

CHAPTER 20 – Project Capital Cost Estimates

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CHAPTER 20 – Project Capital Cost Estimates

SECTION 1 Project Capital Cost Estimating

ARTICLE 1 Introduction and Definitions

Reference Information

Some of the references found in this chapter have hyperlinks that connect to Caltrans intranet pages which are not displayable to the general public. Until such time that the specific reference becomes available on the internet, the user will have to contact their district liaison, Caltrans project manager, or the appropriate Headquarters division to inquire about the availability of the reference.

Importance of Quality Cost Estimates

Reliable cost estimates are necessary for responsible fiscal management at every stage of the project. Reliable cost estimates:

- avoid significant programming problems for Caltrans as well as for local and regional planning.
- support efficient use of staff and budget resources.
- maintain the credibility and accountability of Caltrans between partner agencies and customers such as the California Transportation Commission (CTC), the California Legislature, local and regional agencies, and the public.

Project cost estimates should never be artificially reduced to stay within the funding limits or to make more project funding available for the district. Likewise, project cost estimates should not be artificially increased using higher contingency percentages than recommended in this chapter unless the increase is adequately justified with quantified risks (refer to the heading “Contingency” in this section, Article 2, Policies).

Consistent and Comprehensive Methodology

Estimating the cost of a project is not an exact science. However, Caltrans must strive for reliable project capital cost estimates so that projects can be delivered reasonably close to budget. Caltrans requires that project cost estimates be prepared using a consistent and comprehensive methodology. The cost estimator needs to research and compare costs and use professional judgment to prepare a quality cost estimate. Project scope, schedule, and level of design details are factors to consider when developing an accurate cost estimate. For more information, refer to the Headquarters Division of Design [Cost Estimating](#) website.

Definitions

Current project capital cost estimate – The most recent project capital cost estimate without escalation available during either the planning phase or the design phase, regardless of whether it is the approved project capital cost, adjusted from the date of the estimate to January 1 of the current State fiscal year. Refer to Section 3, Article 1, for a discussion about the relationship between the right of way capital cost estimate and the project design capital cost estimate during the design phase of project development.

Engineer's cost estimate – See project design capital cost estimate.

Programmed capital cost – The sum of escalated construction and right of way capital costs identified in a programming document or subsequent amendment and the basis for comparison with later project capital cost estimates.

Programmed year – The State fiscal year in which the project construction dollars are shown in a programming document or amendment.

Project capital cost estimate – Estimate of all project capital outlay costs including right of way and construction of roadway and structures, but not including capital outlay support costs.

Project planning capital cost estimate – Estimate prepared before or during the project initiation document (PID) and project approval and environmental document (PA&ED) phases used for project justification, programming, analysis of alternatives, and approval. Refer to Section 2 for more information.

Project feasibility cost estimate – A project planning capital cost estimate that may be required by management to determine whether to proceed with development of a PID. It is prepared before the project initiation process at the beginning of project planning studies when a highway improvement need has been identified and a capital cost estimate is needed to evaluate the proposed improvements. The project feasibility capital cost estimate is not used for programming the project.

Project initiation cost estimate – A project planning capital cost estimate required for project initiation. It is used for project cost programming.

Draft project report cost estimate or project report cost estimate – A project planning capital cost estimate prepared during PA&ED

Project design capital cost estimate – Estimate made after project approval, updated throughout development of the plans, specifications, and estimate (PS&E), and categorized as either preliminary or final, known as preliminary engineer's cost estimate or final engineer's cost estimate. It is the fair and reasonable price without escalation that Caltrans should expect to pay for each of the contract items in the contract documents bid item list. Refer to Section 3 for more information.

Right of way capital cost – The project right of way capital cost is identified on the project right of way data sheet prepared by the district. See the *Right of Way Manual* for more information.

