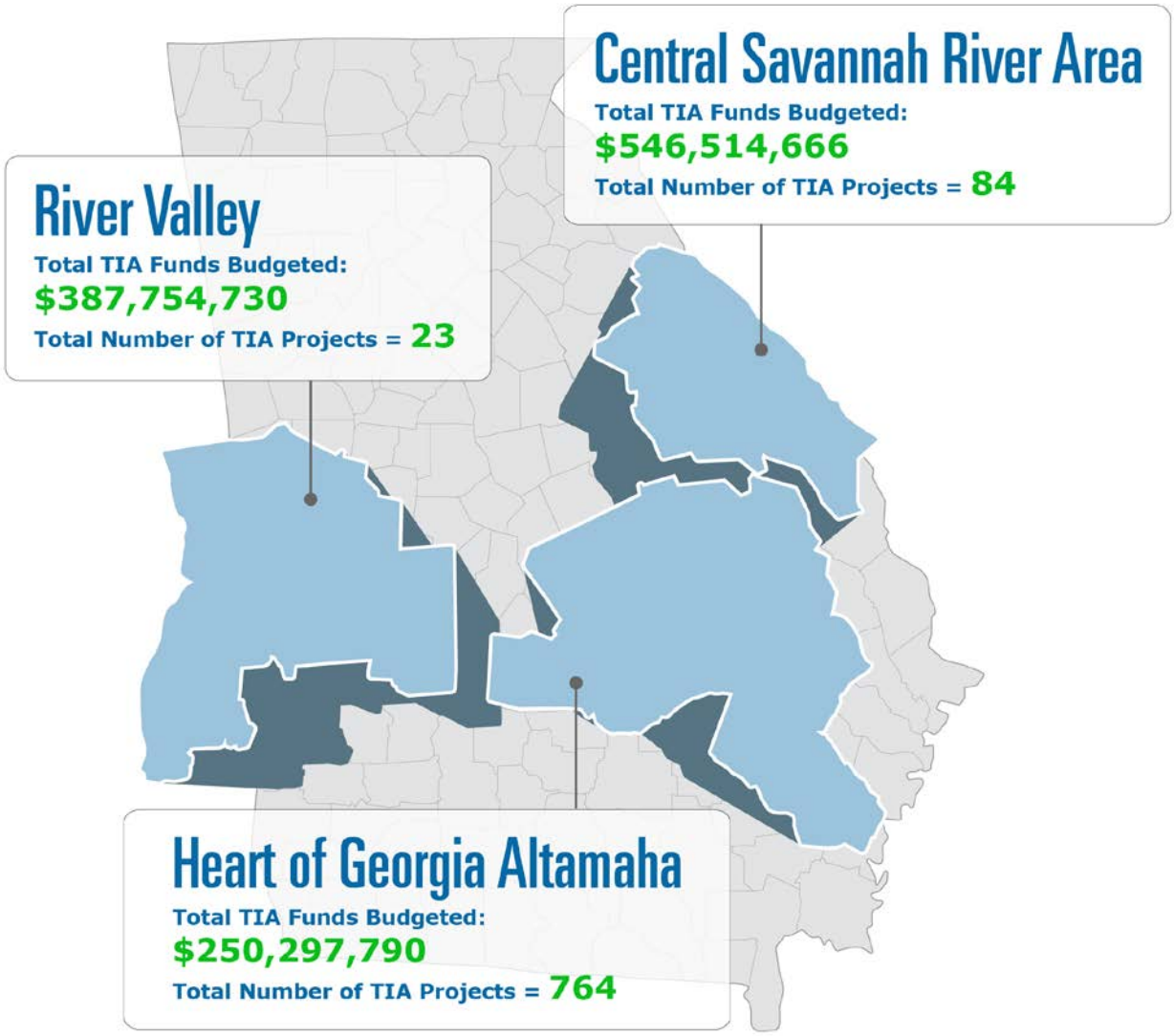

The TIA Manual

Program Management Plan for Transportation Investment Act of 2010 (TIA)

April 2014

Version: v2.1.0

Prepared for:

Georgia Department of Transportation

TIA Office

The TIA Manual (Program Management Plan)

Prepared for
Georgia Department of Transportation
TIA Office

Prepared by
AECOM Technical Services, Inc.

In association with
Georgia DOT

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ISSUED FOR USE

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Contents

1 Introduction

1.1 The TIA Manual

The TIA Manual is the central coordinating document that describes the essential elements of the TIA Program.

1.2 Future Development of the TIA Manual

The TIA Manual is a living document that applies only to the TIA Program. Updates to the TIA Manual will reflect program achievements, changes, constraints, remedial measures, and other ongoing variables. The TIA Manual will be reviewed quarterly with an expected annual revision (refresh) cycle or more frequently as the Program warrants.

The TIA Program Manager (PgM) is responsible for maintaining revisions or additions to the TIA Manual. Once approval from GDOT has been given on proposed changes, the PgM will finalize the update and distribute the revised TIA Manual through the TIA website (www.ga-tia.com).

1.3 Purpose of the TIA Manual

The TIA Program contains two different types of project funding:

1. Regional: 75% of the Special District's TIA proceeds are used to fund all projects on the Special District's Approved Investment List. GDOT is responsible for delivery of these projects.
2. Local: 25% of the Special District's TIA proceeds are divided among all local government within the Special District for use on transportation projects as determined by the local government (the discretionary funds).

Projects that have federal funds and require a future federal action will follow GDOT's PDP.

The TIA Manual is the core document for defining how the TIA Program is managed. The TIA Manual is intended to provide high level guidance necessary to efficiently and effectively deliver the projects on the Approved Investment List(s) from the Transportation Investment Act of 2010 (Program). All parties involved with any facet of this project delivery process must stay focused on delivering the intended projects to the citizens of each Special District on schedule and within budget. For any specific areas that are not included in the PMP, please seek guidance from the PgM.

In the event of a conflict between the TIA Manual and any individual contract, the legally–binding contractual agreements will prevail.

Regardless of whether the roles and responsibilities are defined by this TIA Manual or a contract, the PgM with the concurrence of GDOT, determines whether costs associated with the delivery of a project are eligible for payment or reimbursement using TIA funds.

1.4 Intended Users of the TIA Manual

The audience for the TIA Manual will be the Program Management team, GDOT, participating counties and municipalities, design consultants, contractors, and other consultants and specialist advisors.

1.5 Abbreviations

Table 2-1: List of Abbreviations

Abbreviation	Description
AASHTO	American Association of State Highway and Transportation Officials
ADA	Americans with Disabilities Act
BFI	Bridge Foundation Investigation
BMP	Best Management Practices
CE	NEPA Categorical Exclusion
CEI	Construction Engineering and Inspection
CSRA	Central Savannah River Area Special District
COP	Communications and Outreach Plan
CM	Construction Manager
CES	Cost Estimation System [Trns•port Cost Estimation System (CES®)]
CRP	Citizens Review Panel
DC	Design Consultant
DE	Design Exception
DP & S	GDOT's Office of Design Policy & Support
DPM	GDOT Design Policy Manual
DV	Design Variance
EA/FONSI	NEPA Environmental Assessment/Finding of No Significant Impact
EDG	Electronic Data Guidelines
EOR	Engineer of Record
EPD	Environmental Protection Division
EPM	Environmental Procedures Manual
ESPCP	Erosion, Sediment, and Pollution Control Plans
FHWA	U.S. Department of Transportation, Federal Highway Administration
FPR	Field Plan Review
GDNR	Georgia Department of Natural Resources
GDOT	Georgia Department of Transportation
GDOT OES	Georgia Department of Transportation Office of Environmental Services
GEPA	Georgia Environmental Policy Act
GSFIC	Georgia State Financing and Investment Commission
GUCC	Georgia Utility Coordination Council
GUPS	Georgia Utility Permitting System
HOGA	Heart of Georgia – Altamaha Special District
IGA	Intergovernmental Agreement between GDOT and GSFIC dated 1/1/2013
ITS	Intelligent Transportation System
L&D	Location and Design
LAP	Local Administered Project
LFR	Load Factor Rating
LIA	Local Issuing Authority
LRFD	Load and Resistance Factor Design
LRFR	Load and Resistance Factor Rating
MOU	Memorandum of Understanding
MPO	Metropolitan Planning Organization
MS4	Municipal Separate Storm Sewer System
MUTCD	Manual on Uniform Traffic Control Devices
NEPA	National Environmental Policy Act
NHPA	National Historic Preservation Act
NOI	Notice of Intent
NPDES	National Pollutant Discharge Elimination System
O.C.G.A.	Official Code of Georgia, Annotated
PID	Public Interest Determination
PDP	GDOT Plan Development Process

Abbreviation	Description
PPG	Plan Presentation Guide
QA	Quality Assurance
QC	Quality Control
QPL	Qualified Product List
RFI	Request for Information
RFP	Request for Proposal
ROW	Right-of-Way
RFQ	Request for Qualifications
PgM	Program Manager
PM	Project Manager
PMIS	Program Management Information System
PMP	Program Management Plan, also known as the TIA Manual
PPM	Program Procedure Manual
QBS	Qualifications Based Selection
RV	River Valley Special District
SAAG	Special Assistant Attorney General
SBV	Stream Buffer Variance; impacts to vegetative buffers of Waters of the State
Section 404	Section 404 of the Clean Water Act; impacts to Waters of the U.S.
SME	Subject Matter Expert
SUE	Subsurface Utility Engineer
SOQ	Statement of Qualifications
SWMP	Storm Water Management Program
TIA	Transportation Investment Act of 2010
TRC	TIA Regional Coordinator
UAM	GDOT Utility Accommodations Manual
UCM	Utility Coordination Manager
UPC	Utility Protection Center
USACE	U.S. Army Corps of Engineers
WBS	Work Breakdown Structure
VE	Value Engineering
WFI	Wall Foundation Investigation

1.6 Definitions

Bridge Foundation Investigation (BFI) – Engineering report documenting the existing subsurface conditions, identifying the recommended foundation type, and defining the parameters to be used for the design of bridge foundations.

Blended Project – A project funded in part with federal money.

Chief Engineer – The Engineering Executive appointed by the Commissioner, or other authority as provided by law, and acting for GDOT within the authority and scope of duties assigned.

Construction Manager – PgM staff member responsible for coordinating field operations, CE&I and materials testing coverage and overall execution of construction of the TIA projects.

Design Build – Combining of design engineering and other preconstruction services with construction services into a single contract.

Design-to-Budget – A requirement in the contract between an owner and a design professional that requires the design professional to design a project which meets the needs of the owner without exceeding the budget established by the owner or redesign the project at no additional cost to the owner if the construction bid exceeds the owner's budget.

Engineer of Record (EOR) – A licensed professional engineer in Georgia who develops and/or is responsible for the overall design, design criteria and components of a project. This person may delegate responsibility for the design of a system or component part to a delegated engineer but is ultimately responsible for the delegated engineer's design and the project's total design.

Environmental Documentation – The documentation necessary to ensure a project's compliance with the National Environmental Policy Act of 1969 (NEPA), or the Georgia Environmental Policy Act of 1991 (GEPA) and/or all federal and State permit requirements as applicable.

Local Government – Any municipal corporation, county, or consolidated government created by the General Assembly or pursuant to the Constitution and laws of the State of Georgia.

Load Resistance Factor Design (LRFD) – A design methodology for structures that utilize load factors developed using probabilistic methods for the design of structural elements.

Off-System – Work on a Local road system that does not meet the definition of an On-System route.

On-System – Work on a roadway designated as a State route, Interstate route, or locally owned roadway that traverses over or under a state or interstate route which is designated to be designed to On-System criteria by the Chief Engineer.

Political Subdivision – The State or any local subdivision of the State or public instrumentality or public corporate body created by or under authority of State law, including, but not limited to, municipalities, counties, school districts, special taxing districts.

Plan Development Process (PDP) – GDOT manual that outlines the current process of project development from the project identification through construction award or Final Acceptance for all federal aid projects under GDOT oversight.

Plan Presentation Guide (PPG) – A guide that sets forth the criteria for the electronic appearance and format of plans. These criteria establish, define, and clarify procedures and standards for plans to be used by GDOT. These criteria are not intended to establish design processes; rather, they are guidelines to assure that all drawings have uniform appearance and include all pertinent information, avoid unnecessary information, and reflect high quality workmanship.

Program Manager (PgM) – GDOT's consultant representative that will manage, provide oversight and approve all project phases and activities to ensure that all elements of the work meet the required laws, regulations, quality, design standards, schedule and budget. The Program Manager has delegated authority to act on GDOT's behalf, and will provide the resources and expertise necessary to understand, and be responsible for, a broad spectrum of services related to the TIA Program.

Project Manager (PM) – PgM staff, GDOT staff or consultant representative responsible for leading a project from its inception to execution, including planning, execution and managing the people, resources and scope of the project.

Soil Survey – A report developed to provide project designers with safe, effective and cost efficient recommendations for the design of roadway foundations, embankments and the treatments for Geotechnical and other problems on the project. Soil Survey reports may also be used by contractors to assist in preparing bids and by project engineers during construction to identify and help solve problems.

Special Districts – The twelve special districts based on existing Regional Commission boundaries as created by O.C.G.A. § 48-8-241. A link to a map indicating the District boundaries can be found on the GDOT TIA website. To date, there are three Special Districts which voted to levy the special district transportation sales and use tax: Central Savannah River Area, Heart of Georgia – Altamaha, and River Valley.

State TIA Administrator – GDOT representative from the TIA Office with oversight responsibility for the TIA Program and the TIA Regional Coordinator(s).

Storm Water Management Program (SWMP) - The program to provide requirements to Local Governments and staff on addressing storm water runoff to both improve storm water quality and reduce quantity impacts, and protect downstream areas and receiving waters. It does not cover construction site sediment and erosion control practices. Guidance on these practices can be found in the Manual for Erosion and Sediment Control in Georgia.

Subject Matter Expert (SME) – An individual who exhibits the highest level of expertise in performing a specialized job, task, or skill within the organization performing the work; anyone with in-depth knowledge of the subject.

TIA Regional Coordinator (TRC) – GDOT representative from the TIA Office with responsibility for coordinating with the Local Governments within their assigned Special District(s).

The Source – The Source is GDOT's online reference for contractors. Within The Source, contractors will find information pertaining to bridges, culverts and retaining walls, construction manual, erosion control, earthwork, pavements, special provisions, specifications, and sampling, testing, and inspection.

Transportation Investment Act of 2010 (TIA) - The Act that created 12 Special Districts of the State and authorizes elections to be held in each Special District which would allow each Special District independently of any other Special District to approve and authorize the imposition of a special district transportation sales and use tax to fund transportation projects within the Special District. O.C.G.A. § 48-8-240 et seq.

Wall Foundation Investigation – Engineering report documenting the existing subsurface conditions, identifying the recommended foundation type, and defining the parameters to be used for the design of wall foundations.

