

CHAPTER 22**COST FINDING**2201 **GENERAL**

220101. **Purpose.** This chapter provides a cost determination method to be used when a job order or a process cost accounting system is not part of the DoD Component's formal accounting system. The guidance in this chapter is to be followed by DoD Components that find it is necessary to use cost-finding techniques to determine the costs related to performing a service, to be recovered for goods or services, or to obtain cost information for decision-making and information purposes, such as productivity measurement. Normally, an organization that operates a formal cost accounting system will only use cost finding techniques to identify unfunded costs. However, even these organizations, from time to time, and on special occasions, may have a requirement to use these techniques.

220102. **Overview**

A. **Chapter 19** of this Volume prescribes the basic policy for measuring and allocating costs. This chapter applies that basic policy to cost finding, establishes cost-finding documentation policy, and describes generally recognized cost finding techniques and their potential application within the Department of Defense. The guidance contained in this chapter can be applied to situations when batch processed tasks or functions are involved as well as to specific document process functions.

B. Cost finding is an approach used in the absence of a formal cost accounting system to estimate the actual costs incurred to provide a service, produce a product, or to obtain cost information for periodic decision making and information purposes. It is available for use by those DoD activities that do not have a formal cost accounting module as part of their accounting system, but who periodically provide reimbursable services or products to other DoD Components, Federal Agencies, or to the public. Cost finding may also be necessary when the cost of an item has not been recorded in the accounting system and the item is being transferred, sold, or recorded in the accounting system for the first time or when measuring productivity.

C. The proper application of cost finding requires knowledge of cost accounting and of the organizational functions associated with the final and intermediate cost objectives. Accordingly, personnel assigned to cost-finding projects should have cost accounting experience as well as an understanding of the organizations involved.

2202 POLICY220201. Documentation

A. The application of cost-finding techniques shall be preceded by a clear requirements statement that describes:

1. The cost objectives (both intermediate and final) to which cost finding techniques are to be applied.
2. The organizations involved in performing the cost objectives and the tasks performed by each organization.
3. The cost elements that are applicable.
4. A plan that includes the specific cost finding techniques to be utilized and the criteria to be followed in selecting the specific cost finding technique to be used.
5. A description of how those techniques will accomplish the cost objective.

B. The statement and the work papers accumulating applicable cost elements shall be retained for review for the same length of time as documentation used in support of billings to the public.

C. A case study is presented as addendum to illustrate the application of the material discussed in this chapter. Discussions in the chapter are at the micro level. When a different approach might be usable to develop necessary data to establish the costs associated with a different cost objective (at the macro level, for example), information will be presented on the alternative approaches.

220202. Identification of Cost Objectives

A. For the purpose of this chapter, cost objectives are defined as either functions or work units for which management decides to identify, measure, and accumulate costs. Cost objectives shall be sufficiently discrete and described in writing to such a level of detail to form a basis to identify the specific function or product to be costed.

B. Careful attention must be paid to identification of cost objectives. When the cost objective is identified as being at a macro (an organizational level, for example) level, the amount of effort required to determine the relevant costs and the associated quantitative data should be less refined than if the cost objective were identified as being at the micro (a specific function or operation) level. At the macro level, it is possible that the accounting system, through the use of

coding structures and the general ledger operating program expense accounts listed in [Chapter 7, of Volume 1](#), of this Regulation, can provide much of the required financial data to establish relevant cost information. At the micro level, it probably will be necessary to use one of the methods described in paragraph 2203, below, to determine the time required to perform the cost objective and develop relevant cost information.

C. In addition, the classification of organizations as either direct or indirect (actually involved in performing the cost objective or performing as a support organization, respectively) is dependent on identifying cost objectives. At the macro level, as a general rule, all staff organizations will be classified as indirect, and all line organizations will be classified as direct. At the micro level, it is conceivable that a staff organization, or element thereof, could be classified as a direct organization. The distinction between the macro and micro levels will be an important consideration in complying with OMB productivity requirements discussed in section 2204 of this chapter. The bottom line is that the cost accountant must be able to translate the measurement requirements into terms of source documents, allocation techniques, and other such analysis techniques as may be necessary to meet the management requirement. Establishing a cost objective is a management decision and is essential to the proper application of cost finding techniques to a cost objective.

D. For cost finding purposes, identifying and describing cost objectives take on special importance. Within the Department of Defense, cost finding techniques will probably be used to compare costs of different organizational units or operations performing the same cost objective, or in measuring productivity, and to measure the cost of performing a particular operation, among other things. For example, the costs to issue a check at an accounting station might be compared with the same costs at other accounting stations. In such situations, cost-finding techniques serve as a tool in identifying more efficient methods of performing a given task. Cost objectives may also be used to compare organizational efficiency, for example, the costs for an intermediate objective, such as processing a personnel action at a personnel office, might be compared with other personnel offices.

220203. Identification of Organizations Involved

A. Once the cost objectives have been identified, personnel assigned to identify the costs associated with the cost objective may proceed to the next step: identifying the organizational units contributing resources to the cost objective. Generally, the units will be within the activity itself (the installation level; and, within the installation, the supply unit, the transportation unit, administration, etc.).

B. The initial task is to classify the installation-level organizational units as direct or indirect. A unit that is responsible for actually performing the work is a direct unit. A unit that provides support or performs an administrative function is an indirect unit. Care must be taken

to assure that organizational units are not classified as both direct and indirect for the same cost objective.

1. The process of classifying an organization as either direct or indirect may change as different cost objectives are identified and analyzed. Attempts to retain the same classification for different cost objectives may result in erroneous cost determinations, thus leading to misleading and faulty management decisions.

2. Indirect organizations shall be identified using the criteria cited in paragraph 190203 of [chapter 19](#), of this Volume. An organization that is classified as indirect will not always be recognized in the computation of costs for a final cost objective. At the macro level, staff organizations generally will be recognized as an indirect organization and the related costs allocated among direct organizations. At the micro level, materiality and usefulness will be determining factors.

