# PROJECT MANAGER
# FOR
# TRAINING DEVICES






# USER'S MANUAL
# FOR
# COST PROPOSAL
# EVALUATION PROGRAM
# (CPEP)

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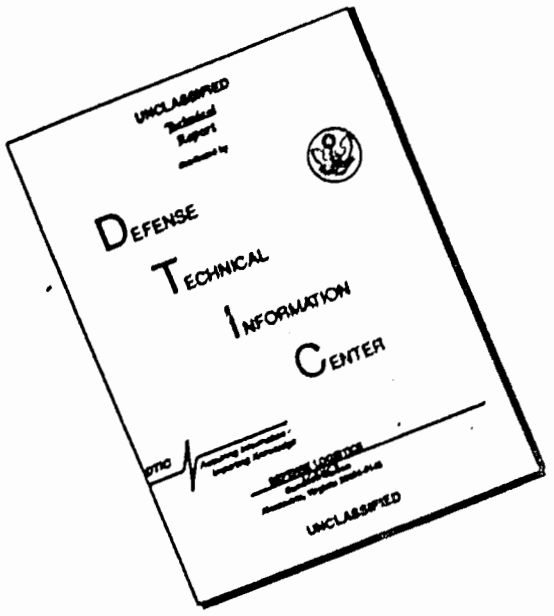


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# REPORT DOCUMENTATION PAGE

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| | |
|---|---|
| 1. REPORT NUMBER: PMT-EM-0003-83 | 2. GOVT ACCESSION NO.: AD-A128356 |
| 3. RECIPIENT'S CATALOG NUMBER: | |
| 4. TITLE (and Subtitle): User's Manual For Cost Proposal Evaluation Program (CPEP) | 5. TYPE OF REPORT & PERIOD COVERED: Final Report |
| | 6. PERFORMING ORG. REPORT NUMBER: |
| 7. AUTHOR(s): C. Brouse, J. DeLang | 8. CONTRACT OR GRANT NUMBER(s): N61339-79-D-0007, Delivery Order 0009, Modification 04 |
| 9. PERFORMING ORGANIZATION NAME AND ADDRESS: Science Applications, Incorporated, 3191 Maguire Blvd., Suite 100, Orlando, Florida 32803 | 10. PROGRAM ELEMENT, PROJECT, TASK AREA & WORK UNIT NUMBERS: |
| 11. CONTROLLING OFFICE NAME AND ADDRESS: U.S. Army PM TRADE, Engineering Management (EM), POC - Mr. Al Boudreaux (AV-791-5761) | 12. REPORT DATE: April 1983<br>13. NUMBER OF PAGES: 112 |
| 14. MONITORING AGENCY NAME & ADDRESS(if different from Controlling Office): U.S. Army PM TRADE, DRCPM-TND-EM, Orlando, Florida 32813 (305) 646-5761 | 15. SECURITY CLASS. (of this report): Unclassified<br>15a. DECLASSIFICATION/DOWNGRADING SCHEDULE: |

16. DISTRIBUTION STATEMENT (of this Report)

Approved for public release; distribution unlimited.

17. DISTRIBUTION STATEMENT (of the abstract entered in Block 20, if different from Report)



18. SUPPLEMENTARY NOTES

19. KEY WORDS (Continue on reverse side if necessary and identify by block number)

User's Manual, Cost Proposal Evaluation Program (CPEP), Request for Proposal (RFP), Work Breakdown Structure (WBS), Training Devices, Estimate, HP-3000, WANG, BASIC, Cost/Hour Evaluation Worksheet, Evaluation Worksheet Legend, Value Worksheet, Cost Proposal Requirements (CPR), Cost Reporting Requirements.

20. ABSTRACT (Continue on reverse side if necessary and identify by block number) The Cost Proposal Evaluation Program (CPEP) is a means to simplify and standardize the methodology for evaluating cost proposals. The User's Manual provides instruction to the cost analyst or evaluation team in the use of the tool. The manual guides the user from a discussion of what data is required (the Cost Proposal Requirements section of an RFP), to a discussion of data preparation after a proposal has been received. The manual continues with step-by-step instructions in the use of the data processing software developed for CPEP. The instructions and the use of the soft-

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20. Abstract (cont'd)

ware are both presented in an elementary manner to assist individuals new to cost proposal evaluation. The software provides printouts that are used for comparison to a Government estimate. Costs are presented at various levels of detail, burdened or unburdened, inflated or normalized.

# USER'S MANUAL

# FOR

# COST PROPOSAL EVALUATION PROGRAM (CPEP)

Prepared For:

PROJECT MANAGER TRAINING DEVICES

U.S. ARMY MATERIEL DEVELOPMENT & READINESS COMMAND

ORLANDO, FLORIDA

12 APRIL 1983

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# CHAPTER I
# INTRODUCTION

The purpose of this User's Manual is to help the user understand and apply the detailed operating procedures of the Cost Proposal Evaluation Program (CPEP). The user is not required to be an experienced cost analyst nor a computer programmer.

The CPEP is a software program that automates cost proposal analysis and evaluation activities.

The CPEP has been developed in response to a need expressed by the Project Manager for Training Devices (PM TRADE). The need is to standardize and make expeditious the methodologies used to prepare documented analyses of cost proposals submitted by offerors in response to a Request For Proposal (RFP). The CPEP meets this need by:

Organizing cost proposal data in a standardized manner; and

Providing rapid assessment of rate or value changes; and

Providing outputs which assist the evaluator in cost proposal evaluation efforts.

The CPEP was developed and used effectively in evaluating the cost proposals for the R&D program of the AH-64 CMS. However, the CPEP is useful for any cost proposal evaluation performed by the Government.

The user is reminded that the RFP prescribes the format to present cost proposal data. The prescribed format is based on PM TRADE's generic Work Breakdown Structure (WBS). The RFP requires offerors to extend the WBS to a level of detail that describes clearly the offerors' cost estimating methodology.

The specification or statement of work (SOW), contract line items (CLIN), and requirements for the technical proposal, management proposal, integrated logistics support proposal and the cost proposal are all prepared in accordance with the WBS. The offerors' cost proposal data, organized by WBS elements, state clearly the time period (including out years), labor categories, material, subcontractor and other costs in accordance with cost proposal requirements prescribed by the RFP.

CPEP may be used for a comparison of costs/hours estimated for each of the WBS elements submitted in competing proposals. A code is prepared which correlates the offerors' cost categories to the Cost/Hour Evaluation Worksheet categories (see Appendix B). The offerors' cost proposal data are transferred to the

appropriate categories of the Cost/Hour Evaluation Worksheet using the code as a guide. Only one WBS element is recorded on each worksheet. These worksheets are distributed among the cost proposal evaluators to document their individual evaluation of each assigned WBS element. After reviewing the cost proposal, the evaluator prepares the Government cost estimate on the same worksheet. Variances between the Government's cost estimate data and the offeror's data are documented on the worksheet. (Reference page 8.) An analysis and rationale for the Government differences is also prepared. The worksheet data are entered into the computer.

The CPEP is designed to accept worksheet data and perform calculations required for an effective evaluation. The CPEP eliminates the manual calculations done previously by evaluators, reduces the number of evaluators required for the task, and reduces the time required for cost proposal evaluation. By being a single data entry model the possibility of errors is minimized when making modifications. The single data entry feature also permits analysts to perform easily and efficiently "what if" comparisons. Analysts' productivity is increased, as well as the timeliness in which the cost proposal evaluations are conducted.

Reports generated by CPEP are as follows:

a. Rates by category (functional area).

b. WBS element cost by category and rate code.

c. WBS level cost roll ups by category and rate code.

d. Unburdened cost summary by WBS number and category.

e. Summary of cost burdens and overheads by WBS number and category.

f. Total burdened cost summary by WBS number and category.

Categories (or functional areas) contained on the major reports are shown below:

a. Material

b. Subcontract

c. Field support

d. Engineering

e. Other direct/manufacturing

f. Other

The rate codes are subcategories as determined by the evaluation team; e.g., subcategories of material may include raw material and purchased parts.

# CHAPTER II

## CPEP OPERATING CHARACTERISTICS

The CPEP is designed to run on the Hewlett-Packard (HP) 3000 computer and is written in BASIC. The software contains sufficient remark statements and prompts to aid the analyst in its operation.

The HP 3000 consists of the following hardware:

| | | |
|---|---|---|
| o | Central Processing Unit (CPU) | 256K Bytes Memory |
| o | Disc Drive (2) | 120 Megabytes (each) storage |
| o | Type Drive | 1600 Bytes Per Inch - Nine Track |
| o | Line Printer | 132 Characters; six to eight lines per inch; 400 lines per minute |
| o | Operator's Console | HP 2645A Systems Console |
| o | Terminals (5) | HP 2624A |

The CPEP is resident on the disc storage and may be called up to one or more of the terminals, as required. The CPEP may be accessed by other computers off-site via telephone modem and tie-in to Science Applications, Inc., Orlando, Florida. The system employs an eight bit word. On the HP-3000, the system operates using virtual storage capabilities in four thousand pages; therefore, total CPU memory is not applicable.

To achieve a Government in-house capability, plans are currently in progress to convert the HP BASIC program code to a BASIC that is fully compatible with another computer system. The conversion will enable the software to function on a WANG Model 2200 MVP or WANG OIS System currently in operation at Naval Training Equipment Center (NTEC) and PM TRADE, respectively.

# CHAPTER III
# CPEP CAPABILITIES

The CPEP is designed to assist the cost evaluation team analyze single offeror and competing offerors cost proposals. The CPEP concept p mits uniform evaluation of each offeror's cost proposal data. Cost data specifications are set forth in the Cost Proposal Requirements (CPR)[1] section of the RFP. The CPR establish standard cost categories (material, subcontract, labor, other direct charges, etc.). The use of standard cost data formats in proposals facilitates transcribing data and comparative analyses. These cost proposal data are mapped into evaluation worksheets.[2] Consistent contractor cost data may be obtained by using the contract reporting requirements as set forth in Appendix C.

Worksheet data are input to the CPEP through simple data loading instructions. These instructions are provided to the user by "screens" that appear on the HP 3000 terminal.

Data presented on the three worksheets: (1) Cost/Hour Evaluation Worksheet, (2) Evaluation Worksheet Legend and (3) Value Worksheet include;

a. Material Cost.

b. Subcontract Item Cost.

c. Other Direct Charge Cost.

d. Engineering Hours.

e. Field Support Hours.

f. Manufacturing Hours.

g. Burden Percent.

h. G&A Percent.

i. Profit Percent.

j. Cost of Money Percent.

k. Hourly Rate Cost.

1 See Appendix A

2 See Appendix B

Data input to the computer may be modified readily. This capability augments the user's ability to evaluate alternatives. Any data value can be varied over a range of possibilities. Similarly, a combination of values may be varied in concert. The cost evaluation team may substitute a complete set of cost data derived from Government cost estimates for comparative analyses. Successive runs may be performed in a matter of minutes.

The CPEP outputs are displayed on hard copy printouts in a uniform format to assist in comparative analysis of the alternatives. Printouts are identified by date and time to provide an audit trail of the cost evaluation process. Multiple copies of printouts may be provided to accommodate simultaneous review by members of the cost evaluation team.

Printouts provided by the CPEP include:

a. Rates by functional area.

b. WBS element cost by functional area and rate code.

c. WBS level cost roll ups by functional area and rate code.

d. Unburdened cost summary by WBS number and functional area.

e. Summary of cost burdens and overheads by WBS number and functional area.

f. Total burdened cost summary by WBS number and functional area.

Results obtained by iterative runs may be used to determine the reasonableness of any part of the offeror's cost proposal. Results may also be used to establish the Government's baseline negotiating position.

Single offeror and competing offeror cost proposals are evaluated in a similar manner. That is, offeror data are entered into the CPEP and results are documented on printouts. Each offeror's proposal position may be tested through variations in the data. The series of runs of: (1) Each offeror's position, (2) alternatives proposed by the cost evaluation team, and (3) the Government's baseline negotiating position are assembled for comparative review. Efficiencies gained by computerized data processing permits rigorous analysis of alternatives, thereby augmenting the Government's negotiating position. An additional benefit of the CPEP is in its ability to escalate/de-escalate cost data. This capability is useful to normalize proposal costs and to examine the budgetary aspects of a program's cost.

In summary, the RFP spells out the requirements for use of the standard WBS and the CPR. An offeror's cost proposal, when prepared in accordance with those RFP requirements, provides the data essential to the CPEP. In turn, uniform use of the CPEP assures consistent proposal-to-proposal (or proposal-to-Government cost estimate) results from the cost proposal evaluation process.

# CHAPTER IV
# DATA PREPARATION

Data preparation involves transcribing data submitted in the offerors' proposals to worksheets.[1] These worksheets are given to data entry personnel who keypunch the data.

The RFP provides guidance[2] to the offerors for preparation of the proposal cost data. The RFP provides a unique Contract Work Breakdown Structure (CWBS) derived from the PM TRADE generic WBS. The CWBS provides a uniform cost element breakout for all cost data submissions. Upon receipt of the offerors' proposals, a preliminary review of the cost data assures conformance to RFP specifications. Particular attention is given to the CWBS. Adherence to the CWBS is essential to the CPEP process.

Proposal data are mapped on the three worksheets[1] listed below:

1. Cost/Hour Evaluation Worksheet.
2. Evaluation Worksheet Legend.
3. Value Worksheet.

1. Cost/Hour Evaluation Worksheet

The Cost/Hour Evaluation Worksheet, Figure IV-1, contains identification data in the heading and a detail cost/hour breakout by category. This worksheet is completed for each appropriate element in the CWBS (for lowest evaluated elements only).

The Cost/Hour Evaluation Worksheet heading lists the following:

1. Project Name.
2. Offeror Name.
3. CWBS Number.
4. CWBS Title.
5. Worksheet Number.

The worksheet preparer enters his/her name and date at the lower righthand section of the worksheet. See Table IV, page 53, for a completed example.

1 See Appendix B

2 See Appendix A

## COST / HOUR EVALUATION WORKSHEET

| PROJECT: | WBS NO: | | CI | NO: |
|---|---|---|---|---|
| OFFEROR: | WBS TITLE: | | | |

| | RATE CODE | CATEGORY | ESTIMATES | | | | % ± |
|---|---|---|---|---|---|---|---|
| | | | OFFEROR | *1 | GOVERNMENT | *2 | |
| 1010 | X | MATERIAL ($) | | | | | |
| | | | | | | | |
| | | | | | | | |
| 1020 | X | SUBCONTRACT COSTS ($) | | | | | |
| | | | | | | | |
| | | | | | | | |
| 1050 | X | FIELD SUPPORT LABOR (HOURS) | | | | | |
| | | | | | | | |
| 10 | X | ENGINEERING LABOR (HOURS) | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| 1120 | X | OTHER DIRECT/MANUFACTURING LABOR (HOURS) | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| 1150 | X | OTHER COSTS ($): | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |

*1 OFFEROR REALISM CODE *2 EVALUATOR CONFIDENCE CODE

L = LOW M = MEDIUM H = HIGH

SIGNATURE/DATE:

FIGURE IV-1

1.0 DESCRIPTION OF WBS ITEM:

2.0 ANALYSIS/RATIONALE FOR GOVERNMENT ESTIMATE:

The body of the worksheet lists the estimated costs or hours by category and/or subcategory. The offeror's proposal cost and hour data are transcribed from the proposal cost forms. Each data item is assigned an offeror realism code: low, medium or high. In the righthand column adjacent to these data, the Government's estimate is entered. Each of the Government data items is assigned an evaluator confidence code: low, medium or high. Finally, +/- percentage is entered to indicate the percent spread (over or under) between the Government estimate and the offeror's estimate using the offeror's value as the base.

2. Evaluation Worksheet Legend

The Evaluation Worksheet Legend, Figure IV-2, is used to assign rate code numbers to the subcategories. These rate codes are used by the CPEP to perform calculations and make printouts. The Evaluation Worksheet Legend heading lists the following:

1. Project Name.
2. Offeror Name.
3. Category.
4. Unit of Measure Hours or Dollars.

The preparer enters his/her signature, date and notes at the bottom of the form. See Tables I-A and II-A, pages 47 and 49, for completed examples.