1.7 Reference Documents

GDOT Bridge and Structures Design Manual
http://www.dot.ga.gov/doingbusiness/PoliciesManuals/roads/BridgeandStructure/GDOT_Bridge_and_Structures_Policy_Manual.pdf

GDOT Design Policy Manual
http://www.dot.ga.gov/doingbusiness/PoliciesManuals/roads/DesignPolicy/GDOT-DPM.pdf

GDOT Disadvantaged Business Enterprise (DBE) Program
http://www.dot.ga.gov/doingbusiness/dbeprograms/Pages/default.aspx

GDOT Environmental Procedures Manual
http://www.dot.ga.gov/doingbusiness/PoliciesManuals/roads/Pages/EnvironmentalProceduresManual.aspx

GDOT Guidelines for Geotechnical Engineering Manual

http://www.dot.ga.gov/doingbusiness/materials/qaqc/pages/default.aspx

GDOT Local Administered Project Manual (LAP)
http://www.dot.ga.gov/localgovernment/FundingPrograms/Documents/LAPManual.pdf

GDOT Pavement Design Manual
http://www.dot.ga.gov/doingbusiness/PoliciesManuals/roads/Pavement/Pavement%20Design%20Manual.pdf

GDOT Plan Development Process (PDP) Manual
http://www.dot.ga.gov/doingbusiness/PoliciesManuals/roads/PDP/4050-1.pdf

GDOT Prequalification for Contractors
http://www.dot.ga.gov/doingbusiness/prequalification/Pages/Contractors.aspx

GDOT Small Business Program
http://www.dot.ga.gov/doingbusiness/sbp/Pages/default.aspx

GDOT Utility Accommodation Policy and Standards Manual (UAM)
http://www.dot.ga.gov/doingbusiness/utilities/pages/manual.aspx

GDOT Survey Manual
http://www.dot.ga.gov/doingbusiness/PoliciesManuals/roads/SurveyManual/SurveyManual.pdf

Georgia Stormwater Management Manual
http://www.atlantaregional.com/environment/georgia-stormwater-manual

Regional Commission (RC) Boundaries Map
http://www.ga-tia.com/regions.aspx

The Source
http://www.dot.ga.gov/doingbusiness/TheSource/Pages/home.aspx

Transportation Investment Act of 2010 – Approved Investment List(s)

- Central Savannah River Area: http://www.ga-tia.com/Images/FactSheets/CSRA-finalinvestmentlistreport.pdf
- Heart of Georgia-Altamaha: http://www.ga-tia.com/Images/FactSheets/HOG-finalinvestmentlistreport.pdf
- River Valley: http://www.ga-tia.com/Images/FactSheets/RiverValley-FinalInvestmentListReport.pdf

Municipal Separate Storm Sewer System (MS4) Permit
http://www.georgiaepd.org/Files_PDF/techguide/wpb/Final_DOT_SW_NPDES_Permit_MS4_Dec_2011.pdf

2 Program Goals and Objectives

The goals and objectives of GDOT in delivering the projects included in the TIA Program are as follows:

- Support Georgia's economic growth and competitiveness through transportation improvements
- Improve access to jobs
- Reduce congestion costs
- Improve efficiency and reliability of commutes
- Ensure more efficient and reliable movement of freight, cargo and goods
- Improve interregional connectivity
- Support local connectivity to statewide transportation network
- Ensure safety and security: reduce accidents that result in injury and loss of life
- Maximize the value of Georgia's transportation assets: optimize capital asset management as well as flow of people and goods through the network
- Minimize the impact of transportation on the environment

2.1 Program Requirements and Regulations

The TIA Program is a "project driven program" designed to fund projects that have limited or no funding but are significant to each Special District. Each Special District project list reflects prioritized decisions that have been made by local elected officials and the public. GDOT is prepared to deliver these transportation improvement projects in these Special Districts by implementing a streamlined delivery process that will assure strict attention to project delivery, budgets, and schedules. This process will incorporate coordination with Regional Commissions and Local Governments, and will demonstrate transparency and accountability to the Special Districts, Citizen's Review Panel and the public.

The projects in the Approved Investment List(s) constitute the program for each Special District. The fundamental elements of the management of the budget, schedule, execution, and delivery of the projects contained in the Approved Investment List(s) are:

- All the projects on the Approved Investment List(s) must be delivered for each Special District
- The project budgets are defined in the Approved Investment List(s) and are the maximum amount of special district transportation sales and use tax proceeds (TIA funds) available for the project. Therefore, projects will be designed and constructed to budget. GDOT is not responsible for supplementing or providing any additional funds unless otherwise shown in the Approved Investment List(s).
- Projects will be delivered on a pay as you go basis or as approved by GDOT should other funding be provided from a sponsor. GDOT is responsible for determining when a project or project phase is initiated if TIA funds are required for the phase.
- The obligation for payment/reimbursement is limited to the amount of TIA funds available. Eligible Project Costs, as defined in O.C.G.A. § 48-8-242(2) and in the IGA between GSFIC and GDOT, will be paid/reimbursed to the sponsor and/or consultant/contractor upon the completion of the following:
    - Project element or project is complete and invoicing is submitted to PgM
    - GDOT's certification of invoices to GSFIC
    - GSFIC's approval of GDOT's certification
    - GSFIC's payment/reimbursement to GDOT

To define the limitation of tax funds and payment obligations of GDOT to any entity under contract with GDOT relating to the TIA Program, all contracts will include the following or similar provisions:

1. The parties acknowledge that the program is one hundred percent (100%) funded with special district transportation sales and use tax proceeds collected pursuant to the Act and that the Department's payment obligations related to the program and project are strictly limited as set forth herein. The parties further acknowledge that no entity of the State of Georgia other than the Department has any obligations to the Consultant/Contractor related to this program or project.
2. The obligation of the Department to pay or reimburse any incurred cost or pay any lump sum cost is expressly limited to the amount of special district transportation sales and use tax proceeds remitted to the Department by GSFIC and designated by the Department for the program in general and the project specifically. This agreement does not obligate the Department to make any payment to the Consultant/Contractor from any funds other than those made available to the Department from the special district transportation sales and use tax proceeds by GSFIC and designated by the Department for the program in general and the project specifically. In the event the funds made available to the Department from the special district transportation sales and use tax proceeds are insufficient for the program and project as designated by the Department, the Department's payment obligations shall not exceed the availability of such special district transportation sales and use tax proceeds and the Department shall have the right at its sole discretion to terminate this agreement immediately upon notice to the Consultant/Contractor without further obligation of the Department to the extent that the obligations exceed the availability of such the special district transportation sales and use tax proceeds for the program and project as designated by the Department. The Department's certification as to the availability of the special district transportation sales and use tax proceeds as designated by the Department for the program and project shall be conclusive.

2.2 Program Management Work Flow

To determine the approach and procedures to deliver of TIA projects, users need to understand the standard work flow as shown in Figure 2-1. Procedures are based on these primary questions:

- What is the funding source?
- Who is letting the project to construction?

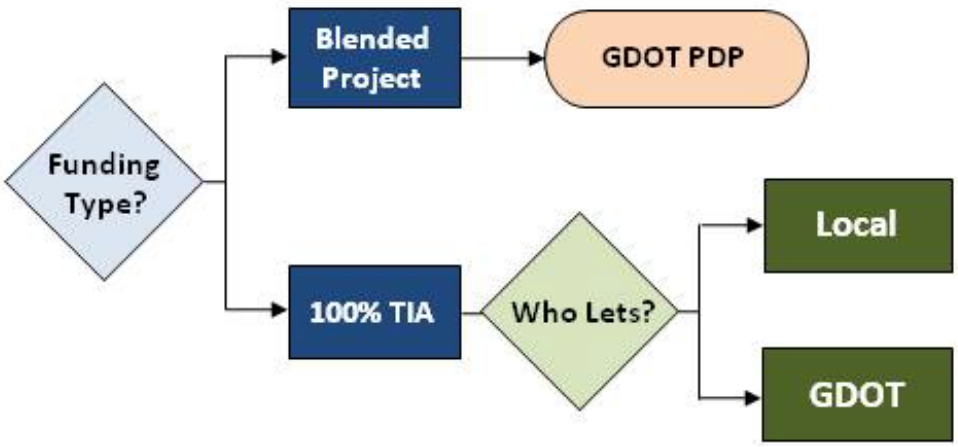

Figure 2-1 TIA Standard Work Flow

Projects that are a blend of TIA funding and Federal and State funding will follow GDOT PDP for those phases where federal funds apply. Procedures for projects that are 100% TIA funded will follow this TIA Manual and will further depend on whether the project is let to construction by GDOT or the Local Government sponsor and whether the project is on the GDOT managed roadway.

3 Program Delivery

3.1 Management Authority

O.C.G.A. § 48-8-249 and the IGA delegates to GDOT the management of the budget, schedule, execution, and delivery of the projects contained in the Approved Investment List(s) "for all transportation projects except bus and rail mass transit systems and passenger rail in any special district the boundaries of which are not wholly contained within a single MPO."

3.2 Roles and Responsibilities

GDOT's organization chart, which includes the TIA Office, can be found on GDOT's website at the following link:

http://www.dot.ga.gov/aboutGeorgiadot/Documents/OrgChart.pdf

3.2.1 Program Team Members and Responsibilities

Key entities of the TIA Program team include:

- Department of Revenue
- GSFIC
- TIA Office
- Program Manager
- Design Consultants / Engineers of Record
- Construction Engineering and Inspection consultants

The graphic below depicts the role of each team member. Citizen Review Panels (CRPs) provide oversight of the TIA Program. The Regional Commissions support the CRPs and provide a forum for the Special Districts to address issues of a regional significance that may occur.

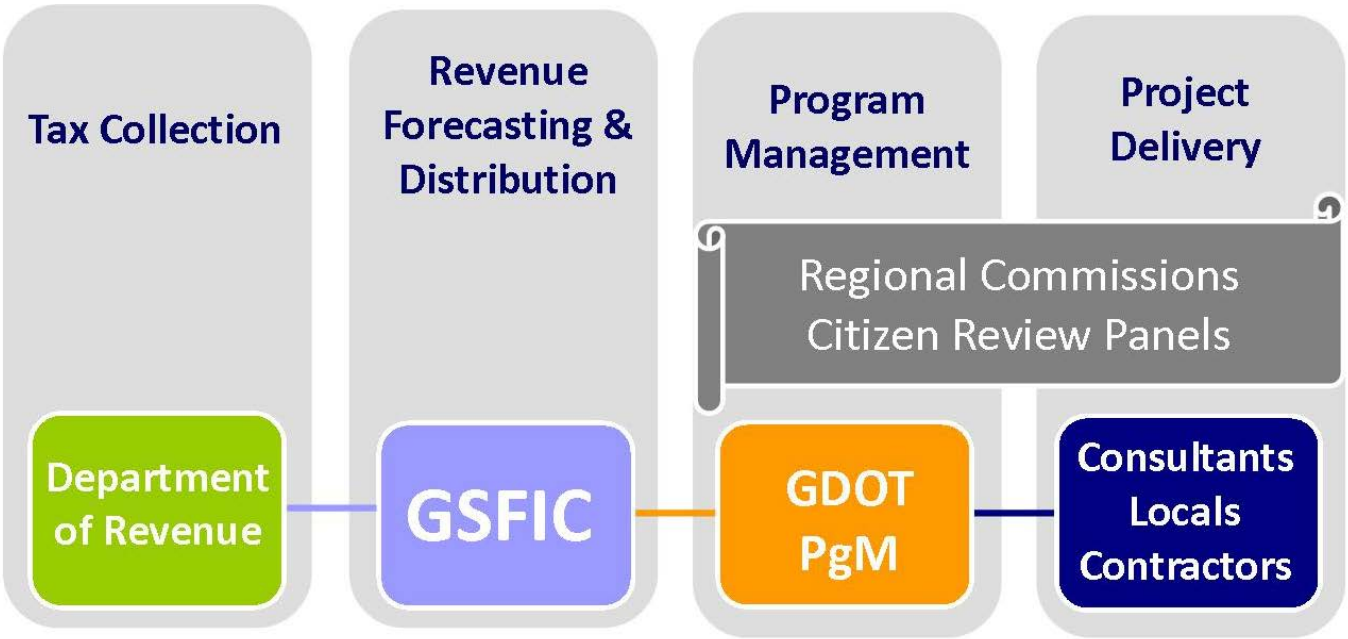

Figure 3-1 TIA Program Agency Roles

There are a number of GDOT offices, as well as other State offices and agencies that support the core team with the delivery of the Program. Detailed roles and responsibilities for each GDOT Office can be found at http://www.dot.ga.gov/aboutGeorgiadot/dotoffices/Pages/default.aspx . Coordination with other agencies will include, but not limited to, the following:

- Georgia Department of Natural Resources (GDNR)
- Environmental Protection Division (EPD)
- Federal Highway Administration (FHWA)
- U.S. Army Corp of Engineers (USACE)
- Federal Emergency Management Agency (FEMA)

3.2.2 Key Management

The PgM will report directly to the TIA Administrator and is charged with overall management of the PgM services and personnel to ensure that the management activities are conducted in accordance with the TIA Manual, the Act and the contractual provisions between GDOT and the PgM. As the principal contact with GDOT, the PgM is responsible and accountable for the successful completion of the PgM contract within the agreed scope, which will include the requirements of being on budget and schedule. The PgM is supported by a Program Team consisting of pre-construction managers, construction managers; program controls specialists, subject matter experts and administrative support staff.

3.2.3 PgM Responsibilities

ANY AND ALL DISCUSSIONS OF THE PROGRAM, LOCAL GOVERNMENT, GDOT OR OTHER THIRD PARTY RESPONSIBILITIES OR DUTIES IN THIS TIA MANUAL DO NOT IN ANY WAY MODIFY, SUPPLEMENT OR AMEND ANY CONTRACTUAL REQUIREMENTS. TO THE EXTENT THAT THERE IS ANY CONFLICT BETWEEN CONTRACTUAL TERMS AND THE TIA MANUAL, THE CONTRACTUAL PROVISIONS WILL CONTROL.

The following table provides an overview of PgM's duties.

Financial Controls	Program Controls	Technical
Capital Cost Forecasting	Schedule Management	Concept Development
Risk Management	Data Integration	Concept Validation
Budget Management	Engineering Services	Utility Coordination
Audits	Document Control	Construction Management
	Reporting	ROW Approvals
	Project Audits	QC/QA
	Management	Environmental Approval
		Environmental Permitting

Administrative	Communication
Accounting	Public Involvement
Procurement Support	Stakeholder Management
IGA Coordination	Dashboard Reporting
Invoicing	Web/Social Media
	Media Support

The PgM assists with developing the strategy best suited for the successful delivery of the Program. The PgM provides collaboration, guidance, and acceptance of schedules and reliable cost estimates to GDOT. The PgM maintains the Master Program Schedule, the cash flow model, and communicates program status through dashboard reporting.

It is the PgM's responsibility to ensure that proper coordination is occurring between the EOR, Local Government, GDOT and all other project team members involved in each of the projects. In conjunction with GDOT, the PgM will determine the frequency of project status meetings to ensure effective management of the projects.

For 100% TIA funded projects, the PgM will manage the scope, schedule and budgets for of all projects in each special district; keep GDOT well-informed of the progress of the projects through all phases; ensure that approvals and certifications are obtained, close-out documents are completed in a timely manner, and warranty items are properly addressed; and serve as PM on projects as directed by GDOT.

For blended projects, the PgM will coordinate with the GDOT designated PM and manage the project schedule and cash flow.

3.2.4 Certifications

For 100% TIA funded projects, the PgM is responsible for compiling all certifications and information, required from the project delivery team, prior to beginning subsequent project phases or project letting. Responsibilities related to certification of Environmental Compliance, Utility Clearance, and Right-of-way can be found in the applicable sections of this manual. If applicable, the PgM will review projects for compliance with ADA requirements and obtain an ADA Compliance Letter from the EOR or Local Government sponsor.

3.2.5 Work Authorizations

The PgM will provide work authorizations with GDOT concurrence for each phase or any sub phase of a project regardless of project sponsor or as otherwise specified in an intergovernmental agreement.