ARTICLE 2 Policies

Goal and Objective

The goal of Caltrans is to avoid cost overruns and excessive cost underruns on projects. An overrun leads to a shortage of funding necessary to deliver the project and compromises the ability of Caltrans to deliver other programmed projects. An underrun leaves funds that could have been used to deliver other important projects. The objective is to produce reliable construction cost estimates throughout the project planning, development, and delivery process. It is important to identify costly unforeseen items of work before the project has been programmed to avoid delay or cancelation of the project.

Project Cost Awareness

Project cost awareness and control must be practiced throughout the planning and design of projects. This begins by establishing realistic assumptions as to final concept, scope, and cost as early in the life of the project as possible.

Standard Formats

Standard project estimating formats must be followed for all project cost estimates.

Project planning cost estimates must be prepared using the standard format available on the Headquarters Division of Design [Cost Estimating](#) website.

Project design cost estimates must be prepared using AASHTOWare Project Preconstruction (AWP-P). Refer to Section 3 for more information.

Accountability

District management and the project manager are to be directly involved and held accountable in estimating project costs, controlling costs, and submitting changes to cost estimates for approval.

Monitoring and Updating Cost Estimates

The project capital cost estimate is not static; it must be monitored and kept current. Updates are required for:

- Annual updates – All cost estimates must be kept current and updated at least once a year. If nothing has changed, current unit costs and calculation of escalation must be updated annually if the estimate is not updated for any of the following listed reasons.
- Programming cycle – A current cost estimate is needed at the start of each programming cycle so that the next programming document reflects current cost estimates. Most programming documents are prepared on a two-year cycle.
- Project approval document – A project approval document, which authorizes a project to proceed further in the project development process, requires an updated project capital cost estimate.
- Significant changes in identified project costs – Update the project cost estimate when a project development workflow task supports the preparation of a more detailed cost. For example, when a preliminary site investigation more clearly identifies contamination issues, or when

a geotechnical design report clarifies sub-surface conditions, an updated cost estimate is required.

- Request for Funds – Certification of the final engineer’s estimate must not be older than 90 days at the time of the CTC vote for request of funds.

Changes to cost estimates for programmed projects require program change requests as described in and following the procedures in [Chapter 6](#) – Project Cost, Scope, and Schedule Changes and the [Project Changes Handbook](#).

Contingency

Contingency compensates for the use of limited information available during early phases of a project. The need for contingency decreases as a project becomes more defined with fewer unknowns. The recommended contingency amount varies significantly depending on the project phase and type of cost estimate.

The recommended amount for contingency specified for various types of project capital cost estimates includes both risk-based contingency for identified known risks and additional or residual contingency for unidentified undetermined risks, such as unrefined scope adjustments, unit cost uncertainties, and construction phase uncertainties. The recommended amount should not be exceeded unless a project specific analysis using a quantified risk register justifies additional contingency. However, if the quantified risk-based contingency is much lower than the recommended amount, consideration should be given to reducing the total contingency percentage based on engineering judgment. See the joint memorandum “Capital Cost Contingency for Project Development Cost Estimates” dated August 23, 2019, available on the Headquarters Division of Design [Cost Estimating](#) website.

Escalation

The State Highway Operation and Protection Program (SHOPP) guidelines adopted by the CTC require Caltrans to escalate the amount programmed for each project phase to the mid-point of the duration of each phase. The State Transportation Improvement Program (STIP) guidelines adopted by the CTC require Caltrans to escalate the amount programmed for each project component to the year proposed for programming, based on the current cost

estimate updated as of November 1 of the year the Regional Transportation Improvement Plan or Interregional Transportation Improvement Plan is submitted.

The Division of Project Management is responsible for setting escalation rates and calculating the escalation amount. See the memorandum “Capital Project Estimate Cost Escalation Rates (Capital and Support)” available on the Headquarters Division of [Project Management](#) website.

