

# DEPARTMENT OF TRANSPORTATION STATE OF GEORGIA

## INTER-DEPARTMENT CORRESPONDENCE

**FROM:** Russell M. McMurry, P.E, Chief Engineer

**DATE:** November 17, 2014

**TO:** Distribution

**SUBJECT:** Cost Estimate

The Department has several documents that provide guidelines on how and when project cost estimates are to be updated. This memorandum is to reaffirm documentation for this important process and provide updated guidance as reflected in recent changes to the process.

- **GDOT Publications Policies and Procedure 3A-9 – Cost Estimating Purpose**  
**Provides guidance for estimating the cost of Right of Way, Utilities and Construction.**  
*The policy was updated to emphasis the importance of updating cost estimates at all milestones in order to ensure any changes to the proposed project are reflected in the cost estimates. Emphasis is also placed on updating project cost estimates annually to ensure the cost estimates are being kept current.*  
  
*Final Field Plan Review Corrected Plans for Final Engineer's Construction Cost Estimate should be sent to the Office of Engineering Services no later than 18 weeks prior to the letting in order to ensure estimates are done on time.*
- **Guidance on Cost Estimate Reviews – Correspondence dated March 27, 2012**  
*Project Managers should ensure updated cost estimate is correctly reflected in the STIP.*
- **Risk Base Cost Estimation – Correspondence dated April 30, 2014**  
*This memo is posted in ROADS and an abbreviated version is available in Policy 3A-9.*
- **CES Cost Estimating Process (AASHTO Trans\*port Cost Estimating System)**  
*If pay items are unpriced, assistance can be requested from the Office of Engineering Services. Assistance for pricing lump sum items can also be requested from the Office of Engineering Services.*
- **CES Cost Estimating Process Flow Chart**  
*The process has been streamlined to allow all projects, whether designed in house or by consultants, to follow the same process. The revised version of the flow chart is attached and can also be found on ROADS.*

If you have any questions or need additional information, please contact Lisa Myers or Genetha Rice-Singleton.

RMM:KJC:GRS

Attachments



# GDOT Publications

## Policies & Procedures

**Policy:** 3A-9- Cost Estimating Purpose  
**Section:** Commissioner's Policies - General  
**Office/Department:** Department of Transportation

**Reports To:** State Transportation Board  
**Contact:** (404) 631-1000

### Purpose and Goal

To provide guidance for estimating the cost of Right of Way, Utilities and Construction prior to the placement of the project in the State Transportation Improvement Program (STIP), Construction Work Program (CWP) or Long Range (LR) Program and to provide for the continuous updating of estimated costs.

### Implementation and Responsibility

Implementation responsibilities for the requirements of this policy are as follows:

The initial project cost estimate will be developed using standard software to be determined by the Department. The source [District Offices, Office of Planning, Metro Planning Organizations (MPOs), Office of Traffic Operations and Office of Maintenance] developing the initial project cost estimate shall visit the project site prior to completing the project cost estimate for Right of Way, Utilities and Construction. The initial Preliminary Engineering (PE) Cost may be a percentage of the construction cost estimate as determined by the Office of Financial Management. The project sources are required to provide basis and justification for the cost estimate and shall be submitted with the proposed project when it is added to the Construction Work Program. This information shall be included in the project file maintained by the Office of Financial Management (OFM).

The GDOT Project Manager shall be responsible for directing the preparation of Right of Way, Utility and Construction Cost Estimates. The Designer of Record shall be responsible for preparing construction cost estimates for outsourced projects under the direction of the GDOT Project Manager. The Final Construction Cost Estimate will be prepared by the Office of Engineering Services for all GDOT Let projects with the exception of some Maintenance projects.

The Office of Financial Management (OFM) shall be responsible for applying inflation factors to estimates based on programmed year and current inflation index. Cost Estimates shall be prepared in today's dollars.

The GDOT Project Manager shall notify the Office of Financial Management to request a STIP Amendment through the Office of Planning for cost increases greater than \$2,000,000 or 20% of the amount authorized.

The GDOT Project Manager is required to track project cost estimate changes through the Cost Estimate field in TPro.

### Cost Estimates at Plan Development Process (PDP) Milestones

Cost estimate updates shall be required at PDP Milestones after the development of the Initial Project Cost Estimate.