3.2.6 Project Cost Estimates

TIA budgets presented on the Approved Investment List(s) include all costs associated with administration, design, construction, construction inspection, and material testing necessary to complete the project. The total cost to the project must be less than the budget and funds must be available for payment at the time each element of the work, or portion of the work, is complete. At each phase of design development, the EOR will produce an engineer's estimate. The PgM will review these estimates, establish contingencies, monitor cash flow and evaluate impacts to the program. The PgM and the EOR will work together to modify the scope as necessary to deliver the project in a manner which meets the intent or predetermined benefit for the project.

3.2.7 Band Change Requests

The projects are to be let to construction in their original band, unless the band change requested by the local governments using the Band Change Request Procedure is followed and approved by the TIA Administrator.

4 Communications Management

4.1 General Policies

4.1.1 Conflicts of Interest

PgM staff, consultants, and contractors shall adhere to policies and provisions of O.C.G.A. § 45-10-20 through § 45-10-28 relating to Conflict of Interest.

For the purposes of the TIA Manual, the definition of "Consultant" as contained in the Consultant Services Conflict of Interest Policy shall include Consultants, Local Governments and Contractors. All references to consultant services shall include any and all services provided by Local Government or the Contractor.

4.1.2 Communications Management Policy

Communications procedures are designed to support all program functions by ensuring smooth communications among all participants and organizations.

Except for matters contractual in nature as specifically spelled out in a consultant or contractor's contract, all communications regarding the TIA Program shall be addressed to:

GDOT TIA Office
State TIA Administrator
One Georgia Center
600 West Peachtree Street
Atlanta, GA 30308

5 Scope, Budget, and Schedule Management

5.1 Project Initiation

GDOT is responsible for delivering the projects in all Special Districts which voted to levy the special district transportation sales and use tax. O.C.G.A. § 48-8-249(c) requires GDOT to determine if a project design and construction should be managed by GDOT, a Local Government, or another public or private entity. Once that determination has been made, the project must be implemented in accordance with applicable federal, state and local requirements. It is critical that projects be delivered in the most cost effective manner possible as to maximize the use of the available TIA funds.

GDOT will coordinate with the Local Governments to determine their interest in project delivery. Each Local Government wishing to deliver a TIA project must complete a Local Project Delivery Application as required by O.C.G.A. § 48-8-249(c). At GDOT's discretion, delivery by Local Governments may be by phase or by the entire project. Upon review and approval by GDOT, a project specific contract, defining the responsibilities of GDOT and the Local Government for delivery, will be executed.

5.2 Concept Reports

The Concept Report is a record of the defined scope of work to be delivered for the project. **The scope of the project shall meet the stated benefit described in the Special District's Approved Investment List(s) and must be clearly stated in the Concept Report**. With the exception of resurfacing, Concept Reports shall be completed and approved for all TIA funded projects at the discretion of the PgM. GDOT's Chief Engineer must approve the Concept Report before a project can be advanced to preliminary plans phase.

5.2.1 Blended Projects

Concept Reports for blended projects will follow the processes and templates defined by the latest GDOT Plan Development Process (PDP) manual.

5.2.2 100% TIA Funded projects

Concept Reports for 100% TIA funded projects will be circulated to GDOT, local sponsors and Regional Commissions. The Regional Commission, or its designee, will be presented with a copy of the Concept Report for review. For 100% TIA funded projects, Concept Team Meetings may be waived based on the PgM's recommendation and acceptance by GDOT.

Design traffic volumes may not be necessary for 100% TIA funded projects and for which the project description included a specific number of lanes for the widening. Design year volume is important and may be necessary on various project types and may be needed for other design elements.

Any changes to the original approved Concept Report for 100% TIA funded projects shall be summarized in a technical memorandum. This technical memorandum shall be included with the original approved Concept Report and will serve as a Revised Concept Report. Revised Concept Reports require PgM concurrence and GDOT's approval.

5.3 Design to Budget

All projects will be designed and constructed to budget. Appropriate contingencies must be included in the project cost estimates. The scope of work approved in the Concept Report shall not change unless there are revenue shortfalls. Projects will be designed to the project budget as established in the Approved Investment List(s). Each project must be delivered as presented in the Special District's Approved Investment List(s). The project scope shall be based on the work necessary to achieve the public benefits, if identified in the Approved Investment List(s), while staying within the project budget. The non-regional projects in the HOGA do not

have a public benefit identified on the Approved Investment List. The EOR shall take a practical design approach so to provide the most cost efficient design possible that satisfies the project scope.

Should a project budget be determined to be insufficient, the engineer of record will have flexibility, with PgM concurrence, to modify certain project elements to reduce project cost as necessary to bring the project into alignment with the budget. The cost estimate at the concept stage should identify any scope reduction that would cause the project benefits not to be satisfied. At a minimum, cost estimates will be evaluated semi-annually throughout the development process to track cost to complete budget requirements.

Below is the order of precedence of project elements that the engineer of record should use in designing to budget, without compromising applicable engineering guidelines and standards. The list starts with the most important elements to the items of less critical.

- Safety features
- Structural members and appurtenances
- Pavement Structure
- Typical sections
- Operational features
- Aesthetic and enhancements (unless necessary to satisfy the stated benefit)

The PgM shall ensure the project is designed and constructed within budget as shown in the Approved Investment List(s). The PgM is responsible for approving the use of project contingencies regardless of the letting responsibility with GDOT's concurrence.

5.4 Project Schedules and Cash Flows

Project schedules and an initial cost estimate shall be included with the Concept Report. The TIA Program utilizes Primavera® scheduling software to maintain the Master Program Schedule and will typically include a requirement in the contract that the designer and contractor will utilize the same in the development of the project schedule. Regardless of the scheduling tool, the consultants and contractors must include major milestones and activities with sufficient details and of reasonable durations to properly describe and manage all phases of the Work. The PgM will review the impacts of the project schedules and cash flow prior to recommending concept reports for approval.

5.5 Program Development and Monitoring

5.5.1 Cost Estimate Reviews

For GDOT let projects, the EOR is required to prepare the project cost estimate using Trns•port Cost Estimation System (CES®) and submit it to the PgM at each stage of plan development (at a minimum annually), or as necessary when the project cost significantly changes. The project manager will set up the CES® Estimate in the system. The PgM will review estimates for compliance with the established project budget and coordinate scope changes and project contingencies with the EOR. The PgM will ensure that estimates accommodate administrative, testing, CEI services and other appropriate costs.

Prior to each project submittal, the PgM will review the CES® Estimate for accuracy.

5.5.2 Value Engineering

Formal Value Engineering studies are not required on 100% TIA funded projects.

6 Risk Management

Risk management supports a proactive approach to decision making in the project through identification, analyses, and responses to project risks. It promotes quantification of project uncertainty and includes maximizing the results of positive events, and minimizing the consequences of adverse events.

The Program's risk management policies are based on the "Practice Standard for Project Risk Management" published in 2009 by the Project Management Institute, and International Standard ISO 31000:2009 titled "Risk management – Principles and guidelines."

As the Program evolves, project and programmatic risk profiles will change and the focus of the Risk Management process will narrow. The PgM's approach to risk management will be to perform risk assessments of the projects and the Program; quantify risk at the project, region and program level; incorporate awareness of project risk exposure on the cash flow and its potential consequences; actively employ risk mitigation measures in the management of the Program; report on the major risk issues to GDOT management; track progress of risk mitigation efforts; and incorporate lessons learned from previous risk assessments continuously throughout the Program.

7 Procurement and Bidding

7.1 Local Delivery

7.1.1 Local Delivery Application

GDOT created a Local Project Delivery Application for Local Governments interested in delivering their own projects. The application is to be completed by the Local Government, or their authorized representative, and submitted to GDOT for approval.

7.1.2 Local Delivery Agreement Hold Points

The Local Agreement will typically contain language setting a schedule of expected milestone (hold) points that may include, but are not limited to the following:

(1) Preliminary Engineering Activities – Concept Report Approval
(2) Preliminary Engineering Activities – Field Plan Review Approval
(3) Right of Way
(4) Construction – Notice to Advertise
(5) Construction – Notice to Proceed

No work on any phase of the PROJECT shall begin without a written notice to proceed from the DEPARTMENT to the LOCAL GOVERNMENT for each of the following separate phases. Each Notice to Proceed that is issued will contain a Completion Date for that phase. If unforeseen conditions are encountered and an extension of the completion date is warranted, the LOCAL GOVERNMENT may request in writing an extension of the completion date for written approval by the DEPARTMENT.

7.2 Design Services

For 100% TIA funded projects, design services can be procured by GDOT or Local Governments if that government has been approved to deliver the TIA project. Procurement of design services by GDOT must adhere to all state laws. Locally procured design services must adhere to the procurement laws and regulations of the Local Government.

7.3 Construction

7.3.1 Bid Package Development

For GDOT let projects, the PgM team compiles the PS&E package, checks the plans, obtains all required certifications and authorizations and then provides the completed package to Office of Construction Bidding Administration (CBA) for advertising bidding and award.

7.3.2 Specifications, Special Provisions and Final Estimate

The EOR is required to develop a complete PS&E package including all of the required technical Special Provisions for the project. The PgM will facilitate reviews of any supplemental specifications or special provisions and make any necessary recommendations to GDOT regarding special provisions.

The PgM will review and validate the EOR's CES® Estimate.

On GDOT Let projects, final corrected plans will be submitted to the Office of Engineering Services as required by the GDOT Letting Schedule.

On Local Let projects, project sponsors shall submit the complete bid package to the PgM allowing 14 days for review and approval. Upon acceptance of the bid package, the PgM will give written notification to the sponsor that the PS&E are acceptable to bid.

7.4 DBE, Small Business and Veteran Owned Business

All projects in the TIA Program that include federal funds will adhere to existing GDOT DBE participation goals and are subject to all oversight in that regard.

However, on May 17, 2012, the Georgia Department of Transportation, acting by and through its Board, passed a Resolution that:

1. Reaffirmed its commitment to Title VI of the 1964 Civil Rights Act of nondiscrimination in the delivery and management of TIA funded projects; and
2. Encouraged the use of DBE's (including minority and woman owned businesses), small businesses, and veteran owned businesses in any project that is funded in whole or in part by TIA funds, and encouraged wherever practical and feasible, the Local Government or governments that manage TIA funded projects to include the same in its delivery and management of a project.

Reference to this resolution shall be included in all 100% TIA funded projects contracts regardless of letting responsibility. Contractual requirements will further detail reporting requirements.

8 Contract Administration

8.1 Design Contracts

8.1.1 Compliance

The PgM will manage the design process in order to ensure compliance with the scope, schedule, budget, and technical requirements. See the Design Management section of this manual for more information on the Design Management responsibilities and requirements.

Design contract compliance is monitored throughout the duration of the contract. For design contracts, progress and payment for services are tracked by the PgM in terms of progress achieved through plan development. If a consultant is found not to be in compliance with the contract, GDOT may withhold payment and/or request that the work be redone.

8.1.2 Design to Budget

The projects in this Program are "design to budget" based on budgets established by the project sponsors and as published in the Approved Investment List(s). In order to manage this requirement, the PgM will set an internal controls policy that will generate the "Design to Budget" budget.

8.2 Bid Review

8.2.1.1 GDOT Let Projects

GDOT Policy 2425-1: Bid Evaluation defines the internal procedures used to evaluate contractor bids for construction projects in GDOT administered lettings. GDOT will tabulate bids and review the submitted bids for irregularities including but not limited to unbalanced bids. GDOT will compare the apparent low bid with the Engineer's Estimate and the project construction budget to determine ability to award the project. The PgM will make a recommendation based on cash flow to GDOT whether to award, defer, or reject the apparent low bid.

8.2.1.2 Local Let Projects

PgM will compare the apparent low bid with the Engineer's Estimate, project budget and projected cash flow to determine the ability to award each project. The PgM will make a recommendation to award, defer, or reject the apparent low bid to GDOT.

Where possible and legally permitted, the PgM will provide the Local Government an opportunity to coordinate a resolution to budget issues on a project prior to rejecting a bid.

8.3 Construction Contracts

8.3.1 Compliance

For blended projects, the Office of Construction Bidding Administration (CBA) will administer TIA related contracts with support from the PgM.

For 100% TIA funded projects, construction contract compliance is monitored throughout the construction duration. Contractor progress and payment are computed based on amount of quantity constructed for each pay item. The Construction Manager (CM) or designated CEI provider will verify quantity of materials used on construction and certify that materials are listed on the QPL. The CM or designated CEI provider will enter progress into Site Manager software, which is used to generate construction invoices.

8.3.2 Supplemental Agreements

Supplemental Agreements may be initiated by the Local Government, Contractor, PgM, or GDOT. Supplemental Agreements must be approved by the PgM and GDOT for conformance with the project budget and scope of services regardless of letting responsibility. All changes in contract amount due to Supplemental Agreements must be reviewed and approved by the PgM and GDOT to ensure compliance with project budget.

8.4 Other Fees

8.4.1 Right of Way

For GDOT let projects that are 100% TIA funded, the PgM will manage the ROW process. For Local let projects that are On-System, the PgM will review and approve all ROW information. For local let projects that are Off-System, the Local Government will certify the ROW.

8.4.2 Environmental Mitigation

When wetland acreage is disturbed, a stream is impacted or a variance is needed for a stream buffer on state waters, the PgM will review the procurement of purchase of environmental mitigation credits in order for the project to move ahead. It is important to note that all environmental mitigation must be complete prior to certification of letting.

8.4.3 USACE 404 Permit / Buffer Variance

The PgM will obtain confirmation of the number of credits that must be purchased from the project ecologist, review the estimated cost for the mitigation credits based on recent purchases, and coordinate with the mitigation banks after approval.

After the bid is awarded, the bank(s) will send an invoice together with a copy of the PO, a copy of the letter sent to the USACE notifying of the transfer of credits and any other supporting documents to the PgM.

8.4.4 National Pollutant Discharge Elimination System (NPDES) Fees

NPDES fees are paid each month to the Environmental Protection Division of the Department of Natural Resources (DNR) for land disturbed as a result of projects awarded by GDOT. The fees are based on the amount of disturbed acreage.

GDOT Construction Bidding Administration staff will process the NPDES fees and the PgM will review and process and approve them for payment.

9 Environmental Management

9.1 Environmental Policy

GDOT and the PgM recognize that implementing the projects within this TIA Program may affect the natural, social, and/or human environment. GDOT and the PgM are committed to identifying and documenting environmental resources; obtaining applicable permits and authorizations; and avoiding/minimizing/mitigating impacts associated with program activities or works.

The TIA projects are required to follow an environmental process commensurate with the sources of funding, potential environmental impacts, and jurisdiction of Federal and State agencies. The environmental process is a multi-disciplinary effort that often requires consultation with a number of agencies and involvement with the public.

9.2 Environmental Objectives of the TIA Program

All works for the Program shall seek to enhance the built environment and, during construction, to avoid/minimize/mitigate environmental impacts by:

- Ensuring the design and construction of the projects is undertaken in an environmentally responsible manner and in full compliance with the provisions of the relevant environmental statutory requirements
- Identifying and mitigating environmental impacts
- Committing resources to comply with the requirements, as presented in this TIA Manual

9.2.1 Project-Specific Environmental Compliance

Environmental impacts associated with TIA projects may require the involvement of local, State and Federal agencies through approvals or permit obtainment. Examples include, but are not limited to, impacts to vegetative buffers of State Waters (Stream Buffer Variance [SBV] application approvals from the Georgia Department of Natural Resources [GDNR], Environmental Protection Division [EPD]), impacts to Waters of the U.S. (Section 404 of the Clean Water Act Permit approval from the U.S. Army Corps of Engineers [USACE]), and impacts to State and/or Federal protected species (coordination with the EPD and U.S. Fish and Wildlife Service, respectively).