C. The organizational units can be classified through use of an iterative process or through the use of organizational charts or tables, depending on the final cost objective. The iterative process consists of a series of questions designed to establish the relationship that each organization unit has with the product or service for which cost-finding techniques are being developed (Figure 22-1 is a suggested list of such questions). First, the organizational units directly involved in the process are identified. Then the organizational units providing indirect functions to the direct organizational units are identified. This second category is also identified and arrayed through an iterative process consisting of a series of questions designed to establish the relationship of supporting activities to direct line organizations. The procedure is repeated until all organizational units are classified as direct or indirect for all identified cost objectives.

D. In order to determine which organizations are involved, it is necessary to identify the flow of actions related to the cost objective and the related intermediate cost objectives.

E. It is important to understand that the organizational activities involved in a particular cost objective or interim cost objective can cross organizational lines of responsibility.

220204. Identification of Cost Elements

A. An important aspect of any cost finding technique is identifying the direct and indirect cost elements applicable to the product or service. Both the direct and indirect activities may have the same cost elements. The difference is in the allocation of all applicable indirect costs (factory burden). [Chapters 19 and 20](#) of this Volume provide guidance to determine factory burden.

SUGGESTED LIST OF QUESTIONS
TO BE USED WHEN IDENTIFYING AND
CLASSIFYING PARTICIPATING ORGANIZATIONS

What organizations are involved in the final and intermediate cost objectives?

Which organization has primary responsibility for the final cost objective?

Which organizations perform intermediate cost objectives?

Which organization acts in a support role to the organization(s) performing the final or intermediate cost objectives.?

Which specific organization units will be involved either directly or as a support function?

What are the specific tasks performed by each of the identified organizations?

What is the order in which the organizations involved perform their delegated responsibilities?

FIGURE 22-1

B. Care must be taken to assure that all cost elements are identified. The first step is to identify all possible cost elements and then to determine which cost elements are significant. The operating program general ledger expense accounts 6111 through 6130, which are described in [Chapter 18](#) of this Volume are used in this example. Figure 22-2 shows the potential application of each account to the direct and indirect activities. After the potential applications are identified, a decision must be made as to which cost elements are sufficiently significant as to warrant separate consideration.

C. After developing the statistical cost data, the individual or group responsible for applying cost finding to the cost objective can make a decision as to the significance of each cost element in the final determination. It is important to remember that the information is, at this point, only raw data. Decisions must be made as to the relevance and materiality of each cost element to the cost objective. Materiality is associated with whether excluding the data could distort the computed value for the final cost objective.

GENERAL LEDGER EXPENSE ACCOUNTS			
GEN. LEDGER ACCOUNT #	EXPENSE ACCOUNT	DIRECT ACTIVITY	INDIRECT ACTIVITY
6111	Personnel Compensation-Civilian	X	X
6112	Personnel Compensation-Military	X	X
6113	Personnel Benefits-Civilian	X	X
6114	Personnel Benefits-Military	X	X
6115	Benefits for Former Personnel		X
6116	Travel and Transportation of Persons	X	X
6117	Transportation of Things	X	X
6118	Rent, Communications and Utilities	X	X
6119	Printing and Reproduction	X	X
6120	Other Services	X	X
6121	Supplies and Materials	X	X
6122	Equipment (not capitalized)	X	X
6123	Grants, Subsidies, and Contributions	X	X
6124	Insurance Claims and Indemnities		X
6125	Depreciation of Equipment	X	X
6126	Depreciation of Real Property	X	X
6127	Depletion of Natural Resources	X	X
6128	Amortization of Leasehold Improvements and Other Intangible Assets	X	X
6129	Bad Debts		X
6130	Annual Leave	X	X

FIGURE 22-2

220205. Application of Prescribed Rates

A. The purpose of using cost-finding techniques is to determine that all applicable cost elements are addressed in computing the final cost. When the purpose is the preparation of an internal report or an external report for another Federal Agency or non-federal organization, the guidance contained in [Volume 11](#) of this Regulation shall be followed to assure that all applicable costs are considered. When the purpose is to establish the cost of an activity associated with the Security Assistance Program, the guidance contained in [Volume 15](#) of this Regulation, shall be followed.

B. The following rules shall be applied when determining the individual costs of intermediate and final cost objectives:

1. Civilian direct labor costs are computed using step 5 of the applicable pay grade for GS- and GM-series personnel. For Wage Board employees, use step 4 of the applicable pay grade. Amounts included as direct labor costs shall recognize only productive time; that is, the time actually used to perform the function. All other time is indirect labor time, and is included in overhead (factory burden). Actual costs may be used, if known, provided appropriate documentation is available to support their substitution.

2. Civilian personnel benefits costs are computed using the rates contained in [Volume 11](#) of this Regulation.

3. Military personnel costs are costed using the rates for each applicable military grade at standard military composite rates in accordance with guidance in [Volume 11](#) of this Regulation.

4. Both military and civilian labor shall be analyzed as to productiveness. Productive labor (labor that is actually chargeable to jobs) shall be recorded as direct labor. Indirect labor (labor that cannot be charged to a specific job) shall be recognized in computing overhead (factory burden). Chapters 19 through 21 of this Volume provide guidance in computing overhead.

5. Direct material cost is determined using standard prices unless the actual cost of the material is known from vendor invoices.

6. Other costs that can be directly related to the cost objective are determined using documents such as vendor invoices, travel vouchers, etc.

7. Indirect costs are based on algorithms that are used to prorate the overhead costs to the cost objective based on factors such as the ratio of direct labor costs for the cost objective to total labor costs for the installation.

220206. Identification of Source Documents

A. Before the values for each cost can be determined, the source documents for the required data must be identified and copies obtained, together with the locations at which the documents are maintained. In addition, it will be necessary to determine the quantities of documents involved, especially if the cost objective is to determine average unit costs for a certain action.

B. When the final cost objective is to determine the cost of performing one single event, the specific documents involved must be identified. When the cost objective is much broader (for example, determining the average cost of issuing checks without regard to whom they are issued), identification of the specific documents involved may not be as significant as the operating costs (including the materials and supplies used) of the organizational units directly involved in the process.