When generating a cost estimate in the Cost Estimation System (CES), certain items may remain unpriced due to the lack of a bid history. Other items may be categorized as Lump Sum items such as "Traffic Control" or "Grading Complete". The GDOT

**Policy:** 3A-9 - Cost Estimating Purpose

**Date Last Reviewed:** 10/1/2014

Project Manager should request assistance directly from the Estimating Section in the Office of Engineering Services for pricing those items. All requests should be made directly to the Chief Estimator and should not be delivered via the electronic "Cost Estimates and Updates" mailbox.

When an intermediate cost estimate is submitted by the GDOT Project Manager to the Office of Engineering Services, a copy of the Programmed Cost Letter Package shall be submitted in PDF format via the electronic "Cost Estimates and Updates" mailbox. All priced items shall be reviewed to ensure consistency with current pricing and all unpriced items will be reviewed and priced. Should any unit costs of "zero" be found within the cost estimate submitted, the Office of Engineering Services will request control of CES to price those items. The Office of Engineering Services will return control of CES back to the GDOT Project Manager to update their records and for resubmission of the Programmed Cost Letter Package.

At least once a month, the Office of Engineering Services shall send a spreadsheet containing updated estimates to the Office of Financial Management for placement in TPro.

Project Cost Estimates shall be updated at the following PDP milestones:

- Projects in Concept Development Phase Cost Estimate
- Preliminary Field Plan Review (PFPR) Cost Estimate
- Right of Way Plans Approval Cost Estimate
- Utility Relocation Plans Cost Estimate
- Final Field Plan Review (FFPR) Cost Estimate
- Final Engineer's Construction Cost Estimate

#### **Projects in Concept Development Phase Cost Estimate**

The source developing the concept estimate shall perform a field visit prior to completing the preliminary cost estimate for the concept report. As noted in the PDP, the GDOT Project Manager is encouraged to review the project location with the Design Phase Leader and the Area Engineer. The construction cost estimate shall be updated based on information gathered from the field visit and conceptual studies. In addition, the GDOT Project Manager shall request updated cost estimates from the Offices of Right of Way and Utilities during this phase.

*Beginning with this phase, the detail estimate software Cost Estimation System (CES) will be the software used to develop the construction cost estimate.*

#### **Preliminary Field Plan Review (PFPR) Cost Estimate**

A project cost estimate is not required with the request for PFPR. A project cost estimate shall be submitted to the electronic "Cost Estimates and Updates" mailbox after revisions resulting from the PFPR have been made. The construction cost estimate is more refined at this point. Improved earthwork, drainage, staging and erosion control quantities are available.

#### **Right of Way Plans Approval Cost Estimate**

The Office of Right of Way will develop a Right of Way Plans Approval Cost Estimate based on the approved right of way plans. This estimate is used for Right of Way Authorization. The Office of Right of Way shall submit a copy of this estimate to the GDOT Project Manager.

**Policy:** 3A-9 - Cost Estimating Purpose

**Date Last Reviewed:** 10/1/2014

**Utility Relocation Plans Cost Estimate**

The Office of Utilities should update the Utility Relocation Plans Cost Estimate as the Utility Relocation Plans are submitted. The Office of Utilities shall submit a copy of this estimate to the GDOT Project Manager.

**Final Field Plan Review (FFPR) Cost Estimate**

A project cost estimate is not required with the request for FFPR. A project cost estimate will be submitted as a part of the FFPR Corrected Plans Package (Plans, Special Provisions, Earthwork & CES Control) to the office of Engineering Services after corrections resulting from the FFPR have been made, but not less than 18 weeks prior to the scheduled Letting. The construction cost estimate is more refined at this point and shall be based on project quantities. More accurate information is known on the project’s final signing and marking, staging, utilities, right of way, bridge, earthwork and paving quantities.

Note: If a Project’s Final Field Plan Review is held earlier than 24 weeks prior to Letting, the Project Manger shall evaluate the project schedule and consider submitting a request to the Office of Engineering Services via the electronic “Cost Estimates and Updates” mailbox to update the project cost estimate after corrections resulting from the FFPR have been made, but not less than 18 weeks prior to the scheduled Letting.

**Final Engineer’s Construction Cost Estimate**

The FFPR Corrected Plans Package is due to the Office of Engineering Services 18 weeks prior to the scheduled Letting. The Office of Engineering Services shall prepare the Final Engineer’s Construction Cost Estimate for the Department and shall submit to the Office of Financial Management no later than 12.5 weeks prior to the scheduled Letting. This estimate shall be used for comparison of bids received at the scheduled Letting to consider the awarding of a project to construction. The Office of Engineering Services shall transfer CES control of the estimate to the Office of Construction Bidding Administration no later than 10 weeks prior to the scheduled Letting.

