

# Design Standards Letter

**Letter Number: G-2000-05**

**Letter Date: 01/19/2000**

**Effective Date: 01/19/2000**

**Section/Plan No.: None**

**Subject: Project Cost Estimates**

## Body

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Project cost estimates should be developed in accordance to the policy and procedures in Section 1-02 of the Project Development Manual (PDM) and Section 3-3 of the Right of Way Procedures Manual. Project estimates for jobs on the approved 5-year program are to be reviewed and updated at the project development milestones or annually. An estimate that has been updated since September 1, 1999 may be used for updating the PATS form for the new program year, if another milestone will not be completed during the programming cycle. Those projects beyond the approved 5-year program do not need the estimate updated, but active location study projects should have updated estimates when a change of scope or location approval has been achieved.

Planning will provide the districts with the funding amounts available to each district for the various project categories in the program. These target amounts will include three (3 %) percent inflation per year. The total for the district program can not be greater than the funds available. In addition to staying within the funds available, all projects programmed in the STIP are expected to be completed.

It is desired the district personnel should compile the estimates as efficiently as possible while providing adequate documentation of assumptions, scope of work, and sources of costs. It is permissible for the district to use a reference file or cite a published figure for unit costs. A copy of the summary sheet, indicating the costs being used for the estimate are sufficient documentation within the project estimate file. The master reference file prepared by the district should be preserved for future documentation.

A copy of right of way form 3-3.3c is adequate documentation within the project estimate file for the right of way estimate provided backup data is maintained in a right of way file.

The costs for demolition, removal of improvements and removal of hazardous materials should be part of the construction costs. Historically these costs had been part of the right of way estimate, but contractor payments through Site Manager invoicing require these costs to be part of the construction budget. The bid item numbers can track these costs in the future. These costs are to be considered part of the miscellaneous costs of a project. The updated

estimate should remove these costs from the right of way estimate and add them to the miscellaneous costs of construction. Future right of way estimates will not include demolition and removal costs.

Use of the generalized costs per mile and cost guidelines in Figure 1.02.1 of the PDM or comparable jobs are suggested for those projects in preliminary stages of design, before preliminary plans are approved. After preliminary plan approval, estimates of grading, drainage, pavement and base costs should be made using pay item quantities. Bridge estimates should be made using the costs from the bridge memorandums as soon as they become available. All other construction costs are included in the miscellaneous costs. It is permissible for the district to develop bid item unit costs or quantities from comparable jobs. Bid item unit costs developed by the district should be kept in a reference file.

A miscellaneous cost of 20 percent of the sum of grading, drainage, base and surfacing may be used until such time that miscellaneous items are tabulated for those projects deemed suitable. Normally the utility costs, erosion control, traffic control, signals, lighting, guardrail, demolition and removals would be considered included in the miscellaneous costs. Safety projects, projects of limited scope, or urban projects should be given special consideration by using comparable jobs rather than applying the 20 percent. It is requested that the estimate file document all specific costs, which would cause the miscellaneous items to exceed the 20 percent. Significant high cost items may be added to the 20 percent until quantities are tabulated. Once miscellaneous items are tabulated, the bid item costs should be used rather than a percentage.

Preliminary engineering costs are to be based upon documented historic data of the district projects by representative jobs of similar work types. This documentation should be kept in the reference file and cited for use in the project estimate file. Attached for reference is a summary of the preliminary engineering costs as a percentage of actual construction costs or award costs, by program type of work and by district. Another acceptable method is to estimate the man-hours required and to apply appropriate labor rates to develop costs. Those projects in progress should have hours or percentage of completion estimated so the remaining required resources to complete the job are identified.

The project estimate file should contain the following items organized by tabs, so they can be quickly located:

- 1) Summary update sheet, containing the date of estimate, reason for the update, the estimator, the amount over or under the program and initials or signature to confirm the project manager has reviewed the update.
- 2) Current PATS form
- 3) Project scope, purpose and need – a brief narrative
- 4) Location sketch or map
- 5) Assumptions, commitments and design criteria
- 6) Cost grouped for Gr&Dr, B&S, Br, Misc, Util, R/W, PE&CE, or printout of Estimate99, with subtotals separated into these categories.

- 7) Appendix for plans, maps, photos or backup data
- 8) Bid tabs and change orders after project is awarded

Those projects on the program for award during the fiscal years 2001 through 2003 should have estimates reviewed by March 31, 2000. Those projects in program fiscal years 2004 and 2005 are to have estimates completed by June 30, 2000. Attached is the evaluation form the project development liaison engineers used last year to do a quality assurance check. We expect to use the same format this year.

The project estimate file should be kept for five years after final acceptance of the construction improvement for purposes of historic tracking. Final bid tabulations and change orders should be added to the file after the project is awarded and final acceptance date should be noted.

Should the district desire additional guidance or desire to discuss further details of the project estimating procedure, please contact the respective project development liaison engineer working with your district. The liaison engineer will be available to review procedures with the district upon request.

A project estimating task force is developing some recommendations to improve the estimating process. Your comments and suggestions are welcome.

ms/dr

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Attachments



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