220207. Selection of the Appropriate Cost-Finding Technique. The development of a final cost for the cost objective can be made using one of several different techniques or a combination thereof. The decision as to the method used will often depend on the purposes for which the cost objective has been established. Those cost objectives established to determine costs to meet a statutory or a recurring use need could require the use of cost-finding techniques with a higher degree of precision than those cost objectives established to meet an internal management need. Section 2203., below, describes various techniques that may be useful in cost finding.

2203 COST-FINDING TECHNIQUES220301. Observation

A. The observation technique is normally used when the specific effort to be costed or a similar effort is currently in process. The first step is to complete the requirements statement required by paragraph 220201, above. The observer then physically follows the product or service through the various performing organizations, documenting the following:

1. Various events incident to performance.
2. The grade levels of personnel directly working on the effort.
3. The length of time spent on the activity.
4. Direct material used.
5. Indirect material used.
6. Types of support received from other organizational units.

7. Any other factors that have an impact on the cost of producing the product or performing the service

A. A traditional flow chart of the entire process may be helpful in organizing, visualizing, and understanding the particular process under review. The process flow shown in addendum of this chapter illustrates the data gathered through the use of this technique.

B. The observer then lists all of the identified cost elements and computes the cost of each element using the general ledger expense accounts shown in figure 22-1.

C. Any other assumptions shall be carefully and accurately documented so that users of the resulting information will have a better understanding of the process used.

220302. Statistical Sampling

A. This technique is normally used when there is a large volume of similar type work being performed on a continuous task basis. An example of the use of this technique is packing, crating, and handling costs incurred at the depot level. A random sample of items is selected and a special job order tag is attached to each item selected when it is initially placed into the performance cycle. All personnel who come into physical contact with the items are required to record their organization, pay grade, length of time involved, and type and quantity of material or supplies used. Completed tags are returned to the personnel conducting the study who ensure that all tags have been returned and properly completed.

B. All of the cost elements identified to the cost objective are assigned a cost.

C. Resulting cost estimates shall be annotated to disclose the confidence level of the resulting estimate within a specific range.

220303. Independent Appraisal. The independent appraisal technique is normally used when the cost determination is made after the cost objective has been completed, and there is no similar product being produced. Normally, the effort would be accomplished by an engineer or an individual who is an expert in the production process. Under this procedure, a list of all resources involved in fabricating the product or performing the service is made. Each resource is then analyzed to establish a reasonable input cost. The total cost of the applied resources represents a reasonable estimate of costs incurred in the cost objective.

220304. Commercial Cost. This technique is normally used in connection with incidental activities carried out during a DoD mission requirement. In these circumstances, the

application of normal full cost to the production of a product or provision of service would not be representative of the incurred cost. An example would be a Navy carrier transporting a disabled foreign aircraft to a repair facility incident to the performance of its normal mission. In this case, a determination of the commercial charge to transport the disabled aircraft might be more representative of the allocable cost incurred by the Navy vessel.

220305. DELPHI Technique. This technique is useful in those instances when the more traditional cost estimation techniques cannot be applied to a cost objective. Accordingly, it is probably the least precise estimating technique, but one that is still useful if another technique is not available.

A. This technique uses a series of estimates made by a group of experts that is refined as subsequent estimates are made. For example, five construction experts might be given the task of estimating the costs associated with a new construction technique. These experts would be given the initial parameters of the project such as location; required specifications; geographical, environmental, time, and political constraints; and, any other known relevant data at the time of project initiation. Each group member would then develop an initial estimate of component costs and reconvene to discuss their individual analyses. After discussion, each expert would be asked to refine their estimate based on what was learned at the meeting. The evaluation process would be repeated by each participant to arrive at a revised estimate. The process would be repeated as often as necessary, until the group achieved consensus that the estimate at hand was the best available, given the uncertainty of the nature of the project and dissimilarity with other efforts in their experience.

B. This technique is probably more useful in determining what some new product or service should cost rather than determining the actual cost of an existing product or service. However, some of the principles involved may be helpful.

220306. Memorandum Records. This technique is an informal method for gathering cost data and should only be used in those cases when the value of the cost data is of little significance. It involves the preparation of memoranda documenting estimates of costs for a specific product or service. It should not be used when significant decisions are to be based on the cost estimates derived or when other more accurate methods are available. It is useful as a cost accumulating tool for those low priority, low value projects or products when it is known that some cost data may be required in the future. However, in this case, a traditional cost accounting system is too costly or too cumbersome relative to the underlying effort.

220307. Analysis of Responsibility Center/Cost Center. This technique can be helpful in those cases where good organizational costs are available through some responsibility center or cost center organizational structure. Costs associated with the center can be allocated to a product or service of the center as a way to estimate at least part of the cost of that product or service.

220308. Combination of Cost-Finding Techniques. Nothing in this chapter prevents the use of more than one of these techniques, if such a use results in a more cost-effective or more accurate estimate of the cost information requirement. The techniques can also be used to augment data that is generated by a conventional cost accounting system. It is important to remember what the cost data requirement is and to generate or utilize the cost accumulation system or method that gives the highest quality cost data at the lowest information accumulation cost. A cost finding technique that is not described here can also be used, as long as it conforms with the general requirement for reliability in relation to the value of the cost data.

220309. Determination of Time and Cost

A. After the required time to perform each element of the final and intermediate cost objectives is determined, the costs associated with each element must be determined. In addition, since real and capitalized personal property is involved, the contribution of these assets must also be determined. The extent to which the computations are necessary will depend on the accuracy measured in performing each action. Figure 22-2 in paragraph 220204 of this chapter illustrates the form that can be used to determine the total costs associated with a final cost objective.

B. Personnel costs are obtained from the following sources:

1. Civilian Personnel. Pay scales issued by the Office of Personnel Management.
2. Military Personnel. Standard military composite pay rates issued by the Military Departments. These standard rates recognize fringe benefits.
3. Civilian Personnel Fringe Benefits. These are determined using the add-on factors in [Volume 11](#) of this Regulation.

