

CHAPTER 7. CONTRACT ADMINISTRATION

SECTION 5. Government Estimates

7.5 Introduction. FAR 36.203 require that an Independent Government Estimate (IGE) be used to help establish reasonableness of price. Regulations require a formal IGE for all proposed modifications involving \$100,000 or more, including increases, decreases, or a combination of both (FAR 36.203). The IGE and the contractor's proposal shall be prepared independently of each other; **a statement to this effect will appear on the estimate cover sheet.** This statement is not necessary on a revised IGE when the estimate changes to include data supported by the contractor during negotiations. TM 5-800-2 for military construction contains detailed instructions for preparing IGEs. Cost Engineering Policy and General Requirements (ER 1110-1-1300), provide policy and guidance for cost estimating for all projects. The approved computer software for cost estimates is the Micro Computer-Aided Cost Engineering System (M-CACES) (ER 1110-1-1300).

7.5.1 Responsibility. IGEs for all changes initiated via the configuration management process are the primary responsibility of Engineering Directorate and Chemical Demilitarization **Directorate.** These estimates are sent to the Resident Engineer by CEHNC. Resident office personnel will prepare an IGE for field changes within the field ACO's delegated authority. If it appears that Engineering Directorate could best prepare the estimate, the Resident Office will send a request, including complete data concerning the change, through the **Director, Chemical Demilitarization Directorate** and Director, Engineering Directorate, to Cost Engineering Branch, ED-ES-C. For all field changes in excess of the ACO's authority, the Resident Engineer will provide Engineering Directorate with all pertinent information to prepare an IGE. Unless the Resident Office provides input to Cost Engineering Branch for estimating impact costs and other indirect costs, such as extended field overhead, Engineering Directorate will not normally include those factors in the IGE. **Chemical Demilitarization Directorate** will provide information on items such as field conditions, which may affect the estimate. Site visits by Cost Engineering Branch personnel will be necessary to accurately prepare estimates for changes. Special circumstances may arise where the Resident Office should prepare the estimates. In such circumstances, the Director of Engineering shall coordinate and establish procedures with the Director of **Chemical Demilitarization Directorate** for preparing the IGE.

7.5.2 Government Estimate Revision. The Resident Engineer may revise the original cost estimate prepared by Engineering Directorate if facts, revealed during negotiations, justify the revisions. **If requested by CD negotiator's, Cost Engineering Branch personnel will assist in part of the negotiations and in revising the estimate for all changes exceeding \$100,000.** They will assist in other negotiations **as requested by the ACO.** Explain estimate revisions in detail by revising sheets, adding sheets to the estimate, and by attaching explanatory notes. **Do not completely redo the estimate.** Revisions must be logical and well defined, so personnel reviewing the IGE can follow the revisions. It will suffice to line out the incorrect figures, insert the correct figures, and footnote the correction with explanatory remarks. The estimator will initial and date the corrections. The IGE is no longer required to equal or exceed the negotiated amount (for additive amounts, opposite for deletion). It is imperative that the contract file demonstrates that the Government has used good business judgment in reaching any negotiated amount. The scope of the IGE, the price negotiation memorandum, and the contractor's proposal concerning the items of work involved must be in agreement.

7.5.3 Modifications Less Than \$100,000. Normally, Huntsville Center's policy does not require an IGE for modifications less than \$100,000. There are some exceptions. However, the Contracting Officer can request an estimate. If the IGE is not necessary, the ACO must perform a cost analysis of the contractor's proposal to verify that it is equitable. The detailed review will be signified by signing and dating the contractor's proposal as such. If the contractor's breakdown is not complete enough to perform a cost analysis, a detailed IGE is necessary to determine acceptability of the proposal. An IGE is necessary to support issuance of a notice to proceed prior to agreement on price and time. **An IGE is also necessary to support a unilateral modification regardless of the amount of the modification.**

7.5.4 Modifications \$100,000 or Greater. Modifications expected to cost \$100,000 or more after negotiation, require preparation of an IGE prior to start of negotiations. Comparing the contractor's proposal with the IGE will help establish the reasonableness of price. **As a minimum, a preliminary IGE must be prepared prior to NTP.** If this is impossible, document the contract file to indicate the circumstances preventing preparation prior to the IGE. The IGE must be completely detailed in accordance with the following procedure:

a. Use the description of change, the scope of work from the approved ECP, and the revised or new specification and/or drawings outlining the change.

b. As necessary, the estimator should visit the job site to gain a thorough understanding of the work involved, including difficulties related to in-place work.

c. The estimator must determine the full extent of work involved in the change through coordination with Engineering Directorate and in-place construction. The estimate will address facilities to be removed, replaced, abandoned in place, and altered or deleted. Include an evaluation on the effect that these changes make on the estimate. Also, determine the status of related procurement and shop fabrication of material and equipment affected by the change, including proposed disposition of material and equipment made excess by the change, whether scrapped, salvaged and revised, retained by the contractor, or turned over to the Government. Reflect the best interests of the Government concerning price, disposition, and possibility of future use of excess materials and equipment in the estimate. In accordance with ER 700-1-1, promptly report excess or surplus materials resulting from contract changes. These items must be screened, inventoried, and disposed of as applicable in accordance with existing regulations. Do not make agreements to provide such materials to construction contractors prior to coordinating with CD-CA.

d. Discussions may be held with the contractor's estimators to develop the scope of work involved in the change and the preparation basis for the IGE and the contractor's proposal prior to the start of estimate preparation.

e. Obtain an accurate quantity take-off of material and equipment required for the change.

f. Consider the following other contributing factors in preparing the estimate: Time of year; weather conditions anticipated; inside or outside work, including heating and lighting requirements; working hours per day or week, including premium pay; equipment required; obstructions; delays; occupied premises; availability of materials, special manufacture, shipping time; lost effort; acceleration; and deleted work and added work.

g. Once the above considerations are established, listing and pricing of all the cost elements should follow. Include as cost elements such items as:

- X Taxes
- X Expendable materials such as form lumber, oxygen, acetylene;
- X Supplies, such as pipe dope, welding rod, nails, paint thinner, special clothes, goggles, and tools allowance;
- X Freight, storage and handling;
- X Job site handling of material and equipment after delivery, such as unloading, warehousing, stockpiling, and issuing;
- X Contractor's plant and equipment usage exclusive of original construction and cleanup

h. Compute labor rates including a basic rate as established by local organizations, overtime, supervision, travel and insurance, welfare, and other fringe benefits where applicable. Identify labor by man-hours, if practical. Exercise care in applying a markup to direct labor. Such labor additives as social security, unemployment benefits, and workmen's compensation are limited in their application. Factual information on these items, including applicability of state laws, should be developed, used, and applied only to basic labor rates excluding travel, subsistence, welfare, health, union, and other benefits.

i. Base the allowance for performance and payment bonds upon the actual cost of the bonds and the total contract to date including the proposed change.

j. Show construction subcontractor and second tier subcontractors' costs individually and summarize on the recap sheet.

k. Periodically review estimates and percentages for contractor overhead and other markup features to assure that they reflect existing conditions.

l. Consider state and local tax regulations where applicable.

m. The totals appearing in "Labor" and "Material" columns may be rounded to the nearest dollar with sums over \$.50 being raised to the next dollar.

n. (1) Periodically review equipment rental rates and ownership rates to insure that estimated hourly rates reflect the average number of hours the equipment is actually being worked regularly each week. When the contractor's owned plant and equipment become a factor in any determination of a contract price adjustment, compute the ownership and operating expense in accordance with either (a) EP-1110-1-8, the "Construction Equipment Cost Guide;" or (b) the audited hourly ownership and operating rates.

(2) The special clause, AN EQUIPMENT OWNERSHIP AND OPERATING EXPENSE SCHEDULE, is now required in all stateside construction contracts. Exhibit 7-5*1, Construction Equipment Costs in Modifications, provides guidance to contract administration personnel in indirect and direct costing of marine and construction equipment in modifications. Exhibit 7-5*1 is not all-inclusive, but is intended to cover the most common situations encountered.

o. Allowance for contingencies must be carefully evaluated, and if included in the estimate, it must be explained in detail.

p. All modification estimates will contain a determination as to whether a time extension is justified and the extent of time extension will be determined by analyzing the current approved construction schedule. If the time extension is the basis for additional costs, show the relationship and amount of cost. Do not include time costs for changes concurrent with the contractor's own delays or for delays under the *Default Clause*.

7.5.5 Cost Records. Field offices should establish and maintain a record of material costs, construction equipment rates, labor rates, and work units on a current basis as a ready reference for estimating. Explore all possible sources for beneficial data. Stored material invoices are an excellent source.

7.5.6 Acceleration. Acceleration is extra effort needed to meet the original contract completion date, i.e.; to eliminate a time extension otherwise due for changes or excusable delays encountered. In changes where acceleration is attributable to extra effort expended by the contractor to comply with an acceleration order, it shall be clearly identified in the Government Estimate. Exhibit 7-5*2, Acceleration, lists the requirements or conditions encountered with Acceleration. Do not confuse "Acceleration" with "Expediting." Expediting is requiring the completion prior to the contract completion date and is not permitted without approval of the Head of the Agency, except that the Contracting Officer may expedite a completion date if no additional costs are incurred (DFARS 236.270).