ARTICLE 3 Responsibilities

Responsibilities of the following roles include:

Headquarters Division of Design

- Maintain standard capital cost estimate formats for use in preparing estimates for all projects.
- Through the Headquarters project delivery coordinator, review, comment on, and recommend approval of projects change requests.
- Approve contingency other than 5 percent before Ready to List.

Headquarters Division of Project Management-Project Delivery and Workload Development

- Process all project change requests for projects submitted to Headquarters.
- Conduct project delivery meetings to monitor and evaluate scope, cost, and schedule changes.

Headquarters Management

- Any issue not resolved at the Division Chief level will be forwarded to the Deputy Director, Project Delivery and Deputy Director Finance. If necessary, the Deputy Directors will meet with the appropriate district and Headquarters staff to decide.

Headquarters Division of Engineering Services-Bridge Design

- Prepare, revise, and update structure cost estimates.
- Promptly advise the project manager of the availability of the structure cost estimate or any significant changes to the estimate along with the reasons for the changes.

District Director

- Monitor project cost and adjust scope to stay within funding capabilities throughout the project development process.
- Review and recommend or approve project change requests subject to district design delegation by agreement with the Division Chief, Division of Design.
- For all major projects, certify that the final engineer's cost estimate is complete and accurate, reflecting the true scope of the work to be performed and representative of the most current market trends. District Director certification is required to achieve Ready to List. The certification must not be older than 90 days at the time of the CTC vote for request for funds.
- Request or approve contingency other than 5 percent at RTL subject to district design delegation agreement with the Chief, Division of Design.

District Right of Way

- Prepare, revise, and update right of way cost estimates.
- Include or exclude expended right of way costs in a consistent manner for cost comparison with earlier estimates.
- Review and sign program change requests (Deputy District Director).
- Promptly advise the project manager of the availability of the right of way cost estimates or any significant changes to the estimates along with the reasons for the changes.

Project Engineer

- Prepare, revise, and update the project capital cost estimate as identified in this chapter.
- Incorporate new or revised cost data from responsible functional units in the project capital cost estimate.
- Maintain a record of successive capital cost estimates for each component, including structure and right of way cost estimates, with documentation of the reasons for significant changes.
- Prepare a justification for supplemental work items memorandum for each project.
- Update the final engineer's cost estimate for District Director certification. The certified estimate must not be older than 90 days at the time of the CTC vote for request for funds.

Project Manager

- Review and approve all project cost estimates.

- Update escalation costs.
- Review and process project change requests.

ARTICLE 4 Coordination with Other Functional Units and Agencies

Consult Others

Other functional units (bridge design, right of way, traffic operations, materials, maintenance, construction, environmental analysis, landscape architecture, etcetera) and local entities should be involved, as appropriate, in the preparation of project cost estimates for both planning and design. Project capital cost estimates should be developed through consultation with the project development team (PDT).

Structure and Right of Way Cost Estimates

The Headquarters Division of Engineering Services-Bridge Design will prepare all structure cost estimates. The district right of way unit will prepare all right of way cost estimates. The estimates prepared by those functional units are to be combined with the highway estimate to obtain the capital outlay costs for the project. For further information on structure and right of way cost estimating contact those functional units.

Cooperative Projects

Projects with contributor funding may require segregated cost estimates. Define the funding responsibilities of the various participants as early as possible in the project development process. To avoid confusion, as soon as the participatory rules for the project are determined, use segregation of cost estimates to show the funding responsibilities of the various partners. Communication among the various partners is necessary for reliable project cost estimates.

Intercounty Projects

Projects situated in more than one county may require segregated capital cost estimates for each county to meet minimum funding requirements. Segregated cost estimates do not need to be completed for each item but should be a percentage of the total project cost estimate.

Federal-aid Projects

Segregated cost estimates are required for those projects with federal funding. To avoid confusion on federal-aid projects, use segregated cost estimates as soon as the participatory rules for the project are determined. The Federal Highway Administration (FHWA) liaison engineer should be contacted to discuss any issues relating to federal-aid.