The body of the worksheet lists the subcategory name, rate code and comments. A maximum of 29 rate codes is permitted per category. Numeric designation of the rate code among categories has no intercategory relationship. For example, rate code 1. of the engineering labor category bears no relationship to rate code 1. in the field support category. However, CPEP printouts list the rate codes in numeric order within each of the labor categories.

The Evaluation Worksheet Legend shown in Figure IV-2.A is a working example. It illustrates the type of subcategories that may be applied. The example also illustrates that rate codes are assigned sequentially and need not have a relationship which corresponds to competing offeror proposals.

## EVALUATION WORKSHEET LEGEND

PROJECT: CATEGORY:

OFFEROR: UNIT OF MEASURE: ☐ HOURS
☐ DOLLARS
☐ FACTOR

| SUB CATEGORY | RATE CODE | COMMENT |
|---|---|---|
| | | |
| | | |
| | | |
| | | |
| | | |
| | | |
| | | |
| | | |
| | | |
| | | |
| | | |
| | | |
| | | |

Note: Signature:
Date:

FIGURE IV-2

## EVALUATION WORKSHEET LEGEND

| CONTRACTOR "ABC" | | RATE CODE | CONTRACTOR "XYZ" | |
|---|---|---|---|---|
| 1010 | MATERIAL ($) | | 1010 | MATERIAL ($) |
| | 7210 MATERIAL | 1 | 101 | PURCHASE PARTS |
| | 0421 P/S INT LOG SPT (MATL) | 2 | 102 | OTHER MANUF MATL |
| | | 3 | 103 | OTHER ENGR MATL |
| | | 4 | 105 | TOOL & MATL |
| 1020 | SUBCONTRACT COSTS ($) | | 1020 | SUBCONTRACT COSTS ($) |
| | CAE | 1 | 104 | SUBCONTRACT < 100K |
| | GE | 2 | 113 | SUBCONTRACT > 100K |
| 1050 | FLD SPT LABOR (HRS) | | 1050 | FLD SPT LABOR (HRS) |
| | | 1 | 502 | FLD ENG DOMESTIC |
| | | 2 | | |
| 1090 | ENGINEERING LABOR (HRS) | | 1090 | ENGINEERING LABOR (HRS) |
| | 0111 ELEC ENGR | 1 | 301 | SYS ENGR |
| | 0112 MECH ENGR | 2 | 302 | PROG PROCESSING |
| | 0113 SYS ENGR | 3 | 303 | PROJ SYS ENGR |
| | 0114 ADMIN ENGR | 4 | 304 | VISUAL ENGR |
| | 0115 RCDS/REL ENGR | 5 | 306 | ENGRING LAB |
| | 0401 P/S REL & MAINT | 6 | 311 | INST/CKT DESIGN |
| | 0421 P/S ILS | 7 | 312 | MECH DESIGN |
| | 0441 P/S FLD OPERAT | 8 | 313 | DESIGN & DRAFTING |
| | 0461 P/S PRESENTATION | 9 | 314 | ADS OPERATOR |
| | 0481 P/S LAB INTEG | 10 | 318 | FACILITY ENGR |
| | 0483 P/S LAB QUAL | 11 | 321 | PROJ MGR |
| | 0484 P/S LAB SUPT | 12 | 322 | PROJ ADMIN |
| | 4001 PROG MGMT | 13 | 323 | CLERICAL |
| | 4010 CONT TECH REQMT | 14 | 326 | PRODUCT ASSURANCE |

FIGURE IV-2.A

| | | | RATE CODE | | | |
|---|---|---|---|---|---|---|
| 090 | ENGINEERING LABOR (CONTD) | | | | | |
| | 4210 | FIN C CNTL EST | 15 | | 327 | COMPONENT ENGR |
| | 4310 | PLANNING | 16 | | 328 | REL/MAINT ENGR |
| | 4510 | CONTRACTS | 17 | | 331 | DOCUMENT CONTROL |
| | 7210 | MATERIEL | 18 | | 332 | TRNG INSTR |
| | 7610 | MICROELECTRONICS | 19 | | 333 | ILS COORD |
| | | | 20 | | 334 | RESEARCH & LIAISON |
| | | | 21 | | 335 | WRITER/EDITOR |
| | | | 22 | | 336 | ARTIST |
| | | | 23 | | 337 | PROR ANAL/COMPILER |
| | | | 24 | | 341 | TEST & CALIBRATE |
| 1120 | OTHER DIRECT/MANUFACTURING LABOR (HOURS) | | | 1120 | OTHER DIRECT/MANUFACTURING LABOR (HOURS) | |
| | 0121 | OFFSITE ELEC ENGR | 1 | | 401 | FABRICATION |
| | 0123 | O/S SYS ENGR | 2 | | 402 | SUBASSEMBLY |
| | 0451 | O/S P/S FLD OPER | 3 | | 403 | FINAL ASSEMBLY |
| | 4002 | O/S PROG MGMT | 4 | | 404 | SIM SYSTEM CONTROL |
| | | | 5 | | 405 | QC INSPECTION |
| | | | 6 | | 406 | MFG ANAL/METHODS |
| | | | 7 | | 407 | PACKING |
| | | | 8 | | 408 | TOOL DESIGN |
| | | | 9 | | 409 | TOOL FABRICATION |
| | | | 10 | | 410 | PPC |
| | | | 11 | | 411 | PMC |

**FIGURE IV-2.A**

EVALUATION WORKSHEET LEGEND (Cont.)

| | | RATE CODE |
|---|---|---|
| 150 | OTHER COSTS ($) | |
| 0111 | ELEC ENGR | 1 |
| 0112 | MECH ENGR | 2 |
| 0113 | SYS ENGR | 3 |
| 0115 | RCDS & REL ENGR | 4 |
| 0123 | OFFSITE SYS ENGR | 5 |
| 0401 | P/S REL & MAINT | 6 |
| 0421 | P/S ILS | 7 |
| 0441 | P/S FLD OPER | 8 |
| 0451 | O/S P/S FLD OPER | 9 |
| 0461 | P/S PRESENTATION | 10 |
| 0483 | P/S LAB QUAL | 11 |
| 4001 | PROG MGMT | 12 |
| 4002 | O/S PROG MGMT | 13 |
| 4210 | FIN C CNTL EST | 14 |
| 4310 | PLANNING | 15 |
| 4510 | CONTRACTS | 16 |
| 7210 | MATERIEL | 17 |
| 4101 | DATA CTR ENGR | 18 |
| 4104 | DATA CTR P/S | 19 |
| 4114 | D/C P/S LABOR | 20 |
| 4128 | ORLANDO CONTROLS | 21 |
| 4140 | DATA CENTER CTR | 22 |
| 4142 | DATA CTR FINANCE | 23 |

| | | RATE CODE |
|---|---|---|
| 1150 | OTHER COSTS ($) | |
| 201 | SHIPPING | |
| 203 | APO FAC (LESS C/M) | |
| 205 | TRAVEL & SUBSISTENCE | |
| 210 | F/S TRAVEL & SUBSISTENCE | |
| 214 | F/S ODC MTL | |
| 221 | ROYALTY | |
| 240 | PREMIUM-DOMESTIC | |

**FIGURE IV-2.A**

EVALUATION WORKSHEET LEGEND (Cont.)

3. Value Worksheet

The Value Worksheet, Figure IV-3, is used to present the numeric value (e.g., $24.00/hr.) of each rate code developed on the Evaluation Worksheet Legend. The Value Worksheet heading lists the following:

1. Project Name
2. Offerer Name
3. Category
4. WBS Element

The body of the form lists the 29 rate codes that may be used per category. Six columns are provided for entry of alternative data values. If more than six alternatives are to be compared or evaluated, additional forms may be used. See Tables I-B and II-B, pages 48 and 50, for completed examples.

Space is provided to enter the date and time of the computer run near the bottom of the form. This facilitates correlation of the values with computer printouts.

## VALUE WORKSHEET

PROJECT: CATEGORY:

OFFEROR: WBS:

| RATE CODE | VALUE | | | | | |
|---|---|---|---|---|---|---|
| | RUN 1 | RUN 2 | RUN 3 | RUN 4 | RUN 5 | RUN 6 |
| 1 | | | | | | |
| 2 | | | | | | |
| 3 | | | | | | |
| 4 | | | | | | |
| 5 | | | | | | |
| 6 | | | | | | |
| 7 | | | | | | |
| 8 | | | | | | |
| 9 | | | | | | |
| 10 | | | | | | |
| 11 | | | | | | |
| 12 | | | | | | |
| 13 | | | | | | |
| 14 | | | | | | |
| 15 | | | | | | |
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| 18 | | | | | | |
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| 21 | | | | | | |
| 22 | | | | | | |
| 23 | | | | | | |
| 24 | | | | | | |
| 25 | | | | | | |
| 26 | | | | | | |
| 27 | | | | | | |
| 28 | | | | | | |
| 29 | | | | | | |
| Computer date time | | | | | | |

FIGURE IV-3

# CHAPTER V
# USING CPEP

After preparing the Cost/Hour Evaluation Worksheets, Evaluation Worksheet Legend and Value Worksheets, the data are ready for input to the computer. The CPEP software assists in the analysis process by enabling the user to perform, check and correct quickly routine mathematical calculations.

The CPEP software is designed to operate in a conversational, interactive mode. It is user friendly, guiding the user through the operations via a series of prompts and responses. The CPEP is sufficiently simple to permit data input and operation after a 10 to 15 minute "walk through."

The steps required to operate the CPEP model are:

1. Enter WBS.
2. Log on computer and access CPEP.
3. Enter Worksheet data.
4. Request Printouts.
5. Log off.

STEP I

Enter WBS

The user employs the computer's edit function to create a file for the WBS. This function varies with each computer. If utilizing the HP 3000, see HP EDIT/3000 reference manual (Part Number 03000-90012). If using equipment other than the HP 3000, the user should reference the equipment manufacturer's manual appropriate to that system. An example of a WBS listing is shown below.

```
1          COMBAT MISSION SIMULATOR1.0
2     HARDWARE DESIGN & DEV        1.1
3     PILOT TRAINEE STATION HDWR   1.1.1
4     COCKPIT STRUCTURE            1.1.1.1
5     SEAT                         1.1.1.2
6     VENTILATION & A/C SYS        1.1.1.3
7     INSTRUMENTS AND CONTROLS     1.1.1.4
8     PROBLEM CONTROL PANEL        1.1.1.5
9     ACCESS RAMP                  1.1.1.6
10    OTHER STATION APPARATUS      1.1.1.7
1'    INTEGRATION & ASSEMBLY       1.1.1.8
12    GUNNER TRAINEE STATION HDWR  1.1.2
13    COCKPIT STRUCTURE            1.1.2.1
14    SEAT                         1.1.2.2
15    VENTILATION & A/C SYS        1.1.2.3
16    INSTRUMENTS AND CONTROLS     1.1.2.4
17    PROBLEM CONTROL PANEL        1.1.2.5
18    ACCESS RAMP                  1.1.2.6
19    OTHER STATION APPARATUS      1.1.2.7
20    INTEGRATION & ASSEMBLY       1.1.2.8
```

STEP 2

Log on CPEP

Log on to the computer provides access to the CPEP. The user follows the procedures listed below:

a. Press the RETURN* key.

b. Enter HELLO USER NAME. ACCOUNT NAME, CPEP and press RETURN.

A prompt** appears requesting your security password:

**Enter User Password.**

c. Enter PASSWORD and press RETURN.

d. Enter RUN CPEP and press RETURN.

The user is now logged on to CPEP and the following message*** appears:

***WELCOME TO CPEP***

*I imagine that to have gotten this far you have already memorized the handbook and have a full understanding of what you have to do to get me to do my stuff. So I'm sure you have input your WBS through the EDITOR function - RIGHT? - ANSWER Y or N. IF you answer Y, I will then proceed with the CPEP program and will be asking you to give me direction as I prompt you and to give me data as I ask for it. However if your answer N, I will give you further directions.*

Enter Y and press RETURN.

*All terminal key strokes are CAPITALIZED.

**Prompts which will appear on the terminal screen are printed in **bold print.**

***Messages which will appear on the terminal screen are printed in italic print.

**STEP 3**

Enter Worksheet Data

A prompt appears on the screen for the file or project name.

a. Enter PROJECT NAME and press RETURN.

A prompt appears on the screen requesting the user to declare the file as new or old. The "new" classification pertains to the first time a project is being entered. All other cases are old.

If new,

a. Enter N and press RETURN.

Enter PROJECT NAME.
The following prompt appears:
**Enter Contractor Name.**

b. Enter CONTRACTOR NAME and press RETURN.

The following prompt appears:

**Do you want to make any changes to contractor name?**

c. Enter N and press RETURN.

If old,
A prompt appears asking if the user wants to change the project name.

a. Enter N and press RETURN.

After the user has declared the project either new or old and followed the prescribed steps, the Master Menu appears as follows:

***MASTER MENU***

*Here are the options available to you now*

1 *You can input or change your hourly, burden and overhead rates from value worksheets*

2 *You can input or change your cost and hour data from cost/hour worksheets*

3 *Your can have me add up your inputs*

4 *You can get a printout of the unburdened costs*

5 *You can have me add up and print your functional element totals*

6 *You can change your rates and recalculate the labor dollar values from value worksheets*

7 *You can calculate your burden and overhead values and get printouts of your burdens and overheads and total costs*

8 *You can deflate/inflate the costs and get a printout of the results*

9 *Or you can call it quits*

*So what will it be 1, 2, 3, 4, 5, 6, 7, 8 or 9?*

The choices listed in the Master Menu are in the order that the user would normally follow in exercising the CPEP software. For example, choices 1 and 2 are data entry steps. When starting a new project, the user must enter data with these steps before the computer can perform calculations and printing. The remaining choices or processes are listed in the sequence that would normally be required in setting up a new project. However, the user may select any of the nine choices that are listed in the Master Menu, especially when using "old" project data.

Explanations of each of the nine choices follow. Included in each explanation is a description of the function of each choice, a procedure for the user to follow, and examples of terminal screen displays and prompts.

Choice 1 INPUT OR CHANGE HOURLY, BURDEN AND OVERHEAD RATES FROM VALUE WORKSHEETS.

Choice 1 allows the user to enter hourly rates, overhead rates and burden rates (burden rates consist of G&A, cost of money and profit) from the Value Worksheets.

To select choice 1 from the Master Menu, enter 1 and press RETURN. The rate input routine screen display appears as follows:

***RATE INPUT ROUTINE***

*These are your options*

1 *Create*

2 *Modify*

3 *Exit and list*

*Enter your selection:*

Option 1 CREATE

Option 1 requests the user to enter the hourly rate from the Value Worksheet for each of the labor categories (field support, engineering, and other/direct manufacturing), as well as overhead rates, burden rates, etc. To select option 1 - CREATE - use the following procedures:

a. Enter 1 and press RETURN.

The prompt for entering rate code and rate value appears.

b. Enter rate code RATE NUMBER and RATE VALUE and press RETURN.

c. Continue until all data from Value Worksheets have been entered.

d. When all rate data for a category are entered,

Enter 0,0 and press RETURN.

e. When all rate data for all categories are entered,

Enter 0,0 and press RETURN.
This returns the user to the rate input routine.

The screen display examples for Option 1 are:

*Enter your rate code and rate for field support*
*Examples: 1, 12.34 or 15, 9.87 - Enter 0,0 to exit*
*1*
*1*
*Enter your rate code and rate for field support*
*Examples: 1, 12.34 or 15, 9.87 - Enter 0,0 to exit*
*2*
*1*
*Enter your rate code and rate for field support*
*Examples: 1, 12.34 or 15, 9.87 - Enter 0,0 to exit*
*3*
*1*
*Enter your rate code and rate for field support*
*Examples: 1, 12.34 or 15, 9.87 - Enter 0,0 to exit*
*0*
*0*
*Enter your rate code and rate for field support*
*Examples: 1, 12.34 or 15, 9.87 - Enter 0,0 to exit*
*4, 1*
*Enter your rate code and rate for field support*
*Examples: 1, 12.34 or 15, 9.87 - Enter 0,0 to exit*
*5, 1*
*Enter your rate code and rate for field support*
*Examples: 1, 12.34 or 15, 9.87 - Enter 0,0 to exit*
*2, 1*
*Enter your rate code and rate for field support*
*Examples: 1, 12.34 or 15, 9.87 - Enter 0,0 to exit*
*0*
*0*
*Enter your rate code and rate for other/direct manufacturing*
*Examples: 1, 12.34 or 15, 9.87 - Enter 0,0 to exit*

## OPTION 2 MODIFY

Option 2 permits the user to modify any rates that have been entered previously. To select option 2 - MODIFY - use the following procedure:

a. Enter 2 and press RETURN.

b. Enter the code which corresponds to the category to be modified and press RETURN.