The funding type, letting responsibility, and location of the project (on or off the GDOT State Route system) are important in the determination of environmental documentation requirements (see Figure 9-1, TIA Environmental Flowchart). Projects that use Federal funds fall under Federal jurisdiction and are generally required to comply with National Environmental Policy Act (NEPA). Projects that are 100% TIA funded and GDOT let, and projects that are 100% TIA funded and locally let that occur on the GDOT State Route system are required to comply with the Georgia Environmental Policy Act (GEPA) process. The GDOT Environmental Procedures Manual (EPM) shall be followed for GDOT let projects and for locally let projects that occur on the GDOT State Route system. If a 100% TIA funded project shares common termini with a Federal Aid project, then consultation with the GDOT TIA Office is required to determine if NEPA must be followed to protect the environmental decision of the adjacent project. GDOT's EPM describes in detail the policies and procedures of the GEPA and NEPA processes. For projects that are 100% TIA funded and locally let that do not occur on the GDOT State Route system, the project sponsor shall obtain all necessary state and federal environmental permits and approvals.

Consultants performing environmental surveys on the TIA Program shall carry a current copy of the Field Survey Right of Entry letter at all times during field work. During field work this letter shall be provided to property owners whose property could be accessed by field personnel within the project study limits. See a sample Field Survey Right of Entry letter at the end of this section.

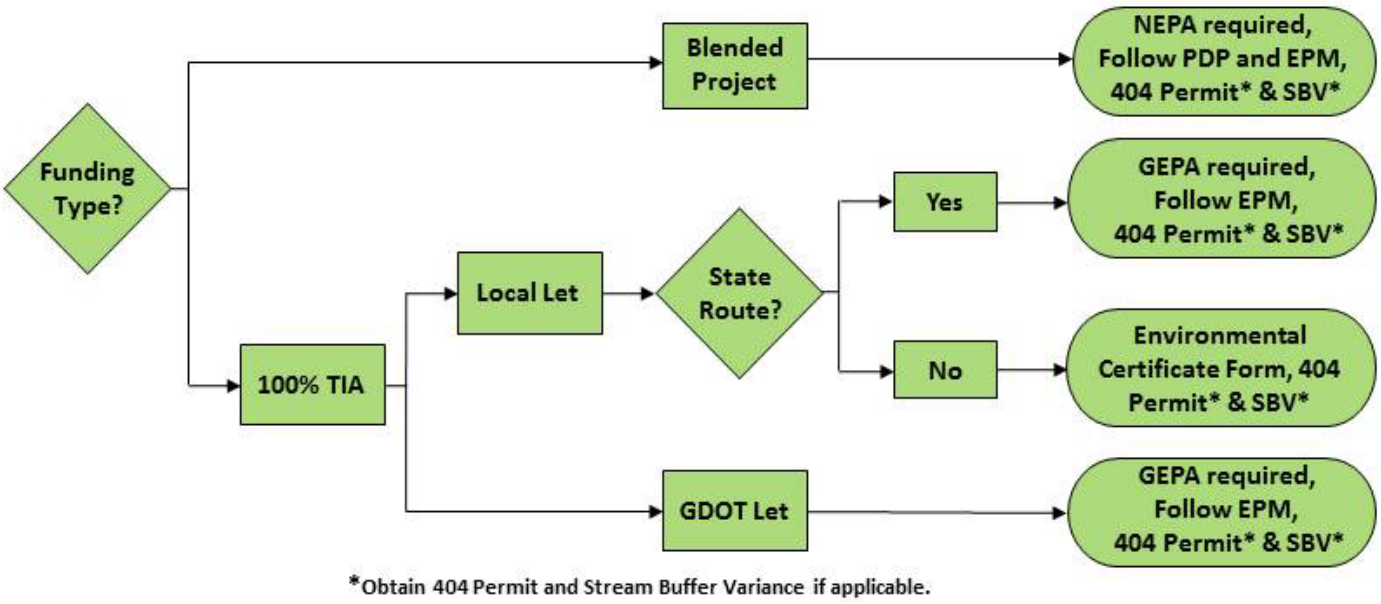

Figure 9-1 TIA Environmental Flowchart

9.2.2 Environmental Strategy

An initial screening and project background research should be conducted as early as possible to determine the potential for environmental impacts.

The preparation of environmental deliverables is one step in a series of approvals for a project to achieve construction authorization. Early coordination with parties that have jurisdiction over the project will help clarify requirements and avoid unnecessary delays. The responsible party for completion of the project's Environmental Deliverables should identify critical path tasks in the schedule and manage these tasks to expedite the delivery of the Environmental Documentation for environmental processes associated with the applicable GEPA, NEPA, and environmental permitting and approval processes. There are a variety of environmental deliverables that projects may require depending upon the funding source, letting authority, and occurrence on or off the GDOT State Route system.

Efficiencies in the process should be considered and may include, but are not limited to initiating right-of-way acquisition concurrently with the local environmental process to expedite project delivery. Elements of risk are inherent in allowing concurrent activities rather than the typical sequential activities; however, these risks must be identified and actively managed by the project sponsor.

GDOT's TIA Office will have oversight responsibility for construction projects let by GDOT. It is the responsibility of the PgM to ensure compliance with environmental commitments and NPDES permit requirements.

9.3 Environmental Responsibilities Overview

Local, State, and Federal projects, regardless of letting responsibility, are required to coordinate, as applicable, with the GDNR regarding the National Pollutant Discharge Elimination System (NPDES) permit requirements, with the EPD to obtain SBV encroachment approval for vegetative buffer impacts to Waters of the State and purchase associated mitigation credits, and the USACE to obtain the appropriate Section 404 Permit for impacts to Waters of the U.S. and purchase associated mitigation credits. If the project is locally let, then the project sponsor is the applicant for all applicable Federal and State permits and approvals (i.e., SBV, Section 404 Permit, etc.) and will purchase the appropriate mitigation credits. For GDOT let projects: 1) the project environmental consultant will prepare and obtain Section 404 Permits and/or SBV applications, 2) the PgM will review all Section

404 Permit and SBV applications prior to transmittal to the applicable regulatory agency, and 3) the PgM will facilitate the purchase of all Section 404 Permit and/or SBV mitigation credits. It should be noted that the Section 404 permit is a Federal action and Section 106 of the National Historic Preservation Act (NHPA) requires documentation of the archaeological and historic resources within the project's study area. For GDOT let projects, all Tribal consultation for GEPA/NEPA will be coordinated through GDOT. The PgM will track the status of obtainment of applicable environmental permits and approvals relative to the project letting schedule.

The responsible party for completion of the project's Environmental Deliverables shall have the experience and qualifications, or retain the experience and area class qualifications necessary to complete local, State, and Federal processes to ensure that applicable requirements are being met. It is important to recognize the context within which the project resides to identify required documentation. For instance, projects that cross federal jurisdictions or have federal funding are required to provide documentation under the NEPA process (i.e., CE, EA/FONSI, EIS/ROD) since the project falls within the federal jurisdictional boundaries.

9.3.1 Local Let and 100% TIA Funded Projects

Projects that are 100% TIA funded and that are locally let are required to comply with local, State and Federal environmental regulations and to obtain all necessary local, State and Federal environmental permits and approvals.

For locally let projects that do not occur on the GDOT State Route system, the sponsor or the sponsor's duly authorized representative shall complete the Environmental Certification Form at the end of this section, which certifies that compliance with applicable local, State, and Federal environmental requirements.

For locally let projects that occur on the GDOT State Route system, the sponsor is required to prepare the appropriate GEPA documentation (i.e., Type A Letter, Type B Letter, or EER/NOD). The PgM may review all applicable information and grant an exception to this requirement on a case-by-case basis. In addition to preparing the appropriate GEPA documentation, it is the local sponsor's responsibility to obtain all necessary local, State, and Federal environmental permits and approvals. Locally let projects on the GDOT State Route system occur within GDOT right-of-way. Sponsors of local let projects that occur on the GDOT State Route system shall implement appropriate construction monitoring activities to avoid environmental non-compliance.

9.3.2 GDOT Let and 100% TIA Funded Projects

Projects that are 100% TIA funded and that are GDOT let are required to follow the GEPA process. The preparation of all environmental studies, GEPA documents and applicable permits must comply with the procedures outlined in the GDOT EPM. The consultant will prepare all applicable environmental studies and GEPA documentation for the review and approval by the PgM and the GDOT TIA Administrator. The PgM will review all environmental applications prior to transmittal to the applicable resource agency. Additionally, the PgM will facilitate the purchase of all Section 404 Permit and/or SBV mitigation credits on behalf of GDOT. For GDOT let projects all pre-construction environmental commitments must be obtained in order for the PgM to complete the environmental certification for let (at least 18 weeks prior to the GDOT let date). For projects that require a 404 Permit and/or SBV, "Final Plans" must be submitted to GDOT Office of Environmental Services (OES) according to the schedule shown below. "Final Plans" are Plans to which there can be no changes to impacts of the Waters of the US or State protected buffers once submittal is made to OES.

- 404 Individual Permit with or without a SBV – 38 weeks prior to let date
- 404 Nationwide or Regional Permit with or without a SBV – 31 weeks prior to let date
- SBV only – 31 weeks prior to let date

9.3.3 Borrow/Waste/Stockpile Sites

Blended projects will follow the PDP and EPM.

For 100% TIA projects, if it is determined that project requires the use of a borrow/waste/stockpile sites for the placement of construction materials (i.e., soil cement base, sand clay base, base, etc.), or disposal of excess material, common fill, and inert waste, the letting authority determines the process by which sites achieve environmental clearance by the local sponsor or by GDOT and the TIA PgM.

For locally let projects, the local sponsor shall provide confirmation to the PgM indicating that environmental clearance work has been completed and no significant environmental resources (i.e., waters of the U.S., state waters, cultural resources, and protected species) would be affected. This confirmation can be achieved by a letter or copy of report documentation from the local sponsor.

For GDOT let projects the GDOT contractor shall submit to GDOT and the PgM a request for environmental survey and approval to use an area for a borrow/waste/stockpile site. Upon receipt of the request of approval form, the PgM shall conduct environmental survey and prepare an environmental survey results memo. It is the responsibility of the contractor to obtain all local, State, and Federal permits and approvals. Within 45 calendar days/30 business days, the PgM shall issue an environmental approval memo to the contractor if the site would not impact historical, archaeological, or federally protected species.

9.4 Environmental Compliance

GDOT's Environmental Compliance Bureau will have oversight responsibility for all projects let by GDOT. It is the responsibility of the PgM to ensure compliance with environmental commitments and NPDES permit requirements.

DEPARTMENT OF TRANSPORTATION
STATE OF GEORGIA

TRANSPORTATION INVESTMENT ACT (TIA) PROJECT

Environmental Certification

P.I. NO.:

LOCATION [*City or County*]:

PROJECT BAND:

DESCRIPTION:

I hereby certify that I am a principal and duly authorized representative of _____ whose address is _____ and also that compliance with applicable local, state, federal environmental requirements has been completed for the subject project. There are no additional environmental commitments and/or requirements that would require notations in the plans. Construction activities will be limited to areas within the designated project construction limits.

_____

Duly Authorized Representative Date

_____

Seal

Rev: 10-13-2013

< Latest DOT letterhead >

Date: <Date>

Subject: <Project Name>, <Project #>, <P.I. #>, County
Transportation Investment Act of 2010 (TIA) Project
Field Survey Right of Entry

Dear Property Owner,

We are requesting your cooperation in our continuing effort to provide a safe and efficient transportation system for the people of Georgia.

The Georgia Department of Transportation (GDOT) is currently conducting environmental surveys for the above referenced project. GDOT has contracted with <Consulting Firm> to provide professional services for this project. This project is in the early stages of development and several alternative alignments are under consideration. A larger area of potential effect (APE) is being considered for preliminary engineering purposes. The proposed alignment will be developed within the APE to minimize harm to the natural, cultural, and built environment based on the location of sensitive ecological, historic, and archaeological resources. These field surveys may require access to your property for the purposes of identifying ecological resources (protected species, wetlands, streams, etc.), which may involve small auger tests and flagging of vegetation; identifying historic buildings by evaluating properties 50 years of age or older and documenting them photographically and with a site plan and floor plan sketches; and identifying archeological resources, which may require the excavation of small, temporary shovel or auger tests. These surveys may also require the collection of samples for analysis and may include ecological specimens, archeological collections, and soil samples, along with readings regarding air quality and noise levels. If more extensive work is required, (i.e., excavation of larger test unites), you will be personally contacted by GDOT or GDOT's consultant.

During the course of our work it may be necessary for personnel to enter upon your property as provided for by Georgia Law, Code 32-2-9(9) which states: The Department and its authorized agents and employees shall have the authority to enter upon any lands in the state for the purpose of making such surveys, soundings, drillings, and examination as the Department may deem necessary or desirable to accomplish the purpose of this title, and such entry shall not be deemed a trespass, nor shall it be deemed an entry which would constitute a taking in a condemnation proceeding, provided that reasonable notice is given the owner or occupant of the property to be entered and that such entry shall be done in a reasonable manner with as little inconvenience as possible to the owner or occupant of the property. Please be assured that this work will be done in a professional manner with as little inconvenience to you as possible.

The following contact information should be used regarding any questions you have about the project or the work to be performed:

- GDOT Project Manager, <Office of TIA/Office of Program Delivery> -- <PM Name>, <telephone #>
- Consultant, <Firm Name> -- <PM Name>, <telephone #>

I sincerely appreciate your cooperation and regret any inconvenience this work may cause.

Sincerely,

<TIA Administrator Name>
TIA Administrator

MD/

cc: <as appropriate>

10 Utility and Railroad Coordination

Existing utilities may be located within or in the vicinity of the existing or proposed ROW of TIA projects, some pursuant to statutory rights or written permission and some pursuant to property rights. Existing utilities may need to be relocated or otherwise adjusted in order to accommodate TIA projects. This Chapter establishes procedures and requirements for utility relocations, including such processes as coordination with utility owners, preliminary engineering, construction and other activities necessary for utility relocations, and the required documentation.

Effective coordination, communication, cooperation and commitment between GDOT, PgM, utility owners, Georgia Utility Coordinating Council (GUCC), Georgia Utilities Protection Center (UPC/811), railroads, municipalities, counties, contractors, and consultants are the key to successful utility coordination.

All existing policies and procedures governing railroads and railroad coordination will be used for TIA projects.

10.1 Utility Accommodation Standards

GDOT policies and procedures for utility relocation and coordination are defined in the *GDOT Utility Accommodation Policy and Standards Manual*, current edition, also referred to as the *GDOT Utility Accommodations Manual* (UAM). All Utilities, whether privately or publicly owned, will be required to comply with the policies and standards of the UAM when occupying or crossing any part of the ROW of the State Highway System.

There may be circumstances where some variances to the UAM may be considered to accommodate the utility owners, GDOT, counties, municipalities, contractors, property owners, locally impacted businesses or potentially affected third parties. Variances will be addressed on a case by case basis and project by project basis. TIA utility special provisions will be required to cover any approved variances. All variances from the UAM must be approved by GDOT's State Utilities Office for blended projects; and recommended for approval by the PgM to the TIA Administrator for 100% TIA funded projects prior to implementation.

10.2 Responsibilities

The roles and responsibilities related to utility certification on TIA projects are outlined in the following sections.