7.5.7 Impact Costs. An analysis of the impact of change on the contractor's operation must be performed. The basic rule is to compare cost and time requirements *before* the change to those *after* the change. Paragraph 13-4 of TM 5-800-2 has an excellent discussion of impact consideration. Avoid including questionable impact costs in the initial Government estimate unless each is justified. If the analysis reveals that the change results in *negative* impact costs, i.e., an increase in productivity; discounts for originally required materials, etc., the negotiator should take this into consideration during proposal review and negotiations. Exhibit 7-5*3, "Impact Costs," lists some considerations when dealing with impact. Note that any impact costs NOT discussed during negotiations, resolved and included in the resulting modification, MUST be removed from the Government Estimate used in support of the modification.

7.5.8 Determination of Allowable Profit. A reasonable profit for a given contract and contractor depends on a number of items. Evaluate all factors against job conditions and weigh accordingly. In preparing Government Estimates where profit is negotiated as an element of price, with either a prime or subcontractor, negotiate or determine reasonable profit for each procurement action by using the weighted guidelines method of profit determination (EFARS 15.971) as noted in Exhibit 7-5*4, HQUSACE Weighted Guidelines Method for Determining Profit. **No profit is allowed on suspended work or delays prior to issuance of NTP (treated as a suspension of work).**

7.5.9 Facilities Capital Cost of Money (FCCM). See Exhibit 7-5*5 for application of FCCM on contract modifications. Note that the Government's profit objective must be reduced by the lesser of 1% of the total job cost or the cost of facilities capital dollar amount, which ever is less. Note also that FCCM is already included in the OCE equipment ownership costs.

7.5.10 Proposal Preparation Costs. Construction contractors normally recover off-site proposal preparation costs in their overhead rates. The Government has usually paid for on-site estimators in the basic contract price, unless the contractor can show an increased cost due to the change (e.g., overtime or additional estimators needed). If the contractor includes a direct cost for off-site proposal preparation efforts, see Exhibit 7-5*6, A Policy Guidance for Treatment of Proposal Preparation Costs on Modifications.

7.5.11 Allowable Overhead. The Government Estimate must consider equitable overhead costs or credits if affected by the change. Two types of overheads are normally considered in pricing modifications. These are increases or decreases in General and Administrative (G&A) overhead and increased or decreased job overhead expenses.

a. Field or job overhead expenses are those cost incurred on the job site or charged directly to the contract, but not readily chargeable to individual work items. Some home office expenses might be charged directly to a contract. When a contractor charges out certain home office expenses to an individual contract, it is important to insure that those costs categories are eliminated from the G&A expense pool to avoid duplication. For example, if the Network Analysis System costs are charged directly to the contract, all NAS home office costs will then be eliminated from the G&A cost pool. The estimator should be careful to consider only those job overhead expenses affected by the change. Certain supervisory personnel expenses are already included in the contract price. Unless the contractor's actual expenses are *increased*, the Government has already paid for those expenses. **The Chief of Engineers has explicitly instructed that the use of unchanging, flat field overhead percentages is prohibited.** Before allowing extended job overhead costs, the estimator must consider and eliminate those extra expenses the contractor would have incurred due to his own concurrent delays or other non-Government caused, concurrent delays (excusable delays under the *Default Clause*, etc.). See Exhibit 7-5*7 for an example of analyzing and calculating field overhead.

b. G&A expenses generally cover the indirect costs of maintaining home and branch offices. FAR 31.203 require that overhead costs be consistently applied throughout the contractor's accounting system. This also means G&A must be consistently applied throughout the contract. The G&A overhead is normally charged to each contract as a percentage of job costs in the contractor's accounting system. Therefore, deductive changes must be treated like increase changes. If G&A percentage is consistently charged for each increase, a like credit must be provided for deductive changes which reduce the job cost base. The G&A overhead rate is normally expressed as a percentage of job costs (direct and indirect). It is normally based on a ratio of allowable (see FAR 31.2 for allowable costs) home and branch office costs divided by total costs for all contracts (often referred to as "cost of sales"). The theoretical G&A rate are based on the contractor's current fiscal year. However, in practice, the latest whole fiscal year cost data is often used to develop the G&A rate, unless that data is not a reasonable representation of the current fiscal year situation. Alternatively, the contractor may propose to charge direct home office costs to a change order. This may be appropriate if this is how the entire job, including each change, is charged in the contractor's accounting system. If the contractor's accounting system normally charges a G&A percentage to each contract, the contractor may be duplicating costs by charging directly to changes, or certain changes. Again, the key to application of G&A is *consistent application* per FAR 31.203.

c. Daily G&A costs. Another type of overhead increasingly proposed by contractors is "unabsorbed home office overhead," sometimes incorrectly titled "**extended home office overhead**" costs. This will usually appear as a daily home/branch office overhead rate, computed by the "Eichleay Method" or other similar formulae. As a general rule, unabsorbed overhead does not apply to construction contract changes. It may apply to extended periods of suspension, in unusual circumstances. **Do not allow this type of overhead without first consulting Construction Directorate.** The estimator should normally apply G&A percentage rates in the Government Estimate. Exhibit 7-5*8 provides a detailed discussion on unabsorbed overhead.

7.5.12 Preparation. The detailed estimate is prepared on ENG Form 150 or by the M-CACES Gold Procedure as outlined in the M-CACES Gold Estimating Program User's Manual. Show cost of all labor, material, equipment, subcontract work, impact on changed and unchanged work, if any, overhead, profit, bond, and, where applicable, gross receipt tax. Summarize the estimate by line item on CEHND Form 970. This form is commonly referred to as the "Cover Sheet" for the Government Estimate. The form will be prepared and properly signed regardless of whether the estimate is constructed by M-CACES or prepared manually; but it is the full extent of the Government Estimate furnished in support of most modifications. The estimator will sign the estimate above his name at the top of CEHND Form 970. The checker will initial above his name. Attach the detailed estimate behind CEHND Form 970. The estimate must be signed by the appropriate authorized approving official prior to use in negotiations.

7.5.13 Approval. In connection with the ACO authorities, Resident Engineers are delegated authority to approve Government Estimates within and up to their designated monetary limit (see exhibit 7-1*2). The Resident Engineer is also delegated authority to approve a Government Estimate exceeding his/her authority when the change is settled within his/her authority limit. If the change involves more than the ACO designated amount, or involves clauses other than those delegated to the ACO, the Resident Engineer will sign the "Submitted By" signature block on CEHND Form 970. Leave the "Recommended By" and "Approved By" blocks blank. CD-CA will insert the signature lines based on availability of appropriate personnel. Exhibit 7-5*9 is a sample Government Estimate showing signature blocks.

7.5.14 Interest in Government Estimates. When Contract Disputes Act interest is applicable, add a separate computation to the Government's Estimate after the total price settlement. Include separate bid items on CEHND Form 970 and Standard Form 30 for interest. Exhibit 7-5*9 also provides a Government Estimate showing interest computation.

7.5.15 Safeguarding Government Estimates. Government Estimate costs is confidential. Prior to accepting the contractor's proposal, safeguard and appropriately protect estimates by "FOR OFFICIAL USE ONLY" (FOUO) cover sheets, DA Label 87. Stamp or mark all sheets comprising the estimate "FOR OFFICIAL USE ONLY" in bold letters at least 3/16 inches in height near the bottom of the page. Store and handle the estimate in accordance with AR 340-17. **Only the Administrative Contracting Officer, under his designated monetary authority, and the Contracting Officer have the authority to accept proposals.** Normally when the modification is given to the ACO or Contracting Officer for signature, cancel the FOUO designation. Cancellation is effected by a qualified person placing his or her signature, date and office symbol appropriately placed on the cover sheet of the Government Estimate under the following statement: **"Protective marking canceled upon agreement between Government and Contractor as to price."** Line out all FOUO markings. Destroy non-record copies of FOUO.

7.5.16 Exhibits.

Exhibit 7-5*1	Construction Equipment Costs in Modifications
Exhibit 7-5*2	Accelerated Contract Work
Exhibit 7-5*3	Impact Costs
Exhibit 7-5*4	HQ USACE Weighted Guidelines Method for Determining Profit
Exhibit 7-5*5	Application of Facilities Capital Cost of Money (FCCM) on Modifications
Exhibit 7-5*6	Policy Guidance for treatment of Proposal Preparation Costs on Modifications
Exhibit 7-5*7	Analyzing and Calculating Field Overhead
Exhibit 7-5*8	Contractor Overhead Calculations
Exhibit 7-5*9	Government Estimate Approval Authority

**GUIDANCE CONSTRUCTION EQUIPMENT COSTS
IN MODIFICATIONS**

1.0 References:

- a. FAR, Part 31.105, Contract Cost Principles and Procedures for Construction and Architect-Engineer Contracts.
- b. FAR, Part 3.205-36, Rental Costs.
- c. EFARS, Part 31.105.
- d. EP 1110-1-8, Volume 3, Construction Equipment Ownership and Operating Expense Schedules, Region III (August 1991).