The following prompt appears:

**Edit which rate?**

c. Enter the rate code NUMBER to be modified and press RETURN.

d. Enter the new VALUE* and press RETURN.

e. Continue until all modifications are entered.

f. Enter 0 and press RETURN to to go to the next category. This brings the user back to the screen that requests another code (category).

g. To exit modify enter 0 and press RETURN.

A screen display example for option 2 is as follows:

***Enter the code for the element you wish to edit (0 to quit):***

***Note:***

1. ***Field Supt Rates***
2. ***Engineering Rates***
3. ***Other/Direct Mfg. Rates***
4. ***Materiel O/H***
5. ***Subcontracted O/H***
6. ***Field Support O/H***
7. ***Engineering O/H***
8. ***Other/Direct Manufacturing O/H***
9. ***Other O/H***
10. ***Burden***
11. ***General and Administrative***
12. ***Cost of Money***
13. ***Profit***

* Example:

For labor rates, enter $12.34/hr as 12.34, $9.87/hr as 9.87, etc.

For percent rates, enter 15% as .15, 120% as 1.2, etc.

*RATES FOR FIELD SUPPORT*

*EDIT WHICH RATE ? (0 TO QUIT)*

| 1 | 2 | 3 | 4 | 5 | 6 | 7 |
|---|---|---|---|---|---|---|
| 1.00 | 2.00 | 3.00 | 4.00 | 5.00 | .00 | .00 |
| 8 | 9 | 10 | 11 | 12 | 13 | 14 |
| .00 | .00 | .00 | .00 | .00 | .00 | .00 |
| 15 | 16 | 17 | 18 | 19 | 20 | 21 |
| .00 | .00 | .00 | .00 | .00 | .00 | .00 |
| 22 | 23 | 24 | 25 | 26 | 27 | 28 |
| .00 | .00 | .00 | .00 | 26.00 | 27.00 | 28.00 |
| 29 | | | | | | |
| 29.00 | | | | | | |

## OPTION 3 EXIT AND LIST

Option 3 produces printouts of all rates that have been entered. In addition, the program returns the user to the Master Menu for a subsequent choice.

## Choice 2 - INPUT OR CHANGE COST AND HOUR DATA FROM COST/HOUR WORKSHEETS

Choice 2 from the Master Menu permits the user to enter dollars (cost of materials, subcontract items and other) and hour (field support, engineering and other/direct manufacturing) data from the Cost/Hour Worksheets. To select choice 2, use the following procedure:

To enter dollar and hour data, enter 2 and press RETURN.

A screen display example for choice 2 appears as follows:

*DOLLAR AND HOUR INPUT ROUTINE*

***These are your options***

*1 Create*

*2 Add*

*3 Modify*

*4 Exit and list*

***Enter your selection:***

OPTION 1 CREATE

Option 1 requests the user to enter cost and hour data for each WBS element. The program automatically sequences from category to category in the following order:

| ITEM NUMBER | CATEGORY CODE | CATEGORY DESCRIPTION | UNIT |
|---|---|---|---|
| 1. | 1010 | Material | $ |
| 2. | 1020 | Subcontracted Items | $ |
| 3. | 1050 | Field Support | Hours |
| 4. | 1090 | Engineering | Hours |
| 5. | 1100 | Other/Direct Mfg. | Hours |
| 6. | 1150 | Other | $ |

a. Enter 1 and press RETURN.

A prompt will appear showing the WBS cost element and category with this instruction:

**Enter code, or 9999 to quit adding, or o to quit this column:**

b. Enter the rate code NUMBER and press RETURN.

c. Enter the amount VALUE and press RETURN.

d. Continue until all data are entered.

The user may proceed to the next category by entering O or may enter 9999 to return to the screen for the dollar and hour input routine of choice 2.

A screen display example for Option 1 is as follows:

***COCKPIT STRUCTURE 1.01.01.01***
***ENTERIES FOR 1010 MATERIAL***
*Enter code, or 9999 to quit adding, or 0 to quit this column: 1*
*Enter amount: 1*
*Enter code, or 9999 to quit adding, or 0 to quit this column: 2*
*Enter amount: 25*
*Enter code, or 9999 to quit adding, or 0 to quit this column: 3*
*Enter amount: 100*
*Enter code, or 9999 to quit adding, or 0 to quit this column: 0*
*0*

## Option 2 ADD

With one exception, option 2 is the same as option 1, CREATE. The exception is that when selected, the ADD Option sequences the user directly to the last entry made. Therefore, if the user is interrupted during a data entry process under option 1, at any future time the user may move directly to the last entry made. The procedure is as follows:

a. Enter 2 and press RETURN. The next category that has received no data appears. Proceed in accordance with the CREATE option.

## Option 3 MODIFY

Option 3 permits the user to modify any dollar or hour data entered previously. The program shifts from WBS element to WBS element and requests the user to identify the category to be changed. The procedure for option 3 MODIFY is as follows:

a. Enter WBS NUMBER and press RETURN.

A screen appears showing the total value of each category within that WBS element.

b. Enter the CATEGORY NUMBER (1 to 6) to be modified and press RETURN.

A screen of all dollar or hour values appears for rate code (field) within that category.

c. Enter RATE CODE (field) number to be modified and press RETURN.

d. To advance to the next sequential rate code (field) and press RETURN.

e. To move to the next category, enter 0 and press RETURN.

f. Continue until all the categories are modified.

g. To move to the next option, enter O and press RETURN.

A screen display example for option 3 - Modify - follows:

| DESCRIPTION | WBS # |
|---|---|
| PILOT TRAINEE STATION HDWR | 1.01.01 |

| MATL $ (1) | SCI $ (2) | FS HOURS (3) | FS $ | ENG HOURS (4) |
|---|---|---|---|---|
| 0 | 0 | 0 | 0 | 0 |

| ENG $ | O/D M HOURS (5) | O/D M $ | OTHER $ (6) | TOTAL $ |
|---|---|---|---|---|
| 0 | 0 | 0 | 0 | 0 |

EDIT WHICH FIELD (1-6, OR 0 TO QUIT):

| DESCRIPTION | WBS # |
|---|---|
| PILOT TRAINEE STATION HDWR | 1.01.01 |

1010 MATERIAL

EDIT WHICH RATE ? (0 TO QUIT)

| 1 | 2 | 3 | 4 | 5 | 6 | 7 |
|---|---|---|---|---|---|---|
| 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 8 | 9 | 10 | 11 | 12 | 13 | 14 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 15 | 16 | 17 | 18 | 19 | 20 | 21 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 22 | 23 | 24 | 25 | 26 | 27 | 28 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 29 | | | | | | |
| 0 | | | | | | |

## Option 4 EXIT AND LIST

Selection of option 4 results in printouts of all data entered; i. e., costs and hours for the six categories. A separate sheet is printed for each WBS element. Pressing the EXIT and LIST selection followed by RETURN also moves the user back to the Master Menu for further processing.

Choice 3 - YOU CAN HAVE ME ADD UP YOUR INPUTS.

Choice 3 is a directive to the computer to process the data that has been entered in choice 1 and choice 2. No printouts result. All processing is internal to the computer and requires no further user action. The procedure for choice 3 is as follows:

a. Enter 3, and press RETURN.
The program remains at the Master Menu for further instruction.

Choice 4 - YOU CAN GET A PRINTOUT OF THE UNBURDENED COSTS.

Choice 4 produces a printout of the calculations that the computer has made within choice 4. The printout lists all WBS elements vertically in numerical order. The categories (1010, material; 1020, subcontracted items; 1050 field support hours; etc.) are listed horizontally on the top of the table. The column TOTAL UNBURDENED is included. The procedure is as follows:

a. Enter 4, and press RETURN.

The program remains at the Master Menu for further instruction. An example of the printout is as follows:

CONTRACTOR ABC
FILE SAMP

DATE APR 6, 1983, 10.23 HR
PAGE 1

SAMPLE
COSTS BY WBS FORMAT
UNBURDENED DOLLARS IN:_____

| WBS NO. | ELEMENT NAME | FUNCTIONAL ELEMENTS | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | 1010 MATL $ | 1020 SCI $ | 1050 FS HR | 1060 FS $ | 1090 ENG HR | 1100 ENG $ | 1120 OD/M HR | 1130 OD/M $ | 1150 OTHER $ | TOTAL UNBURDENED $ |
| 1.00 | | 3740 | 6800 | 850 | 21250 | 16700 | 265500 | 2935 | 35985 | 1140 | 334415 |
| 1.01 | HARDWARE DESIGN & DEV | 3740 | 6800 | 850 | 21250 | 16700 | 265500 | 2935 | 35985 | 1140 | 334415 |
| 1.01.01 | PILOT TRAINEE STATION HDWR | 1670 | 3400 | 850 | 10625 | 6800 | 107100 | 1350 | 16650 | 420 | 140065 |
| 1.01.01.01 | COCKPIT STRUCTURE | 1100 | 2000 | 500 | 6250 | 4000 | 63000 | 300 | 3700 | 10 | 76060 |
| 1.01.01.02 | SEAT | 110 | 200 | 50 | 625 | 400 | 6300 | 150 | 1850 | 20 | 9255 |
| 1.01.01.03 | VENTILATION & A/C SYS | 110 | 200 | 50 | 625 | 400 | 6300 | 150 | 1850 | 30 | 9265 |
| 1.01.01.04 | INSTRUMENTS AND CONTROLS | 110 | 200 | 50 | 625 | 400 | 6300 | 150 | 1850 | 100 | 9335 |
| 1.01.01.05 | PROBLEM CONTROL PANEL | 110 | 200 | 50 | 625 | 400 | 6300 | 150 | 1850 | 50 | 9135 |
| 1.01.01.06 | ACCESS RAMP | 110 | 200 | 50 | 625 | 400 | 6300 | 150 | 1850 | 60 | 9145 |
| 1.01.01.07 | OTHER STATION APPARATUS | 110 | 200 | 150 | 625 | 400 | 6300 | 150 | 1850 | 70 | 9155 |
| 1.01.01.08 | INTEGRATION & ASSEMBLY | 110 | 200 | 50 | 625 | 400 | 6300 | 150 | 1850 | 80 | 9165 |
| 1.01.02 | GUNNER TRAINEE STATION HOUR | 1870 | 3400 | 850 | 10625 | 9900 | 158400 | 1585 | 19335 | 720 | 194350 |
| 1.01.02.01 | COCKPIT STRUCTURE | 1100 | 2000 | 500 | 6250 | 6000 | 96000 | 300 | 3700 | 20 | 109020 |
| 1.01.02.02 | SEAT | 110 | 200 | 50 | 625 | 600 | 9600 | 150 | 1850 | 40 | 12475 |
| 1.01.02.03 | VENTILATION & A/C SYS | 110 | 200 | 50 | 625 | 600 | 9600 | 150 | 1850 | 60 | 12485 |
| 1.01.02.04 | INSTRUMENTS AND CONTROLS | 110 | 200 | 50 | 625 | 600 | 9600 | 225 | 2775 | 80 | 13655 |
| 1.01.02.05 | PROBLEM CONTROL PANEL | 110 | 200 | 50 | 625 | 600 | 9600 | 225 | 2775 | 100 | 13675 |
| 1.01.02.06 | ACCESS RAMP | 110 | 200 | 50 | 625 | 600 | 9600 | 150 | 1850 | 120 | 12705 |
| 1.01.02.07 | OTHER STATION APPARATUS | 110 | 200 | 50 | 625 | 600 | 9600 | 225 | 2775 | 140 | 13715 |
| 1.01.02.08 | INTEGRATION & ASSEMBLY | 110 | 200 | 50 | 625 | 300 | 4800 | 160 | 1760 | 160 | 7855 |

EXAMPLE

Choice 5 - YOU CAN HAVE ME ADD UP AND PRINT YOUR FUNCTIONAL ELEMENT TOTALS.

Choice 5 directs the computer to total the values and print the results for each WBS element. Each WBS element and its associated data is printed on a separate page. All WBS levels are printed; i.e., subtotals as well as the lowest WBS levels. All costs are shown as unburdened. The procedure is as follows:

a. Enter 5, and press RETURN.

An example of the printout follows.

PROJECT: SAMPLE CONTRACT NAME: ABC WED, APR 6, 1983, 11:15 AM

WBS 9 : 1.00 DESCRIPTION:

| RC | 1010 MATL $ | 1020 SCI $ | 1050 FS HR | 1060 FS $ | 1090 ENG HR | 1100 ENG $ | 1120 OD/M HR | 1130 OD/M $ | 1150 OTHER $ | TOTAL $ |
|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 340 | 6000 | 1700 | 21250 | 5000 | 30000 | 1085 | 11935 | 1140 | 131465 |
| 2 | 3400 | | 100 | | 11700 | 175500 | 1850 | 24450 | | 202950 |
| 3 | | | | | | | | | | |
| 4 | | | | | | | | | | |
| 5 | | | | | | | | | | |
| 6 | | | | | | | | | | |
| 7 | | | | | | | | | | |
| 8 | | | | | | | | | | |
| 9 | | | | | | | | | | |
| 10 | | | | | | | | | | |
| 11 | | | | | | | | | | |
| 12 | | | | | | | | | | |
| 13 | | | | | | | | | | |
| 14 | | | | | | | | | | |
| 15 | | | | | | | | | | |
| 16 | | | | | | | | | | |
| 17 | | | | | | | | | | |
| 18 | | | | | | | | | | |
| 19 | | | | | | | | | | |
| 20 | | | | | | | | | | |
| 21 | | | | | | | | | | |
| 22 | | | | | | | | | | |
| 23 | | | | | | | | | | |
| 24 | | | | | | | | | | |
| 25 | | | | | | | | | | |
| 26 | | | | | | | | | | |
| 27 | | | | | | | | | | |
| 28 | | | | | | | | | | |
| 29 | | | | | | | | | | |
| TOT | 3740 | 6000 | 1800 | 21250 | 16700 | [illegible] | 2935 | 36385 | 1140 | 334415 |

EXAMPLE

Choice 6 - YOU CAN CHANGE YOUR RATES AND RECALCULATE THE LABOR DOLLAR VALUES FROM VALUE WORKSHEET.

Choice 6 is recommended for partial changes of data contained in the Value Worksheet. Wholesale changes should be performed with choice 1. The procedure is as follows:

a. Enter 6 and press RETURN.

b. From this point, follow the same procedure as described under choice 1, option 2.

Choice 7 - YOU CAN CALCULATE YOUR BURDEN AND OVERHEAD VALUES AND GET PRINTOUTS OF YOUR BURDENS AND OVERHEADS AND TOTAL COSTS.

Choice 7 directs the computer to calculate costs for each of the WBS elements. Two printouts are provided.

The first is a listing and summary of total costs, unburdened costs combined with burden costs.

The second is a printout of the difference between unburdened costs and total costs (referred to as "DELTAS").

Both printouts list vertically the WBS elements. Cost categories are listed horizontally under the table heading.

The screen display returns to the Master Menu for further direction after exercising choice 7. The procedure for choice 7 is as follows:

a. Enter 7 and press RETURN.

Examples of the printouts follow.