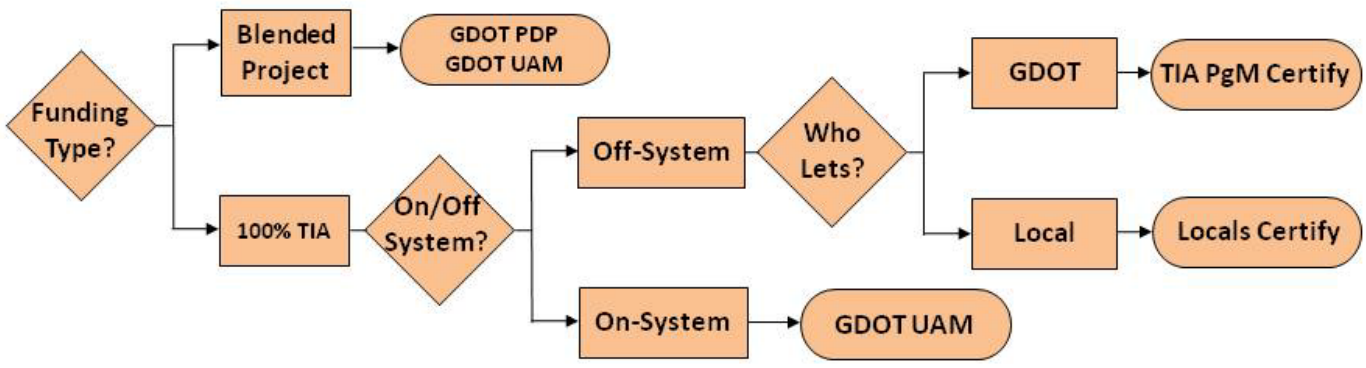

Figure 10-1 TIA Utility Responsibility Workflow

The PgM will assist the project contractors in accomplishing all Utility Coordination from Project Concept to project closeout. The PgM will coordinate, provide direction and assist the contractor, railroads and the utility owners in the Utility Coordination process.

10.2.1 Blended Projects

The GDOT Utilities Office will manage the utility relocation process for blended projects. Utility coordination and work will follow the PDP and comply with the policies and standards set forth in the UAM.

10.2.2 100% TIA Funded Projects

The PgM will serve in the role of GDOT's District Utilities Engineer as outlined in the UAM.

For On-System projects, utility coordination and work will comply with the policies and standards set forth in UAM.

For Off-System projects let by the Local Government, utility coordination and work will comply with the Local Government's policies and procedures. For Off-System projects let by GDOT, the PgM will provide certification of utilities.

10.3 Identification of Utilities and Notification of Utility Companies

Utilities are identified through field surveys, topographic surveys, coordination with utility companies, and subsurface investigations using SUE methods. The EOR incorporates utility location data into its base drawings.

10.3.1 Direct Communication with Utility Companies

The EOR will obtain a list of utility companies in the vicinity of a project prior to the beginning of design. Once conceptual design is complete, the EOR will send base plans to each of the utility companies requesting markups identifying existing utility locations and relocation designs, which are incorporated into the final construction drawings by the EOR. The EOR will determine if there are any existing utility agreements in place, and identify and resolve any utility conflicts associated with a project.

All construction documents shall include requirements to contact the Georgia Utilities Protection Center (UPC/811).

10.3.2 Need for SUE Services

For projects with 100% TIA funding, the PgM will determine if SUE is needed for GDOT let projects

10.4 Certification of Utilities

100% TIA projects will follow the UAM and the PgM will function as both the District and State Utilities Engineer.

For 100% TIA funded projects on Off-System routes, the sponsor or the sponsor's duly authorized representative shall complete the Utilities Certification at the end of this section, which certifies that all utility conflicts have been identified and resolved and that GDOT has no payment obligation for utility related costs on the project.

10.5 Utility Relocation Work and Construction Schedules

Utility companies are required to attend the pre-construction conference and to coordinate the construction schedule. The Contractor will work closely with the utility company throughout construction. During construction, the construction manager or designated CEI staff shall monitor utility relocation progress, attend / hold coordination meetings, and confirm that utility construction fulfills the MOU and contract requirements.

10.6 Utility Relocations/Coordination during Construction

The PgM and the EOR will coordinate with Utility and Railroad Owners before project certification to determine conflicts, necessary relocations, utility adjustment schedules, and issuance of the Georgia Utility Permitting System (GUPS) permits. It is common for utilities to be unexpectedly encountered during construction. If this occurs, the contractor will notify the CM and initiate coordination to identify and coordinate relocation of the newly discovered utility.

10.7 Utility Reimbursement

Obligation of GDOT, counties, and municipalities regarding reimbursement to utility owners for utility relocation is outlined in the UAM.

Reimbursements for utility relocations are determined and negotiated prior to construction letting. The negotiated amount of reimbursement may require a Force Account Agreement between GDOT and the utility company.

10.8 Utility and Railroad Owner Meetings and Correspondence

The PgM will be responsible for holding meetings and otherwise communicating with Utility and Railroad Owners as necessary to timely accomplish any required Utility Relocations on GDOT let projects.

At least ten (10) calendar days in advance of each scheduled project utility and railroad meeting, the PgM shall provide written notice and an agenda for the meetings with the appropriate Utility and Railroad Owner. The PgM shall prepare and distribute minutes via US mail and/or electronic mail of all meetings within seven (7) days after the date of the meeting with Utility and Railroad Owners and shall keep copies of all correspondence between PgM and any Utility and Railroad Owner.

10.9 Record Keeping

The PgM shall ensure that utility construction and inspection records are maintained in order to ascertain that Utility Relocation Work is accomplished in accordance with the terms and in the manner proposed on the approved Utility Work Plan and the applicable Utility Agreement.

Documentation forms currently used by GDOT, counties and municipalities will be used for utility relocation whenever possible. When new documentation forms, such as a variance, are required, approval will be required from the relevant governmental agency and GDOT State Utilities Office. Utility owners will be notified in writing within ten (10) calendar days prior to any documentation form changes and its respective implementation.

DEPARTMENT OF TRANSPORTATION
STATE OF GEORGIA

TRANSPORTATION INVESTMENT ACT (TIA) PROJECT

Utilities Certification

Project No:

P.I. #:

Description:

I hereby certify that I am a principal and duly authorized representative of the _____ whose address is _____ and that the appropriate research, field investigation, design considerations and coordination with the Utility Owners on this project, as indentified in the table below, have been performed, and further certify that all known utility conflicts have been identified and resolved.

Status of Utilities

A. [ ] There are **NO** known utility conflicts within the project limits.

B. [ ] There are known utility conflicts within the project limits (see table below).

Utility Company	Utility Type	TIA Reimbursable

The Georgia Department of Transportation (GDOT) shall bear no cost in the Utility relocation reimbursement for this project. Any Utility Reimbursement Agreement required for construction of this project shall be between the _____ and the respective Utility Owner. In accordance with O.C.G.A § 48-8-242 (2) (B), connections for utility services are eligible for the reimbursement under TIA subject to the availability of funds designated by GDOT for the project and the revenue collections. If a previously unknown conflict arises during construction that requires reimbursement, the _____ shall be responsible for all coordination. Costs for such coordination would be subject to the same funding and eligibility considerations.

_____

Duly Authorized Representative Date

_____

Seal

11 Right-of-Way Management

11.1 General Acquisition Requirements

Titles 32 and 23 should be used for all Right-of-Way (ROW) acquisition regardless of who acquires the ROW for the TIA projects.

Reimbursements to Local Governments for property acquisitions and payments to property owners will be paid out of TIA funds through reimbursement in accordance with the Local Agreement.

For all GDOT acquired parcels, all reviews and approvals noted in the GDOT Right-of-Way Manual to be completed by GDOT ROW Office staff will be completed or coordinated by the PgM.

For parcels that are on-system or system adjacent, regardless of who acquires the ROW, all consultant acquisitions must be performed by GDOT prequalified ROW consultants for each level of work being performed during the acquisition process. Additionally, all appraisals and appraisal reviews must be conducted by an independent appraiser, pre-qualified by GDOT.

11.2 Responsibilities

For 100% TIA funded projects that are GDOT let or are On-system and Local let, GDOT's ROW Office has delegated the authority to the TIA Administrator to manage ROW. The TIA Administrator has contractually delegated the management of those acquisitions to the PgM. The PgM is responsible for:

- Ensuring that all acquisitions are in accordance with state laws and regulations
- Reviewing and approving ROW plans for 100% TIA funded projects
- Establishing a ROW budget and ensuring the project scope and cost is within budget
- Approving any proposed financial transaction associated with the acquisition of ROW on a 100% TIA funded project
- Certifying for each project all Right-of-Way has been acquired; or a plan for acquisition is in place that will not impact the construction schedule
- Validating that ROW acquisitions by Local Governments are eligible for reimbursement from the TIA Program
- Verifying ROW stipulations between Local Governments and property owners are included in the construction contract
- Coordinating the submittal of approved ROW plans to the Electronic Document Management Office
- Preparing deeds and closing documents as needed
- Ensuring GDOT project management software used to track the ROW acquisition process for all projects is current
- If applicable, overseeing the ROW acquisition being performed by the Right of Way consultant on the behalf of GDOT

For 100% TIA funded projects that are Off-system and Local Let;

The Local Government is responsible for:

- Ensuring that all acquisitions are in accordance with state laws and regulations
- Reviewing and approving ROW plans
- Ensuring the ROW cost is within budget
- Certifying for each project all Right-of-Way has been acquired; or a plan for acquisition is in place that will not impact the construction schedule
- Verifying ROW stipulations between Local Governments and property owners are included in the construction contract
- Preparing deeds and closing documents as needed
- Providing ROW certification to PgM prior to construction let in accordance with Section 11.4 below.

The PgM is responsible for:

- Establishing a ROW budget
- Approving any proposed financial transaction associated with the acquisition of ROW on a 100% TIA funded project

- Validating that ROW acquisitions by Local Governments are eligible for reimbursement from the TIA Program
- Auditing as necessary

11.3 GDOT ROW Acquisition Management

The Engineer of Record will establish a preliminary cost estimate for the project and ensure ROW acquisition costs are within the project budget. At a minimum the information contained in the TIA Preliminary ROW Cost Estimate (see Figure 11-1) must be developed and used to verify that the projected costs are within the project budget. This form is available as an MS Excel file here. A copy of the Preliminary ROW Cost Estimate must be provided to the PgM.

The project team appraiser will generate the property estimate for Market Value. The PgM review appraiser will approve Market Value.

11.4 Local ROW Acquisition

Local ROW acquisition is eligible for reimbursement for both administrative and real property value up to amount budgeted.

The administrative costs associated with the acquisition of ROW and the real property costs are eligible for reimbursement by the TIA Program. Local Governments must provide a ROW Cost Estimate to the PgM for approval, at a level of detail sufficient to justify the project ROW costs, prior to issuance of a Notice to Proceed. Budgets for ROW cost will be agreed to by GDOT and the Local Governments through a Local Agreement. If ROW costs are found to be in excess of the budgeted amount, coordination between the Local Government and the PgM is necessary to determine the impacts to the project. ROW costs that exceed the amount agreed upon in the Local Agreement, and deemed necessary to complete the project, may be the responsibility of the Local Government.

The Local Government or its Engineer of Record will establish a preliminary cost estimate for the project and ensure ROW acquisition costs are within the project budget. At a minimum the information contained in the TIA Preliminary ROW Cost Estimate (see Figure 11-1) must be provided to the PgM and used to verify that the projected costs are within the project budget. This form is available as an MS Excel file here.

Consultants who contract with the Local Governments to acquire ROW can establish the Market Value for the real property based on the approved detailed cost estimate. TIA projects that cross county lines with ROW acquisition will require a Local Agreement for acquisition services with each county acquiring the right-of-way.

ROW acquisition by the Local Governments is encouraged on most TIA projects. For projects that can be completed within existing ROW or with minimal ROW acquisition by the Local Governments, the PgM will request that the Local Governments certify ROW with the Right of Way Certification form at the end of this section. On projects not requiring ROW acquisition, the form certifies that all work on a project will be performed within existing ROW. On projects requiring ROW, the form certifies that all necessary ROW has been acquired, and that all ROW is owned by the local sponsor prior to letting to construction.

Preliminary ROW Cost Estimate

Project No. RCXX-XXXXXX
PI No. XXXXXXX
Project Name: Enter Project Name
Date: Enter Date of Estimate (DDMMMYYYY)

Land and Improvements	Agriculture	Residential	Commercial	Industrial	Notes
Estimate ($/ac)	$0	$0	$0	$0	Enter Cost / Acre
Fee Simple Area (ac)	0.00	0.00	0.00	0.00	Enter Acreage
Fee Simple Estimate	$0	$0	$0	$0	CALCULATED FIELD
Perm Easement Area (ac)	0.00	0.00	0.00	0.00	Enter Acreage
Perm Easement Factor	0%	50%	50%	0%	Adjust Percentage as Appropriate
Perm Easement Estimate	$0	$0	$0	$0	CALCULATED FIELD
Temp Easement Area (ac)	0.00	0.00	0.00	0.00	Enter Acreage
Temp Easement Factor	0%	25%	25%	0%	Adjust Percentage as Appropriate
Temp Easement Estimate	$0	$0	$0	$0	CALCULATED FIELD
City Land Available for Swap (a	0.00	0.00	0.00	0.00	Enter Acreage (If required)
City Land Available for Swap Es	$0	$0	$0	$0	Enter Estimated Value (If required)
Proximity Damages	$0	$0	$0	$0	Enter Fees and Provide Notes as Appropriate
Consequential Damages	$0	$0	$0	$0	Enter Fees and Provide Notes as Appropriate
Cost to Cures	$0	$0	$0	$0	Enter Fees and Provide Notes as Appropriate
Improvements	$0	$0	$0	$0	Enter Fees and Provide Notes as Appropriate
Trade Fixtures	$0	$0	$0	$0	Enter Fees and Provide Notes as Appropriate
PROPERTY TYPE TOTALS	**$0**	**$0**	**$0**	**$0**	CALCULATED FIELD
	Land and Improvements Sub Total		**$0**		CALCULATED FIELD

Valuation Services	Agriculture	Residential	Commercial	Industrial	
Appraisals (# of Parcels)	0	0	0	0	Adjust Parcels as required
Estimated Fee (per Parcel)	$0	$0	$0	$0	Enter Estimated Fee per Parcel
Total Appraisals	$0	$0	$0	$0	CALCULATED FIELD
Specialty Reports	$0	$0	$0	$0	Enter Estimated Costs and Provide Notes
Estimated Fees	$0	$0	$0	$0	Enter Estimated Fees and Provide Notes
PROPERTY TYPE TOTALS	**$0**	**$0**	**$0**	**$0**	CALCULATED FIELD
	Valuation Services Sub Total		**$0**		CALCULATED FIELD

Legal Services	Parcels	Estimated Fees	Totals	
Meeting with Attorney	0	$125	$0	Adjust Parcels / Fees as required (using best judgement)
Preliminary Titles	0	$200	$0	Adjust Parcels / Fees as required
Closing and Final Title	0	$300	$0	Adjust Parcels / Fees as required
Recording Fees	0	$50	$0	Adjust Parcels / Fees as required
	Legal Services Sub Total		**$0**	CALCULATED FIELD

Administrative	Parcels	Ian Hours/Parcel	Totals	
Pre-Acquisition	0	40	$0	Adjust Parcels / Fees as required
Acquisition	0	100	$0	Adjust Parcels / Fees as required
Administrative Appeals	0	50	$0	Calculates as 15% of Acq Parcel Count (Adjust if Necessary)
	Administrative Sub Total		**$0**	CALCULATED FIELD

Contingency			
Overall Contingency	20%	$0	Enter Percentage for Contingency (Default = 20%)

Total Estimated Costs **$0** CALCULATED FIELD

Figure11- 1 - ROW Cost Estimate Form

11.5 Abbreviated Valuation Methods

Abbreviated Valuation Methods may be used in compliance with procedures outlined in GDOT ROW Manual. Deviation from these procedures is granted for the monetary threshold. The monetary threshold has been raised to $50,000. This is an amendment to the values established in the ROW Manual. All other procedures must be followed.