2.0 This guidance is a summary of the major policies prescribed in the above references to aid field office personnel in properly costing owned or rented marine and construction equipment in modifications. Stateside contracts must contain a special clause, entitled: EQUIPMENT OWNERSHIP AND OPERATING EXPENSE SCHEDULE, for use when actual ownership or operating expenses cannot be determined.

3.0 Contractors commonly account for such items as equipment depreciation, interest payments on loans, home office repair shops, major overhauls and repairs, small tools for mechanics, etc., in their overhead cost pools. This is perfectly legal and proper for normal business purposes. FAR Part 31 also recognizes this practice (although not all costs are allowable, e.g. interest) unless a predetermined schedule of construction equipment use rates is used. Contractors usually include such costs in their proposed overhead for Corps contracts.

4.0 FAR 31.105 states, "Actual cost data shall be used when such data can be determined for both ownership and operating cost for each piece of equipment, or groups of similar serial or series equipment from the contractor's accounting records." When actual costs are proposed in excess of \$25,000.00, EFARS requires "cost and pricing data" submission with SF 1411, "Contract Pricing Proposal Cover Sheet", subject to audit.

5.0 FAR states that when actual costs cannot be determined, predetermined rates may be specified. EFARS Part 31.105 prescribes the use of the Corps Schedule when the contracting officer can't determine actual cost data for both ownership and operating costs from the contractor's accounting records. The Corps Schedule is applicable for all stateside construction contracts. Contractors can seldom account accurately for actual equipment costs. Consequently, the schedule is most often required for costing owned construction equipment in modifications.

6.0 When the schedule is used, FAR requires that all costs included in the cost rate schedule must be identified and eliminated from the contractor's other direct and indirect proposed costs. All costs removed from the indirect (G&A) pool should be added to the "total cost of sales base"; (see below), when computing the adjusted overhead rate for Corps construction contracts. Field office personnel should always require the contractor to submit a cost breakdown and basis for computing overhead, since many equipment costs are usually included in the numerator and not in the denominator, as proposed by the contractor. Below is the formula most often used to calculate G&A.

$$\text{G\&A rate} = \frac{\text{X\% of home office cost pool} + \text{Branch or Div office pool}}{\text{total cost of sales of Branch or Division}} \times 100\%$$

Where X = share of home office costs allocated to the branch or division

If the G&A rate aren't adjusted, costs will be duplicated between direct hourly rates and overhead. Below is the adjusted formula:

$$\text{Adjusted G\&A rate} = \frac{\text{same as above less equipment costs}}{\text{same as above plus equipment costs}} \times 100\%$$

7.0 This is the most common cost duplication proposed by contractors. In fact, even if they cite a recent DCAA audit as the justification for their proposed G&A rate, it may have likely not been adjusted to remove equipment costs from the overhead pool. This is due to several reasons. DCAA auditors primarily audit defense contractors on non-Corps contracts. For contracts other than COE, stateside construction, there most likely will not be equipment cost guide used as the basis for equipment pricing. Unless specifically alerted in the request for audit or technical analysis that the cost guide may be applicable, DCAA auditors often fail to eliminate equipment costs from the home office overhead pool. We recommend field offices inform the auditor that the COE cost schedule is in the contract. When asking DCAA auditors for recent or current audited G&A rates, confirm whether the auditor removed all equipment costs from the overhead pool. Also, ask for copy of the G&A work papers whenever you use another audit as a source.

8.0 The ownership costs developed in the schedule consist of allowances for depreciation and cost of facilities capital (CFC). The rates consider purchase price (less tires), freight, sales or import tax, and salvage values. See page 2-2 of the schedule for a full explanation.

- o License fees,
- o Property taxes,
- o Insurance costs.

9.0 The following allowable costs have not been included in the rates. An allowance may be considered in overhead or directly to a piece of equipment (but not in both):

- o Job site security,
- o Inspection fees,
- o Record-keeping,
- o Mechanics training,
- o Highway permits.

10.0 Unless a new piece of equipment must be mobilized or a compensable time extension results from the change, most of the costs in paragraphs 9 and 10 will not be increased or decreased by the change, thus should not be considered, except perhaps in the G&A pool.

11.0 Contract administrative (CA) personnel are reminded to subtract original equipment tire costs from the equipment acquisition cost, when calculating an ownership rate.

12.0 The schedule operating cost rates include allowance for the following (see EP 1110-1-8, pages 2-4 to 2-7):

- o Fuel (including fuel storage tanks and pumps)
- o Filters, oil, grease (FOG)*
- o Repairs and maintenance (including major overhauls)**
- o Tire wear and repairs (including original equipment tires)

* FOG includes cost of wages, fringes, service trucks and other equipment cost, for fueling, greasing, and servicing, taxes for materials, except that an oilier may be separately proposed for certain cranes, drag lines, hydraulic excavators and shovels.

** These cost include:

- o Mechanics labor and supervision
- o Repair parts and supplies
- o Service trucks and other equipment used during M&R operations, plus tools
- o Supporting facilities, such as field and main office repair shops, shop overhead, parts, supplies inventory, and outside specialties services, such as machine shops

13.0 CA personnel should eliminate any of the above costs, if duplicated in the proposals. Adjustments to the schedule rates may be necessary due to equipment age, number of hours per week used, or actual purchase price in accordance with instructions in the schedule. The schedule also includes standby costs.

14.0 Equipment ownership or standby costs are only allowable for equipment in sound, working condition (FAR 31.105). This also applies to rental equipment. For instance, if rental equipment is charged by the month, adjustments must be made for pieces of equipment out of service for longer than routine service.

15.0 Reasonable costs of renting construction equipment are allowable, with certain restrictions (FAR 31.105). Servicing costs, FOG, fuel, etc., if not included in the rental agreement, are allowable. Costs for major repairs and overhaul of rental equipment are unallowable. They should be included in the rental cost. Equipment sold and leased back cannot exceed the ownership rates from the schedule (FAR 31.205-36). Charges in the nature of rent for equipment between any divisions, subsidiaries, or organization under common control are allowable, to the extent that they don't exceed the normal costs of ownership, provided that no part of the costs shall be duplicated. For instance, overhead and profit for the subcontractor or contractor renting from their affiliate are already included in the "rental" rate and should not be duplicated at the same level (FAR 31.205-36).

16.0 Cost for equipment rented from an affiliate at rates normally charged to non-affiliates are allowable provided that the affiliate normally leases to the public and also provided that the rates are reasonable, e.g., when compared to other rental sources, compared to owned equipment rates with markup applied, etc. Again, do not duplicate costs such as markup already included in the rental rate (FAR 31.205-36).

ACCELERATION

1. *ACCELERATION IS SPEEDING UP THE CONTRACT WORK TO TRY TO COMPLETE PERFORMANCE EARLIER THAN OTHERWISE EXPECTED.*
2. *CONTRACTOR SELF-INITIATED -- NONCOMPENSABLE*
3. *GOVERNMENT-INITIATED -- DELIBERATE OR CONSTRUCTIVE*
4. *COMPENSABLE UNDER CHANGES CLAUSE ONLY IF GOVERNMENT REQUIRES ACCELERATED EFFORT TO MEET A CURRENT DELIVERY SCHEDULE IN THE FACE OF DELAYS FOUND TO BE EXCUSABLE.*
5. *MOST COMMON OCCURRENCES:*
 - * *CO DIRECTS ADHERENCE TO ORIGINAL OR ADJUSTED CONTRACT COMPLETION DATE BUT THERE ARE EXCUSABLE DELAYS.*
 - * *CO ADDS REQUIREMENTS TO CONTRACT BUT FAILS TO EXTEND CONTRACT TIME.*

GENERAL REQUIREMENTS FOR GOVERNMENT-DIRECTED CONSTRUCTIVE ACCELERATION:

1. *A PERIOD OF EXCUSABLE DELAY MUST EXIST.*
2. *GOVERNMENT MUST HAVE ACTUAL KNOWLEDGE OF THE DELAY WITH ENOUGH DATA TO BE ABLE TO MAKE REASONABLE DETERMINATION.*
 - * *CONTRACTOR MUST NOTIFY GOVERNMENT WITH DATA; OR*
 - * *GOVERNMENT MUST HAVE ACTUAL KNOWLEDGE.*
3. *GOVERNMENT MUST FAIL OR REFUSE TO GRANT THE REQUESTED EXTENSION WITHIN REASONABLE TIME.*
4. *THERE MUST BE AN EXPRESS OR IMPLIED GOVERNMENT ORDER TO ACCELERATE PROGRESS.*
5. *CONTRACTOR MUST NOTIFY GOVERNMENT THAT ORDER IS CONSIDERED TO BE A CONSTRUCTIVE CHANGE.*
6. *CONTRACTOR MUST MAKE ACTUAL, REASONABLE EFFORT TO ACCELERATE, RESULTING IN ADDITIONAL COSTS.*