CONTRACTOR ABC
FILE SAMP

DATE APR 6, 1983 11:18 AM
PAGE 1

SAMPLE
COSTS BY WBS FORMAT
BURDENED DOLLARS IN:_____

| WBS NO. | ELEMENT NAME | FUNCTIONAL ELEMENTS | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | 1010 MATL $ | 1020 SCI $ | 1050 FS HR | 1060 FS $ | 1090 ENG HR | 1100 ENG $ | 1120 QC/M HR | 1130 QC/M $ | 1150 OTHER $ | [illegible] ENG $ |
| •1.00 | | 178150 | 377369 | 1800 | 1375824 | 1670019645381 | | 2935 | 2080212 | 55357 | [illegible] |
| •1.01 | HARDWARE DESIGN & DEV | 178150 | 377369 | 1800 | 1375824 | 1670019645381 | | 2935 | 2080212 | 55357 | [illegible] |
| •1.01.01 | PILOT TRAINEE STATION HOUR | 89075 | 188684 | 850 | 687912 | 6800 | 7924747 | 1350 | 962499 | 20395 | [illegible] |
| •1.01.01.01 | COCKPIT STRUCTURE | 52397 | 110991 | 500 | 404654 | 4000 | 4661616 | 300 | 213889 | 466 | [illegible] |
| •1.01.01.02 | SEAT | 5240 | 11099 | 50 | 40465 | 400 | 466162 | 150 | 106944 | 971 | [illegible] |
| •1.01.01.03 | VENTILATION & A/C SYS | 5240 | 11099 | 50 | 40465 | 400 | 466162 | 150 | 106944 | 1457 | [illegible] |
| •1.01.01.04 | INSTRUMENTS AND CONTROLS | 5240 | 11099 | 50 | 40465 | 400 | 466162 | 150 | 106944 | 4856 | [illegible] |
| •1.01.01.05 | PROBLEM CONTROL PANEL | 5240 | 11099 | 50 | 40465 | 400 | 466162 | 150 | 106944 | 2428 | [illegible] |
| •1.01.01.06 | ACCESS RAMP | 5240 | 11099 | 50 | 40465 | 400 | 466162 | 150 | 106944 | 2914 | [illegible] |
| •1.01.01.07 | OTHER STATION APPARATUS | 5240 | 11099 | 150 | 40465 | 400 | 466162 | 150 | 106944 | 3399 | [illegible] |
| •1.01.01.08 | INTEGRATION & ASSEMBLY | 5240 | 11099 | 50 | 40465 | 400 | 466162 | 150 | 106944 | 3885 | [illegible] |
| •1.01.02 | GUNNER TRAINEE STATION HOUR | 89075 | 188684 | 850 | 687912 | 9900 | 11720635 | 1585 | 1117713 | 34962 | [illegible] |
| •1.01.02.01 | COCKPIT STRUCTURE | 52397 | 110991 | 500 | 404654 | 6000 | 7103415 | 300 | 213889 | 971 | [illegible] |
| •1.01.02.02 | SEAT | 5240 | 11099 | 50 | 40465 | 600 | 710342 | 150 | 106944 | 1943 | [illegible] |
| •1.01.02.03 | VENTILATION & A/C SYS | 5240 | 11099 | 50 | 40465 | 600 | 710342 | 150 | 106944 | 2914 | [illegible] |
| •1.01.02.04 | INSTRUMENTS AND CONTROLS | 5240 | 11099 | 50 | 40465 | 600 | 710342 | 225 | 160417 | 3885 | [illegible] |
| •1.01.02.05 | PROBLEM CONTROL PANEL | 5240 | 11099 | 50 | 40465 | 600 | 710342 | 225 | 160417 | 4856 | [illegible] |
| •1.01.02.06 | ACCESS RAMP | 5240 | 11099 | 50 | 40465 | 600 | 710342 | 150 | 106944 | 5827 | [illegible] |
| •1.01.02.07 | OTHER STATION APPARATUS | 5240 | 11099 | 50 | 40465 | 600 | 710342 | 225 | 160417 | 6798 | [illegible] |
| •1.01.02.08 | INTEGRATION & ASSEMBLY | 5240 | 11099 | 50 | 40465 | 300 | 355171 | 150 | 106944 | 7769 | [illegible] |

EXAMPLE

PROJECT: SAMPLE CONTRACT NAME: ABC WED, APR 6, 1983, 11:17 AM

DELTAS

| WBS # | MATL $ | SCI # | FS # | ENG # | OD/M $ | OTHER $ | BURDEN | G&A | COM | PROFIT | TOTAL |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | OVERHEAD | | | | | | | | | | |
| 1.00 | 3964 | 9520 | 38250 | 584100 | 53970 | 1254 | 1230577 | 3384086 | 5651425 | 12420724 | 2371 |
| 1.01 | 3964 | 9520 | 38250 | 584100 | 53970 | 1254 | 1230577 | 3384086 | 5651425 | 12420724 | 2371 |
| 1.01.01 | 1982 | 4760 | 19125 | 235620 | 24975 | 462 | 512387 | 1409064 | 2353137 | 5171734 | 967 |
| 1.01.01.01 | 1166 | 2800 | 11250 | 136680 | 5550 | 11 | 262524 | 776942 | 1297493 | 2851636 | 544 |
| 1.01.01.02 | 117 | 280 | 1125 | 136 | 2775 | 22 | 32740 | 90036 | 150360 | 330462 | 63 |
| 1.01.01.03 | 117 | 280 | 1125 | 1366 | 2775 | 33 | 32766 | 90105 | 150476 | 330716 | 63 |
| 1.01.01.04 | 117 | 280 | 1125 | 13860 | 2775 | 110 | 32942 | 90590 | 151266 | 332496 | 62 |
| 1.01.01.05 | 117 | 280 | 1125 | 13860 | 2775 | 55 | 32816 | 90244 | 150707 | 331225 | 62 |
| 1.01.01.06 | 117 | 280 | 1125 | 13860 | 2775 | 66 | 32841 | 90313 | 150823 | 331479 | 63 |
| 1.01.01.07 | 117 | 280 | 1125 | 13860 | 2775 | 77 | 32866 | 90332 | 150939 | 331733 | 63 |
| 1.01.01.08 | 117 | 280 | 1125 | 13860 | 2775 | 88 | 32892 | 90452 | 151054 | 331988 | 63 |
| 1.01.02 | 1982 | 4760 | 19125 | 348480 | 29000 | 792 | 716190 | 1975022 | 3298267 | 7249959 | 1363 |
| 1.01.02.01 | 1166 | 2800 | 11250 | 211200 | 5550 | 22 | 409276 | 1125491 | 1879570 | 4130927 | 786 |
| 1.01.02.02 | 117 | 280 | 1125 | 21120 | 2775 | 44 | 45463 | 125022 | 208788 | 458874 | 87 |
| 1.01.02.03 | 117 | 280 | 1125 | 21120 | 2775 | 66 | 45513 | 125161 | 209019 | 459363 | 87 |
| 1.01.02.04 | 117 | 280 | 1125 | 21120 | 4163 | 88 | 48339 | 132931 | 221995 | 487901 | 93 |
| 1.01.02.05 | 117 | 280 | 1125 | 21120 | 4163 | 110 | 48389 | 133070 | 222226 | 488409 | 93 |
| 1.01.02.06 | 117 | 280 | 1125 | 21120 | 2775 | 132 | 45664 | 125577 | 209713 | 460909 | 87 |
| 1.01.02.07 | 117 | 280 | 1125 | 21120 | 4163 | 154 | 48490 | 133347 | 222689 | 489427 | 93 |
| 1.01.02.08 | 117 | 280 | 1125 | 10560 | 2640 | 176 | 27063 | 74424 | 124267 | 273159 | 52 |

Choice 8 - YOU CAN DEFLATE/INFLATE THE COSTS AND GET A PRINTOUT OF THE RESULTS.

Choice 8 provides the capability to inflate constant dollars or deflate escalated dollars. As is always the case with inflating or deflating dollars, the procedure requires timephasing (spreading dollars over years). Therefore the user is prompted for information regarding how the inflation or deflation is to proceed: Number of years costs are spread over? Percentage of cost in each year? Constant dollar (base) year? User may choose either R&D or Investment inflate/deflate factors and may also choose composite or compound indices. Factors for the inflate/deflate process are resident in the software, but may be adjusted as necessary by the user via a prompt from the software. Completion of the choice 8 routine returns the user to the Master Menu. The procedure for choice 8 is as follows:

a. Enter 8 and press RETURN.

The following prompt appears:

**Do you wish to change your escalation factors? y/n**

If from this initial prompt, the user selects Y, the following procedure applies:

a. Enter Y and press RETURN.

The following prompt appears:

**Which factor? R for R&D or I for investment factor.**

b. Enter R or I and press RETURN.

The following prompt appears:

**1) Composite or 2) compound index, ans. 1 or 2.**

c. Enter 1 or 2 and press RETURN.

A screen appears showing the years and escalation factors.

The prompt asks: **Edit which year?**

d. Enter YEAR NUMBER and press RETURN.

The cursor advances to the year in question.

e. Enter ESCALATION FACTOR and press RETURN.

f. Continue until all entries are made.

g. Enter 0 and press RETURN.

A prompt asks: **Do you wish to change your escalation factors? y/n.**

h. Enter N and press RETURN.

The following prompt appears:

**I assume that you want to spread the estimated costs over a number of years. The spread costs are then to be de-escalated using standard inflation factors.**

**Right now, I need some information from you.**

**How many years are the WBS items spread over?**

i. Enter NUMBER OF YEARS and press RETURN.

The following prompt appears:

**What is the first year the WBS costs are in?**

**Note: Because you are spreading costs over X years, your allowable range is 1st year to last year.**

j. Enter YEAR and press RETURN.

The following screen appears:

***You can de-escalate your costs by using up to 10 spread percentages. These percentages will be applied to the WBS items and then the de-escalation factors will be divided into the results and they will be summed and put back into their respective WBS items.***

The following prompt appears:

**Enter percentage for year.**

k. Enter percentage DECIMAL FACTOR and press RETURN.

l. Continue until all entries are made.

The following screen appears:

*Now it gets tricky*

*You have two options concerning how you want the costs reassembled:*

*1) You can have all your costs in one year's dollars or*

*2) You can spread your costs via percentages*

*NOTE: If you chose option 1, I will just de-escalate the costs and leave them in the base year's dollars*

*However, if you choose option 2,*

*I will escalate the costs using a prorata share of the costs using the percentages you specify*

**Do you want to choose option 1 or 2?**

If user selects option 1, the following procedure applies:

a. Enter 1 and press RETURN.

CPEP completes the operation including a printout and returns the user to the Master Menu for further processing.

If the user selects option 2, the following procedure applies:

a. Enter 2 and press RETURN.

The following prompt appears:

**I assume that you want to spread the de-escalated costs over a number of years. The spread costs are then to be escalated using standard inflation factors. I need some information from you. How many years are the WBS items spread over?**

b. Enter YEARS and press RETURN.

The following prompt appears:

**What is the first year the WBS costs are in?**

c. Enter IST YEAR and press RETURN.

The following screen appears:

*You can escalate your costs by using up to 10 spread percentages. These percentages will be applied to the WBS items and then the escalation factors will be multiplied by the results and they will be summed and put back into their respective WBS items.*

The following prompt appears:

**Enter percentage for year.**

d. Enter DECIMAL VALUE and press RETURN.

e. Continue until all entries are made.

CPEP completes the operation including a printout and returns the user to the Master Menu for further processing.

If from the initial prompt (reference page 39) the user selects N, the following procedure applies:

a. Enter N and press RETURN.

The following prompt appears:

**I assume that you want to spread the estimated costs over a number of years. The spread costs are then to be de-escalated using standard inflation factors.**

**Right now, I need some information from you.**

**How many years are the WBS items spread over?**

b. Enter NUMBER OF YEARS and press RETURN.

The following prompt appears:

**What is the first year the WBS costs are in?**

c. Enter IST YEAR and press RETURN.

The following screen appears:

*You can de-escalate your costs by using up to 10 spread percentages. These percentages will be applied to the WBS items and then the de-escalation factors will be divided into the results and they will be summed and put back into their respective WBS items.*

The following prompt appears:

**Enter percentage for year..**

d. Enter percent DECIMAL FACTOR and press RETURN.

e. Continue until all entries are made.

The following screen appears:

*Now it gets tricky*
*You have two options concerning how you want the costs reassembled:*

*1) You can have all your costs in one year's dollars or*
*2) You can spread your costs via percentages*

*NOTE: If you choose option 1, I will just de-escalate the costs and leave them in the base year's dollars*
*However, if you choose option 2,*
*I will escalate the costs using a prorata share of the costs using the percentages you specify*
**Do you want to choose option 1 or 2?**

If user selects option 1, the following procedure applies:

a. Enter 1 and press RETURN.

CPEF completes the operation including a printout and returns the user to the Master Menu for further processing.

If the user selects option 2, the following procedure applies:

a. Enter 2 and press RETURN.

The following prompt appears:

**I assume that you want to spread the de-escalated costs over a number of years. The spread costs are then to be escalated using standard inflation factors.**

**I need some more information from you. How many years are the WBS items spread over?**

b. Enter NUMBER OF YEARS and press RETURN.

The following prompt appears:

**What is the first year the WBS costs are to be escalated?**

NOTE: **Because you are spreading costs over X years, your allowable range is 1st year to last year.**

c. Enter <u>1ST YEAR</u> and press RETURN.

The following screen appears:

*You can escalate your costs by using up to 10 spread percentages. These percentages will be applied to the WBS items and then the escalation factors will be multiplied by the results and they will be summed and put back into their respective WBS items.*

The following prompt appears:

**Enter percentage for <u>year</u>.**

d. Enter DECIMAL VALUE and press RETURN.

e. Continue until all entries are made.

CPEP completes the operation including a printout and returns the user to the Master Menu for further processing.

NOTE: In option 2 to change constant dollars from <u>one</u> base year to a <u>different</u> base year, user responds to the prompt (What is the first year the WBS costs are to be escalated?) by entering the year to which the base year dollars are to be converted (i.e., the year the dollars are being converted to). When user requires such a change, the software automatically applies compound inflate/deflate indices.

## Choice 9 - YOU CAN CALL IT QUITS

The following procedure applies:

a. Enter 9 and press RETURN.

The screen displays END OF PROGRAM.

b. Enter BYE and press RETURN.

# CHAPTER VI
# SAMPLE CPEP ANALYSIS

A sample set of worksheets and printouts are presented in this chapter to illustrate CPEP.

The sample utilizes a 20 cost element WBS and the standard CPEP categories. Data values are chosen for simplicity of tracking (e.g., 10, 100, 1,000, etc.) and do not represent actual data.

The material presented herein is incomplete. This is necessary to avoid having the reader leaf through volumes of repetitive material. Enough examples are included to show each operation.

Evaluation Worksheet Legend and Value Worksheets, Tables I-A, I-B, II-A and II-B are shown for the engineering and general administrative categories only.

Engineering has two subcategories: (1) systems engineer and (2) mechanical engineer; assigned rate codes 1 and 2, respectively. For Run 1, systems engineer is assigned the value 18.00 while mechanical engineer is assigned the value 15.00. These values represent the engineering costs per hour. CPEP multiplies the values by the number of engineering hours to obtain engineering costs. The same costs per hour are used in all cost elements that have systems or mechanical engineering hours.

The general and administrative factor is 15% (.15). This factor is applied against all cost elements.

Data prepared on the Value Worksheets are entered using choice 1 of the Master Menu. A printout is generated when choice 1 is completed. The printout shows the input data, Table III. Note: User has the option of combining several rates such as G&A, Cost of Money (COM), and Profit into one rate.

Cost/Hour Evaluation Worksheet data are entered using choice 2 of the Master Menu. Sample data are shown in Table IV. Note the system engineering and mechanical engineering hourly values. These data are multiplied by the hourly rates shown previously.

A printout of each WBS cost element at the lowest levels and the summary of all WBS cost elements is generated by choices 3 and 4 of the Master Menu. Table V is an example of an individual WBS cost element printout of unburdened costs. Note the 1,000 and 3,000 hour entries under engineering hours and their associated costs $18,000 and $45,000.

A summary of unburdened costs by WBS cost element and categories is shown in Table VI. Note the cockpit structure data are taken from the cockpit structure individual WBS cost element printout, Table V.