SECTION 2 Project Planning Capital Cost Estimates

ARTICLE 1 Introduction

Project planning capital cost estimates are categorized as: project feasibility, project initiation, draft project report, and project report.

ARTICLE 2 Project Feasibility Cost Estimate

Purpose

A project feasibility cost estimate may be required by management to determine whether to proceed with development of a project initiation document (PID). It is prepared before the project initiation process at the beginning of project planning studies when a highway improvement need has been identified and a project cost estimate is needed to evaluate the proposed improvements. The project feasibility cost estimate serves as background information for the project initiation cost estimate and is not used for programming the project.

Required Level of Detail

There may not be sufficient data available to prepare a detailed project cost estimate before project initiation. However, management may still need project cost information at very early stages to decide whether to proceed with development of a PID. To give management the best information available when deciding, the project feasibility cost estimate needs to be accurate and factual. It may be based on a comparison with similar projects.

In the past, most State highway projects were new roadways with new alignments and a well-defined scope, and thus, the project feasibility cost estimates may have been based on a cost per mile for a particular type of facility. However, in recent years, most projects either maintain, rehabilitate, or improve the operation or safety of the existing system. Cost estimates for these projects are more difficult to develop and it may be necessary to conduct a thorough onsite field review to obtain factual data to prepare a realistic estimate that can be used with confidence.

Scoping for Project Feasibility Cost Estimates

Since the project feasibility cost estimate is the first cost estimate prepared for the project, it is essential that the project be adequately scoped. The worst probable case should usually be assumed. Existing facilities thought to be adequate may become inadequate because of changes to standards, new data, further deterioration before construction, or other factors.

High-Cost Items

Estimators should be aware of features that have the potential of requiring high-cost items. Items relating to the cost of mitigating hazardous waste and other environmental impacts, utility relocation, noise barriers, retaining walls, major storm drains, transportation management plan, and traffic handling must be quantified. Assumptions made during development of the cost estimate should be documented.

If structure design work is required, the Headquarters Division of Engineering Services-Bridge Design should be consulted to obtain cost data for the project feasibility cost estimate.

At the feasibility stage, the right of way unit will normally complete the first sheet of the right of way data sheet with the notation, “Not Valid for Programming Purposes.”

Recommended Contingency

The recommended contingency for the project feasibility capital cost estimate is 30 to 50 percent, depending on the factual data available for preparing the estimate.

ARTICLE 3 Project Initiation Capital Cost Estimate

Required Level of Detail and Additional Information

The project initiation capital cost estimate is an expansion of the project feasibility cost estimate using the same format, but with more detail.

Additional information that must be obtained includes:

- Existing and forecasted traffic volume
- Geotechnical design information (particularly where foundation and slope stability problems can be anticipated)
- Materials and pavement structural section design information
- Advance planning studies for new structures and modification of existing structures
- Hazardous waste assessment
- Potential environmental issues and mitigation
- Right of way data sheet
- Utility data sheet
- Traffic handling and transportation management plans
- Utilization of existing resources (recycling)

Constructability reviews should evaluate and validate the project capital cost estimate and assumptions made.

Appropriate Mapping

To adequately prepare a project initiation cost estimate, it is essential to obtain appropriate mapping. Consult with the district survey unit and review the [Plans Preparation Manual](#).

Basis for Programming

The project initiation capital cost estimate is closely scrutinized because it is used for project programming and is the basis for comparison with later project capital cost estimates; the importance of its reliability cannot be overemphasized. The project initiation capital cost estimate is adjusted from the date of the estimate to January 1 of the current State fiscal year. The programmed cost that appears the first time a project is listed in the STIP or SHOPP is the project initiation capital cost estimate escalated to the mid-point of the construction phase. This represents the project construction cost for the requested programming year.