| Exhibit 7-5*2. Accelerated Contract Work

DEALING WITH ACCELERATION WHEN THERE ARE EXCUSABLE DELAYS

- * AVOID CONSTRUCTIVE GOVERNMENT ACCELERATION, IF THE NEED DATE ALLOWS EXTENSION TO THE SCHEDULE. MAKE TIMELY ANALYSIS, COMMUNICATE TO CONTRACTOR INTENT TO GRANT SPECIFIC NUMBER OF DAYS TIME EXTENSION.
- * IF INTENTIONAL ACCELERATION IS NECESSARY DUE TO NEED DATES, AND THE GENERAL REQUIREMENTS ARE PRESENT (GOVERNMENT IS LIABLE):
 1. DETERMINE THE FACTS:
 - * WHEN DID ACCELERATION BEGIN?
 - * WHEN DID IT END?
 - * WHAT ADDITIONAL COSTS WERE INCURRED?
 2. SOURCES OF INFORMATION:
 - * PAYROLLS, Q.C. REPORTS, Q.A. REPORTS, CORRESPONDENCE, EXAMINATION/AUDIT OF PROPOSAL, ETC.,
 3. COST INDICATORS:
 - * DO PAYROLLS SHOW ABNORMAL OVERTIME DURING SPECIFIC PERIOD?
 - * WERE NUMBERS OF CRAFTSMEN OR SUPERVISORS SIGNIFICANTLY INCREASED?
 - * WAS ADDITIONAL EQUIPMENT MOBILIZED?
 - * WAS THERE ADDITIONAL JOBSITE MANAGEMENT?
 4. EXAMPLES OF COSTS TO CONSIDER:
 - * PREMIUM PORTION OF THE OVERTIME
 - * ADDITIONAL NUMBERS OF OVERHEAD PERSONNEL
 - * EXTRA COSTS FOR SALARIED EMPLOYEES
 - * ADDITIONAL EQUIPMENT MOBILIZATION COSTS
 - * LOSS OF EFFICIENCY -- IMPACT
 - * AIR FREIGHT VERSUS NORMAL DELIVERY COSTS

| Exhibit 7-5*2. Accelerated Contract Work - Continued

IMPACT ON THE UNCHANGED WORK

- * IMPACT IS THE COST OR TIME EFFECT OF A CHANGE ON THE UNCHANGED WORK
- * IMPACT WAS HISTORICALLY NOT RECOGNIZED
- * WWII - BECAME BIG PROBLEM ON MILITARY FAST PROJECTS
- * RICE DOCTRINE - 1942 SUPREME COURT CASE
- * 1968 - CHANGES CLAUSE REVISED TO INCLUDE IMPACTS IN THE EQUITABLE ADJUSTMENT. ALSO IN DIFFERING SITE CONDITIONS CLAUSE
- * EXAMPLES
 - * RIPPLE EFFECT ON SCHEDULE
 - * MULTIPLICITY OF CHANGES
 - * STACKING OF TRADES (CONGESTION)
 - * FATIGUE (OVERTIME)
 - * REASSIGNMENT OF MANPOWER
 - * LOSS OF MORALE AND ATTITUDE
 - * CREW SIZE INEFFICIENCY
 - * ERRORS AND OMISSIONS -- POOR WORKMANSHIP
 - * SITE ACCESS
 - * LOGISTICS DELAYS OR PRICE INCREASES
 - * LOSS OF MATERIAL DISCOUNTS TIMING/QUANTITIES
 - * DILUTION OF SUPERVISION
 - * JOINT OCCUPANCY INTERFERENCE (BOD)

DEALING WITH IMPACT

- * NEGOTIATOR MUST ANALYZE AND INCLUDE VALID CONSIDERATION IN PRE-NEGOTIATION GOVERNMENT ESTIMATE AND OBJECTIVES.
- * DISCUSS AND DOCUMENT RESOLUTION IN AGREEMENT.
- * REMOVE FROM ESTIMATE IF NOT INCLUDED OR RESOLVED IN AGREEMENT. LATER CLAIM WOULD RESULT IN DOUBLE RECOVERY FOR SAME ITEM.
- * IF UNILATERAL, INCLUDE CONSIDERATION IN EQUITABLE ADJUSTMENT AMOUNT AND DOCUMENT.

Exhibit 7-5*3. Impact Costs

OCE WEIGHTED GUIDELINES METHOD FOR DETERMINING PROFIT

1. Use of Weighted Guidelines in Connection with Determining Fair and Reasonable Profit for Fixed-Price Construction Contracts and Modifications. In preparing Government estimates and/or where profit is negotiated as an element of price, either prime or subcontractor, a reasonable profit shall be negotiated or determined for each procurement action by using the following procedure as a guide:

<u>Factor</u>	<u>Rate</u>	<u>Weight</u>	<u>Value</u>
Degree of Risk	20		
Relative Difficulty of Work	15		
Size of Job	15		
Period of Performance	15		
Contractor's Investment	5		
Assistance by Government	5		
Subcontracting	<u>25</u>		
	100		%

2. Based on the circumstances of each procurement action, each of the above factors shall be weighed from 0.03 to 0.12 as indicated below. The value shall be obtained by multiplying the rate by the weight. The value column when totaled indicates the fair and reasonable profit percent-age under the circumstances of the particular procurement.

a. Degree of Risk. Where the work involves no risk or the degree of risk is very small the weighing should be 0.03; as the degree of risk increases the weighing should be increased up to a maximum of 0.12. Lump sum items will have, generally, a higher weighed value than unit price items for which quantities are provided. Other things to consider: The portion of the work to be performed; reasonableness of negotiated costs; amount of labor included in costs; whether the negotiation is before or after performance of work; etc.

b. Relative Difficulty of Work. If the work is most difficult and complex the weighing should be 0.12 and should be proportionately reduced to 0.03 on the simplest of jobs. This factor is tied in to some extent with the degree of risk. Some things to consider: the nature of the work; by whom it is to be done; where; what is the time schedule; etc.

c. Size of Job. All work not in excess of \$100,000 shall be weighed at 0.12. Work estimated between \$100,000 and \$5,000,000 shall be proportionately weighed from 0.12 to 0.05. Work from \$5,000,000 to \$10,000,000 shall be weighed at 0.04 and work in excess of \$10,000,000 at .03.

d. Period of Performance. Jobs in excess of 24 months are to be weighed at 0.12. Jobs of lesser duration are to be proportionately weighed to a minimum of 0.03 for jobs not to exceed 30 days. Although EFARS provides that no weight is to be allowed where additional time is required, an Engineer Board of Contract Appeals has ruled that a weight can be assigned for this element if the changed work requires more time than the originally specified work, even if interim or final completion dates are not extended

e. Contractor's Investment. To be weighted from 0.03 to 0.12 on the basis of below average, average or above average. Things to consider: use of Government-owned property; equipment and facilities expending assistance; etc., for average Government assistance, use 0.12.

f. Subcontracting. To be weighed inversely proportional to the amount of subcontracting. Where 8% or more of the work is to be subcontracted, the weighing is to be 0.03 and such weighing proportionately increased to 0.12 where all the work is performed by the contractor's own forces.

3. When considered necessary because of unusual circumstances or local conditions, the range of weight may be increased to an upper limit of 0.15 if supported by adequate justification and approval of the Huntsville Center engineer.

4. Facilities Capital Cost of Money (FCCM). In accordance with EFARS, the FCCM will not be recognized as an allowed cost in construction contracts where the method of computing profit is other than the method prescribed in FAR. Inasmuch as the OCE weighted guideline method is prescribed for profit evaluation, the FCCM should not be allowed as a separate cost in the prime settlement. The only exception to this rule is that FCCM may be included in equipment use rates without a reduction in profit allowance. If during negotiations, an impasse is reached relative to the EFARS instructions, it would be an acceptable alternative to follow FAR instructions. Under FAR, FCCM can be allowed as a separate cost element provided that profit (computed by methods other than the manufacturing weighted guidelines prescribed therein) is reduced by the amount of FCCM allowed. If an impasse persists after presentation of the above alternate approach, the matter should be forwarded to CH-CA for consideration.