11.6 Advanced ROW Acquisition

Advanced ROW acquisition may be considered if the project meets one of the following:

- Substantial monetary savings (time or cost) can be achieved
- Enhancement of the integration of highways with public or private urban redevelopment
- Forestalling of the physical or functional obsolescence of highways

Advanced ROW acquisition can only be approved by the PgM and the TIA Administrator. Funding for advanced acquisitions, requested by the local sponsor and determined eligible by the PgM and TIA Administrator, must be provided by the Local Governments and will be reimbursed by the TIA Program after the advanced ROW acquisition parcels are certified and as funds become available in the project's ROW phase.

11.7 Condemnation

Condemnation of a property requires Notice of Location and Design (L&D) Approval before advertisement. Condemnation shall not be used for advanced acquisitions on TIA projects. ROW plans that are approved at the time of the condemnation petition convey exactly the impacts of ROW acquisition for the condemnation proceeding. Any design changes after the condemnation petition has been filed will not be reflected in the condemnation proceedings and are to be avoided if at all possible. All ROW to be acquired at the time of the condemnation filing will be acquired through that process; additional ROW needs for a condemned property will be treated as a new acquisition and should be avoided. The condemnation petition will not reflect design changes that occur after the condemnation filing which change the ROW footprint impacted.

For projects where the ROW is to be acquired in the name of GDOT, a Special Assistant Attorney General (SAAG) is required for all condemnation proceedings. If it is determined that SAAG services are needed, the PgM will submit a request for assignment of a SAAG to a project through the Office of Right of Way Funding and Certifications. This request must include Project Number, PI#, and charging information for the SAAG billing.

DEPARTMENT OF TRANSPORTATION
STATE OF GEORGIA

TRANSPORTATION INVESTMENT ACT (TIA) PROJECT
Right of Way Certification

P.I. NO.:
COUNTY:
DESCRIPTION:

This is to advise that the right of way and/or easements have been acquired in accordance with the current FHWA directives covering the acquisition of real property on the above referenced project.

Place an "X" at the applicable item:

____ This project is limited to the existing rights of way and no additional rights of way acquisition was required.

_____ All necessary rights of way, including control of access when pertinent have been acquired including both legal and physical possession.

_____ All Rights of Way are owned by the City/County/State/Federal Government or a combination of these.

_____
City or County Attorney Date

FOR DEPARTMENT OF TRANSPORTATION USE ONLY

This is to advise that the required right of way for the above listed project was acquired in compliance with 49 CFR – Part 24, the Relocation Act of 1972(as amended), and all other appropriate federal regulations and guidelines governing the acquisition of right of way for roadway purposes. Title and possession has been obtained to all rights of way. Where appropriate, relocation and property management have been completed.

R/W NOT REQUIRED ___ DEEDS ____ CONDEMNATIONS ___ TOTAL PARCELS ___

If R/W is being acquired; I have audited all files and they are in compliance with all Federal Guidelines outlined above.

_____
TIA ROW Manager
(Sign Only if ROW is being acquired)

_____
TIA Administrator Date

Rev 11-05-2013

12 Design Management

12.1 Roadway Design

Unless otherwise determined by the TIA Office during project development, roadway design as part of a blended project is required to follow the GDOT PDP manual and all policies, procedures and manuals required by GDOT.

Roadway design as part of a 100% TIA funded project is required to follow the TIA Manual.

12.1.1 On-System and Off-System Roadways

For the TIA Program, roadway designs are classified as either On-System or Off-System as defined by Section 1.6 of the TIA Manual.

12.1.2 Roadway Design Specifications

For 100% TIA funded projects that are On-System, roadway projects shall be designed in accordance with the policies, guidelines, and standards published and referenced in the GDOT Design Policy Manual, the design criteria published in the AASHTO-A Policy on Geometric Design of Highways and Streets and AASHTO-A Policy on Design Standards Interstate System, the guidelines and standards published by the FHWA Manual on Uniform Traffic Control Devices, and the PPM 10-Design Management, as may be amended from time to time.

In the event of conflicting information or guidance, the DPM supersedes AASHTO guidelines.

Current *GDOT Standard Specifications for the Construction of Transportation Systems* (as supplemented by the Supplemental Specification Book, Special Provisions, Supplemental Specifications, GDOT Standards, and Construction Details) will be used in the design and construction of On-System projects.

For 100% TIA funded projects that are Off-System, the Local Government will determine the roadway design criteria. The following are suggested minimum standards for roadway design:

- For ADT > 400, AASHTO: A Policy on Geometric Design of Highways and Streets
- For ADT ≤ 400, AASHTO: Guidelines for Geometric Design of Very Low-Volume Local Roads

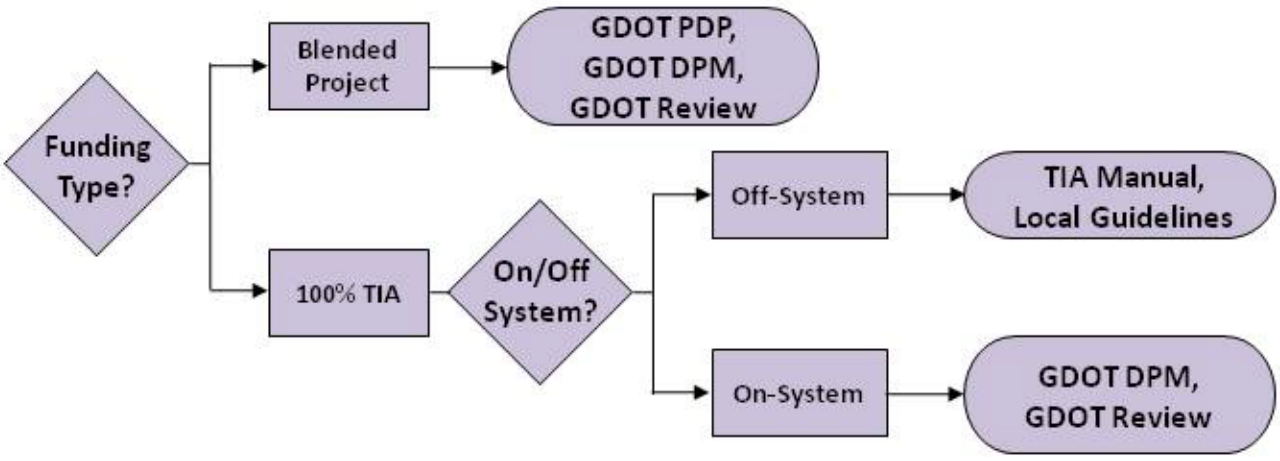

Figure 12-1 TIA Roadway Design Guidance

12.1.3 Responsibilities

The roles and responsibilities of the EOR and Local Government related to roadway design of TIA projects are outlined in the following sections.

12.1.3.1 Engineer-of-Record

The EOR is responsible for all aspects of design, plan development and specifications related to a roadway design. Designs and plans for On-System roadways shall follow the DPM. Every design must be certified by a licensed engineer registered in Georgia.

Engineering firms providing design work for On-System roadways are to be prequalified with GDOT area classes necessary for the project.

The EOR is responsible for ensuring that roadway designs are complete, accurate and constructible. Construction plans should be of sufficient quality to ensure that the contractor can easily understand the design and how the roadway is to be constructed. If errors occur during construction due to errors on the roadway plans, the EOR is responsible to provide a remedy at no additional cost to the project. The EOR may be held responsible for covering the additional contractor costs, liquidated damages or legal claims as a result of errors and/or omissions in the plans.

12.1.3.2 Local Government

For Off-System roadways, the Local Government shall submit plans and specifications to the PgM for review before letting the project.

12.1.4 Survey and Mapping

The electronic database shall be completed in accordance with the GDOT Survey Manual, unless deviations are approved by the PgM or the TIA Administrator.

12.1.5 Soil Survey

Soil survey(s) will be completed for all TIA funded projects unless the EOR provides acceptable justification which is accepted by the PgM for not performing the soil survey. The soil survey(s) will follow the requirements and guidance set forth in GDOT's PDP, GDOT's *Guidelines for the Geotechnical Engineering Manual*, and by GDOT's Office of State Materials Engineer. Furthermore, the soil survey must be accepted prior to the Field Plan Review (FPR).

The soil survey(s) should be coordinated and developed as soon as possible to provide safe, effective and cost-efficient recommendations for the project design. The PgM will have the authority to accept all soil surveys for projects Off- System. GDOT's Office of State Materials will be responsible for providing acceptance for all On-System projects.

12.1.6 Pavement Evaluation and Design

The need for a Pavement Evaluation will be determined by the TIA Office for all GDOT Let projects.

For 100% TIA funded projects that are On-System, pavement design and evaluation submittals shall be developed in accordance with GDOT's PDP and *GDOT Pavement Design Manual* and reviewed and approved by the PgM.

For 100% TIA funded projects that are Off-System and Local Let, pavement evaluation and design shall follow local guidelines and recommend practices established by the Local Government. GDOT can provide pavement design recommendations and review if requested by the Local Government and agreed to by GDOT.

For 100% TIA funded projects that are Off-System and GDOT let, pavement design will be determined by the TIA Office.

For On System, the recommended pavement design life is 20 years. If a 20 year design is not achievable, the EOR should reduce/remove section thickness and/or layers from the top of the pavement structure in lieu of the base or sub-grade.

12.2 Municipal Separate Storm Sewer System (MS4)

All TIA funded projects must comply with the MS4 permit for those areas outlined in the MS4. Provisions in the MS4 permit allow GDOT to present evidence to the Environmental Protection Division (EPD) regarding why certain control measures are not feasible or reasons why a project should be exempt from their Storm Water Management Program (SWMP). Extra attention should be undertaken by the PgM and EOR for each control measure, especially post-construction Best Management Practices (BMP) for the SWMP, to determine its feasibility for implementation on the project.

12.3 Highway Signing and Pavement Markings

For all TIA projects, highway signing and pavement markings will be installed in accordance with the MUTCD. For On-System TIA projects, highway signing and pavement markings will also conform to the GDOT Signing and Marking Design Guidelines.

Modification of posted speed limits will be performed in accordance with State Code and local ordinances.

12.4 Traffic Operations

TIA projects that are On-System or GDOT let, regardless of funding, will follow the GDOT processes for the installation of all traffic control devices. The option of implementing minor traffic control devices, sidewalk or highway signing and pavement marking projects without construction plans and specifications will be reviewed and approved by the PgM on a case-by-case basis.

12.4.1 Roundabouts

For 100% TIA funded projects, roundabouts are viable intersection alternatives.

For 100% TIA funded projects that are On-System, requests for roundabout studies should be submitted to the PgM and TIA Administrator for review and approval prior to beginning the study. Peer review of roundabouts is required unless the PgM and/or the Chief Engineer determines otherwise. See Chapter 8 of the GDOT Design Policy Manual (DPM) and State website for Modern Roundabouts.

For 100% TIA funded projects that are Off-System, the use of conventional intersection solutions that meet both the safety improvement goals and budget limitations should be considered when roundabout alternatives exceed the project budget.

12.4.2 Traffic Control Signals

Traffic control signal permits approved by the GDOT Chief Engineer will be required for all new traffic control signals installed for On-System TIA projects only. Off-System TIA projects with new traffic control signals will follow MUTCD's requirements and will be approved by the local agencies in accordance with the MUTCD.

12.4.3 Intelligent Transportation Systems (ITS)

Blended projects, and locally funded projects on the state highway system, will follow the GDOT PDP process for the installation of all ITS improvements. The installation of ITS improvements on TIA projects, which include local funding on Off-System highways, will follow the TIA Manual. The option of implementing minor ITS projects without construction plans will be reviewed and approved by the PgM on a case-by-case basis.

12.6 Bridges and Structures

Bridge designs that are part of a blended project are required to follow the GDOT PDP manual and all policies, procedures and manuals required by GDOT.

Bridge designs that are part of a 100% TIA funded project are required to follow the TIA Manual. It is preferred that bridge design development include a preliminary bridge plan phase (including Hydraulic and Hydrological Studies (H&H) as required) and a final bridge plan phase.

12.6.1 On-System and Off-System Bridges

For the TIA Program, bridge designs are classified as either On-System or Off-System as defined by Section 1.6 of the TIA Manual.

On-System bridges are to be maintained and inspected by GDOT following the completion of construction.

If a project involves a bridge that carries the interstate or a bridge crossing the interstate, FHWA coordination is required and may involve submitting plans to FHWA for review.

Off-System bridges will be maintained by the Local Government owner of the bridge. The PgM will develop an Intergovernmental Agreement between GDOT and the Local Government to define the maintenance responsibilities for Off-System bridges.

12.6.2 Bridge Design Specifications

Bridges are to be designed using the most recent editions of the Georgia DOT *Standard Specification - Construction of Transportation Systems, 2001 Edition*, *GDOT Bridge and Structures Design Manual (DPM)*, *GDOT LRFD Bridge and Structure Design Manual*, and AASHTO Bridge Design Specifications. It is preferred that new bridges be designed using the latest AASHTO *LRFD Bridge Design Specifications* but this will not be required in all cases.

Blended projects must conform to FHWA requirements.

For 100% TIA funded projects, the following are the AASHTO Bridge Design Specifications to be used for bridge design:

- Bridge Widening Projects: Latest version of AASHTO Bridge Specifications or the version of the specifications in place at the time the bridge was originally designed with prior approval from GDOT Office of Bridges and Structures.
- NEW Off-System Bridges: *AASHTO Standard Specifications for Highway Bridges, 2002, 17th Edition* (HS20 Loading) as a minimum.
- NEW On-System Bridges: *AASHTO Standard Specifications for Highway Bridges, 2002, 17th Edition* (HS20 Loading) as a minimum. However, the latest AASHTO *LRFD Bridge Design Specifications* are acceptable.
- NEW On-System Bridges (Interstate): Latest version of AASHTO *LRFD Bridge Design Specifications* (HL93 Loading) to accommodate full FHWA oversight.

In the event of conflicting information or guidance, the Bridge DPM or Bridge LRFD DPM supersedes AASHTO guidelines.

12.6.3 Responsibilities

The roles and responsibilities of GDOT, PgM, EOR and Local Government related to bridge design of TIA projects are outlined in the following sections.