Caltrans is the sponsor for all projects funded solely from the SHOPP and most projects funded from the Interregional Improvement Program. Because funding capacity is spread over multiple years, it may be necessary to develop more than one project cost. Each project cost is based on a different fiscal year

of funding capacity. The Headquarters Division of Transportation Programming provides direction regarding funding capacity.

Use Most Up-To-Date Cost Estimate

If the period between the approval of the project initiation document and the date of programming the project is lengthy, the cost estimate must be updated. In this case, a current project cost estimate should be used to program the project.

Recommended Contingency

The recommended contingency for the project initiation capital cost estimate is 25 percent.

ARTICLE 4 Draft Project Report Capital Cost Estimate

Required Level of Detail

The draft project report cost estimate uses the same format as the project feasibility and the project initiation cost estimate, except it is considerably more detailed. The estimate for each competing project alternative is calculated using updated data from the various functional units involved with the project (such as: materials, bridge design, traffic operations, hydraulics, right of way, etcetera) to produce a quality cost estimate. In addition, environmental and hazardous waste studies should have been completed by this time, so unforeseen costs should be less likely. Assumptions and costs for the transportation management plan should be updated.

Cost Estimate Changes

Cost increases or decreases from the project initiation capital cost estimate must be discussed in the draft project report.

Recommended Contingency

The recommended contingency for the draft project report capital cost estimate is 20 percent.

ARTICLE 5 Project Report Capital Cost Estimate

Required Level of Detail

The project report cost estimate is prepared as part of the project approval process. This occurs after completion of the public hearing process, selection of the preferred alternative, and completion of the environmental document.

The project report cost estimate is prepared using the same format as the project planning cost estimate. However, since the preferred alternative has been selected, the project report cost estimate is more definitive.

Cost Estimate Changes and Approval

Approved cost changes do not change the programmed cost but become input to the next programming cycle. If the project report cost estimate results in a revised project cost estimate, the procedures for establishing and approving the revised project cost estimate must be followed (See Section 1 Article 2, Policies). The project report cost estimate does not become the basis for comparison with subsequent current project capital cost estimates unless it is used to establish a new programmed cost, either in an update of the programming document or by amendment of the programming document. All percentage increases (or decreases) are applied from the programmed cost.

Cost increases or decreases from the project initiation cost estimate must be discussed in the project report.

Recommended Contingency

The recommended contingency for the project report cost estimate is 15 percent.

SECTION 3 Project Design Capital Cost Estimates

ARTICLE 1 General

Design Cost Estimates

The project design capital cost estimate is made after project approval, updated throughout PS&E development, and is categorized as either preliminary or final.

Construction Costs versus Total Project Capital Outlay Costs

Project design capital cost estimates include construction costs only and do not include right of way capital cost. Project construction costs are a portion of the project capital outlay costs that have been programmed and reported upon during the project planning phase. When current capital cost estimates are required during the PS&E phase, the total project capital outlay costs (including right of way costs and construction costs) are implied unless otherwise specified. Right of way funds are typically expended during the design phase to acquire parcels needed to construct the project. For this reason, there must be close coordination with the district right of way unit when comparing project cost estimates with the programmed project costs during the PS&E phase. Verify that all right of way funds (either expended or unexpended) are accounted for and are consistent with the programmed cost.

ARTICLE 2 Transitioning from Project Planning to Project Design Capital Cost Estimates

Project Design Capital Cost Estimate Components

The project design capital cost estimate includes the following components:

- Bid items
- Supplemental work
- Department-furnished materials and expenses
- Contingency

Bid Items

After project approval, all project features should be known, and many specific bid items can be identified. Bid items and cost estimates identified during the project planning phase become more defined as work by the design staff and other functional units progresses. Bid items in the engineer's estimate (including units of measure and quantities) are used for the bid item list in the construction contract documents.