C. Depreciation and Amortization of Capitalized Personal Property. Refer to [Chapters 1 and 6](#) of this Volume, and [Volume 11](#), Part III, of this Regulation for the Defense Business Operations Fund.

D. Depreciation and Amortization of Real Property. Refer to [Chapters 1 and 6](#) of this Volume, and [Volume 11](#), Part III, of this Regulation for the Defense Business Operations Fund.

ADDENDUM**CASE STUDY****Determination of the Costs
Associated With Paying A Contractor Invoice**

This case study demonstrates the application of the various requirements contained in this chapter to determining the costs associated with paying a contractor invoice. The situation selected was chosen as being typical of the types of operations occurring within the Department of Defense for which comparisons between organizations can be made.

Paragraph 220201 of this chapter requires a clear statement that identifies the cost objectives to which cost-finding techniques are to be applied and the cost finding techniques to be applied, among other things. Such a statement is presented in Figure 22-3.

The intermediate cost objectives related to the final cost objective are listed in Figure 22-4. The list is at the summary level and serves as a basis for identifying the processes which must be examined in detail. The compilation is based on the guidance contained in paragraph 220202 of this chapter.

The organizational elements and their relationship to the intermediate and final cost objectives are identified in Figure 22-5. As described in paragraph 220203 of this chapter, it is developed using the organization chart and descriptions of organization functions. It also categorizes the installation's organizational units as direct (those that are involved in the final cost objective) and indirect. Those classified as indirect provide varying degrees of support to the organizational units that are identified as direct. It is not necessary for all direct activities to be a part of the same organizational activity.

The process flow associated with paying a contractor invoice, as described in paragraph 220203 of this chapter is illustrated in Figure 22-6. A comparison of this process flow chart with the organization chart in Figure 22-5 will identify organizations that may not be shown on the organization chart. For example, the contract administration activity is not shown on the organization chart and could be a part of supply operations. Similarly, the mail room might be part of base operations. These situations arise when the organization chart is at a higher level than the operation being costed.

The organizational activities realigned as direct and indirect for the purposes of this cost finding study are shown in Figure 22-7. This chart is provided as a basis for clearly identifying which activities are to be classified as direct activities, as described in paragraph 220203 of this chapter.

The cost elements to be considered in determining the relevant costs associated with this task are identified in Figure 22-8. They are based on figure 22-1 in paragraph 220204 of this chapter.

The personnel assigned to the direct activities associated with paying a contractor's invoice are listed in Figure 22-9. This information is necessary to support the determination of personnel costs as described in paragraph 220204 of this chapter.

Statistical information as to the equipment, real property, and supplies and materials used in performing the final and intermediate cost objectives is provided in Figure 22-10. In addition, the equipment is subdivided between capitalized and expensed equipment.

The personnel rates associated with the personnel assigned to the direct organization activities are summarized Figure 22-11. The costs associated with the final and intermediate cost objectives using the guidance in paragraph 220205 of this chapter concerning application of prescribed rates are computed and shown in Figure 22-12.

The source documents associated with the intermediate and final cost objectives are listed in Figure 22-13. Copies of each of these documents would be obtained and included as supporting documentation in the working papers associated with the cost finding task, as required in paragraph 220206 of this chapter.

A compilation of the time required to perform each of the various actions associated with processing a contractor invoice for payment is shown in Figure 22-14. The civilian or military grade for each person involved in the process, as well as the equipment used and the time each equipment was used also is identified. The requirements contained in paragraph 220207 of this chapter are addressed in Figure 22-14.

The costs associated with paying a contractor invoice are summarized in Figure 22-15.

ADDENDUM

STATEMENT OF PURPOSE
Determination of Costs
To Pay A Contractor's Invoice

A. **PURPOSE**

This effort is undertaken to determine the cost incurred by one DoD organization to pay a contractor's invoice. The information is required to identify the various types of activities involved and the related costs for comparison with similar costs incurred by other DoD organizations.

B. **COST OBJECTIVES**

The intermediate and final cost objectives associated with this effort include those required to administratively process contract documents, receiving reports and invoices and issue a check.

C. **ORGANIZATIONS INVOLVED**

Those organizational activities directly involved in processing the contract, processing invoices, mailing documents, and issuing checks will be classified as direct activities. All other activities are considered as indirect activities.

D. **COST ELEMENTS**

The cost elements in [Volume 11](#) of this Regulation applicable to other Federal Agencies will be accumulated. The following cost elements to be identified for the purposes of this task include personnel (civilian and military), personnel benefits, communications, and supplies and materials.

E. **APPROACH**

Cost finding shall be used to establish the cost to pay a contractor invoice. Observation and questions shall be used to establish the sequence of observations. Time measurement shall be used to establish the time required to perform each action in the process. These techniques are considered the best approach because preliminary indications are that each action requires only a few minutes of any employees' time. In addition, the use of specific material, equipment and documents can be readily identified and measured. Personnel costs shall be based on hourly rates obtained from pay scales for civilian personnel, and standard military composite rates for military personnel.

FIGURE 22-3

ADDENDUM

**FINAL AND INTERMEDIATE COST OBJECTIVES
TO PAY A CONTRACTOR INVOICE**

FINAL COST OBJECTIVE: Pay a contractor invoice

INTERMEDIATE COST OBJECTIVES: Establish voucher file
Maintain voucher file
Receive receiving reports
Receive invoices
Compare invoice to receiving reports and contracts
Check to see whether proposed payment requires additional funding
Check to see if right of offset exists against amounts due the Government by the contractor
Prepare payment voucher
Schedule voucher for payment
Print check
Mail check
Record payment