**Risk Contingency**

In order to compensate for varying levels of risk, the contingencies below will be added to the construction cost estimate of each project type listed at the identified milestones as well as the annual updates occurring between each milestone.

Project Type	Risk	Contingency		
		Concept	PFPR	FFPR
Enhancement/Bicycle/Pedestrian Facility/Safety	Low	5% to 10%	0% to 5%	0% to 5%
Reconstruction/Rehabilitation No Added Capacity	Low	5% to 10%	0% to 5%	0% to 5%
Maintenance-Restoration and Rehabilitation	Medium	5% to 15%	0% to 7%	0% to 5%
Bridge New/Replacement	Medium/High	10% to 15%	0% to 7%	0% to 5%
New Construction	High	10% to 20%	5% to 10%	0% to 5%
Reconstruction/Rehabilitation Added Capacity	High	10% to 20%	5% to 10%	0% to 5%

## **Annual Cost Estimate Updates**

Depending on a project's funding years, several or no annual cost estimates may be required. Annual updates are not required for projects where either the PE is not authorized or all funded phases are either outside of the STIP or in Long Range. For projects where PE is authorized and there are funded phases as identified in the STIP, updates are required as described below:

The GDOT Project Manager shall submit updated project cost estimates for the Right of Way, Utilities, and Construction Costs of the project annually and at any time there is a 10% or greater cost increase or decrease to the Office of Engineering Services via the electronic "Cost Estimates and Updates" mailbox. This annual update shall be submitted for approval to the Office of Engineering Services at least 30 days prior to the end of the State Fiscal Year (June 30<sup>th</sup>). Once PE is authorized, the GDOT Project Manager will annually review project expenditures with concurrence of the project team and will request any necessary funding adjustments including PE. All PE Funding adjustments shall be submitted to the Office of Planning via the *Additional PE Request Form*. For projects in which PE is not authorized, OFM will adjust the PE cost estimate as the construction cost estimate changes. For those projects requiring only increases for inflation, the Office of Financial Management shall apply inflationary increases.

### **Annual Updates:**

#### **Occurring between Approved Concept and PFPR**

The GDOT Project Manager shall review previous Right of Way, Utilities and Construction cost estimate amounts and the current Baseline schedule along with previous and current STIP dates and estimate amounts to ensure adequate scheduling and funding. The GDOT Project Manager shall request updated cost estimates from the Design Phase Team, the Office of Right of Way and the Office of Utilities. Upon receipt of the updated cost estimates, the GDOT Project Manager shall submit a Programmed Cost Letter Package to the Office of Engineering Services in PDF Format via the electronic "Cost Estimates and Updates" mailbox. The Construction cost estimate shall be based on current plans.

#### **Occurring between PFPR and Right of Way Authorization**

The GDOT Project Manager shall review previous Right of Way, Utilities and Construction cost estimate amounts and the current Baseline schedule along with previous and current STIP dates and estimate amounts to ensure adequate scheduling and funding. The GDOT Project Manager shall request updated cost estimates from the Design Phase Team, the Office of Right of Way and the Office of Utilities. Upon receipt of the updated cost estimates, the GDOT Project Manager shall submit a Programmed Cost Letter Package to the Office of Engineering Services in PDF Format via the electronic "Cost Estimates and Updates" mailbox. The Construction cost estimate shall be based on current plans.

#### **Occurring between Right of Way Authorization and FFPR**

The GDOT Project Manager shall review previous Utilities and Construction cost estimate amounts and the current Baseline schedule along with previous and current STIP dates and estimate amounts to ensure adequate scheduling and funding. The GDOT Project Manager shall request updated cost estimates from the Design Phase Team and the Office of Utilities. Upon receipt of the updated cost estimates, the GDOT Project Manager shall submit a Programmed Cost Letter Package to the Office of Engineering Services in PDF Format via the electronic "Cost Estimates and Updates" mailbox. The Construction cost estimate shall be based on current plans.

#### **Occurring between FFPR and Final Engineer's Construction Cost Estimate**

For projects with the Final Field Plan Review held 24 weeks prior to the scheduled Letting, The GDOT Project Manager shall review the current Baseline schedule along with previous and current STIP dates and estimate amounts to ensure adequate scheduling and funding. Depending on the current Baseline schedule, the GDOT Project Manager shall consider submitting a

request to the Office of Engineering Services in PDF Format via the electronic "Cost Estimates and Updates" mailbox to update the project cost estimate after corrections resulting from the FFPR have been made, but not less than 18 weeks prior to the scheduled Letting.