TABLE I-A

## EVALUATION WORKSHEET LEGEND

PROJECT: SAMP DATA

CATEGORY: ENGINEERING

OFFEROR: ABC

UNIT OF MEASURE: ☒ HOURS
☐ DOLLARS
☐ FACTOR

| SUB CATEGORY | RATE CODE | COMMENT |
|---|---|---|
| SYSTEMS ENG. | 1 | |
| MECHANICAL ENG. | 2 | |
| | | |
| | | |
| | | |
| | | |
| | | |
| | | |
| | | |
| | | |
| | | |
| | | |

Note:

Signature: Jon Clay
Date: 4/5/83

TABLE I-B

## VALUE WORKSHEET

PROJECT: SAMPDATA CATEGORY: ENGINEERING

OFFEROR: ABC

| RATE CODE | VALUE | | | | | |
|---|---|---|---|---|---|---|
| | RUN 1 | RUN 2 | RUN 3 | RUN 4 | RUN 5 | RUN 6 |
| 1 | 18.00 | | | | | |
| 2 | 15.00 | | | | | |
| 3 | | | | | | |
| 4 | | | | | | |
| 5 | | | | | | |
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| 28 | | | | | | |
| 29 | | | | | | |
| Computer date time | | | | | | |

TABLE II-A

## EVALUATION WORKSHEET LEGEND

PROJECT: SAMP DATA

CATEGORY: G&A

OFFEROR: ABC

UNIT OF MEASURE: ☐ HOURS
☐ DOLLARS
☒ FACTOR

| SUB CATEGORY | RATE CODE | COMMENT |
|---|---|---|
| G&A | 1 | |
| | | |
| | | |
| | | |
| | | |
| | | |
| | | |
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| | | |
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Note:

Signature: Joe Cyrus
Date: 4/5/83

TABLE II-B

## VALUE WORKSHEET

PROJECT: SAMPDATA CATEGORY: G+A

OFFEROR: ABC

| RATE CODE | VALUE | | | | | |
|---|---|---|---|---|---|---|
| | RUN 1 | RUN 2 | RUN 3 | RUN 4 | RUN 5 | RUN 6 |
| 1 | .15 | | | | | |
| 2 | | | | | | |
| 3 | | | | | | |
| 4 | | | | | | |
| 5 | | | | | | |
| 6 | | | | | | |
| 7 | | | | | | |
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| 27 | | | | | | |
| 28 | | | | | | |
| 29 | | | | | | |
| Computer date time | | | | | | |

TABLE III

SAMPLE RATE INPUTS

*RATES USED IN THE SAMPLE PROGRAM* *TUE, APR 5, 1983, 4:18 PM*

*RATES FOR ENGINEERING*

| RATE CODE | RATE | RATE CODE | RATE |
|---|---|---|---|
| 1 | 18 | 16 | 0 |
| 2 | 15 | 17 | 0 |
| 3 | 0 | 18 | 0 |
| 4 | 0 | 19 | 0 |
| 5 | 0 | 20 | 0 |
| 6 | 0 | 21 | 0 |
| 7 | 0 | 22 | 0 |
| 8 | 0 | 23 | 0 |
| 9 | 0 | 24 | 0 |
| 10 | 0 | 25 | 0 |
| 11 | 0 | 26 | 0 |
| 12 | 0 | 27 | 0 |
| 13 | 0 | 28 | 0 |
| 14 | 0 | 29 | 0 |
| 15 | 0 | 30 | 0 |

*RATES USED IN THE SAMPLE PROGRAM* *TUE, APR 5, 1983, 4:19 PM*

*RATES FOR MATERIAL OVERHEAD*

| RATE CODE | RATE |
|---|---|
| 1 | .1 (10%) |

*RATES FOR SUB-CONTRACTED ITEMS OVERH*

| RATE CODE | RATE |
|---|---|
| 1 | .2 |

*RATES FOR FIELD SUPPORT OVERHEAD*

| RATE CODE | RATE |
|---|---|
| 1 | .2 |

TABLE III (Continued)
SAMPLE RATE INPUTS

*RATES FOR ENGINEERING OVERHEAD*

| *RATE CODE* | *RATE* |
|---|---|
| 1 | 1.5 (150%) |

*RATES FOR OTHER DIRECT/MANUFACTURING*

| *RATE CODE* | *RATE* |
|---|---|
| 1 | 1.8 |

*RATES FOR OTHER OVERHEAD*

| *RATE CODE* | *RATE* |
|---|---|
| 1 | 1.1 |

*RATES FOR OTHER BURDEN*

| *RATE CODE* | *RATE* |
|---|---|
| 1 | .4 |

*RATES FOR GENERAL AND ADMINISTRATIVE*

| *RATE CODE* | *RATE* |
|---|---|
| 1 | .15 |

*RATES FOR COST OF MONEY*

| *RATE CODE* | *RATE* |
|---|---|
| 1 | .003 |

*RATES FOR PROFIT*

| *RATE CODE* | *RATE* |
|---|---|
| 1 | .1 |

## COST / HOUR EVALUATION WORKSHEET

| PROJECT: | WBS NO: | | CI | NO: |
|---|---|---|---|---|
| SAMP DATA | 1.1.1.1 | | | |
| **OFFEROR:** | **WBS TITLE:** | | | |
| ABC Co. | Cockpit Structure | | | |

| RATE CODE | CATEGORY | ESTIMATES | | | | % + - |
|---|---|---|---|---|---|---|
| | | OFFEROR | *1 | GOVERNMENT | *2 | |
| X | MATERIAL ($) | | | | | |
| 1 | RAW MAT'L. | 500 | M | | | |
| 2 | PURCH. PARTS | 800 | M | | | |
| X | SUBCONTRACT COSTS ($) | | | | | |
| 1 | XYZ CORP. | 5,000 | L | | | |
| | | | | | | |
| X | FIELD SUPPORT LABOR (HOURS) | | | | | |
| 1 | FS | 500 | L | | | |
| X | ENGINEERING LABOR (HOURS) | | | | | |
| 1 | SYSTEM ENGR. | 1,000 | H | | | |
| 2 | MECH. ENGR. | 3,000 | H | | | |
| | | | | | | |
| X | OTHER DIRECT/MANUFACTURING LABOR (HOURS) | | | | | |
| 1 | FAB. | 100 | H | | | |
| 2 | ASSY. | 200 | M | | | |
| | | | | | | |
| X | OTHER COSTS ($): | | | | | |
| 1 | OTHER | 500 | L | | | |
| | | | | | | |
| | | | | | | |

*1 OFFEROR REALISM CODE *2 EVALUATOR CONFIDENCE CODE

L = LOW M = MEDIUM H = HIGH

SIGNATURE/DATE:

Joe Cost 5 Apr. '83

# TABLE V
## INDIVIDUAL WBS COST ELEMENT
## (UNBURDENED)

WBS # : 1.01.01.01

DESCRIPTION: COCKPIT STRUCTURE

| RC | 1010 MATL $ | 1020 SCI $ | 1050 FS HR | 1060 FS $ | 1090 ENG HR | 1100 ENG $ | 1120 OD/M HR | 1130 OD/M $ | 1150 OTHER $ | TOTAL UNBURDENED $ |
|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 500 | 300 | 300 | 6250 | 1000 | 10000 | 100 | 1100 | 500 | 31350 |
| 2 | 800 | | | | 3000 | 45000 | 200 | 2600 | | 48400 |
| 3 | | | | | | | | | | |
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| 29 | | | | | | | | | | |
| TOT | 1300 | 300 | 500 | 6250 | 4000 | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] |

# TABLE VI

## SUMMARY OF WBS COST ELEMENTS

## (UNBURDENED)

CONTRACTOR ABC
FILE SAMP

PAGE 1

SAMPLE
COSTS BY WBS FORMAT
UNBURDENED DOLLARS IN:_____

| WBS NO. | ELEMENT NAME | FUNCTIONAL ELEMENTS 1010 - 1020 MATL $ | 1020 OCT $ | 1050 FO MR | 1060 FS $ | 1090 ENG MR | 1100 ENG $ | 1120 OD/M MR | 1130 OD/M $ | 1150 OTHER $ | TOTAL UNBURDENED $ |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1.00 | COMBAT MISSION SIMULATOR | 3940 | 9500 | 1800 | 21250 | 16700 | 265500 | 2935 | 35905 | 1630 | 338105 |
| 1.01 | HARDWARE DESIGN & DEV | 3940 | 9500 | 1800 | 21250 | 16700 | 265500 | 2935 | 35905 | 1630 | 338105 |
| 1.01.01 | PILOT TRAINEE STATION HOUR | 2070 | 6400 | 950 | 10625 | 6800 | 107100 | 1350 | 16650 | 910 | 143755 |
| 1.01.01.01 | COCKPIT STRUCTURE | 1300 | 5000 | 500 | 6250 | 4000 | 63000 | 300 | 3700 | 500 | 79750 |
| 1.01.01.02 | SEAT | 110 | 200 | 50 | 625 | 400 | 6300 | 150 | 1850 | 20 | 9105 |
| 1.01.01.03 | VENTILATION & A/C SYS | 110 | 200 | 50 | 625 | 400 | 6300 | 150 | 1850 | 30 | 9115 |
| 1.01.01.04 | INSTRUMENTS AND CONTROLS | 110 | 200 | 50 | 625 | 400 | 6300 | 150 | 1850 | 100 | 9185 |
| 1.01.01.05 | PROBLEM CONTROL PANEL | 110 | 200 | 50 | 625 | 400 | 6300 | 150 | 1850 | 50 | 9135 |
| 1.01.01.06 | ACCESS RAMP | 110 | 200 | 50 | 625 | 400 | 6300 | 150 | 1850 | 60 | 9145 |
| 1.01.01.07 | OTHER STATION APPARATUS | 110 | 200 | 150 | 625 | 400 | 6300 | 150 | 1850 | 70 | 9155 |
| 1.01.01.00 | INTEGRATION & ASSEMBLY | 110 | 200 | 50 | 625 | 400 | 6300 | 150 | 1850 | 80 | 9165 |
| 1.01.02 | GUNNER TRAINEE STATION HOUR | 1070 | 3400 | 850 | 10625 | 9900 | 158400 | 1585 | 19335 | 720 | 194350 |
| 1.01.02.01 | COCKPIT STRUCTURE | 1100 | 2000 | 500 | 6250 | 6000 | 96000 | 300 | 3700 | 20 | 109070 |
| 1.01.02.02 | SEAT | 110 | 200 | 50 | 625 | 600 | 9600 | 150 | 1850 | 40 | 12425 |
| 1.01.02.03 | VENTILATION & A/C SYS | 110 | 200 | 50 | 625 | 600 | 9600 | 150 | 1850 | 60 | 12445 |
| 1.01.02.04 | INSTRUMENTS AND CONTROLS | 110 | 200 | 50 | 625 | 600 | 9600 | 225 | 2775 | 60 | 13390 |
| 1.01.02.05 | PROBLEM CONTROL PANEL | 110 | 200 | 50 | 625 | 600 | 9600 | 225 | 2775 | 100 | 13410 |
| 1.01.02.06 | ACCESS RAMP | 110 | 200 | 50 | 625 | 600 | 9600 | 150 | 1850 | 120 | 12505 |
| 1.01.02.07 | OTHER STATION APPARATUS | 110 | 200 | 50 | 625 | 600 | 9600 | 225 | 2775 | 140 | 13450 |
| 1.01.02.00 | INTEGRATION & ASSEMBLY | 110 | 200 | 50 | 625 | 300 | 4800 | 150 | 1760 | 160 | 7655 |

Choice 5 of the Master Menu generates printouts similar to Table V, only at higher WBS levels. An example is shown on Table VII for WBS number 1.00. Note that the total values correspond to those shown on Table VI for WBS number 1.00.

A printout of the delta costs related to overhead, burden, general and administrative, cost of money and profit generated by Master Menu choice 7 are shown on Table VIII. The calculations leading to the total cost including profit for WBS number 1.1.1.1 are shown below:

| ITEM | REFERENCE | VALUE |
|---|---|---|
| Unburdened cost | Table VI | 79,750 |
| Delta Cost | | |
| Material | Table VIII | 130 |
| Subcontract | Table VIII | 1,000 |
| Field Support | Table VIII | 1,250 |
| Engineering | Table VIII | 94,500 |
| Manufacturing | Table VIII | 6,660 |
| Other | Table VIII | 550 |
| | TOTAL DELTA COST | 104,090 |
| Unburdened + Delta costs | | 183,840 |
| X Burden Rate | | .4 |
| Burden cost Table VIII | | 73,536 |
| Unburdened + Delta + Burden costs | | 257,376 |
| X G&A Rate | | .15 |
| General and Administration cost Table VIII | | 38,606 |
| Unburdened + Delta + Burden + G&A costs | | 295,982 |
| X COM Rate | | .003 |
| COM cost Table VIII | | 888 |
| Unburdened + Delta + Burden + G&A + COM cost | | 296,870 |
| X Profit Rate (100% cost + 10% profit) | | 1.10 |
| Cost Total with all Factors Including Profit | | 326,557 |

Note that the total column on Table VIII includes the unburdened costs from Table VI, as well as the delta costs.

Table IX presents the sum of the unburdened and delta costs by WBS cost element and category.

# TABLE VII

## INDIVIDUAL WBS COST ELEMENTS - HIGHER LEVEL

## (UNBURDENED)

PROJECT: SAMPLE CONTRACT NAME: ABC

WBS 0 : 1.00 DESCRIPTION: COMBAT MISSION SIMULATOR

| RC | 1010 MATL $ | 1020 SCI $ | 1030 FS HR | 1040 FS $ | 1090 ENG HR | 1100 ENG $ | 1120 OD/M HR | 1130 OD/M $ | 1150 OTHER $ | TOTAL UNBURDENED $ |
|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 740 | 9800 | 1700 | 21250 | 5000 | 90000 | 1085 | 11935 | 1630 | 135355 |
| 2 | 3200 | | 100 | | 11700 | 173500 | 1850 | 24050 | | 202750 |
| 3 | | | | | | | | | | |
| 4 | | | | | | | | | | |
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| 27 | | | | | | | | | | |
| 28 | | | | | | | | | | |
| 29 | | | | | | | | | | |
| TOT | 3940 | 9800 | 1800 | 21250 | 16700 | 263500 | 2935 | [illegible] | 1630 | [illegible] |

PROJECT: SAMPLE

CONTRACT NAME: ABC

DELTAS
(OVERHEADS AND BURDENS)

TABLE VIII
DELTA COSTS

| WBS # | MATL $ | SCI $ | FS $ | ENG $ | OD/M $ | OTHER $ | BURDEN | G&A | COM | PROFIT | TOTAL |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | OVERHEAD | | | | | | | | | | |
| 1.00 | 394 | 1960 | 4250 | 398250 | 64773 | 1793 | 323804 | 169908 | 3921 | 130730 | 1437968 |
| 1.01 | 394 | 1960 | 4250 | 398250 | 64773 | 1793 | 323804 | 169908 | 3921 | 130730 | 1437968 |
| 1.01.01 | 207 | 1200 | 2125 | 168650 | 29970 | 1001 | 135592 | 71102 | 1642 | 54740 | 602144 |
| 1.01.01.01 | 130 | 1000 | 1250 | 94500 | 6660 | 550 | 73536 | 38606 | 888 | 29608 | 326558 |
| 1.01.01.02 | 11 | 40 | 125 | 9450 | 3330 | 22 | 8033 | 4637 | 107 | 3566 | 39226 |
| 1.01.01.03 | 11 | 40 | 125 | 9450 | 3330 | 33 | 8041 | 4641 | 107 | 3569 | 39262 |
| 1.01.01.04 | 11 | 40 | 125 | 9450 | 3330 | 110 | 8900 | 4672 | 108 | 3593 | 39524 |
| 1.01.01.05 | 11 | 40 | 125 | 9450 | 3330 | 55 | 8058 | 4650 | 108 | 3576 | 39338 |
| 1.01.01.06 | 11 | 40 | 125 | 9450 | 3330 | 66 | 8066 | 4654 | 108 | 3579 | 39374 |
| 1.01.01.07 | 11 | 40 | 125 | 9450 | 3330 | 77 | 8075 | 4659 | 108 | 3583 | 39413 |
| 1.01.01.08 | 11 | 40 | 125 | 9450 | 3330 | 88 | 8083 | 4663 | 108 | 3586 | 39449 |
| 1.01.02 | 187 | 680 | 2125 | 237600 | 34803 | 792 | 188212 | 98806 | 2279 | 75990 | 835824 |
| 1.01.02.01 | 110 | 400 | 1250 | 144000 | 6660 | 22 | 104605 | 54910 | 1263 | 42230 | 464520 |
| 1.01.02.02 | 11 | 40 | 125 | 14400 | 3330 | 44 | 12150 | 6378 | 147 | 4906 | 53956 |
| 1.01.02.03 | 11 | 40 | 125 | 14400 | 3330 | 66 | 12166 | 6386 | 148 | 4912 | 54029 |
| 1.01.02.04 | 11 | 40 | 125 | 14400 | 4995 | 88 | 13219 | 6939 | 161 | 5338 | 58706 |
| 1.01.02.05 | 11 | 40 | 125 | 14400 | 4995 | 110 | 13236 | 6940 | 161 | 5345 | 58781 |
| 1.01.02.06 | 11 | 40 | 125 | 14400 | 3330 | 132 | 12217 | 6413 | 148 | 4933 | 54254 |
| 1.01.02.07 | 11 | 40 | 125 | 14400 | 4995 | 154 | 13270 | 6966 | 161 | 5358 | 58930 |
| 1.01.02.08 | 11 | 40 | 125 | 7200 | 3160 | 176 | 7349 | 3858 | 90 | 2968 | 32640 |