FIGURE 22-4

ADDENDUM

ILLUSTRATIVE INSTALLATION ORGANIZATION CHART

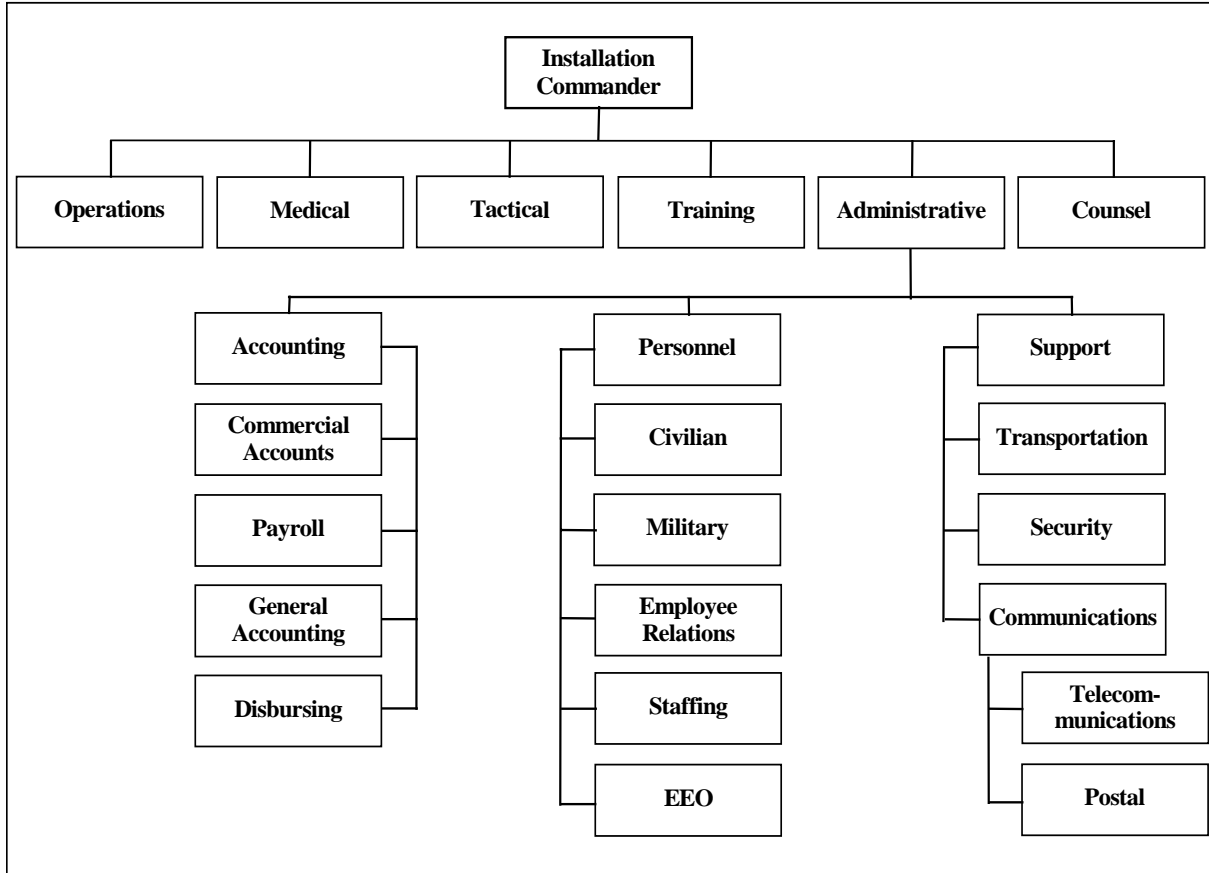


FIGURE 22-5

ADDENDUM

PROCESS FLOW FOR ISSUING CHECKS TO CONTRACTORS

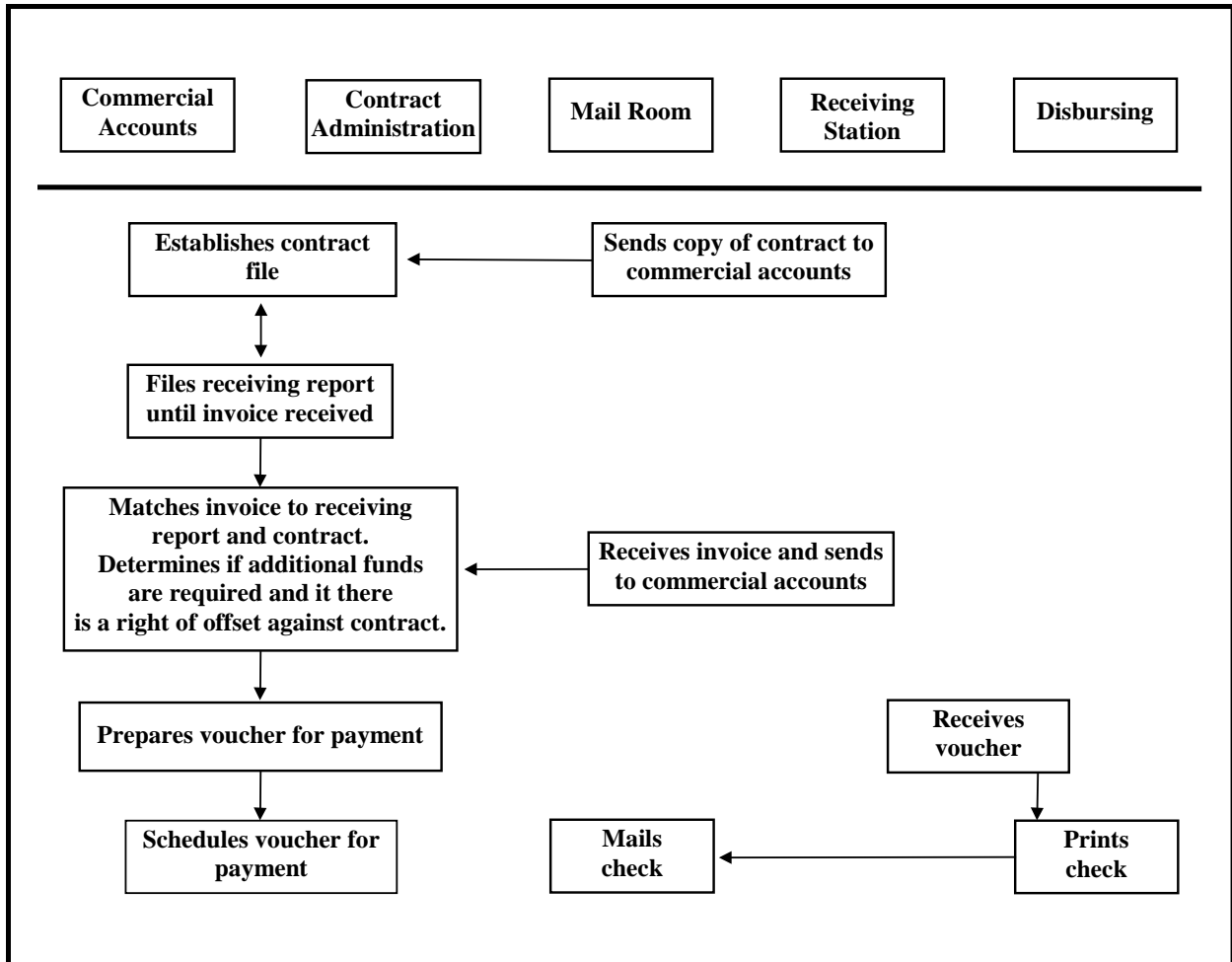


FIGURE 22-6

ADDENDUM

ORGANIZATION HIERARCHY ASSOCIATED WITH
FINAL AND INTERIM COST OBJECTIVE

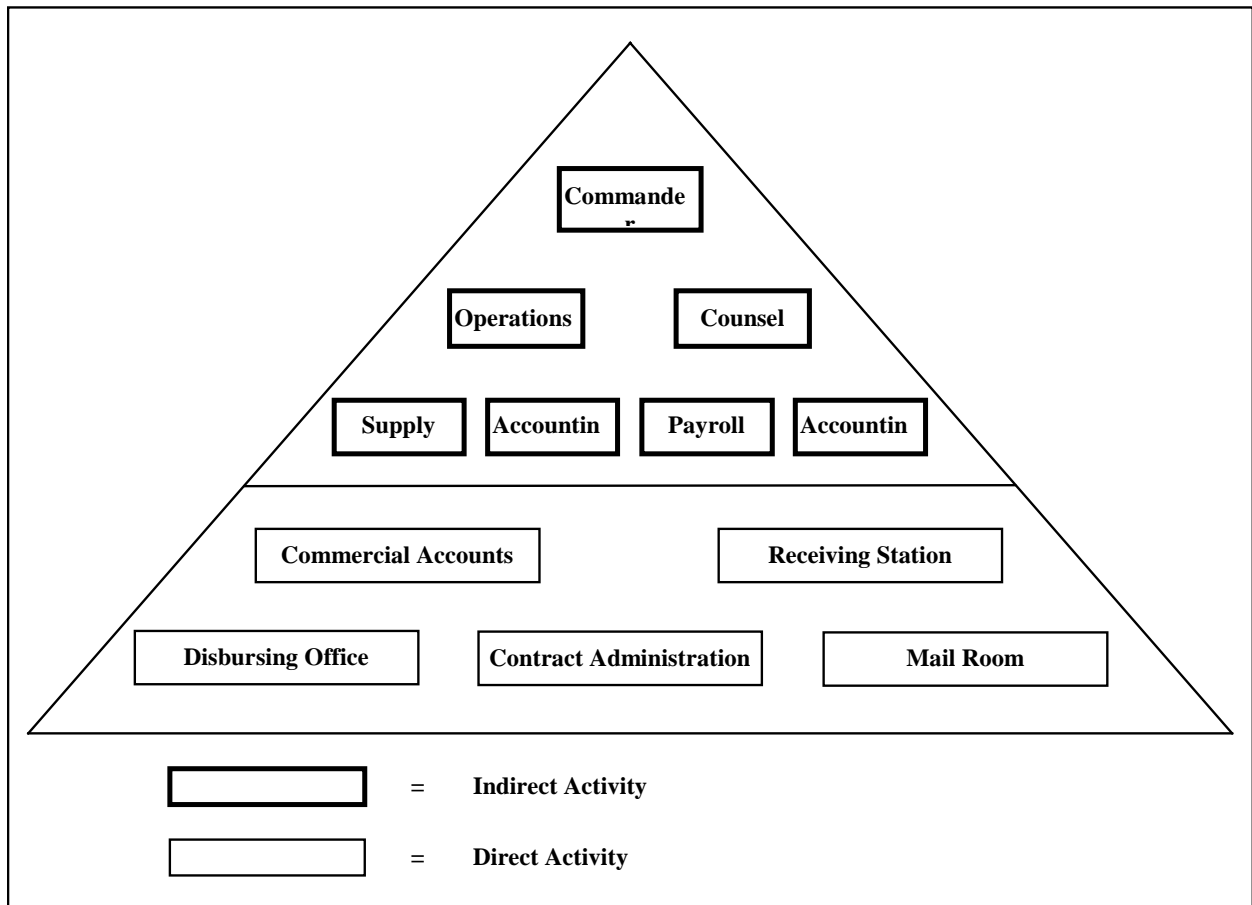


FIGURE 22-7

ADDENDUM

COST ELEMENTS

The cost elements potentially associated with the cost of issuing a check to a contractor are summarized as follows:

- (1) Personnel costs, both military and civilian.
- (2) Personnel benefits, both military and civilian.
- (3) Communications (telephone).
- (4) Supplies and materials.
- (5) Postage.
- (6) Utilities.
- (7) Equipment (depreciation).
- (8) Buildings (depreciation).
- (9) Leasehold improvements (amortization).
- (10) ADP Software (amortization).