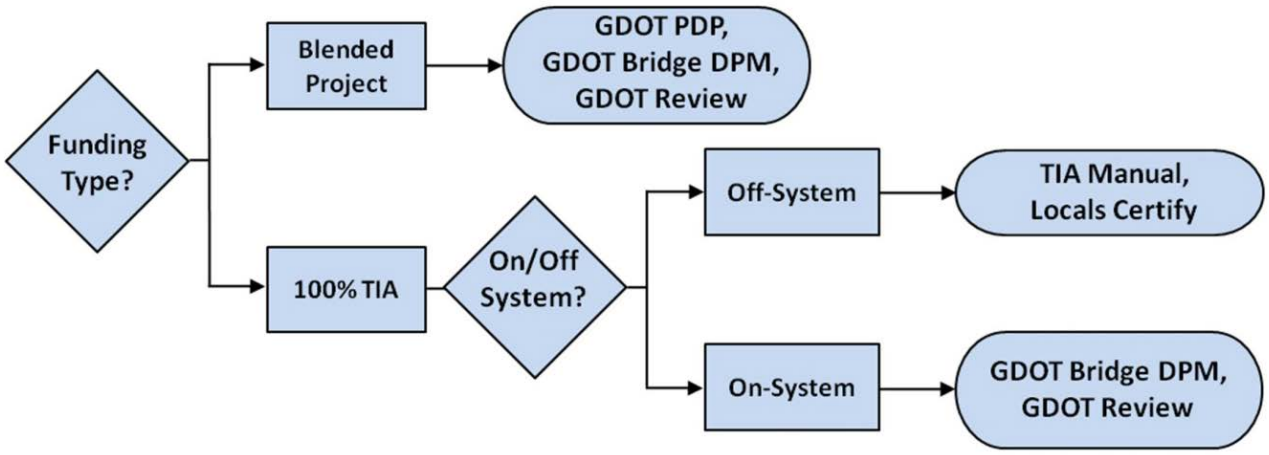

Figure 12-2 TIA Bridge Project Design Guidance

12.6.3.1 GDOT Office of Bridge Design

For On-System bridges and bridges that are part of blended projects, the GDOT Office of Bridge Design will provide the necessary submittal reviews, guidance and design acceptance. Blended projects will follow the PDP.

For all other bridges, the Office of Bridge Design will perform audits on projects for compliance with the TIA Manual.

For additional responsibilities related to Shop Drawings and Request for Information (RFI), see Section 12.6.10.

12.6.3.2 Program Manager

For Off-System projects, the PgM may perform review of bridge submittals. The design and plan reviews will be “peer” review in nature and will be conducted at the completion of the preliminary plan and final plan phases. The peer review will consist of the design drawings for completeness and compliance with the TIA Manual, cost estimates, and constructability. It is expected that bridge plans and designs will be prepared in a format typical to GDOT bridge plans in quality and presentation. Bridge review is not a substitute for the EOR’s own quality control procedures. This review does not relieve the EOR of its overall responsibility for the design.

12.6.3.3 Engineer-of-Record

The EOR is responsible for all aspects of design, plan development and specifications related to a bridge or structure design. Bridge and structure designs and plans for On-System bridges shall follow the Bridge DPM or Bridge LRFD DPM. Every bridge design must be certified by a licensed engineer registered in Georgia specializing in bridge design.

Engineering firms providing bridge and structure design work bridges are to be prequalified with GDOT in Area Classes 4.01, 4.02, and/or 4.04 as necessary for the project.

The EOR is responsible for ensuring that bridge designs are complete, accurate and constructible. Construction plans should be of sufficient quality to ensure that the contractor can easily understand the design and how the bridge is to be constructed. If errors occur during construction due to errors on the bridge plans, the EOR is responsible to provide a remedy at no additional cost to the project. The EOR may be held responsible for covering the additional contractor costs, liquidated damages or legal claims as a result of errors and/or omissions in the plans.

For additional responsibilities related to Shop Drawings and Request for Information (RFI), see Section 12.6.10.

12.6.3.4 Local Government

For Off-System bridges, the Local Government and the Local Government's EOR shall certify that:

- The bridge configuration meets the drainage design and stream crossing requirements of the local jurisdiction and FEMA, and creates no adverse effects to flood elevations or flood plain limits in the surrounding area.
- The bridge is designed to resist the hydraulic forces determined by the applicable design guidelines and imposed on the structure by the waterway.
- The foundations are designed to be installed below the anticipated scour depths, into competent bearing material, and in accordance with the bridge foundation investigation.
- The scour protection is designed to resist anticipated velocities at the crossing.

The Local Bridge Design Certification shall be submitted to the PgM before Final Acceptance of the project.

12.6.4 Bridge Details

The following sections outline guidelines for design and detailing of bridges that will improve safety and lower long term maintenance costs for the owner.

12.6.4.1 Superstructure

Whenever possible, minimize the number of deck joints in bridge spans. Locate deck joints to provide access for future maintenance and replacement.

The use of fracture critical members (FCMs) is not permitted on highway bridges without written authorization from GDOT Office of Bridge Design. Design and detail FCMs to allow full access for inspection. Provide a minimum inside depth of six (6) feet to facilitate interior inspection of box girders. To allow free flow of air during inspections, include access openings of 3'-0" diameter minimum into all cells, and between cells of the girders. Provide outside access opening covers in areas that can be accessed without impacting traffic. Provide hinged access opening covers with hinges located on the inside of the box girder.

Timber bridges, masonry bridges and structural plate arches are not permitted for TIA projects. Intermediate hinges in bridge girders or spans are not permitted for TIA projects.

Design bridge superstructures, joints and bearings to allow access for long-term inspection and maintenance.

12.6.4.2 Bridge Foundations

Design foundations for bridges over waterways to accommodate predicted scour depths. The EOR will determine the scour potential of each bridge crossing using the Bridge Foundation Investigation and H&H Study.

12.6.4.3 Bridge Railing and Barriers

All barrier systems shall meet current crash test and other safety requirements as determined by GDOT. Table 14-6 lists current approved GDOT Bridge Railing Standards, which GDOT will update upon request.

Table 14-6: GDOT Standard Bridge Railing

BRIDGE BARRIER, PARAPET AND RAIL		
Description	**Std Name**	**Rev Date**
With Sidewalks		
Concrete Parapet (42” tall – 13” wide)		
Concrete Parapet (27” tall- 13” wide) w/Std 3626 (42” tall total)		
Concrete Parapet (34” tall – 13” wide) w/Std 9031N Chain Link Wire Fence for urban area bridge over an Interstate or other limited access highway or a railroad”		
No Sidewalks		
Concrete Jersey Barrier (32” tall) w/ 9” top (No Bicycle route)		
Concrete Type “S” Barrier (42” tall)		
COMBINATION RAILS/FENCES		
Description	**Std Name**	**Rev Date**
One-Pipe Aluminum Handrail for mounting on parapets (14.75” high rail)	3626	10-64
Chain Link Wire Fence for mounting on top of parapets	9031N	06-81
Pipe Handrail for mounting on top of parapets & modified barriers	9031R	10-88
ARCHITECTURAL RAILS		
Description	**Std Name**	**Rev Date**
Texas Rail (to be used only with GDOT Bridge Office approval)		
Kansas Corral (to be used only with GDOT Bridge Office approval)		

12.6.5 Concept and Preliminary Plans

12.6.5.1 Concept

If required for approval of the Concept Report, provide concept layouts consisting of bridge plan view, elevation view and typical section. Include a cost estimate, based on the concept layout, in the Concept Report.

12.6.5.2 Preliminary Plans

Preliminary Design Packages are required for all projects let to construction by GDOT.

Unless required by the Local Government, Local Let projects do not require submittal of Preliminary Design Packages. Submittal of the bridge layout for review at an early phase of the project is recommended to minimize cost and schedule impacts.

Preliminary bridge layouts must show all required crossing information as outlined in the Bridge Design Policy Manual and the GDOT Bridge Detailing Manual.

12.6.5.3 Hydraulic and Hydrological Studies

Bridge projects crossing or encroaching on FEMA studied waterways must be studied and designed to meet all FEMA requirements.

For On-System bridges, GDOT requires an H&H Study and Preliminary Bridge Layout to be submitted and accepted prior to advancing to the next phase, regardless of funding source. H&H Study Reports for these projects must follow the guidelines and policies in the GDOT Drainage Manual and include the Preliminary Bridge Layout in the study appendices. The GDOT Drainage Manual outlines the content and format of H&H Study Reports.

For Off-System bridges, an H&H Study Report shall be completed to determine bridge configuration, hydraulic opening, scour depths and changes to existing flood elevations and floodplain limits. These bridges must (1) be designed to meet the drainage design requirements of the local jurisdiction; (2) be designed to resist hydraulic forces imposed on the structure by the waterway; (3) have foundations installed below the anticipated scour depths into competent bearing material; and (4) include scour protection designed to accommodate anticipated stream velocities.

For Off-System bridges, the Local Government and the Local Government's EOR or representative, shall provide a Local Bridge Design Certification as per the TIA Manual.

12.6.5.4 Preliminary Cost Estimates

A concept level and preliminary cost estimate shall be prepared for the bridges using the latest cost data available from GDOT including square foot cost provided in the Bridge DPM and the most recent GDOT Mean Item Summary Data. It is important that the estimate developed at this stage of the project is as accurate as possible.

12.6.6 Final Plans

Final design of bridges will follow the requirements of the GDOT Bridge DPM and the applicable AASHTO Bridge Design Specifications. For bridges designed using the AASHTO Standard Specifications, the EOR is encouraged to use the GDOT Bridge design programs, which are available from GDOT at no cost. For Bridges that must be designed using the AASHTO LRFD Bridge Design Specifications, it is necessary for the EOR to use software that is capable of designing the bridge using the LRFD Specifications. Design calculations will be required for all portions of the bridge. Calculations should be checked for accuracy in accordance with the EOR's internal quality assurance policy.

Bridge plans and details shall follow the requirements of the latest GDOT Bridge Detailing Guide where applicable. Final plans will be of sufficient detail and quality to let the project for construction.

12.6.6.1 Final Cost Estimates

A final construction cost estimate for each bridge will be required prior to letting the project. The estimate should be developed using estimated final quantities of materials and the most recent GDOT Item Mean Summary Data.

12.6.6.2 Foundation Investigations

A Bridge Foundation Investigation (BFI) will be required for all bridge projects regardless of the funding source. In cases where they are available for use on bridge replacement projects, existing BFIs may be used in lieu of a new BFI Report. Prior to undertaking a TIA project, an initial search shall be undertaken with GDOT's Office of Materials and Testing to determine if approved BFI Report(s) are available for use. The BFI will make all necessary recommendations for the project and will follow the format required by GDOT's Office of Materials and Testing. For On-System bridges, the BFI shall be submitted to GDOT for review and approval.

Requirements and procedures for Wall Foundation Investigations (WFI) reports shall closely follow those specified for BFIs above.

12.6.7 Retaining Walls

Retaining walls will be designed according to the guidelines in the GDOT Bridge DPM. Wherever possible, the use of GDOT standard walls and contractor designed walls is encouraged. A WFI will be required for walls as recommended by the GDOT Bridge DPM.

For On-System and blended projects, wall layouts will be submitted with the preliminary design package for acceptance. For Off-System projects, it is recommended that wall layouts be submitted with the preliminary design package for acceptance.

12.6.8 Bridge Condition Surveys

For On-system bridges to be widened and/or rehabilitated, the Office of Bridge Design - Bridge Maintenance Section shall complete Bridge Condition Surveys in accordance with the PDP. The PgM will obtain Bridge Condition Surveys for these projects from Office of Bridge Design - Bridge Maintenance Section. As determined eligible by the TIA Administrator, recommendations from Bridge Condition Survey reports shall be incorporated into the final design of the bridge.

12.6.9 Bottomless Culverts

Bottomless or three-sided culverts may be used on projects. These culverts consist of precast concrete sections that are founded on spread footings or pile supported foundations. Foundations for these structures must be designed and protected from anticipated scour depths. Requirements for design capacity, H&H studies and foundations shall follow applicable sections of the TIA Manual.

12.6.10 Construction Phase

During construction, the EOR will provide shop drawing review and technical support consisting of addressing contractor RFI's, attending project status meetings and site visits as needed to resolve problems or issues in the field.

12.6.10.1 Shop Drawings

During construction, the EOR will provide shop drawing review. The Design Consultant or its designated EOR will review the shop drawings for bridges and structures designed by the EOR. For On-System bridges, GDOT will process and return shop drawings to the contractor following acceptance by the EOR. The PgM will coordinate processing of the shop drawings, RFIs and construction correspondence. All submittal related correspondence will be submitted to the PgM for distribution to appropriate review personnel. The PgM is to ensure that contractor submittals and RFI's are addressed and processed in a timely manner.

Review of Shop drawings will be performed and approved by the EOR. The PgM will keep a record of all shop drawing submittals and approvals over the course of the project. This record will be turned over to the Local Government and/or GDOT at the conclusion of the project. The EOR will review shop drawings to ensure that fabrications are consistent with the designer's intent. A partial list will include, but not be limited to:

- Structural steel framing
- Precast, prestressed concrete beams
- Precast segmental concrete units
- Bearings
- Expansion joints
- SIP deck forms
- Sound Barriers
- Sign structures
- Signal poles
- Bridge appurtenances
- High mast lighting

Shop drawing review may be required for major items of temporary works that might affect the public, impose significant loadings on the permanent works, and/or require an engineered design. A partial list includes, but is not limited to:

- Temporary structures
- Cofferdams
- False work, shoring and formwork
- Superstructure erection
- Construction staging and traffic control
- Demolition plans

12.6.10.2 Requests for Information

Requests for Information (RFI) will be coordinated between the PgM, Local Government (if required) and the EOR. The PgM will keep a record of all RFI submittals and outcomes over the course of the project. This record will be turned over to the Local Government and/or GDOT at the conclusion of the project.

12.6.10.3 As-Built Plans

As-Built Plans will be prepared for all structures on the project. This will include the as-built foundation drawings as well as the construction documents used for the structure, noting all field change corrections made to the drawings. The PgM will store As-built drawings produced from construction and transfer the final drawings to the appropriate project sponsor upon project closeout.

12.6.11 Load Rating

The EOR will complete a load rating and develop a Load Rating Report for each bridge design which includes a statement certifying that the bridge has the capacity to carry the minimum design loading specified in the TIA Manual and does not require posting for current state legal loads. The Statement of Load Rating Certification will include the professional seal and signature of a registered professional engineer in the state of Georgia.

Load rating procedures outline in AASHTO's *The Manual for Bridge Evaluation*, current edition, shall be followed. Bridges designed using the AASHTO Standard Specifications may be rated using either LFR or LRFR methodologies. Bridges designed using the AASHTO LRFD Specifications must be rated using LRFR methodologies.

Load Rating Reports will be submitted to the PgM upon certification of final bridge plans. The PgM will submit the reports to the Office of Bridge Design for verification of load capacity and acceptance prior to project letting. If changes occur between submittal of final plans and construction of the bridge that affect the load capacity of the bridge, it is the responsibility of the EOR to submit revised Load Rating Reports to the PgM and GDOT for rerating. A certified copy of the Load Rating Report and Final Bridge Plans will be submitted to Office of Bridge Maintenance for inclusion in the maintenance records for each bridge.

If an independent load rating, performed by GDOT, demonstrates that the capacity of the bridge design is less than 95% (<95%) of the design load, the EOR will be responsible for any additional design and construction costs associated with correcting the deficiency in a manner that increases the capacity to a level that meets the design load requirements.

12.6.12 Final Acceptance

For On-System bridge projects, all project deliverables will be in accordance with GDOT PDP and Bridge DPM.