# TABLE IX

## SUMMARY OF WBS COST ELEMENTS

## (BURDENED)

CONTRACTOR ABC
FILE SAMP

SAMPLE
COSTS BY WBS FORMAT
BURDENED DOLLARS IN: _____

DATE
PAGE 1

| WBS NO. | ELEMENT NAME | 1010 MATL $ | 1020 SCI $ | 1050 FS HR | 1060 FS $ | FUNCTIONAL ELEMENTS 1090 ENG HR | 1100 ENG $ | 1120 OD/M HR | 1130 OD/M $ | 1150 OTHER $ | TOTAL BURDENED $ |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1.00 | COMBAT MISSION SIMULATOR | 7699 | 20086 | 1000 | 45292 | 16700 | 1179032 | 2935 | 178979 | 6080 | 1437968 |
| 1.01 | HARDWARE DESIGN & DEV | 7699 | 20086 | 1000 | 45292 | 16700 | 1179032 | 2935 | 178979 | 6080 | 1437968 |
| 1.01.01 | PILOT TRAINEE STATION HOUR | 4045 | 13640 | 950 | 22646 | 6000 | 475609 | 1350 | 82010 | 3394 | 602144 |
| 1.01.01.01 | COCKPIT STRUCTURE | 2540 | 10658 | 500 | 13322 | 4000 | 279770 | 300 | 18403 | 1865 | 326558 |
| 1.01.01.02 | SEAT | 215 | 426 | 50 | 1332 | 400 | 27977 | 150 | 9201 | 75 | 39226 |
| 1.01.01.03 | VENTILATION & A/C SYS | 215 | 426 | 50 | 1332 | 400 | 27977 | 150 | 9201 | 111 | 39262 |
| 1.01.01.04 | INSTRUMENTS AND CONTROLS | 215 | 426 | 50 | 1332 | 400 | 27977 | 150 | 9201 | 373 | 39524 |
| 1.01.01.05 | PROBLEM CONTROL PANEL | 215 | 426 | 50 | 1332 | 400 | 27977 | 150 | 9201 | 187 | 39338 |
| 1.01.01.06 | ACCESS RAMP | 215 | 426 | 50 | 1332 | 400 | 27977 | 150 | 9201 | 223 | 39374 |
| 1.01.01.07 | OTHER STATION APPARATUS | 215 | 426 | 150 | 1332 | 400 | 27977 | 150 | 9201 | 262 | 39413 |
| 1.01.01.08 | INTEGRATION & ASSEMBLY | 215 | 426 | 50 | 1332 | 400 | 27977 | 150 | 9201 | 298 | 39449 |
| 1.01.02 | GUNNER TRAINEE STATION HOUR | 3654 | 7246 | 850 | 22646 | 9900 | 703423 | 1505 | 96169 | 2686 | 835824 |
| 1.01.02.01 | COCKPIT STRUCTURE | 2149 | 4264 | 500 | 13322 | 6000 | 426315 | 300 | 18403 | 75 | 464528 |
| 1.01.02.02 | SEAT | 215 | 426 | 50 | 1332 | 600 | 42632 | 150 | 9201 | 150 | 53956 |
| 1.01.02.03 | VENTILATION & A/C SYS | 215 | 426 | 50 | 1332 | 600 | 42632 | 150 | 9201 | 223 | 54029 |
| 1.01.02.04 | INSTRUMENTS AND CONTROLS | 215 | 426 | 50 | 1332 | 600 | 42632 | 225 | 13803 | 296 | 59706 |
| 1.01.02.05 | PROBLEM CONTROL PANEL | 215 | 426 | 50 | 1332 | 600 | 42632 | 225 | 13803 | 373 | 59781 |
| 1.01.02.06 | ACCESS RAMP | 215 | 426 | 50 | 1332 | 600 | 42632 | 150 | 9201 | 448 | 54254 |
| 1.01.02.07 | OTHER STATION APPARATUS | 215 | 426 | 50 | 1332 | 600 | 42632 | 225 | 13803 | 522 | 59930 |
| 1.01.02.08 | INTEGRATION & ASSEMBLY | 215 | 426 | 50 | 1332 | 300 | 21316 | 100 | 6754 | 597 | 32640 |

Choice 8 of the Master Menu generates the printouts shown on Tables X and XI.

The costs found on Table V! represent the original input that is based upon the offerors' inflation factors. To compare costs among offerors, it is desirable to normalize the offerors' submission to a common base.

Costs on Table X adjust the original estaimte to constant year dollars. Thus all original cost estimates are normalized.

Costs on Table XI are normalized costs that have been escalated using inflation factors selected by the evaluation team.

# TABLE X

## NORMALIZED WBS COST ELEMENTS

## (UNBURDENED)

CONTRACTOR ABC — DATE
FILE SAMP — PAGE 1

SAMPLE
COSTS BY WBS FORMAT
NORMALIZED DOLLARS IN: _____

| WBS NO. | ELEMENT NAME | 1010 MATL $ | 1020 SCI $ | 1050 FS NR $ | 1060 FS $ | FUNCTIONAL ELEMENTS 1090 ENG NR $ | 1100 ENG $ | 1120 OD/M NR $ | 1130 OD/M $ | 1150 OTHER $ | TOTAL NORMALIZED $ |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1.00 | COMBAT MISSION SIMULATOR | 7790 | 20978 | 1050 | 45893 | 17000 | 1101532 | 3095 | 104790 | 6572 | 1447556 |
| 1.01 | HARDWARE DESIGN & DEV | 7790 | 20978 | 1050 | 45893 | 17000 | 1101532 | 3095 | 104790 | 6572 | 1447556 |
| 1.01.01 | PILOT TRAINEE STATION HOUR | 3902 | 13426 | 950 | 22291 | 6000 | 460154 | 1350 | 81512 | 3341 | 592705 |
| 1.01.01.01 | COCKPIT STRUCTURE | 2500 | 10491 | 500 | 13113 | 4000 | 275304 | 300 | 10115 | 1636 | 321439 |
| 1.01.01.02 | SEAT | 212 | 419 | 50 | 1311 | 400 | 27530 | 150 | 9057 | 74 | 38611 |
| 1.01.01.03 | VENTILATION & A/C SYS | 212 | 419 | 50 | 1311 | 400 | 27530 | 150 | 9057 | 109 | 38647 |
| 1.01.01.04 | INSTRUMENTS AND CONTROLS | 212 | 419 | 50 | 1311 | 400 | 27530 | 150 | 9057 | 367 | 38904 |
| 1.01.01.05 | PROBLEM CONTROL PANEL | 212 | 419 | 50 | 1311 | 400 | 27530 | 150 | 9057 | 184 | 38721 |
| 1.01.01.06 | ACCESS RAMP | 212 | 419 | 50 | 1311 | 400 | 27530 | 150 | 9057 | 220 | 38757 |
| 1.01.01.07 | OTHER STATION APPARATUS | 212 | 419 | 150 | 1311 | 400 | 27530 | 150 | 9057 | 258 | 38795 |
| 1.01.01.08 | INTEGRATION & ASSEMBLY | 212 | 419 | 50 | 1311 | 400 | 27530 | 150 | 9057 | 293 | 38831 |
| 1.01.02 | GUNNER TRAINEE STATION HOUR | 3888 | 7552 | 900 | 23602 | 10200 | 713370 | 1745 | 103278 | 3232 | 854850 |
| 1.01.02.01 | COCKPIT STRUCTURE | 2115 | 4197 | 500 | 13113 | 6000 | 419632 | 300 | 10115 | 74 | 457246 |
| 1.01.02.02 | SEAT | 212 | 419 | 50 | 1311 | 600 | 41964 | 150 | 9057 | 148 | 53111 |
| 1.01.02.03 | VENTILATION & A/C SYS | 212 | 419 | 50 | 1311 | 600 | 41964 | 150 | 9057 | 220 | 53164 |
| 1.01.02.04 | INSTRUMENTS AND CONTROLS | 212 | 419 | 50 | 1311 | 600 | 41964 | 225 | 13587 | 293 | 57660 |
| 1.01.02.05 | PROBLEM CONTROL PANEL | 212 | 419 | 50 | 1311 | 600 | 41964 | 225 | 13587 | 367 | 57660 |
| 1.01.02.06 | ACCESS RAMP | 212 | 419 | 50 | 1311 | 600 | 41964 | 150 | 9057 | 441 | 53401 |
| 1.01.02.07 | OTHER STATION APPARATUS | 212 | 419 | 50 | 1311 | 600 | 41964 | 225 | 13587 | 514 | 58006 |
| 1.01.02.08 | INTEGRATION & ASSEMBLY | 212 | 419 | 50 | 1311 | 300 | 20982 | 160 | 6617 | 588 | 32126 |

# TABLE XI

## NORMALIZED AND ESCALATED WBS COST ELEMENTS

## (UNBURDENED)

CONTRACTOR ABC — DATE
FILE BAMP — PAGE 1

SAMPLE
COSTS BY WBS FORMAT
NORMALIZED AND ESCALATED DOLLARS IN: _____

| WBS NO. | ELEMENT NAME | 1010 MATL $ | 1020 SCI $ | 1030 FS HR | 1060 FS $ | FUNCTIONAL ELEMENTS 1090 ENG HR | 1100 ENG $ | 1120 OD/M HR | 1130 OD/M $ | 1150 OTHER $ | TOTAL NORM/ESCAL $ |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1.00 | COMBAT MISSION SIMULATOR | 8922 | 24203 | 1800 | 52405 | 16700 | 1366269 | 2935 | 207402 | 7046 | 1666326 |
| 1.01 | HARDWARE DESIGN & DEV | 8922 | 24203 | 1800 | 52405 | 16700 | 1366269 | 2935 | 207402 | 7046 | 1666326 |
| 1.01.01 | PILOT TRAINEE STATION HOUR | 4687 | 15806 | 950 | 26242 | 6800 | 551139 | 1350 | 95961 | 3933 | 697769 |
| 1.01.01.01 | COCKPIT STRUCTURE | 2943 | 12351 | 300 | 15438 | 4000 | 324199 | 300 | 21326 | 2161 | 378415 |
| 1.01.01.02 | SEAT | 249 | 494 | 50 | 1544 | 400 | 32420 | 150 | 10662 | 87 | 45455 |
| 1.01.01.03 | VENTILATION & A/C SYS | 249 | 494 | 50 | 1544 | 400 | 32420 | 150 | 10662 | 129 | 45497 |
| 1.01.01.04 | INSTRUMENTS AND CONTROLS | 249 | 494 | 50 | 1544 | 400 | 32420 | 150 | 10662 | 432 | 45801 |
| 1.01.01.05 | PROBLEM CONTROL PANEL | 249 | 494 | 50 | 1544 | 400 | 32420 | 150 | 10662 | 217 | 45585 |
| 1.01.01.06 | ACCESS RAMP | 249 | 494 | 50 | 1544 | 400 | 32420 | 150 | 10662 | 250 | 45627 |
| 1.01.01.07 | OTHER STATION APPARATUS | 249 | 494 | 150 | 1544 | 400 | 32420 | 150 | 10662 | 304 | 45672 |
| 1.01.01.08 | INTEGRATION & ASSEMBLY | 249 | 494 | 50 | 1544 | 400 | 32420 | 150 | 10662 | 345 | 45714 |
| 1.01.02 | GUNNER TRAINEE STATION HOUR | 4234 | 8397 | 850 | 26242 | 9900 | 815131 | 1585 | 111441 | 3113 | 968555 |
| 1.01.02.01 | COCKPIT STRUCTURE | 2496 | 4941 | 500 | 15438 | 6000 | 494016 | 300 | 21326 | 87 | 538296 |
| 1.01.02.02 | SEAT | 249 | 494 | 50 | 1544 | 600 | 49402 | 150 | 10662 | 174 | 62525 |
| 1.01.02.03 | VENTILATION & A/C SYS | 249 | 494 | 50 | 1544 | 600 | 49402 | 150 | 10662 | 258 | 62604 |
| 1.01.02.04 | INSTRUMENTS AND CONTPOLS | 249 | 494 | 50 | 1544 | 600 | 49402 | 225 | 15995 | 345 | 68023 |
| 1.01.02.05 | PROBLEM CONTROL PANEL | 249 | 494 | 50 | 1544 | 600 | 49402 | 225 | 15995 | 432 | 68116 |
| 1.01.02.06 | ACCESS RAMP | 249 | 494 | 50 | 1544 | 600 | 49402 | 150 | 10662 | 519 | 63370 |
| 1.01.02.07 | OTHER STATION APPARATUS | 249 | 494 | 50 | 1544 | 600 | 49402 | 225 | 15995 | 605 | 68311 |
| 1.01.02.08 | INTEGRATION & ASSEMBLY | 249 | 494 | 50 | 1544 | 300 | 24701 | 150 | 10144 | 692 | 37823 |

# APPENDIX A

# COST PROPOSAL REQUIREMENTS (CPR)

SAMPLE

COST PROPOSAL REQUIREMENTS (CPR)

for

(Enter Program Title)

COST PROPOSAL REQUIREMENTS (CPR)
FOR
(ENTER PROGRAM TITLE)

1.0 GENERAL

The offeror shall prepare the cost proposal in accordance with the requirements of this document. The proposed cost shall be developed based on the Contract Work Breakdown Structure (CWBS) set forth in this Request For Proposal (RFP).

2.0 METHODOLOGY AND RATIONALE

a. Cost estimates fully supported by data which are sufficient to establish the reasonableness, realism, and completness of the proposed cost/price shall be submitted for each contract WBS item. The proposals shall include a complete description of the philosophy and methodology used in developing cost estimates. It has been standard practice for contractors to include "boilerplate" statements extracted from the company's estimating policy. This is unacceptable. The proposal shall explain what specifically was used for each estimate. Supporting detail provided, for example, should include cost estimating relationships and cost factors that have been used, as well as assumptions concerned with economics, technology, schedules, plant volume, learning curves, allocations, comparisons to similar products, etc. The contractor, in the preparation of this estimate, shall insure that all WBS items are covered by an identifiable statement of work document and/or paragraphs thereof. When necessary, the contractor shall develop a substatement of work document to insure that cost estimates for discrete items (lowest level CWBS) can be readily separated from the remainder of the contractor proposal documentation. This estimating methodology and rationale shall be provided for all elements of the proposal.

b. "Estimating Methodology" means the manner or method in which a cost is estimated, its factual base, and assumptions incorporated in the estimate. This information is cost and pricing data within the meaning of the Truth in Negotiations Act and is included in that information which the offeror must certify.

c. "Estimating Rationale" means that process of reasoning and judgement, reduced to narrative in the proposal, which would lead a reasonable man to conclude that the estimate was equitable and realistic.

d. Offerors shall not presume that certain estimating methodologies are inherently reasonable and need not be supported by rationale.