FIGURE 22-8

ADDENDUM

<u>NUMBER OF PERSONNEL ASSIGNED TO DIRECT ACTIVITIES ASSOCIATED WITH FINAL COST OBJECTIVE</u>					
	COMMERCIAL ACCOUNTS	RECEIVIN G STATION	DISBURSIN G OFFICE	CONTRACT ADMIN.	MAIL ROOM
Captain	1		1		
1st Lieutenant	2		3		
2nd Lieutenant	1	1	2	1	
Sergeant (E-5)		2	2		1
Corporal (E-3)	3	4			1
Civilian (GS-8)	2		2	2	
Civilian (GS-6)	2	1	4	2	1
Civilian (GS-5)	5	2	4	4	2
Civilian (GS-3)		2	2		5

FIGURE 22-9

ADDENDUM

<u>EQUIPMENT AND REAL PROPERTY USED BY DIRECT ACTIVITIES ASSOCIATED WITH FINAL COST OBJECTIVE</u>					
	COMMERCIAL ACCOUNTS	RECEIVING STATION	DISBURSING OFFICE	CONTRACT ADMIN.	MAIL ROOM
<u>CAPITALIZED EQUIPMENT:</u>					
Microfiching Machines			1	1	
Rotary Index Files	5		1	8	
<u>EXPENSED EQUIPMENT:</u>					
Typewriters	6		3	7	
Adding Machines	12	10	16	8	
Check Writers			2		
Envelope Stuffing Machines	1		3		
Desks	16	6	20	11	2
Chairs	25	7	24	15	11
<u>REAL PROPERTY:</u>					
Office Space (Sq. Ft.)	1,778	480	2,540	1,390	498
Warehouse Space (Sq. Ft.)		1,638			
<u>ADDITIONAL INFORMATION:</u> Microfiching Machines cost \$22,000 each and have a life expectancy of 10 years for depreciation purposes. Rotary Index Files cost \$14,000 and have a life expectancy of 10 years for depreciation purposes.					
Age of Micro- fiching Machines: 3 years old 4 years old			1	1	
Age of Rotary Index Files: 2 years old 3 years old 5 years old	4 1		1	3 3 2	

FIGURE 22-10

ADDENDUM

EQUIPMENT AND REAL PROPERTY USED BY DIRECT ACTIVITIES
ASSOCIATED WITH FINAL COST OBJECTIVE
(CONTINUED)

Real Property:

1. Office space is converted warehousing constructed during 1956. Conversion was made in 1978 at a cost of \$755,000. Total amount of warehousing space converted was 35,768 sq. ft.
2. The receiving station is located in another warehouse constructed in 1961 at a cost of \$1,547,277.
3. Total warehouse space is 295,480 sq. ft. The office space occupied by the receiving stations was constructed at that time. No improvements have been made to the space since original construction.

Material and Supplies:

1. Standard price per 1,000 of any contract package (includes forms, instructions, and supporting addenda) is \$250.
2. Standard price per 1,000 of receiving report forms (DD 250) is \$35.
3. Standard price per 1,000 of legal size envelopes is \$9.50.
4. Standard price per 1,000 blank check stock is \$12.80.
5. Standard price of any accounting form, including voucher schedules is \$15.50.
6. Standard monthly prorated cost of office supplies is \$125. This includes adding machine tapes, correspondence paper, pencils, pens, etc.

Expensed Equipment:

1. When necessary, expensed equipment (desks, chairs, etc.) would have a prorated monthly charge of \$50 per office. This is a composite rate for all expensed office equipment.

FIGURE 22-10 (Cont'd)

ADDENDUM

<u>SUMMARY OF TIME SPENT BY PERSONNEL GRADE TO ISSUE A CHECK TO A CONTRACTOR (IN MINUTES)</u>						
	COMM. ACCTS.	RECEIV. STAT.	DISB. OFC.	CONT. ADMIN.	MAIL ROOM	TOTAL
Captain	6		7			13
Sergeant (E-5)			18			18
Corporal (E-3)			8			8
Civilian (GS-8)	4	8	2			14
Civilian (GS-6)	68		10			78
Civilian (GS-5)	23		6			29
Civilian (GS-3)		17	29		26	72

FIGURE 22-11

<u>COMPUTATION OF COSTS ASSOCIATED WITH ISSUING A CHECK TO A CONTRACTOR</u>					
	ANNUAL RATE	HOURLY RATE	MINUTE RATE	TIME USED	COST
<u>PERSONNEL COSTS:</u>					
Captain	\$ 37,860	\$ 18.20	\$.30	13	\$ 3.90
Sergeant (E-5)	21,900	10.53	.18	18	3.24
Corporal (E-3)	18,350	8.82	.15	8	1.20
Civilian (GS-8)	26,670	12.82	.21	14	2.94
Civilian (GS-6)	24,350	11.71	.20	78	15.60
Civilian (GS-5)	22,546	10.84	.18	29	5.22
Civilian (GS-3)	18,456	8.87	.15	72	10.80

Note: Hourly rates recognize all benefit costs.

FIGURE 22-12

ADDENDUM

<u>SOURCE DOCUMENTS</u>	
1.	DD Form 1155, "Order for Supplies or Services"
2.	DD Form 250, "Material Inspection and Receiving Report"
3.	DD Form 350, "Individual Contracting Action Report"
4.	Payment Voucher Schedule
5.	Blank check

FIGURE 22-13

<u>TIME REQUIREMENTS TO PAY A CONTRACTOR INVOICE</u>	
	TIME REQUIRED (IN MINUTES)
<u>COMMERCIAL ACCOUNTS:</u>	
1. Receives contract from Contract Administration. Date and time stamps and sends to voucher clerk. (Date and time stamp machine used: 10 seconds) (GS-5 Secretary)	4
2. Establish contract file and insert contract. (Typewriter used: 1 minute) (Rotary Index File used: 15 seconds) (GS-6 Voucher examiner clerk)	7
<u>RECEIVING STATION:</u>	
1. Receives material and counts. (GS-3 Receiving clerk)	10
2. Prepares DD 250. (GS-3 Receiving clerk)	5
3. Delivers to Receiving Station Supervisor. (GS-3 Receiving clerk)	2
4. Receiving Stations Supervisor approves and sends to Commercial Accounts. (GS-8 receiving Station Supervisor)	8
<u>COMMERCIAL ACCOUNTS:</u>	
1. Receives receiving report from Receiving Station Supervisor; date and time stamps; sends to voucher examiner clerk. Date and time stamp machine used: 10 seconds) (GS-5 Secretary)	6