Supplemental Work

Supplemental work is anticipated work within the scope of the project included in the engineer's estimate to cover work of such an uncertain nature that it cannot be quantified as a contract bid item. Supplemental work identified in the contract special provisions must be included.

Department-Furnished Materials and Expenses

Items listed under this component consist either of work done by Department forces, or others, concurrently with contract construction operations; or materials to be purchased and charged against the project, but which will be paid for directly by the Department, not the contractor.

Contingency

For a project design capital cost estimate, the contingency is a percentage of the subtotal of the cost of bid items, supplemental work, and Department-furnished materials and expenses included in the grand total of the preliminary or final engineer's cost estimate to cover the cost of unforeseen factors related to construction within the defined project scope.

Refer to the [Construction Contract Development Guide](#) for guidance for preparing the project design cost estimate, including specific requirements for the use of bid items, supplemental work, and Department-furnished materials and expenses.

District and Bridge Design Capital Cost Estimates

The project design capital cost estimate includes the district construction capital cost estimate and when applicable, the structure construction capital cost estimate. The district construction cost estimate is compiled by the project

engineer to capture all highway bid items of work and the costs associated with construction of those items. The structure construction cost estimate is compiled by Headquarters Division of Engineering Services - Bridge Design to capture all structure bid items of work on the project and the costs associated with their construction.

ARTICLE 3 AASHTOWare Project Preconstruction

General

Bid items, supplemental work, and Department-furnished materials and expenses are entered in AASHTOWare Project Preconstruction (AWP-P); information is available on the Headquarters Division of Engineering Services [AASHTOWare Project Preconstruction](#) website. AWP-P provides the data files required for the bid opening and progress pay system and produces segregated cost estimates according to fund source.

Highway, Bridge, and Combined Cost Estimate Files

AWP-P permits independent storage of data from the district and Headquarters Division of Engineering Services-Bridge Design for each project using separate categories and the recall of separate or combined cost estimates. The district and Bridge Design are each responsible for independently establishing and updating their own estimate data. The highway cost estimate is established by the district and the structure cost estimate is established by Bridge Design. Reports may be requested in AWP-P as highway, structure, or combined.

Common Highway and Bridge Items

When a combined construction capital cost estimate report is requested, the quantities for highway and bridge items are integrated. Estimators in Bridge Design and the district should reach prior mutual agreement for prices on common items. Items in common to Bridge Design and the district, such as temporary barrier systems, must be reviewed carefully to avoid duplicating quantities or overlooking items in the cost estimate.

Highway Cost Estimate

The district portion of the cost estimate should be entered into AWP-P at the beginning of the design phase using the contract item codes located on the Headquarters Division of Design [Standard Plans, Standard Specifications and Contract Item Codes](#) website.

As contract items of work are identified and quantities calculated, these quantities should be entered into AWP-P. Entering the completed quantities into AWP-P as soon as they are calculated facilitates cost estimate updates and eases the preparation of the final engineer's cost estimate.

For projects with contributor funding or Federal-aid funding and projects located in multiple counties, segregated cost estimates must be available in AWP-P at the time of PS&E delivery. As soon as the participatory rules for the project are determined, estimators must use segregated cost estimates in AWP-P. By doing this, no changes should be necessary to any segregation once the project is listed for advertisement.

Structure Cost Estimate

The structure cost estimate should be entered into AWP-P by Bridge Design, as soon as possible after project approval, using the contract item codes. However, many bid items for structures are not known in enough detail until late in the design phase. For that reason, the structure cost estimate may not be available for use until structural design work is complete. Until the structure cost estimate is available, the cost data used for the project report cost estimate should be used. It is important to keep in close contact with the Headquarters Division of Engineering Services-Bridge Design project functional manager and the structure designer. The project engineer must determine whether any unforeseen complications have occurred that will alter the estimated cost of the structures and inform the structure designer of any such changes.

ARTICLE 4 Preliminary Engineer's Cost Estimate

General

The conversion of the construction related portions of the project report capital cost estimate into AWP-P creates the preliminary engineer's cost estimate.