The only cost which need not be supported by rationale are vendor costs where the amount is established under adequate price competition or by catalog prices where the item is sold to the general public in

sufficient quantities in a competitive market. Failure to provide supporting rationale for all other elements of the cost proposal is unacceptable.

e. Historical costs typically include realized contingencies, obsolete and/or inappropriate methods and technology, and structural and managerial inefficiencies. Use of historical or comparison costs without supporting rationale particularly is unacceptable.

3.0 CWBS DICTIONARY

a. The offeror shall extend the Government Contract Work Breakdown Structure and provide a CWBS dictionary.

b. The CWBS extension and the CWBS dictionary shall be prepared in accordance with DI-A-3023/M-126-1 (MOD 1) "Contract Work Breakdown Structure (attachment I)".

4.0 DIRECT LABOR/COST DATA

The offeror shall provide the following information and data:

a. Labor Hours and Dollars

The offer shall , for each WBS element, at each level, prepare a spread sheet showing the following:

(1) Labor hours by functional labor category.

(2) Extended labor dollar cost by functional labor category.

(3) Labor hours and dollars by functional labor category and by time periods used as the basis of the proposed cost (months, quarters, or fiscal years).

(4) Total labor hours and dollars by functional labor category and by time periods (months, quarters, or fiscal years).

(5) Total labor hours and dollars by functional labor category and time periods.

(6) The time periods selected by the offeror for cost/hour spreading shall reflect the same approach used to develop the proposed cost.

(7) The functional labor categories provided shall be the lowest level of functional labor aggregation which is used by the offeror in preparing the proposed cost.

(8) The Contractor shall, for each labor category by WBS element, identify estimating methodology and rationale and show all calculations. All factors used shall be identified. The tasks performed by each labor category shall be described for each WBS element at the lowest level. The tasks shall be segregated as non-recurring or recurring. Define the non-recurring and recurring categories and their contents.

b. Burden Rates and Dollars

(1) If more than one overhead rate applies to labor in your accounting system, such as factory overhead, the labor categories shall be appropriately segregated.

(2) Labor rates applicable to each category by time period (month, quarter, or fiscal year).

(3) The applicable overhead rate(s) and dollars shall be shown by time period and total.

(4) Material handling burden, G&A, FCCM, etcetera, shall be applied to their appropriate base. Rates and dollars will be shown by time period and total. Each base shall be identified.

c. Subcontracts, Purchased Parts, Raw Materials, and Other Costs.

(1) The costs shall be segregated and shown in the time period in which the cost will be incurred.

(2) These costs shall be segregated and provided for each WBS element, at each level.

(3) For production contracts these costs shall be segregated and the non-recurring and recurring costs identified.

(4) The offeror shall provide the identification, estimating rationale and methodology, and detailed backup for all direct costs other than labor.

(5) The offeror shall provide a bill of materials prepared on DD Forms 346 and 347 and in accordance with the instructions on the reverse of the forms. A computer prepared list in the format of the DD Forms is acceptable. However, the prepared list shall be organized by WBS element.

d. All direct labor hours and cost data shall be presented in a manner which will allow the Government to readily extract the information according to the categories established in Format A, Cost/Hour Evaluation Worksheet. An example of complete worksheet is provided for reference. The offeror should provide any distinguishing information or detail which would assist the Government in extracting information from the cost proposal to complete Cost/Hour Evaluation Worksheet.

5.0 SUBCONTRACTOR COST AND PRICING DATA

The Contractor shall, in accordance with the criteria of paragraph 3-807.4 of the Defense Acquisition Regulation, obtain cost or pricing data from his subcontractors.

a. For each subcontractor (within the crieteria of DAR 3-807.4) the Contractor will submit that subcontractor's executed DD633 and (at a minimum)

the direct labor and cost data as required of the prime in this CPR, plus methodology and rationale.

b. Technical/Cost (best value) competition is not "adequate price competition" within the meaning of paragraph 3-807 of the Defense Acquisition Regulation. (See DAR 3-807.7(a)).

6.0 TRAVEL COSTS

The Contractor will set forth his travel costs in detail, (number of men, number of trips, locations, costs, etc.) together with his estimating methodology and rationale. He shall identify, and supply upon further request, his published corporate travel policy document.

7.0 FOREIGN TAXES, CUSTOMS, DUTIES, ROYALTIES, EXCISE TAXES, AND OTHER SPECIAL COSTS

The Contractor shall identify all costs which the terms of this RFP required to be separately reported and/or that the Contractor is required to certify the extent to which they are or are not included in the proposed cost. If none, for any given category, so state.

8.0 OTHER DIRECT COSTS

The Contractor shall identify and include here any costs not included elsewhere that will be charged as a direct cost to the contract. They will be broken down in detail and the estimating methodology and rationale provided.

9.0 TRANSPORTATION COSTS

The Contractor shall set forth the transportaion costs for shipment of the equipment from the Contractor's plant to the destination points specified in Section E, Deliveries of Performance of the RFP.

10.0 OVERHEAD, BURDEN RATES, PROFIT, AND RISK

a. The Contractor shall document all costs that will be allocated to the contract on an indirect basis.

b. Offeror shall, for each account in his accounting system (examples: engineering, overhead, manufacturing overhead, material handling overhead, G&A expense, etc.) reflect all costs that will be allocated for each account and specifically identify, in detail, the cost bases (by labor, material, etc. categories) to which each account is applicable. Identify the contents (pools) within each account.

c. Offeror shall submit DD Form 1861 and all backup thereto to reflect Facilities Capitol Cost of Money.

## 11.0 INFLATION RATE SUMMARY AND EXPLANATION

A table shall be provided showing all inflation rates used to prepare the cost proposal broken out by time periods and functional categories (at least material, subcontracts, labor, and other costs). The value of all weighted inflation rates used shall be provided. The basis for all area used shall be explained.

## 12.0 GFE COST DATA

The offeror's cost proposals shall identify the GFE being proposed. To insure that the government evaluates all offerors on a comparable basis the following data is required from both the prime offeror and subcontractor:

a. A list of all GFE (including quantities) proposed by WBS.

b. For each government furnished item identified in response to the preceding paragraph the offeror shall briefly describe the item and provide a CFE cost for providing the equivalent item, including the offeror's equivalent associated costs. The cost of each item of GFE shall be provided from current government stock list documentation.

c. The estimated fair rental value for the use of government property shall be furnished in summary (identifying both facility and other property dollars) with the cost documentation.

d. It is necessary that the Government be able to determine total program cost. Therefore, the offeror shall also address all associated costs such as test support, use of special test Government facilities, etc. The offeror should provide cost differences, quoted on each item (including quantities required) to assist the Government in determining the economics of providing the items as GFE in lieu of CFE.

## 13.0 PROJECT MASTER SCHEDULE MASTER PHASING CHART

Provide a master schedule chart depicting the milestones for each WBS element that controls the time phasing of the total project to meet the project schedule. This chart shall include major contract milestone requirements, especially contract award, post award conference, project planning review, computer program system management guidance conference, preliminary design reviews, critical design reviews, release of purchase orders for critical items with long lead times, critical functional computer program modules completion, DT&E test procedures delivery complete, real-time operation complete, and ready for government tests, tooling, CFE/GFE deliveries.

Identify critical interfaces between functional department schedules which support the master schedule, review the required contract milestone, comment specifically on the reasonableness of each milestone, and an ability to meet each milestone.

14.0 Cost Data Summary Report

For each contract the offeror shall prepare the Cost Data Summary Rerort (DD Form 1921) in accordance with DI-F-6006 MOD (attachment 2). In lieu of the contract line item and reporting elements (columns a and b), the WBS element number and name shall be provided for all WBS elements at each level to at least level 3. The proposed non-recurring, recurring and total costs shall be provided for each WBS element (columns d, e, and f). Omit columns g, h, i, and j. A separate DD 1921 shall be prepared for each subcontractor whose services require non-recurring effort. Provide definitions and explanations of the contents of both the non-recurring and recurring categories.

15.0 Manufacturing Data

Any manufacturing rationale in data form shall be explained. Definitions shall be provided for each variable. A clear explanation of the manufacturing estimate and calculations shall be provided.

16.0 Technical Data and Information

Prepare a list of the CDRL items and the price of each.

## 17.0 SUMMARY OF COST PROPOSAL INFORMATION REQUIRED

a. Material: $ by category by WBS by time spread.

b. Subcontractor: $ by category by WBS by time spread.

c. Field Support Labor: $ and hours by functional category by WBS by time spread.

d. Engineering Labor: $ and hours by functional category by WBS by time spread.

e. Manufacturing Labor: $ and hours by functional category by WBS by time spread.

f. Other Costs: $ by category by WBS by time spread.

g. Overhead: $, basis and rated by time spread.

h. Burden: $, basis and rates by time spread.

i. Labor Rates: $ by functional labor category by time spread.

j. Travel: Number of people each trip, number of trips, locations, type of labor, costs (per diem/transporation) and time spread.

k. Transportation: Identify costs and describe.

l. Other Direct Costs: Identify costs and describe.

m. Special Costs: Identify costs and describe.

n. Contract WBS: CWBS extension and CWBS dictionary.

o. Inflation Factors: Inflation rates by functional category and time spread.

p. Methodology and Rationale: Basis of bid, calculations, factors, tasks by WBS and non-recurring vs. recurring.

q. GFE: Separately identify and cost by WBS.

r. Each Contract: Non-recurring efforts, $ and hours segregated from recurring efforts, $ and hours.

s. Subcontractor Information: Same above requirements as the Prime Contractor.

# COST / HOUR EVALUATION WORKSHEET

| PROJECT: | WBS NO: | | CI | NO: |
|---|---|---|---|---|
| EXAMPLE | 1.1.1.4 | | | |
| OFFEROR: | WBS TITLE: | | | |
| XYZ Corp. | Cockpit Sturcture - Panels (Example Only) | | | |

| | RATE CODE | CATEGORY | ESTIMATES | | | | % ± |
|---|---|---|---|---|---|---|---|
| | | | OFFEROR | *1 | GOVERNMENT | *2 | |
| 1010 | X | MATERIAL ($) | | | | | |
| | 1 | 101 Purchased Parts | 5000 | | | | |
| | 2 | 102 Other Manuf. Mat. | 100 | | | | |
| | 3 | 103 Other Engr. Mat. | 50 | | | | |
| 1020 | X | SUBCONTRACT COSTS ($) | | | | | |
| | 1 | A. B. Duke | 3000 | | | | |
| | 2 | F. C. D. | 25000 | | | | |
| 1050 | X | FIELD SUPPORT LABOR (HOURS) | | | | | |
| | 1 | 203 F/S | 200 | | | | |
| 1100 | X | ENGINEERING LABOR (HOURS) | | | | | |
| | 1 | 305 Systems Engineer | 100 | | | | |
| | 2 | 307 Visual Engineer | 150 | | | | |
| | 3 | 308 Proj. Sys. Engr. | 30 | | | | |
| | 4 | 310 Mech. Design | 80 | | | | |
| | 5 | 312 Clerical | 50 | | | | |
| 1120 | X | OTHER DIRECT/MANUFACTURING LABOR (HOURS) | | | | | |
| | 1 | 401 Fabrication | 25 | | | | |
| | 2 | 402 Subassembly | 15 | | | | |
| | 3 | 403 Final Assembly | 10 | | | | |
| 1150 | X | OTHER COSTS ($): | | | | | |
| | 1 | 206 Travel & Subsistence | 500 | | | | |
| | 2 | 207 Shipping | 1000 | | | | |
| | 3 | 208 Computer | 75 | | | | |



*1 OFFEROR REALISM CODE *2 EVALUATOR CONFIDENCE CODE

L = LOW M = MEDIUM H = HIGH

SIGNATURE/DATE:

FORMAT A

| DATA ITEM DESCRIPTION | 2. IDENTIFICATION NO(S). | |
|---|---|---|
| | AGENCY | NUMBER |
| 1. TITLE<br>Contract Work Breakdown Structure | | DI-A-3023/<br>M-126-1 (MOD 1) |

DESCRIPTION/PURPOSE

The contract work breakdown structure (contract WBS) establishes the framework for reporting program cost schedule, and technical performance. It provides a basis for uniform planning and reporting status and program visibility and assignment of responsibilities.

4. APPROVAL DATE

5. OFFICE OF PRIMARY RESPONSIBILITY

6. DDC REQUIRED

8. APPROVAL LIMITATION

7. APPLICATION/INTERRELATIONSHIP

Used on programs where either cost/schedule control system criteria, in accordance with DOD Instruction 7000.2, or cost/schedule planning and control system requirements are to be applied.

9. REFERENCES (Mandatory as cited in block 10)

MIL-STD-881

MCSL NUMBER(S)

10. PREPARATION INSTRUCTIONS

The contract WBS will be reflected in a report which consists of two parts, Part I is an Index, and part II will be the Dictionary.

a. Part I, Index. The contract WBS Index will contain the data elements as shown in the attached format. Instructions are as follows:

Header - Self explanatory.

Columns:

4 - Line No. Enter line item number entry.

5 - Work Breakdown Structure Elements/Tasks. Enter the title of the WBS element and indentured to reflect the level. Level 1 is the total contract. Levels 2, 3, etc., are successively lower levels of the program.

6 - WBS Number. Enter the WBS number as provided by the Government and extended by the contractor.

7 & 8 - RDT&E Prod. Place a checkmark in the appropriate columns to show whether the WBS element is associated with the RDT&E phase or the production phase, or both.

**ATTACHMENT 1**

| DATA ITEM DESCRIPTION | 2. IDENTIFICATION NO(S). | |
|---|---|---|
| | AGENCY | NUMBER |
| 1. TITLE<br>Contract Work Breakdown Structure | | DI-A-3023/<br>M-126-1 (MOD 1) |

DESCRIPTION/PURPOSE

The contract work breakdown structure (contract WBS) establishes the framework for reporting program cost schedule, and technical performance. It provides a basis for uniform planning and reporting status and program visibility and assignment of responsibilities.

4. APPROVAL DATE

5. OFFICE OF PRIMARY RESPONSIBILITY

6. DOC REQUIRED

8. APPROVAL LIMITATION

7. APPLICATION/INTERRELATIONSHIP

Used on programs where either cost/schedule control system criteria, in accordance with DOD Instruction 7000.2, or cost/schedule planning and control system requirements are to be applied.

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MIL-STD-881

MCSL NUMBER(S)

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a. Part I, Index. The contract WBS Index will contain the data elements as shown in the attached format. Instructions are as follows:

Header - Self explanatory.

Columns:

4 - Line No. Enter line item number entry.

5 - Work Breakdown Structure Elements/Tasks. Enter the title of the WBS element and indentured to reflect the level. Level 1 is the total contract. Levels 2, 3, etc., are successively lower levels of the program.

6 - WBS Number. Enter the WBS number as provided by the Government and extended by the contractor.

7 & 8 - RDT&E Prod. Place a checkmark in the appropriate columns to show whether the WBS element is associated with the RDT&E phase or the production phase, or both.

**ATTACHMENT 1**

9 - (Untitled.) This column will be used for other program phases such as a formal component improvement program.

10 - Contract Line Item. Enter the number of the contract line item which is associated with the WBS element.

11 - Para No. Enter the applicable paragraph numbers from the Statement of Work (SOW) which are associated with the WBS element.

12 - Specification Number. Where applicable, enter the number of the specification which covers the WBS element. If the specification is associated with more than one WBS element, indicate which paragraphs are applicable to the WBS element.