5. CEHND Form 971, Reasonable Profit on Fixed-Price Construction Contracts, and charts for Weighted Guideline Profit Determination for size of job, period of performance, and subcontracting, are pages 3, 4 and 5 to this exhibit

WEIGHTED GUIDELINE PROFIT DETERMINATION					
SIZE OF JOB:	<u>FACTOR</u>			<u>FACTOR</u>	
0	100,000	0.120	900000	3,000,000	0.079
100,000	200,000	0.119	3,000,000	100,000	0.077
200,000	300,000	0.117	100,000	200,000	0.076
300,000	400,000	0.116	200,000	300,000	0.074
400,000	500,000	0.114	300,000	400,000	0.0734
500,000	600,000	0.113	400,000	500,000	0.071
600,000	700,000	0.111	500,000	600,000	0.070
700,000	800,000	0.110	600,000	700,000	0.069
800,000	900,000	0.109	700,000	800,000	0.067
900,000	1,000,000	0.107	800,000	900,000	0.066
1,000,000	100,000	0.106	900,000	4,000,000	0.064
100,000	200,000	0.104	4,000,000	100,000	0.063
200,000	300,000	0.103	100,000	200,000	0.061
300,000	400,000	0.101	200,000	300,000	0.060
400,000	500,000	0.100	300,000	400,000	0.059
500,000	600,000	0.099	400,000	500,000	0.057
600,000	700,000	0.097	500,000	600,000	0.056
700,000	800,000	0.096	600,000	700,000	0.054
800,000	900,000	0.094	700,000	800,000	0.053
900,000	2,000,000	0.093	800,000	900,000	0.051
2,000,000	100,000	0.091	900,000	5,000,000	0.050
100,000	200,000	0.090	5,000,000	10,000,000	0.040
200,000	300,000	0.089	OVER	10,000,000	0.300
300,000	400,000	0.087			
400,000	500,000	0.086			
500,000	600,000	0.084			
600,000	700,000	0.083			
700,000	800,000	0.081			
800,000	900,000	0.080			

Exhibit 7-5*4. HQUSACE Weighted Guidelines Method for Determining Profit (Continued)

Weighted Guideline Profit Determination - Continued

Period of Performance	Factor
OVER 24 MONTHS -----	0.120
23 TO 24 MONTHS -----	0.116
22 TO 23 MONTHS -----	0.112
21 TO 22 MONTHS -----	0.109
20 TO 21 MONTHS -----	0.105
19 TO 20 MONTHS -----	0.101
18 TO 19 MONTHS -----	0.098
17 TO 18 MONTHS -----	0.094
16 TO 17 MONTHS -----	0.090
15 TO 16 MONTHS -----	0.086
14 TO 15 MONTHS -----	0.082
13 TO 14 MONTHS -----	0.079
12 TO 13 MONTHS -----	0.075
11 TO 12 MONTHS -----	0.071
10 TO 11 MONTHS -----	0.068
09 TO 10 MONTHS -----	0.064
08 TO 09 MONTHS -----	0.060
07 TO 08 MONTHS -----	0.064
06 TO 07 MONTHS -----	0.052
05 TO 06 MONTHS -----	0.049
04 TO 05 MONTHS -----	0.045
03 TO 04 MONTHS -----	0.041
02 TO 03 MONTHS -----	0.038
01 TO 02 MONTHS -----	0.034
UNDER 30 DAYS -----	0.030

SUBCONTRACTING

80% OR MORE -----	0.030
70% TO 80% -----	0.042
60% TO 70% -----	0.055
50% TO 60% -----	0.068
40% TO 50% -----	0.080
30% TO 40% -----	0.092
20% TO 30% -----	0.105
10% TO 20% -----	0.118
0% TO 10% -----	0.120

| REASONABLE PROFIT ON FIXED-PRICE CONSTRUCTION CONTRACTS

PROJECT R&D Missile RehabPAGE OF 1LOCATION Redstone Arsenal, ALDATE 31 May 85

Fair and reasonable profit on fixed price construction contracts and modifications.

FACTOR	WEIGHTED	RATE	WEIGHT	VALUE
Degree of Risk (where the risk is very small weighting should be .03)	0.03 to 0.12	1820%	0.08	1.60
Relative Difficulty of Work (If work is most difficult and complex the weighting should be .12)	0.12 to 0.03	15	0.08	1.20
Size of Job (100,000 to 5,000,000)	0.12 to 0.05	15	0.10	1.50
(5,000,000 to 10,000,000) (work not in excess of \$100,000 shall be weighted at .12) (between \$100,000 and 5,000,000 from .12 to .05) (\$5,000,000 to \$10,000,000 at .04 and in excess of \$10,000,000 at .03)	0.04	15	0	0
Period of Performance (Jobs in excess of 24 mos. are to be weighed at .12)	0.12 to 0.03	15	0.04	0.60
Contractor's Investment (.03 to .12 on the basis of below average, average and above average)	0.12 to 0.03	5	0.08	0.40
Assistance by Government (.12 to .03 on the basis of average to above average)	0.12 to 0.03	5	0.12	0.60
Subcontracting (80% or More .03) (To be weighted inversely proportional to the amount of subcontracting).	.03 to 0.12	25	0.12	3.00
			100%	8.9%

| REASONABLE PROFIT FACTOR, (MAX = 0.12)

Exhibit 7-5*4. HQUSACE Weighted Guidelines Method for Determining Profit (Continued)

FACILITIES CAPITAL COST OF MONEY (FCCM):

1. REDUCTION OF PROFIT OBJECTIVE AND
2. FCCM ADJUSTMENT FOR OWNED EQUIPMENT WHEN EQUIPMENT COST GUIDE RATES ARE USED

1. References:

FAR 15.903(c), 31.205-10
DFARS 215.973
1995 EFARS 15.973

2. General. Facilities Capital cost of Money is an important cost determined by applying a cost-of-money rate to the net book value of tangible and intangible capital assets which are employed in contract performance. This cost is an imputed cost attributable to all contractors without regard as to whether the contractor assets were acquired through equity or borrowed capital. A Cost of Money is not a form of interest on borrowing, but rather an element, which represents an allocation of the contractor's cost for having his assets committed to the performance of a specific contract.

3. Department of Defense Profit Off-Set Policy.

a. DFARS 215.973 requires an offset to the pre-negotiation profit objective based on 1% of the total job cost or the cost of facilities capital dollar amount whichever is less.

b. This adjustment is needed for the following reason: The values for the profit factors used in the weighted guidelines method were adjusted to recognize the shift in FCCM from an element of profit to an element of contract cost (FAR 31.205-10) and reductions were made directly to the profit factors for performance risk. In order to ensure that this policy is applied to all DOD contracts which allow FCCM, similar adjustments shall be made to contracts which use alternate structured approached. (i.e., COE Weighted Guidelines Method).

4. Allowability as a Cost. Whether or not the contract is otherwise subject to CAS (Cost Accounting Standards) the cost of money is allowable **IF:**

a. It is calculated and allocated to contracts and vested in accordance with FAR 31.205-10 and FAR 30.417. Normally, require a recent audit verifying the calculation.

b. The contractor maintains adequate records to demonstrate compliance with this standard.

c. Included in the capitalized cost that provides the basis for allowable depreciation and/or amortization of assets.

d. And it is NOT simply the contractor's actual interest cost.

Exhibit 7-5*5. Application of Facilities Capital Cost of Money (FCCM) on Modification

5. Example: Calculation of Factors

		Project Pool	G&A Pool	
Gross Assets	(A)	\$14,500,000	\$78,900,000	
Accumulated Deprec.	(B)	<u>- 8,400,000</u>	<u>- 45,700,000</u>	(Includes owned equip)
Net Book Value	8	\$ 6,100,000	\$33,200,000	(Excludes owned equip)
Secty of Treasury Interest Rate	(D)	X 9.0%	X 9.0%	
Cost of Money to Be Allocated	(E)	\$ 549,000	\$ 2,988,000	
Allocation Base: Total Cost of Sales	(F)	\$ 28,000,000	\$ 1,188,563	(Excludes owned equip)
Cost of Money Factor* (E/F)		0.01961	0.00251	

(A), (B), 8 average values for the year

(D) FAR 30.414-40(b). Published every 6 months.

* Appendix A to FAR 30.414 requires 5 decimal places.

6. Application of Factors.

Total Project Cost (or Cost of Modification)	\$300,000	(owned)
Direct Equipment	30,000	(rented)
	200,000	
Direct Labor	50,000	
Subcontract Costs	110,000	
Field Overhead	39,500	
G&A	12,368	
Bond	6,800	
Total Job Cost	\$748,690	
Less Owned Equipment	300,000	
Total	\$448,690	

***NOTE:** If the cost of the work being priced includes equipment and that equipment is priced based on the Equipment Ownership and Operating Expense Schedule, Cost of Facilities Capital will already be included in the equipment rates. **Do not calculate FCCM on equipment when the rates from the Schedule are used. If actual cost for equipment is used, no adjustment is needed.**

Exhibit 7-5*5. Application of Facilities Capital Cost of Money (FCCM) on Modification
(Cont.)

G&A Allocation:			
Total Cost		\$ 448,690	
CFC Factor		<u>X .00251</u>	
			\$1,126
Project Allocation:			
Total cost		\$ 448,690	
CFC Factor		<u>X .01961</u>	
			\$8,799
1.	Total CFC applicable to action		\$9,925 *
2.	1% off-set X \$748,690		\$7,487 **
	* Add to cost after profit is applied.		
	** Reduce PNO Profit by lessor of 1. or 2.		

Profit:			
Say 8% X \$748,895	=	\$ 59,895	
Reduction		<u>- 7,487</u>	
PNO Profit	=	\$ 52,408	

Summary for PNO:			
Total Job Cost		\$748,690	
CFC (See 1. Above)		9,925	
PNO Profit		<u>\$ 52,408</u>	
Subtotal Before		\$811,023	

NOTE: The allocation base, direct job or project costs, must be consistent with the method used to allocate the cost. Thus, in this example, the allocation base was total job or project costs. The factor was then applied to the amount negotiated, which represents the amount the total job, or project costs would increase as a result of this negotiation.

| Exhibit 7-5*5. Application of Facilities Capital Cost of Money (FCCM) on Modification (Cont.)