FIGURE 22-14

<u>TIME REQUIREMENTS</u> <u>TO PAY A CONTRACTOR INVOICE (CONT'D)</u>	
	TIME REQUIRED (IN MINUTES)
2. Voucher examiner clerk pulls contract file; reviews receiving report to assure that material received is what was ordered; determines that coding is correct. (Adding machine used: 20 seconds) (Rotary Index File used: 15 seconds) (GS-6 Voucher examiner clerk)	12
<u>MAIL ROOM:</u>	
1. Receives envelope from contractor; opens it; places in Commercial Accounts mail pouch (GS-3 Mail clerk)	4
2. Mail clerk delivers to Commercial Accounts. (GS-3 Mail clerk)	22
<u>COMMERCIAL ACCOUNTS:</u>	
1. Receives mail pouch from mail clerk; removes invoice from mail pouch; date and time stamps; sends to voucher examiner clerk. (Typewriter used: 2 minutes) (GS-5 Secretary)	7
2. Voucher examiner clerk pulls contract file; reviews invoice to assure that invoice agrees with contract and receiving report; determines that coding is correct. (Adding machine used: 22 seconds) (Rotary Index File used: 11 seconds) (GS-6 Voucher examiner clerk)	9
3. Audits voucher and prepares voucher for payment. (Adding machine used: 18 seconds) (GS-6 Voucher examiner clerk)	8
4. Schedules voucher for payment. (Typewriter used: 2 minutes, 35 seconds) (GS-6 Voucher examiner clerk)	5
5. Forwards voucher, together with supporting documents to supervisor for approval. (GS-6 Voucher examiner clerk)	3
6. Commercial Accounts supervisor approves voucher and gives to secretary for transmittal to the disbursing office. (GS-8 Supervisor)	4
7. Secretary gives voucher and supporting documents to Captain. (GS-5 Secretary)	2
8. Captain reviews, approves, and returns to secretary	6
9. Secretary inserts in disbursing office pouch. (GS-5 Secretary)	2
10. Voucher clerk delivers pouch to disbursing office. (GS-6 Voucher examiner clerk)	12

FIGURE 22-14 (Cont'd)

<u>TIME REQUIREMENTS TO PAY A CONTRACTOR INVOICE (CONT'D)</u>	
	TIME REQUIRED (IN MINUTES)
<u>DISBURSING OFFICE:</u>	
1. Receives pouch from voucher examiner clerk; opens pouch; delivers payment schedule to disbursing clerk. Date and times stamps documents. (Date and time stamp machine used: 10 seconds) (GS-3 Clerk)	3
2. Disbursing clerk reviews and schedules for check writing; gives package to supervisor for approval. (Typewriter used: 3 minutes, 18 seconds) (GS-5 Disbursing clerk)	6
3. Disbursing supervisor reviews and approves; gives to Captain. (GS-6 Supervisor)	4
4. Captain reviews, approves, and returns to disbursing supervisor.	4
5. Disbursing supervisor gives to Sergeant (E-5). (GS-6 Supervisor)	2
6. Sergeant gets blank check from safe; prepares check writer; prints check; gives to disbursing supervisor (Check writer used: 54 seconds)	18
7. Disbursing supervisor gives to Captain (GS-6 Supervisor)	2
8. Captain signs check and returns to disbursing supervisor.	3
9. Disbursing supervisor gives to Corporal (E-3). (GS-6 Supervisor)	2
10. Corporal prepares envelope and puts check in envelope.	4
11. Clerk receives envelop from Corporal and delivers to Mail Room. (GS-3 Clerk)	13
12. Corporal gives supporting documentation to disbursing supervisor.	4
13. Disbursing supervisor gives documents to clerk. (GS-6 Supervisor)	2
14. Clerk returns documents to Commercial Accounts. (GS-3 Clerk)	13
<u>COMMERCIAL ACCOUNTS:</u>	
1. Secretary receives documents from clerk; date and time stamps. (Date and time stamp machine used: 8 seconds) (GS-5 Secretary)	2
2. Secretary gives to voucher examiner clerk who files documents in contract file. (Rotary Index File used: 17 seconds) (GS-6 Voucher examiner clerk)	12

FIGURE 22-14 (Cont'd)

ADDENDUM

<u>SUMMARY OF THE COSTS ASSOCIATED WITH FINAL COST OBJECTIONS ISSUE CHECK TO CONTRACTOR</u>		
<u>PERSONNEL COSTS (INCLUDING BENEFITS):</u>		
Military (6112,6114)	\$ 8.34	
Civilian (6111,6113)	34.56	
Total Personnel Costs		\$ 42.90
<u>CAPITAL EXPENSES:</u>		
Depreciation - Personal Property (6125)	-0-	
Depreciation - Real Property (6126)	-0-	
Amortization - Real Property Improvements (6128)	-0-	
Amortization - ADP Software (6128)	-0-	
Total Capital Expenses		-0-
<u>OTHER EXPENSES:</u>		
Travel of Persons (6116)	-0-	
Transportation of Things (6117)	-0-	
Rent, Communications, Utilities (6118)	-0-	
Printing and Reproduction (6119)	-0-	
Contractual Services (6120)	-0-	
Supplies and Materials (6121)	-0-	
Equipment (not capitalized 6122)	-0-	
All other expenses (6129, 6130, 6300, 6900)	-0-	
Total Other Expenses		-0-
TOTAL COSTS ASSOCIATED WITH FINAL COST OBJECTIVE		\$ 42.90

Note: Capital expenses and other expenses were not computed because neither category contributed a value that would meaningfully affect the outcome. Microfiching machines are used periodically when the number of documents ready to microfiche total several hundred. The Rotary Index files are used constantly and the amount of time allocable to document retrieval associated with a particular check is measured in terms of less than one minute. Real property occupied represented approximately 2 percent of total space and if allocated to the cost objective based on time required to process a check would be substantially less than \$1. Similarly the value of other expenses would be substantially less than \$1 (the standard price of the blank check would be \$.0128).

The general ledger accounts that are the source for the amounts reported are shown in parentheses.

FIGURE 22-15