For Off-System bridge projects, the following will be required to be submitted to GDOT for Final Acceptance:

- Design and As-built Plans
- Load Rating Report
- H&H Studies Reports including scour calculations
- As-built Foundation Plans
- BFI used for design
- Shop Drawings

DEPARTMENT OF TRANSPORTATION
STATE OF GEORGIA

TRANSPORTATION INVESTMENT ACT (TIA) PROJECT

Local Bridge Design Certification

P.I. NO.: _____

LOCATION [*City or County*]: _____

PROJECT BAND: _____

BRIDGE ID: _____

DESCRIPTION: _____

I hereby certify that I am a principal and duly authorized representative of _____ whose address is _____ and further certify that the _____ and its Engineer of Record attests that:

1. The bridge configuration meets the drainage design and stream crossing requirements of the local jurisdiction and FEMA, and creates no adverse affects to flood elevations or flood plain limits in the surrounding area.
2. The bridge is designed to resist the hydraulic forces determined by the applicable design guidelines and imposed on the structure by the waterway.
3. The foundations are designed to be installed below the anticipated scour depths, into competent bearing material, and in accordance with the bridge foundation investigation.
4. The scour protection is designed to resist anticipated velocities at the crossing.
5. Engineer of Record Certifies to all above.

_____ _____

Duly Authorized City/ County Representative Date

_____

City / County Seal

DEPARTMENT OF TRANSPORTATION
STATE OF GEORGIA

TRANSPORTATION INVESTMENT ACT (TIA) PROJECT

Local Bridge Design Certification

P.I. NO.: _____

LOCATION [*City or County*]: _____

PROJECT BAND: _____

BRIDGE ID: _____

DESCRIPTION: _____

I hereby certify that I am a licensed Engineer in the State of Georgia and that my address is _____

_____ and further certify and attest that:

1. The bridge configuration meets the drainage design and stream crossing requirements of the local jurisdiction and FEMA, and creates no adverse affects to flood elevations or flood plain limits in the surrounding area.
2. The bridge is designed to resist the hydraulic forces determined by the applicable design guidelines and imposed on the structure by the waterway.
3. The foundations are designed to be installed below the anticipated scour depths, into competent bearing material, and in accordance with the bridge foundation investigation.
4. The scour protection is designed to resist anticipated velocities at the crossing.

_____

Engineer of Record Seal / Certification

12.7 Design Exceptions/Variances

GDOT requires all Design Exceptions (DE) and Design Variances (DV) to be submitted and reviewed by GDOT's Office of Design Policy & Support (DP&S) regardless of funding source. It is highly encouraged that any DE/DV be discovered and introduced at the concept stage or as early as possible. The Concept Report should identify these variations and should include them in the report for review and approval. If a DE and/or DV are to be obtained, then the format and procedures outlined in the GDOT PDP and in the GDOT DPM are to be followed.

For all projects that are not Interstate projects and are 100% TIA funded, GDOT's Chief Engineer will approve all DE and DV. These DE and DV reports will be submitted to the:

- PgM for review and concurrence with copies sent to the RC and TIA Office
- Chief Engineer for approval following the process outlined in the DPM with copies sent to the PgM, TRC, and TIA Office

12.8 Field Plan Review

The EOR is responsible for completing the Final plans and addressing all comments from the Field Plan Review. The Final Plans are to be submitted to the PgM for review to ensure all comments have been addressed adequately and the plans are ready for letting.

The PgM is responsible for facilitating plan reviews, preparing FPR reports, reviewing FPR responses, and distributing final FPR reports. FPR comments and actions shall consider impacts to scope, schedule and budget prior to implementation on a project. The Environmental commitments shall be known prior to the FPR. In addition, the soils report, if required, shall be complete prior to the FPR.

A minimum of one FPR, conducted at the 80% to 85% plan completion level, is required for 100% TIA funded project. At the request of the EOR and with approval from the PgM, additional FPRs may be held for complex projects and projects that have a large number of right-of-way or utility impacts.

Appropriate GDOT staff shall be invited to the FPR.

12.9 Airport Projects

The work and materials for airport projects shall be in strict and entire conformity with:

- Laws of the State of Georgia,
- GDOT's Standard Specifications, 2001 Edition, and the Supplemental Specifications,
- Federal Aviation Administration's Standards for Specifying Construction of Airports, dated February 17, 1989,
- GDOT's Special Provision 107-1-01-SP (Legal Regulations and Responsibility to the Public),
- GDOT's Special Provision 108-1-01-SP (Prosecution and Progress),
- GDOT's Special Provision 109-1-01-SP (Measurement and Payment), and
- "TERMS AND CONDITIONS OF ACCEPTING AIRPORT IMPROVEMENT PROGRAM GRANTS," dated April 13, 2012.

Copies of any of these compliance documents are available from GDOT's Aviation Programs office or the Atlanta Airports District Office of the Federal Aviation Administration.

13 Construction Administration

13.1 Preconstruction Conference

The PgM is responsible for coordinating a Preconstruction Conference with the Contractor, CEI provider, District / Area Office, utilities, etc. after project award, but prior to beginning of construction activities. The format of the Pre-Construction Conference will follow GDOT standards as outlined on The Source.

13.2 Construction Engineering and Inspection

For blended projects, CEI shall be performed in accordance with all GDOT manuals, specifications, plans, and testing requirements. GDOT Manuals include but are not limited to the *GDOT Construction Manual*, *GDOT Bridge Manual*, and *GDOT Sampling, Testing and Inspection Manual*.

Scope of work for inspection of GDOT let 100% TIA projects will be determined by the PgM and submitted to the TIA Administrator for concurrence.

Scope of work for inspection of locally let projects will be the responsibility of the Local Government, unless determined otherwise by the PgM.

13.3 Construction Audits

For blended projects the standard GDOT procedures will apply.

For 100% TIA projects, the PgM is responsible for conducting audits on both On-System and Off-System projects. GDOT may conduct random audits for validation.

13.4 Site Manager

Site Manager will be the software used for all daily reporting, submittals, submittal tracking, materials certifications, testing reporting, and payment estimates on all GDOT let projects.

13.5 Materials

All construction materials shall comply with current Qualified Product List requirements, GDOT Standard Specifications for the Construction of Transportation Systems, as supplemented by the Supplemental Specification Book, Special Provisions, Supplemental Specifications, Standards, and Details. Products and suppliers are defined on the Qualified Products list and they have a defined inspection frequency.

For GDOT Let Projects, GDOT's Office of Materials and Testing will provide all required testing in accordance with all applicable GDOT Manuals, which include but are not limited to: the *GDOT Construction Manual*, *GDOT Bridge Manual*, and *GDOT Sampling, Testing and Inspection Manual*.

For material quality assurance on Local Let, On-System Projects see section 13.5.1 of the TIA Manual

The CM or designated CEI provider will complete Material Certifications to ensure all sampling and testing is completed as required for the project. For GDOT let, On-System projects Material Certifications are to be submitted and tracked through Site Manager. Material Certification ensures all materials used in the Work are acceptable.

13.5.1 Local Let Responsibilities for Material Quality Assurance

For On-System local let projects, Local Government shall provide a consultant prequalified in Area Classes 6.04a and 6.04b to perform the Materials Testing. Local Governments shall follow the following process:

- Submit a Local Let Material Quality Assurance form to the PgM to obtain approval of materials testers
- Notify the PgM at the Preconstruction Conference that this is a TIA project and that QPL sources must be utilized
- Ensure that only testing personnel with GDOT certifications perform testing on the project, and all testing must be in accordance with GDOT's Sampling Testing and Inspection Manual
- Complete a quarterly Materials Certificate (MC) Checklist and submit to the PgM as required in GDOT Construction Manual. Contact PgM to obtain a Checklist prior to starting work on the project
- Provide test results to the PgM through the Field Data Collection System (FDCS) or hardcopy
- Complete final MC Checklist and submit to the PgM as required in GDOT Construction Manual

13.6 Project Closeout

13.6.1 Final Inspection

For blended projects and 100% TIA funded projects that are On-System, final inspection follows the requirements as outlined in The Source and Standard Specifications as may be modified from time to time by TIA specific policies.

For 100% TIA funded projects that are Off-System, final acceptance of work is the responsibility of the local sponsor. The local government will provide a final acceptance letter to GDOT for the project. The PgM will perform a Final Audit on these projects.

13.6.2 Final Audit

The CM or designated CEI provider is responsible for completing the Checklist Prior to Requesting Final Audit. If any of the checklist items have discrepancies, they must be resolved or be in the process of being resolved before requesting a Final Audit. The CM or designated CEI provider will compile a list of all discrepancies and completion status. This list should be attached to the front of the Final Package and checked off by the CM as each item on the list is resolved. Once all the items have been resolved, the CM will complete the Final Audit. The Final Audit can be completed without the Materials Certificate being received, but the lack of the Materials Certificate should be noted on the Final Audit. The project cannot be closed out until the Materials Certificate is received from the CM.

13.6.3 Final Payment

For 100% TIA funded projects that are GDOT let, the designated CEI provider will submit the Final Package to the PgM prior to completion of the Punch List by the Contractor.

The CM will notify the PgM and GDOT that the project is ready for Final Audit. This request comes only after the CM has thoroughly reviewed the project records using the Project Checklist for Requesting a Final Audit as a guideline. Immediately on completion of the Final Acceptance, the CM or designated CEI provider will transmit final quantities to the Contractor.

If the Contractor accepts the statement of final quantities or has no questions within twenty (20) days, the CM will forward the Final Package to the PgM. If the Contractor questions the statement within twenty (20) days, the PgM will coordinate with the CM, or designated CEI provider, to resolve any discrepancies.

The PgM will process the Final Statement for the TIA Administrator's certification and will submit it to GSFIC for payment/reimbursement.

13.6.4 As-Built Plans

For On-System projects, the CM or designated CEI provider will coordinate with the EOR throughout construction to determine if field changes can be completed as a redline change or if revisions to the plans by the EOR are needed. The CM will coordinate and distribute plan revisions as required and ensure the Contractor has the most current set of plans. Redlined Final As-Built plans should be compiled by the CM or designated CEI provider as directed and submitted to the PgM for review and processing.

For Off-system projects, local sponsors are responsible for obtaining As-Built plans.

13.6.5 Final Acceptance

The Contractor is required to notify the CM in writing of substantial completion, including the actions completed on the corrections list. The CM or designated CEI provider will review the project, verify contractor's statement of substantial completion and the CM will notify the TRC and PgM that the project is ready for Final Inspection. The CM or designated CEI provider will notify the TRC and PgM and the contractor when final inspection is scheduled so that the contractor's representative can attend. Final acceptance recommendation to the PgM is the responsibility of the CM. GDOT may attend Final Acceptance meetings of On-System projects. The CM is to coordinate GDOT attendance as appropriate.

13.6.5.1 Local Certification

For local let, off system projects, the Local Government shall notify the CM that it will be holding a final acceptance meeting with sufficient advance notice that the CM could attend. Following acceptance of the project the Local Government shall provide within 10 working days a written acceptance of the project to the TIA Office.

TIA Program - Local Let Project - Materials Quality Assurance

SELECT ONE:

☐ **Request GDOT to perform Materials Testing (Complete Section 1)**

☐ **Request Approval for Consultant Quality Assurance Materials Testing (Complete Sections 1 and 2)**

Section 1

Project Number/County: _____

GDOT Contract ID Number/Proposed Let Date: _____

Project Description: _____

_____

Local Govt. Responsible for Letting Project: _____

Local Govt. Project Manager Contact Name & Number: _____

_____

Section 2

GDOT Certified Technicians to be responsible for testing on the project:

1) Roadway Testing Technicians (RTT) are required to perform field density testing on embankment, pipe backfill, subgrade and all asphalt layers, along with sampling misc. materials

List GDOT Certified Roadway Testing technician(s) who will be performing testing:

GDOT RTT Certification Number	Name/ Employer

2) Concrete **– GDOT Certified Concrete technician(s) are required to perform all field concrete testing (slump, air, cylinders)

List who will be performing concrete testing & GDOT certification number:

GDOT Concrete Certification Number	Name/ Employer

Attach additional sheets as necessary.

**Please note if a Bridge or other major structure is involved:

NOTE: Labs performing any testing shall be accredited in the testing to be performed (i.e. AASHTO T-22 or ASTM C-39 for concrete cylinders) by the AASHTO Accreditation Program (AMRL and/or CCRL).

3) Hot Mix Asphalt

GDOT specifications require the Contractor to perform mixture Acceptance testing at the plant. GDOT will perform Verification Testing at the asphalt plant as a part of the existing QPL process. The Local Government is responsible for notifying GDOT's Testing Management Operations Supervisor (TMOS) at least one week prior to start of work.

*send completed form to TIA Office.

APPROVED: _____

TIA Program Manager Date

14 Quality Management

14.1 Introduction

Quality management includes all the activities that are used to direct, control, and coordinate quality. These activities include formulating a quality policy and setting quality objectives and procedures. They also include quality planning, quality control, quality assurance, and quality improvement.

Each consultant and contractor is responsible for quality management on their respective contract. The PgM may request to review consultant or contractor quality management plans.

14.1.1 Quality Assurance Elements

The basic quality assurance elements include but are not limited to the following:

- Development and implementation of quality plans, procedures and instructions
- Quality management organization and personnel qualifications
- Design and management control
- Review and control of contract drawings and text documents
- Procurement control, Quality records and electronic data file control
- Indoctrination, training, and certification
- Verification of all quality requirements (to include reviews, audits, and surveillance)

14.1.2 Quality Control Elements

The basic quality control elements will include execution of any (or all) of the following, as applicable:

- Inspections of works
- Tests of materials and equipment
- Control of calibration of measuring and test equipment
- Audit of processes and systems

14.1.3 Design

The GDOT Quality Control and Quality Assurance (QC/QA) Program has been developed by the Engineering Division of the Georgia Department of Transportation to ensure the engineering, design, plans and quantities developed by our design offices are supported by comprehensive studies and sound engineering judgment; comply with established policies, guidelines and standards; and contain appropriate design flexibility and cost saving measures. This program shall be the basis for QC/QA on the TIA program.

The document can be found at:
http://www.dot.ga.gov/doingbusiness/PoliciesManuals/roads/OtherResources/GDOT_QCQA_Program.pdf

14.1.4 Construction

14.1.4.1 Requirements

At a minimum, QC/QA shall be performed in accordance with GDOT's Sampling, Testing, and Inspection Manual, standard specifications, supplemental specifications, special provisions or any other sampling or testing requirements such as material provider's recommendations.

For detailed instructions refer to The Source: http://www.dot.ga.gov/doingbusiness/TheSource/Pages/home.aspx

15 Safety

This section defines the responsibility for safety for the PgM and each participant involved in the Program including GDOT, contractors, consultants, designers, and inspectors. The contracts assign the responsibility of safety risks on the program to the party most able to control and mitigate those risks.

In addition, the PgM recommends and encourage a "safety culture" on the program which makes it clear that all participants are expected to report known hazards to the appropriate individual or entity responsible for the involved work, as well as perform their own activities in full compliance with applicable laws and regulations.

The PgM is not contracted to provide comprehensive safety services to GDOT. The PgM is required to have a safety program in place for its employees developed in accordance with the local laws and regulations. The PgM safety program includes as a minimum, education and training for the PgM staff commensurate with company policy and the hazards expected to be encountered during the program. The PgM is ultimately only responsible for the safety of its employees.

The PgM is not responsible for job site safety, construction means and methods, or the safety for the owner, contractors, consultants, designers, and inspectors. On TIA construction projects, the contractor is solely responsible for the safety and welfare of his employees and for the protection of property, other program stakeholders and the general public. The contractor has to comply with all federal, state, local and county safety regulations, applicable to his work site.

IMPORTANT: All program participants have a duty to call attention to observed unsafe conditions as a key step in preventing injuries to themselves or others. In addition to this basic ethical requirement, other responsibilities for job site safety derive from statutes, regulations, case law and contracts.