

APPENDIX I

DESCRIPTION OF ELEMENTS OF CONSTRUCTION COSTS

6-I-1. Direct Construction:

a. Construction Contractors* Earnings. This includes TOTAL cost of contracts for construction accomplished under two-step formal advertisement or one-step (turnkey) negotiations.

b. Direct labor costs.

c. Detailed construction layout.

d. As-built drawings.

e. Operating manuals and instructions.

f. Training of using service personnel.

g. Surveys and monumentation for record purposes.

h. Negotiation of utility contracts.

i. Materials and equipment purchased with construction funds and furnished to contractors without reimbursement.

j. Materials, labor, and equipment (including construction equipment and civilian-type end items of installed equipment) furnished without reimbursement from construction funds , as contemplated by authorizing legislation.

k. Airfield pavement evaluation - testing, collection and evaluation of data, and preparation of report.

l. Value engineering.

6-I-2. Other Costs - Planning and Design:

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- a. Determination of criteria and siting.
- b. Preparation of budget (preliminary) sketches, preliminary estimates, and preliminary designs, including site investigations. Includes contacts with using services, higher headquarters and local authorities.
- c. Preparation of design analyses.
- d. Constructibility review.
- e. Subsurface explorations, and sampling and testing of foundation and construction materials during investigation and design phases.
- f. Detailed designs.
- g. Preparation of plans, specifications and contract documents prior to bidding.
- h. Negotiations of contracts for engineering services.
- i. Reproduction of bidding documents.
- j. Performing hydrographic and topographic surveying and mapping as required for planning and design.
- k. Participation of design staff in pre-award activity (to acquaint prospective bidders with nature of work and construction personnel with design).
- l. Preparation of Government estimates of cost to compare with bids on new construction.
- m. Mapping and description of topographic features involved where real estate interests are required in connection with removal of obstructions or prohibition of the erection of structures or timber growth.

n. Supervision of contractors performing any of the above functions.

o. post-completion inspection.

p. Damages assessed contractors when finally determined by the contracting officer.

q. Research and investigational program.

r. Engineering and design during construction (EDC). These design costs are charged to construction funds and include:

(1) Review of engineering and design effort by the construction contractor where contract specifications are expressed in terms of performance standards with certain design details left to the contractor.

(2) participation of design staff in modifications of contract agreements to the extent of providing revised design, plans, specifications, and related cost estimates.

(3) Designer participation in HVAC systems commissioning.

(4) Designer participation in critical structural steel connections.

(5) Tests required to verify design assumptions.

(6) Direct labor costs related to the pursuit of A-E liability.

(7) Responding to contractor*s requests for information regarding design errors and omissions.

(8) Designer visits to construction site when related to any of the above.

s. Value engineering.

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t. All work required by direct charging personnel after the potential for A-E liability has been determined by Construction Division and the action referred to the Architect-Engineer Responsibility Coordinator (AERC).

6-I-3. Other Costs - Supervision and Inspection:

a. Studies and analyses of plans and specifications and conferences of construction staffs to establish construction sequence, etc., with design personnel to become familiar with design requirements.

b. Participation of construction staffs in pre-award activity to acquaint prospective bidders with nature of work.

c. Award and administration of construction contracts.

d. Award and administration of contracts which provide for supervision and inspection of construction.

e. Establishment of bench marks and base lines required for layout of construction.

f. Review of drawings, manuals, catalogue cuts, and other information submitted by the construction contractor.

g. Assure that construction is performed in compliance with plans and specifications by supervision and inspection of construction work, conferences with the contractors to coordinate various features of the project and enforce compliance with schedules.

h. Sampling and testing during construction phase of subsurface and construction materials to determine their suitability and compliance with plans and specifications.

i. Negotiation with construction contractors on all contract modifications, including preparation of all contract documents required therefor and preparation of Government

estimates on those contract modifications that do not require preparation of revised designs, plans and specifications.

j. Estimate quantities, determine periodic payments to contractors, and review and approval of construction contract payments, including any measurements required therefor by Government forces.

k. Construction staff*s review and approval of construction schedules and progress charts, as prepared by contractors.

l. Preparation of construction progress and completion reports.

m. Project management and administration not otherwise identified above.

n. Damages assessed contractors when finally determined by the contracting officer.

o. The initial investigation and documentation of A-E liability and damages by Construction Division.

6-I-4. Other Costs - District Overhead.

a. Executive, Advisory and Administrative.

- (1) Executive
- (2) Resource Management/Comptroller
- (3) Technical Liaison
- (4) Counsel
- (5) personnel
- (6) Administrative Service
- (7) Safety
- (8) Provost Marshall

b. Supply (excluding direct charges).

c. Miscellaneous expenses.

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- (1) Transportation of Things
- (2) Communication Services
- (3) Rents and Utility Services
- (4) Printing and Reproduction
- (5) Other Contractual Services
- (6) Supplies and Materials
- (7) PCS Expenses
- (8) Suggestions and Incentive Awards
- (9) Pro-rata and Other Charges

(District overhead is distributed to engineering and design and construction.)

d. Architect-Engineer liability actions and review of modifications by Counsel, Procurement, and other Advisory and Administration (A&A) staff will be charged to overhead.