CEHND-CD-CA (415-10a)

3 September 1997

MEMORANDUM FOR CEHNC-CD (Field and Center Personnel)

SUBJECT: Policy Guidance for Treatment of Proposal Preparation Costs on Modifications

1. This is to provide guidance to contract administration personnel on a policy for payment of proposal preparation costs on modifications for changes to fixed-price construction work. This policy is limited to the ChemDemil contracts, issued by IOC. The following procedures should, if followed by HNC field offices, result in a consistent HNC approach to payment for proposal preparation costs. Each contract must be analyzed individually.
2. In general, the contractor has the contractual duty to prepare and submit change order proposals, in response to an RFP. The contractor will incur costs for this effort; the extent will depend upon the complexity and scope of the proposed change.
3. If the contractor has field office personnel available to prepare change proposals, the Government has paid for their proposal preparation effort. The contractor should utilize these personnel to the extent possible. There should be no direct cost included in the modification proposal for proposal preparation by field office personnel, unless the change is initiated past the contract completion date and the Government is otherwise liable for extended overhead.
4. If the contractor's home office estimating staff prepare change order proposals, the cost is usually absorbed in the contractor's G&A overhead (indirect) mark-up on the direct costs of the changed work. These costs are usually included in the contractor's overhead rate and provide compensation, regardless of the actual cost.
5. An exception is where the change is so significant and the cost of proposal preparation is so extraordinary that the field office staff cannot prepare the proposal and the contractor's G&A rates are insufficient for absorption of the costs. In such a case, reasonable, **direct costs** of off-site proposal preparation are allowable, in lieu of paying for it in the overhead rates.
6. Another exception is when the change is too complex for the on-site staff to prepare the proposal and where the SC can prove that it did not include any costs for preparation of complex change order proposals by home or branch office estimating in its Best and Final Offer overhead rates. We may entertain paying direct costs for the off-site estimators in such cases. The costs must be reasonable.

| Exhibit 7-5*6. Policy Guidance for Treatment of Proposal

Preparation Costs on Modifications

7. For the situations addressed in 5 and 6 above, the HNC ACO has directed that the SC must certify in the settlement for each modification that includes a direct charge for off-site proposal preparation costs that:

- ! No direct or indirect change order proposal preparation costs were included in the contract BAFO proposal;
- ! All proposal preparation costs and all salaries of those personnel preparing change order proposals have been otherwise excluded from all indirect cost pools used to compute overhead and excluded from indirect overhead charges included in the modification proposal;
- ! Proposal preparation costs are not otherwise duplicated in the change order proposal price.

8. For changes requiring an audit, the Resident Engineer will request the auditor verify the above restrictions.

9. Do not reimburse the contractor for additional efforts to rework a change proposal due to gross mistakes by the contractor's estimators or their failure to follow customary or FAR required procedures. These costs are not considered Areasonable.

10. If the Government initiates the change, then cancels or otherwise never issues the modification, the contractor might be entitled to recover reasonable proposal preparation costs. However, if the change must be canceled due to lack of cooperation, non-performance by the contractor, or outrageous pricing, do not reimburse the contractor for proposal preparation costs.

11. FAR 31.201-3 says, in part: *AA cost is reasonable if, in its nature and amount, it does not exceed that which would be incurred by a prudent person in the conduct of competitive business.* It further states: *ANo presumption of reasonableness shall be attached to the incurrence of costs by a contractor... the burden of proof shall be upon the contractor to establish that such cost is reasonable.* The FAR principle of reasonableness applies to both the amount and the conduct of the contractor. The contractor also has a contractual responsibility to reasonably cooperate in settling mods.

Exhibit 7-5*6. Policy Guidance for Treatment of Proposal **(Continued)**

Preparation Costs on Modifications (continued)

FIELD OVERHEAD EXAMPLE

TASK: Find field overhead allowance for a modification to a \$10 million, 20-month construction project.

1. With no time extension.
2. With time extension.

GIVEN: Field Office Budget (included in original bid or contract proposal):

Mobilization	\$ 120,000
De-mobilization	40,000
Project Manager	80,000
Quality Control Staff	120,000
Safety Manager	60,000
Payroll Tax/Insurance	78,000
Supplies	20,000
Office Rent	40,000
Miscellaneous	<u>12,000</u>
Total	\$ 570,000

Direct Costs: \$8,150,000

Placement Schedule (Direct Costs)

<u>Month</u>	<u>Cost</u>
2	\$ 160,000
4	410,000
6	820,000
8	1,630,000
10	3,260,000
12	5,380,000
14	6,930,000
16	7,740,000
18	7,990,000
20	8,150,000

Exhibit 7-5*7. Analyzing and Calculating Field Overhead

Assume now that four months into the project it is necessary to make a major modification. The contractor has submitted with its cost or pricing data the following actual costs to date and proposed field overhead rate:

<u>Item</u>	<u>Cost to Date</u>
Mobilization	\$ 120,000
Salaries	52,000
Payroll Tax/Insurance	15,000
Rent	8,000
Misc. & Supplies	<u>4,000</u>
	\$ 208,000

Direct Cost to Date: \$ 410,000

Proposed Field Overhead Rate: $\$208,000/\$410,000 = 50.7\%$

Solution:

- Analyze each indirect cost element by behavior category:
 - X Variable (proportional to amount of work, not time related).
 - X Fixed (time related, not related to volume of work).
 - X One-time (sunk costs, non-recurring).
 - X Semi-variable (exhibits more than one of the above types of behavior - analyze each part separately).

2. Analyze each element as to reasonableness, cost trends, correlation to remaining work (e.g., if only 40% of original QC staff or field office staff necessary for the period of time extension delay, reduce salaries, etc.)

Analysis:

Four Months Costs Segregated by Type Behavior

	<u>Fixed</u>	<u>Variable</u>	<u>One-Time</u>	<u>Semi-Variable</u>
Mobilization			\$120,000	
Salaries	\$52,000			
Payroll Tax/Insurance	15,000			
Rent	8,000			
Misc. & Supplies	<u>\$ 4,400</u>			
	\$75,000	\$ 4,400	<u>\$120,000</u>	\$ 0

X Direct Cost to Date: \$410,000

X Salaries are running on-schedule and consistent with as-bid conditions. Miscellaneous and supplies are fairly consistent with budget.

Exhibit 7-5*7. Analyzing and Calculating Field Overhead (**Continued**)

Conclusion:

1. Field overhead with no time extension:

$$\frac{\$ 4,400}{\$410,000} \times 100\% = 1.07\% \quad \text{Say 1.1\% of direct costs.}$$

2. Field overhead with compensable time extension:

X Allow 1.1% of direct costs. Also allow extended field overhead
For the compensable portion of the time extension.

X Extend field overhead = $\frac{\$18,750}{1 \text{ month}} \times \frac{1 \text{ month}}{30 \text{ days}} = \$625/\text{day}$

X Allow 1.1% of direct costs plus \$625/day time extension for field overhead.

NOTE: A Compensable \cong means that the Government is exclusively responsible for the time extension, after deducting concurrent delays or contractor delays. When both parties are responsible for a percentage of a delay period (e.g., 100 days delay; Government caused 45% of the delay; contractor caused 55%, etc.), prorate the number of days to obtain number of compensable days. If it can't be determined which party is responsible for the delay, an uncompensable time extension would normally be due.

EICHLEAY/"UNABSORBED"/"EXTENDED" OVERHEAD

1. Attached to this exhibit are sample calculations of "extended home office overhead," promulgated by the Kellogg Corporation in a June 1989 newsletter, discussion concerning the sample, and general information on this subject for your reference.
2. Attempts by contractors to improperly claim unabsorbed overhead must be challenged. Note the different formulas in the example and how they differ for calculated "damages" the contractor will claim. Be especially wary of proposals using the "Modified Eichleay Formula."
3. In general, unabsorbed overhead isn't applicable to delays or additional work under the Changes clause. Its applicability is rare and is limited to certain delays due to directed or constructive (total) suspensions of work. Modifications should normally include home office overhead as a percentage of direct and indirect job costs for both increase and credit modifications.

| Exhibit 7-5*8. Contractor Overhead Calculations

KELLOGG CORPORATION

**"CALCULATING DAMAGES FOR EXTENDED HOME OFFICE OVERHEAD"
(JUNE 1989)**

The Eichleay Formula is the best known and most widely used method for calculating home office overhead damages. It may be interesting to create a set of facts so that the damages resulting from three versions of the Eichleay Formula can be compared. Therefore, assume the following:

Original Contract Price	\$2,250,000
Total Contract Billings	2,925,000
Total Company Billings for Organization Contract Period	8,200,000
Total Company Billings for Actual Contract Period	11,700,000
Contract Billings for Extended Period	450,000
Direct Costs Incurred During the Extended Period (excluding job site overhead)	360,000
Total Home Office Overhead for Actual Contract Period	1,520,000
Total Home Office Overhead for Org. Contract Period	1,350,000
Total Fixed Home Office Overhead for Original Contract Period	950,000
Home Office Overhead as a Percent of Direct Costs	15%
Original Days of Contract Performance	90 Days
Actual Days of Contract Performance	120 Days
Number of Days Delay	30 Days

[CEHNC-CD-CA NOTE: Claims for "extended" or "unabsorbed" home office overhead will be recognizable as a daily rate for a specified period.]