The preliminary engineer’s cost estimate should be updated frequently during the design phase as the project construction details, specifications and plans are completed.

Level of Detail

The project design capital cost estimate should be considerably more detailed than the project planning capital cost estimate. As engineering and environmental studies progress, more information, such as final survey data, materials and drainage information, refined transportation management plans, structure studies, and evaluations from design phase constructability reviews becomes available.

Recommended Contingency

The recommended contingency for the preliminary engineer’s cost estimate is 10 percent.

ARTICLE 5 Final Engineer’s Cost Estimate

General

The final engineer’s cost estimate, also commonly referred to as the engineer’s estimate, is completed at the end of the PS&E development. All bid items are identified, and all quantities are calculated and entered in AWP-P.

The final structure cost estimate is prepared by Bridge Design. The district combines the final highway cost estimate and the final structure cost estimate into the final engineer’s cost estimate.

Contingency

The standard contingency is 5 percent. AWP-P automatically allows for a contingency of 5 percent, but a different percentage may be entered. [Project Delivery Directive PD-04](#) includes responsibilities for approving increases or decreases to the standard 5 percent project contingency. Any change to the standard 5 percent contingency for the final engineer’s estimate requires approval from the Chief, Headquarters Division of Design. This authority may be delegated for a project contingency up to 10 percent. To increase or decrease the standard 5 percent contingency, the project engineer must

prepare a formal request with justification supported by a quantified risk register. The District Director concurs on the request and submits it to the Chief, Office of Project Support, Headquarters Division of Design. Any required approvals for non-standard contingency must be secured before project advertisement.

Distribute a copy of the approved contingency justification to:

- Headquarters Division of Engineering Services, Office Engineer
- The project history file
- The resident engineer's file
- The district quality management plan coordinator for district delegated approvals

Supplemental Work

[Project Delivery Directive PD-04](#) includes requirements for approval when the total cost of non-excluded supplemental work items exceeds 5 percent of the total estimated cost for contract items, and for approval of supplemental work items not on the pre-approved supplemental work items list for projects with and without Federal funding. Some supplemental work items with a well-defined need and cost justification can be excluded when calculating the 5 percent cost limitation. See Section 7 of the [Construction Contract Development Guide](#) for the current excluded and current pre-approved supplemental work items list. The project engineer must prepare a justification for supplemental work items memorandum for each project. Any required approvals for amount of non-excluded supplemental work or non-standard supplemental work items must be secured before project advertisement.

Certification of Final Engineer's Cost Estimate

For a project that requires allocation of funds from the CTC, the District Director is required to certify that the engineer's estimate is complete and accurate, reflects the true scope of work to be performed, and accounts for current market trends. Certification of project cost estimates \$5 million and lower may be delegated to the Deputy District Director of Project Delivery. This certification is required before the RTL milestone (M460). The certified estimate must not be older than 90 days at the time of the CTC vote.

Locking Files

After compilation of the PS&E is complete and the project is Ready to List (for advertising), the final engineer's cost estimate is locked in AWP-P by Headquarters Division of Engineering Services Program/Project Management and Office Engineer soon after the project is submitted for advertisement. As the RTL package proceeds through the bidding and letting workflow phases, only the Division of Engineering Services Program/Project Management and Office Engineer can alter the AWP-P estimate. If changes to the final engineer's cost estimate are necessary after it has been locked, contact the Division of Engineering Services Program/Project Management and Office Engineer to coordinate the changes.

Comparison with Contractor Bids Received

The final engineer's cost estimate is used for comparison with the contractor bids received for the project and is the basis for the award of the contract. The funds available to construct the project is the sum of the dollar amount of the low bidder's contract bid items plus the dollar amounts of the supplemental work, Department-furnished materials and expenses, and contingency from the final engineer's cost estimate.