### **Other Reasons for Updates**

Project cost estimate updates are also submitted as a result of the following:

- Revised Concepts
- VE Study Implementations

### **Important Links**

#### **CES Cost Estimating Process (GDOT Let Projects Only)**

#### **Programmed Cost Letter**

**Effective Date of policy:** The contents of this policy are effective immediately and shall apply to all projects in progress.

### **References:**

None

### **History:**

revised: 10/01/14;

added to Manual of Guidance: 10/22/85

Reviewed: 10/1/2014

**DEPARTMENT OF TRANSPORTATION  
STATE OF GEORGIA**

**INTERDEPARTMENT CORRESPONDENCE**

**FILE**

**OFFICE** Chief Engineer

**DATE** March 27, 2012

**FROM**

  
Gerald M. Ross, P.E., Chief Engineer

**TO**

Distribution

**SUBJECT**

**Guidance on Cost Estimate Reviews**

Over the past months several projects have been pulled from the letting due to the construction and utility cost estimates exceeding the STIP threshold of 20% or \$2 million. To determine the STIP phase estimates, reference should be made to the actual STIP document, which is accessible through the Office of Planning web page.

The Office of Planning facilitates STIP balancing by Congressional District meetings between the months of November and March. Prior to the STIP balancing meetings it is crucial that the cost estimates are updated.

Please use the guidance below to ensure that the phase cost estimates in the STIP match the actual project cost estimates.

1. Cost Estimates will be updated annually and at certain project milestones. If there is a significant change in the scope of the project it shall be updated more frequently. The Office of Program Delivery shall check projects monthly for out of date cost estimates.
2. All project cost estimates shall be updated prior to October 1. This includes those projects in which the latest cost estimate date is between November and March.
3. After Cost Estimates are updated, the Project Manager shall verify that the change is also reflected in the STIP. (The comparison should be against the STIP document found on the web page.)
4. Prior to each Quarterly meeting, the Project Manager will verify the STIP and current cost estimate. If there are discrepancies this shall be indicated at the Quarterly meeting and afterwards the Office of Financial Management and Office of Planning shall verify and request the necessary changes.
5. Final Cost Estimates – The Project Manager shall check the STIP estimate against the FFPR estimate. If the FFPR estimate is 15% or greater than the STIP estimate, and there are

numerous changes as a result of the FFPR, the Project Manager shall facilitate the expedite populating of CES and inform the Office of Engineering Services that the project is priority.

6. If the funding for a project is advanced by the Office of Planning, the Project Manager shall be notified immediately by the Office of Planning. This does not include changes made during the Balancing meetings held between November and March.
7. The Office of Engineering Services shall copy the Program Delivery Engineer on all approved cost estimates.

If you have any questions or need additional information please contact, Genetha Rice-Singleton.

  
GMR:GRS

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# DEPARTMENT OF TRANSPORTATION STATE OF GEORGIA

## INTER-DEPARTMENT CORRESPONDENCE

DATE: April 30, 2014

FROM: Russell R. McMurry, P.E. RA

TO: Distribution

SUBJECT: Risk Based Cost Estimation

Accurate and dependable cost estimates are crucial to the development of fiscally balanced programs as well as communication to our internal and external stakeholders. Cost estimates are prepared minimally at the milestone points of Concept Report, PFPR and FFPR. At each of these milestones, the level of unknowns or risk to the project is reduced, resulting in a more assured cost estimate. In order to compensate for these varying levels of risk, the contingencies below will be added to the construction cost estimate of each project type listed at the identified milestones as well as the annual updates occurring between each milestone.

Contingencies have been identified by project type with the most complex or highest risk projects having the highest contingency and the least complex or lowest risk projects having the least contingency. The effectiveness of these contingencies will be monitored and reviewed at the completion of FY 2016 to identify where and if adjustments are needed.

This memo is effective June 1, 2014 and supersedes all other guidance as updates to policies 3A-9 are performed. Questions regarding this memo should be forwarded to myself or Andrew Heath.

Project Type	Risk	Contingency		
		Concept	PFPR	FFPR
Enhancement/Bicycle/Pedestrian Facility/Safety	Low	5% to 10%	0% to 5%	0% to 5%
Reconstruction/Rehabilitation No Added Capacity	Low	5% to 10%	0% to 5%	0% to 5%
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Bridge New/Replacement	Medium/High	10% to 15%	0% to 7%	0% to 5%
New Construction	High	10% to 20%	5% to 10%	0% to 5%
Reconstruction/Rehabilitation Added Capacity	High	10% to 20%	5% to 10%	0% to 5%

RRM:ata

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