Version #1: Original - Eichley Formula

(1) Total Contract Billings x Total Home Office = Home Office
 divided by Total Contract Billings Overhead for Overhead
 for Actual Cont. Period Actual Contract Allocable to
 Period Contract

Sample Calculation (1): $\frac{\$ 2,925,000}{11,700,000} = 25\% \times 1,520,000 = \$380,000$

(2) Allocable Home Office Overhead = Daily Home Office Overhead
 divided by Actual Days of Contract Performance Allocable to Contract

Sample Calculation (2): $\frac{\$380,000}{120 \text{ Days}} = \$3,170/\text{Day}$

(3) Daily Home Office x No. of Days = Extended Home Office
 OH Allocable to Contract of Delay Overhead Damages

Sample Calculation (3):
 $\$3,170/\text{Day} \times 30 \text{ Days} = \$95,100$

Modified Version 1 of Eichley Formula

Original Cont. Price x Total Home Office = Home Office
 divided by Total Overhead for Overhead
 Cont. Billings for Original Contract Allocable
 Original Period Period Contract

Sample Calculation (1):
 $\frac{\$2,250,000}{8,200,000} = 27\% \times 1,350,000 = \$365,000$

(2) Allocable Home Office Overhead = Daily Home Office Overhead
 divided by Original Days of Cont. Performance Allocable to Contract

Sample Calculation (2): $\frac{\$365,000}{90 \text{ Days}} = \$4,055/\text{Day}$

(3) Daily Home Office x Number of Days = Extended Home Office
 Overhead Allocable to Contract of Delay Overhead Damages

Sample Calculation (3): $\$4,055/\text{Day} \times 30 \text{ Days} = \$121,650$

[CEHNC-CD-CA NOTE: The advantage to contractor is that damages can be determined before extended period is over.]

Exhibit 7-5*8. Contractor Overhead Calculations - Continued

COMMENTARY ON KELLOGG CORPORATION SAMPLE
AND
"EXTENDED" OR "UNABSORBED" HOME OFFICE OVERHEAD

1. The example was created to illustrate use of different formulas and their results. The circumstances created to support the example, however, can be challenged, if a contractor imitates them in a real contract case. Unfortunately, many contractors and Government negotiators do not have any understanding of unabsorbed overhead or how to apply it. They use the formulas because they are convenient and are generous. The purpose of this guidance is to help the Government negotiator understand some of the theory and rationale underlying the concept of unabsorbed overhead, when it does and doesn't apply and how to challenge unwarranted claims. This commentary addresses unabsorbed overhead in general and the sample in detail.

2. It is necessary to first understand how construction companies normally account for their "General and Administrative" expenses. These are the indirect costs of maintaining the home office and construction branch offices, if any. In general, G&A are normally charged to projects as an average percentage of the cost of all jobs or contracts ("cost of sales"). FAR Part 31.203 gives a detailed discussion. The formula for calculating a G&A rate generally looks like this:

$$\text{G\&A rate} = \frac{\text{X\% of Home Office Cost Pool} + \text{Branch or Div Ofc Pool}}{\text{Total Cost of Sales of Branch or Division}} \times 100\%$$

where X = share of home office costs allocated to the Branch or Division.

On Government contracts, the home and branch office cost pools must also comply with the allowability, allocability, and reasonableness requirements of FAR Part 31. Thus, not all "legal" home or branch office costs are allowable or allocable to Government contracts. The G&A rate theoretically represent conditions during the time of performance of the contract or modification being negotiated. In practice the G&A rate is usually calculated from the contractor's latest fiscal accounting period and tested for a reasonable correlation to current or projected conditions.

3. The above accounting practice treats G&A as a "variable, indirect cost." In other words, G&A recovery is related to the amount of contract costs incurred, even though G&A is actually a "semi-variable, indirect cost" (composed of both fixed, daily costs and costs which vary with the amount of work being performed). Accounting for G&A as a variable cost (%) is the most practical method for contractors to price work in a way to be reasonably assured of G&A recovery over the long term.

4. FAR Part 31.203(d) requires that a contractor's method of allocating indirect costs "be in accordance with generally accepted accounting principles which are consistently applied." Contractors are not allowed to charge G&A on the basis of "actual costs" for one change, then as a "daily cost" on the next change, or on a percentage basis on another change, etc.

5. Unabsorbed overhead recovery was originally conceived in Government supply contracts, where tooling or production on an assembly line was completely suspended for extended periods, solely due to Government acts or

| Exhibit 7-5*8. Contractor Overhead Calculations - Continued

omissions (e.g., Allegheny Sportswear Co., ASBCA No. 4163, 25 March 1958, 58-1 BCA 1684 and Carteret Work Uniforms, ASBCA No. 1015, 25 July 1952 and ASBCA No. 1647, 20 August 1954). In those cases, the manufacturer's overhead costs were largely fixed and could not be reduced, thus were not fully "absorbed" without unfairly increasing allocation to other production lines or contracts. A classic case of unabsorbed overhead would occur if the contractor's entire production were shutdown for extended periods. In calculating the equitable adjustment for the suspension of work on the above cases, it was impossible for the manufacturer to apply the normal accounting practice (allocating overhead as a percentage of costs), since there were no direct costs incurred. To recover overhead costs incurred but not calculable in the ordinary manner, the manufacturers developed "unabsorbed overhead" formulas to allocate a prorata share of daily overhead. The boards have accepted this concept under limited circumstances.

6. The Eichleay case (ASBCA NO. 5183, 29 July 1960, 60-2 BCA) created the formula now most widely adopted by the construction industry for delay claims. Its applicability has been upheld by boards and courts in limited cases where the previously mentioned conditions existed on construction contracts. Its use has also been adopted by the manufacturing industry. The analogy to the manufacturing shutdown discussed above must be established for the concept to be valid on a construction contract. Eichleay application should be limited to those extreme cases (analogous to the manufacturing plant shutdown) where it's impossible to apply normal accounting practice. Normal practice would be to calculate G&A as a percentage of suspension costs, if any, and assume that the contractor will absorb his home overhead costs over the long run.

7. The Kellogg Corporation sample uses the term "extended home office overhead." In this case, as in most, the life or existence of the home office is not "extended" by the owner's "delay." The home office will still exist after this project is over. Treating home office expense as an "extended" or fixed, daily cost is inconsistent with normal accounting practices (variable, indirect cost). Therefore, challenge the entire amount as non-existent, inappropriate and inapplicable if a contractor uses this terminology. Chances are, he will not be able to explain the concept of his damages, let alone justify them.

8. It appears that the sample is a representation of "unabsorbed overhead." As discussed later, actual claims or requests for adjustment must provide proof that unabsorbed overhead actually existed. The sample did not include such evidence. A claim for unabsorbed overhead is really a request to recoup increased overhead costs allocated to other work because of a work stoppage which occurred on the delayed contract. The mere extension of the completion date should not be considered a work stoppage on a delayed contract (Montoya Construction Co., Inc. ASBCA 34691, 89-1 BCA). Stated another way, unabsorbed overhead is that amount of indirect expense actually incurred, which would have been allocated to the contract had the delay not occurred, and is not recoverable in the revenue from any other work (*Government Contract Accounting*, Howard P. Wright and James P. Bedingfield, 1979, page 347). The theory is that there must have been virtually no costs incurred on the job for an extended period. Thus, the contract must have no cost base to have its share of the home office, indirect, G&A burden charged against. In addition, the delay must have tied up the contractor's resources, e.g., equipment,

Exhibit 7-5*8. Contractor Overhead Calculations - Continued

plant, bonding capacity, etc., to the extent that the resources could not be diverted to other work or such that the Contractor was prevented from taking on other work during the delay period (Capital Electric Co. VS U.S., 729, F. 2nd 743, 1984).

9. The burden of proof is on the contractor to demonstrate that Government caused delay (no concurrent delays by contractor, third parties, weather, etc.) caused the contractor's other contracts to be burdened with increased overhead. (Savoy Construction Co., ASBCA 21218, et al, 80-1, BCA para. 14392). The contractor must be able to distinguish and segregate the owner suspension from other excusable or contractor-caused delays (Novak and Co., Inc. vs. Facilities Development Corp. 498 N.Y.S. 2nd 492 - N.Y. AD, 1986). If the work under a delayed contract has been performed, regardless of when, there cannot be unabsorbed overhead unless (i) the total overhead cost has been increased or (ii) other work had to be turned away. The sample does not indicate or prove that either of the two conditions occurred.

10. As stated above, once an owner-caused suspension delay is established, the contractor must prove an actual economic impact, showing it was impossible to obtain other work to perform during the suspension, thereby absorbing home office overhead on other work (Capital Electric). The contractor must make an effort to mitigate the effects of the stoppage by diverting idle resources to other work, reducing variable G&A costs, commensurate with the job shutdown, or obtaining other work to absorb the overhead. If he offers no financial documentation of financial impact, Eichleay has been denied, even with proof of owner-caused suspension (LaCoste Builders, Inc. ASBCA 29884, Nov 23, 1987; Willie J. Brown D/B/A WB Const. Co., ASBCA 42493, Jul 17, 1991). If the contractor failed to make a reasonable effort to obtain other work to direct the idle resources to, unabsorbed overhead recovery is not allowable (Vepco, Inc. ASBCA No. 29983, Feb 27, 1986). In the Kellogg sample, no explanation of the delay or proof of economic loss was offered, so the claim for unabsorbed overhead must be denied.

11. Unabsorbed overhead applies to directed or constructive suspensions of work under contract clause, *Suspension of Work* (Capital Electric). It does not generally apply to delays under the *Changes Clause*, *Differing Site Conditions Clause*, etc., (Numerous board and court cases, see Construction Claims Monthly, Feb 1991 for a good discussion). This generally excludes use of the formula in proposals under those clauses. The standard G&A markup on additional job costs are applicable. If there was an extended period of Government-caused suspension of work preceding issuance of the change and the prerequisites discussed above are met, proving there was unabsorbed overhead, there could be recovery for a portion of the period preceding issuance of the change (A.A. Beiro Construction Co., Inc. ENG BCA 5103, June 28, 1991; I.P.S. Group, Inc., ASBCA, 33182, Aug 15, 1988).

12. Three other considerations are important. First, the delay must be unreasonable. An amount of time considered to be reasonable, if any, for Government action to resolve the problem which caused the delay should be removed from the overall period of suspension for causation and calculation of any unabsorbed overhead (Day and Zimmermann-Madway, ASBCA 13367, 71-1 BCA; Santone Building and Supply Co., ASBCA 9668, 1964, E.C. Morris and Son, Inc. ASBCA 36706, Feb 15, 1991). Secondly, profit is not allowed on "unabsorbed

Exhibit 7-5*8. Contractor Overhead Calculations - Continued

overhead" recovery, since it's a result of a suspension of work. Thirdly, the contractor can only recover unabsorbed overhead for the portion of owner-caused delay, which extends the performance period past the scheduled completion date. Beyond that, there are no damages (C.F.I. Construction Co DOTBCA 1782, Jan 13, 1987). Float in the project schedule belongs to the owner. Always examine the schedule. **There is no unabsorbed overhead if the contractor completes the contract within schedule, regardless of delay.**

13. Contractors often experience some slowdown or suspension delays on their contracts and not only on their Government contracts. Another argument against claimed unrecovered overhead is that the contractor's G&A rate is effectively raised due to delays on any of his projects. Remember that G&A rates reflect long term, average experience, including normally encountered delays. Suspension type delays reduce the "total cost of sales" used in the denominator decreases, the G&A percentage increases. Subsequent modifications will incorporate the higher G&A rate. If the higher G&A rate is applied to future contracts and modifications on Government and commercial contracts and the contractor receives compensation for "unabsorbed overhead", duplicate recovery occurs. Argue that the effects of normal delays on his Government and commercial contracts are already a factor in the normal G&A rate calculation. The Government already shares the burden of past delays on commercial and Government contracts, including his own delays, as these are built-in to the G&A rate. If we allow unabsorbed overhead he will recover twice for the same delays.

14. It's important to distinguish "revenues" or contract "billings" from "cost of sales" or "contract costs." Unabsorbed overhead is not created by delayed "billings" or delayed "revenues." Unabsorbed overhead is a result of a suspension which eliminates or reduces job costs to the extent that there is no cost base to charge home office indirect costs to. As stated in paragraph 2, if there is no cost base, normal accounting practices cannot be used to allocate overhead to the delay adjustment. "Billings" are used in formulas for unabsorbed overhead only because there are not enough "costs" to charge G&A percentage to (R.W. Contracting, Inc., ASBCA No. 24627, April 4, 1984, BCA 84-2).

15. "Unabsorbed overhead" is not "unrecovered overhead." The argument that the contractor did not recover all of his overhead chargeable to your project or to other projects is irrelevant to the question of whether there was "unabsorbed overhead." If the contractor expended costs on your project, there is a cost base to allocate home office overhead to on a percentage basis consistent with standard accounting practice. The Government is responsible to include its share of G&A in any equitable adjustment while the contractor "absorbs" the rest, even if he doesn't recover it.

16. In the Kellogg Corporation sample, delays due to additional work do not justify unabsorbed overhead. The sample does not attribute delays to a suspension. The delay itself is only 30 days. However, the sample states that there were \$360,000 of direct job costs incurred during the delay period. The obvious conclusion is that there could not have been any "unabsorbed overhead," as the contractor could allocate G&A to at least \$360,000 during the period. The sample did not reveal the amount of job overhead expended during the "delay period," but G&A is normally allocated to those costs, too. Applying the contractor's G&A rate of 15% to the \$360,000 job costs, equals \$54,000 G&A allocation.

Exhibit 7-5*8. Contractor Overhead Calculations - Continued

17. The originally anticipated revenue from this project was

$$\frac{\$ 2,250,000}{90} = \$25,000/\text{day}$$

The actual revenue from this job was

$$\frac{\$ 2,925,000}{120} = \$24,375/\text{day}$$

Several conclusions can be drawn. The delay had a negligible effect on daily contract revenues, so probably had little effect on daily job costs. There was no shift of G&A burden to the contractor's other work. Even if work on the project stopped briefly, it appears that additional work was issued (\$675,000 of billings), increasing the contract cost base beyond that originally anticipated. This allowed the contractor to "absorb" the overhead from the "stopped period." This should be examined in all claimed cases of unabsorbed overhead.

18. This contract represented 25% of total company sales during the actual 120-day performance period.

(a) \$ 2,925,000 Job billings = 25% of total billings

\$11,700,000 Total billings over the 120 days

(b) Total G&A for the delay period is:

$$\begin{array}{r} \$1,520,000 \text{ Actual } 120 \text{ days} \\ -1,350,000 \text{ Original } 90 \text{ days} \\ \hline = 170,000 \text{ for } 30 \text{ days} \end{array}$$

(c) 25% of \$170,000 = \$42,500 overhead allocable to this project for the delay period.

(d) If \$54,000 can be charged to the project during the delay period (see paragraph 13), the job will more than absorb its share of G&A during the delay period. "Unabsorbed overhead" is nonexistent here.

19. Calculation of unabsorbed overhead is an inconsistent accounting practice, contrary to FAR 31.203(d). In the rare event that "unabsorbed overhead" is applicable to a suspension of work, FAR 31.201-2 limits allowability of costs resulting from accounting practices inconsistent with FAR part 31.2 to not exceed what would have resulted from practices consistent with FAR 31.2.

20. Even assuming that there was "unabsorbed overhead" on the project, one must examine the calculation to approximate an equitable solution. The sample yields inequitable results:

(a) Using the "Original Eichleay Formula"

\$95,000 > \$42,500 actual share of G&A during delay period

\$95,100 > \$54,000 at 15% G&A charged to the during delay period

Exhibit 7-5*8. Contractor Overhead Calculations (Continued)

(b) The Modified Eichleay Formula is even worse. The advantage to the contractor in using this method is that the recovery can be made before the extended period is over, which should instantly be a sign that there is no proof that the contractor will have unabsorbed overhead. If the delay is over, the formula should not be applicable.

\$121,650 > \$42,500 actual share of G&A.

\$121,650 > \$54,000 at 15% G&A.

(c) Modified Version 2 - Eichleay Formula is often applied by Government auditors. They examine the home office cost pool and eliminate all variable costs (those costs which fluctuate with work volume) leaving only the fixed (time related) G&A costs. If Eichleay must be used, this is the preferred version. It more closely approximates the direct cost markup method here, but still results in excessive recovery (see DCAA pamphlet 7641.45).

\$82,350 > \$42,500 actual share of G&A.

\$82,350 > \$54,000 at 15% G&A.

21. In conclusion, field offices must challenge claims for "extended home office overhead," "daily G&A rates," "unrecovered home office overhead," "unabsorbed overhead," etc., whenever possible. Unabsorbed overhead may be valid in certain, unusual circumstances. It is not necessarily valid simply because there was a suspension of work on a project. The burden is on the contractor to prove that the necessary conditions existed. Proving the claim may require him to open his entire accounting records to show how the delay affected his other contract work.

Exhibit 7-5*8. Contractor Overhead Calculations (Continued)

**HNC GOVERNMENT ESTIMATE APPROVAL AUTHORITY
CHEMICAL DEMILITARIZATION DIRECTORATE**

Category and Limits	Approved for Accuracy	Approved for Use in Acquisition
CSDP < \$500K Field Originated Change	RE Chief of Contract Admin	Resident Engineer or Deputy RE
ALL < \$10 Million Other than A-E (Except Field Changes Noted Above) Originated Changes)	Director of Organization with Preparation Responsibility	Director of Organization with Program Management Responsibility
All > \$10 Million Other than A-E (Including CSDP Design Originated Changes)	Director of Engineering	DC Alternate DD
A-E < \$2 MIL	Director of Organization with Preparation Responsibility	Director of Organization with Program Management Responsibility
A-E > \$ 2 MIL	Director of Organization with Preparation Responsibility	DC, Alt. DD
Universal Alternate	DE, DD, DC	DE, DD, DC

NOTE: All estimates of a controversial or politically sensitive nature shall be coordinated with the commander prior to being approved for use.

Exhibit 7-5*9, Government Estimate Approval Authority