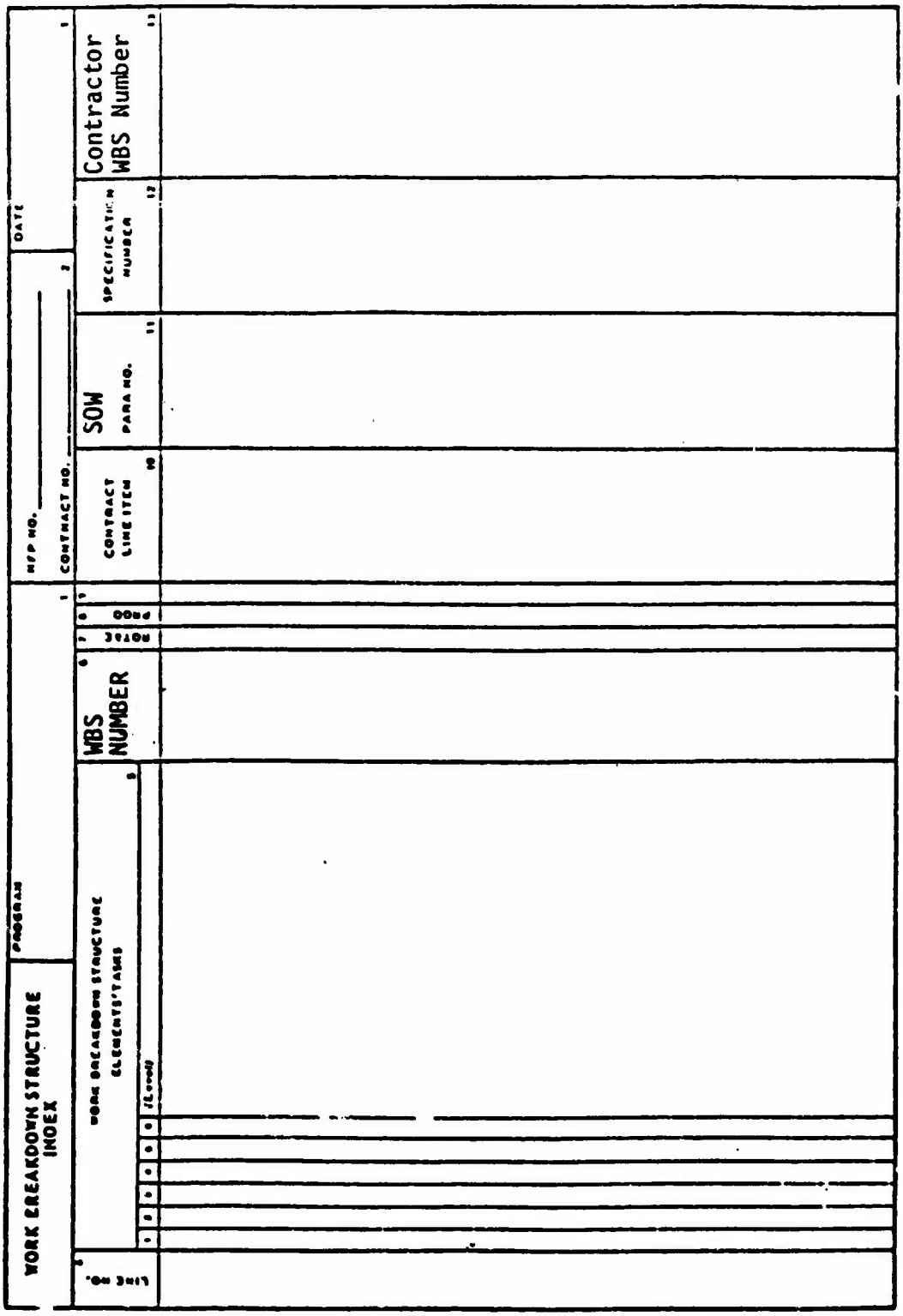
13 - Contractor WBS Code. Enter the WBS coding devised by the contractor when different from column 6 (WBS Number).

b. Part II, WBS Dictionary and Contract Requirements. The Dictionary/ Contract Requirements will describe the technical,physical, and cost content of every WBS element. It will describe what the element is and efforts associated with the WBS element (such as design, development, and manufacturing). It will also describe the physical configuration and components as well as distinguishing performance parameters of the hardware and software. For the WBS elements specified elsewhere for cost reporting, the WBS Dictionary definitions will also include the exact narrative of the directly associated work statement paragraphs. General arrangement of the Dictionary will be as displayed on the attached Part II format:

(1) The elements will be in the same order as the contract WBS index.

(2) Following the description of the element will be a listing of the next level of WBS element.

DI-A-3023/M-126-1 (MOD 1) (Continued)
Preparation Instructions (Continued)



CONTRACT WORK BREAKDOWN STRUCTURE
PART II-WBS DICTIONARY AND CONTRACT REQUIREMENTS

ITEM NO.

| | |
|---|---|
| PROGRAM TITLE WBS ELEMENT TITLE AND NUMBER | PHYSICAL DESCRIPTION AND PERFORMANCE |
| DATE | |
| ELEMENT TASK DESCRIPTION<br>TECHNICAL CONTENT | |
| | SPECIFICATION NUMBER SPECIFICATION TITLE |
| | COST CONTENT |
| | SYSTEM CONTRACTOR |
| APPLICABLE WORK STATEMENT NARRATIVE | |
| | ASSOCIATE/SUB/SUB SUBCONTRACTOR |

A-14

**ATTACHMENT 2**

| DATA ITEM DESCRIPTION | 2. IDENTIFICATION NO(S). AGENCY | NUMBER |
|---|---|---|
| 1. TITLE: Cost Data Summary Report (DD Form 1921) | DOD | DI-F-6006(MOD) |

**3. DESCRIPTION/PURPOSE**

To collect costs for all work breakdown structure (WBS) elements for providing cost backup for funds estimates. The report is used in preparing estimates in support of the Five Year Defense Program, developing independent government and parametric cost estimates in support of cost and price analyses and contract negotiations, evaluating contractors' proposals and responding to requirements for summary information to higher levels of management. It segregates actual and estimated costs into their recurring and non-recurring components.

**4. APPROVAL DATE**

November 1973

**5. OFFICE OF PRIMARY RESPONSIBILITY**

OASD(C)

**6. ODC REQUIRED**

**8. APPROVAL LIMITATION**

**7. APPLICATION/INTERRELATIONSHIP**

a. The Cost Data Summary Report is applicable to major systems contracts for some large advanced development prototype efforts, full-scale development, and production with a total RDT&E estimate of over $50 million or cumulative production estimates of over $200 million or as specified in Chapter 1 of the Contractor Cost Data Reporting (CCDR) system.

b. This report is related to the Functional Cost-Hour Report, DID DI-F-6007; the Progress Curve Report, DID DI-F-6008; and the Plant-Wide Data Report, DID DI-F-6009.

**9. REFERENCES (Mandatory as cited in block 10)**

OMB 22-R-0322
DODI 7000.11
Contractor Cost Data Reporting (CCDR) system, NAVMT P 5241, AMCP 715-8, AFLCP/AFSCP 800-15.
Military Standard 881.

**MCSL NUMBER(S)**

AMSL No. 71556.

**10. PREPARATION INSTRUCTIONS**

a. The contractor shall prepare deliverable reports (DD Form 1921) in accordance with the instructions contained herein.

b. The contractor may submit hard copy printouts from his punched cards or magnetic tapes, in lieu of the OMB-approved DD Form 1921, Cost Data Summary Report, provided that the printouts are identical in content and structure with the DD Form 1921 (Chapter 3, Contractor Cost Data Reporting (CCDR) system).

c. DD Form 1921 - Cost Data Summary Report. The Cost Data Summary Report summarizes all activities included in the contract and aggregates costs against the reporting elements selected from the work breakdown structures defined in MIL-STD-881 and/or specified in the contract. The report shall provide information to at least level 3 of the WBS.

(1) The following instructions apply to DD Form 1921, the Cost Data Summary Report. Leave items 4, 6, 7, 8, and 9 blank, unless otherwise specified by the DOD component. Also omit columns g, h, i, and j.

(a) Item 1 Program

Identify the system designator or the type, model, and series of the prime item or items being purchased under contract or being proposed for contract. If the contract or proposal is for or includes services (research, flight tests, etc.), specify the work to be performed. In the case of associate contractors and subcontractors reporting separately, identify the end item being purchased on the contract and the program for which it is being procured (e.g., aft body section of the F-X, wind

tunnel tests for the B-X, launch equipment for missile X).

(b) Item 2 Contract RFP Program Estimate - Check the RFP box.

(c) Item 3 RDT&E Procurement - Check the appropriate box.

(d) Item 5 Report As Of - Enter the reporting date.

(e) Item 10 Prime/Associate Subcontractor

Check the Prime/Associate box if the contractor reporting is the prime or associate contractor for the work to be performed on contract or being proposed and enter the name, division (if applicable), and address of the reporting contractor. Check the subcontractor box if the report is being submitted by a subcontractor and enter the name, division (if applicable) and address of the reporting subcontractor.

(f) Item 11 Name of Customer

If the report is being submitted by a subcontractor enter the name of the customer for whom the work on contract is being performed. If the report is being submitted by a prime or associate contractor, leave item blank.

(g) Column a Contract Line Item (Work Breakdown Structure Element)

Enter the WBS element number as specified in the contract which relates to the reporting element in column b.

(h) Column b Reporting Elements (WBS Name)

Enter the reporting elements (WBS Name) specified in the contract or by the DOD component for which cost data is to be reported.

(i) Column c Element Code

Not applicable.

(j) Columns d, e, and f To Date - Cost Incurred - Nonrecurring, Recurring, and Total

(1) Costs of all reporting elements reported are to be segregated into nonrecurring and recurring classifications. For some elements these costs are clearly differentiated. For example, all systems or component tests (other than quality control tests, acceptance tests, etc.) mock-ups and construction of facilities are nonrecurring, regardless of whether these activities continue through the life of the program. Other elements are not so easily differentiated. Nevertheless, every attempt will be made to achieve a consistent and reasonable identification of these costs.

(2) General principles to be applied in the determination of nonrecurring and recurring costs apply to all research and development and production programs, as well as to any major modification during a program.

(a) Nonrecurring Costs - Nonrecurring costs include costs of the following:

(1) Preliminary design effort encompassing the translation of weapon systems concepts and requirements into specifications for new systems as well as for major modification of existing systems.

(2) Design engineering that entails the specifications and preparation of the original set of detailed drawings for new systems as well as for major modifications of existing systems.

(3) With respect to (a) and (b), above, it is preferable to identify the point of segregation between nonrecurring and recurring engineering costs as a specific event or point in time. Ideally, the event used would be the point at which "design freeze" takes place as a result of a formal test or inspection, and after which formal engineering change proposal (ECP)procedures must be followed to change design. If no reasonable event can be specified for this purpose, then all engineering cost incurred up to the date of 90 percent engineering drawing release may be used. The precise method used for segregating recurring and nonrecurring engineering costs will be identified and explained in the "Remarks" space.

(4) Systems test and evaluation regardless of when it occurs in the life of a program.

(5) All partially completed reporting elements manufactured for tests (e.g., static, fatigue, dummy missiles, ground integration millile components, inert missiles).

(6) Costs of all tooling, manufacturing, and procurement effort specifically incurred in performing development or tests, except for the manufacture of complete units during the development program.

(7) The initial set of tools and all duplicate tools produced to permit the attainment of a specific rate of production for a program.

(8) Training of service instructor personnel.

(9) Initial preparation of technical data and manuals.

(10) Start-up costs such as plant lay-out, operations planning, plant rearrangement, tooling design and planning, the original industrial engineering efforts to perfect a manufacturing technique.

(b) Recurring Costs-Recurring costs include the following:

(1) Engineering required for redesign, modifications, reliability, maintainability, associated evaluation and liaison.

(2) Complete reporting elements produced either for test (e.g., R&D flight test, operational evaluation flight test, quality assurance, design evaluation, etc.) or for operational use.

(3) Tool maintenance, modification, rework, and replacement.

(4) Training all Service personnel to operate and maintain equipment.

(5) Reproduction and updating of technical data and manuals.

(3) For each reporting element in Column b, the reporting contractor will show an entry in separate lines for:

(a) Total costs (less G&A) from the inception of the contract excluding payments of those subcontractors separately reported on Cost Data Summary Reports.

This requires that the prime contractor deduct from the total cost of each reporting element all amounts paid to each subcontractor reporting separately. The resultant figure reported by the prime contractor will be the prime contractor's costs plus the [illegible] subcontractors not separately reporting less payments to separately reporting subcontractors. Cost should be reported without regard to ceilings established for incentive contracts, or the price on firm fixed price contracts.

(b) The cost for that portion of a reporting element being developed or manufactured by a separate reporting subcontractor. If a subcontractor has been designated to prepare a separate Cost Data Summary Report to the prime contractor, the prime contractor will insert in columns d, e, and f from the subcontractor's Cost Data Summary Report the costs for the selected reporting elements. If the subcontractor reports directly to the Department of Defense, the prime contractor will enter the appropriate price in column f for the subcontract utilizing billing data.

(4) Following the last reporting element (column b) the following summary entries are required in separate lines:

(a) Subcontractor G&A - Enter in column f the G&A costs for each of the subcontractors who report to the prime contractor. The prime contractor will enter the appropriate figures on his report from the subcontractor's report and submit the subcontractor's report to the government with his own. For subcontractors reporting directly to the government, no entry is required since such costs are included in the data reported under each reporting element.

(b) Subcontractor Profit or Fee - Enter in column f the Profit or Fee for each of the subcontractors who report directly to the prime contractor. The prime contractor will enter the appropriate figures from the subcontractor's report and submit the original of the subcontractor's report to the government with his own. For subcontractors reporting directly to the government, no entry is required since such costs are included in the data reported under each reporting element.

(c) The G&A and Profit or Fee entries will cover all work performed by the subcontractor and not relate to any specific reporting element.

(d) Total Cost (less reporting contractor's G&A and Profit or Fee) - Enter the total cost in column f.

(e) Reporting Contractor's G&A - Enter in column f the reporting contractor's G&A costs.

(f) Reporting Contractor's Profit or Fee - Enter in column f the reporting contractor's Profit or Fee.

(g) Total - In column f enter the sum of the following line entries:

(i) Total Cost (less Reporting Contractor's G&A).

(ii) Reporting Contractor's G&A.

(iii) Reporting Contractor's Profit or Fee.

(5) Page ____ of ____

Enter the page number and total number of pages of the Cost Data Summary Report being submitted.

CLASSIFICATION

| COST DATA SUMMARY REPORT (Dollars in _____) | 2. PROGRAM | 3. ☐ CONTRACT ☐ RFP ☐ PROGRAM ESTIMATE | 4. ☐ INITIAL ☐ PROCUREMENT<br>5. MULTIPLE YEAR CONTRACT ☐ YES ☐ NO | 5. REPORT AS OF<br>6. FY FUNDED: |
|---|---|---|---|---|
| 7. CONTRACT TYPE | 8. CONTRACT PRICE | 9. CONTRACT CEILING | 10. ☐ PRIME/ASSOCIATE ☐ SUBCONTRACTOR (Name and Address, Include ZIP Code) | 11. NAME OF CUSTOMER (Subcontractor use only) |

| CONTRACT LINE ITEM | REPORTING ELEMENTS | ELEMENT CODE | TO DATE: COSTS INCURRED — NON-RECURRING | TO DATE: COSTS INCURRED — RECURRING | TO DATE: COSTS INCURRED — TOTAL | AT COMPLETION: UNITS | AT COMPLETION: COSTS INCURRED — NON-RECURRING | AT COMPLETION: COSTS INCURRED — RECURRING | AT COMPLETION: COSTS INCURRED — TOTAL |
|---|---|---|---|---|---|---|---|---|---|
| a | b | c | d | e | f | g | h | i | j |
| | | | | | | | | | |

REMARKS

| NAME OF PERSON TO BE CONTACTED | SIGNATURE | DATE |
|---|---|---|
| | | |

DD FORM AUG 72 1921

CLASSIFICATION

DD Form 1921

FIGURE 3-1. COST DATA SUMMARY REPORT

# APPENDIX B

# CPEP WORKSHEETS

## COST / HOUR EVALUATION WORKSHEET

| PROJECT: | WBS NO: | | CI | NO: |
|---|---|---|---|---|
| OFFEROR: | WBS TITLE: | | | |

| | RATE CODE | CATEGORY | ESTIMATES | | | | % ± |
|---|---|---|---|---|---|---|---|
| | | | OFFEROR | *1 | GOVERNMENT | *2 | |
| 1010 | X | MATERIAL ($) | | | | | |
| | | | | | | | |
| | | | | | | | |
| 1020 | X | SUBCONTRACT COSTS ($) | | | | | |
| | | | | | | | |
| | | | | | | | |
| 1050 | X | FIELD SUPPORT LABOR (HOURS) | | | | | |
| | | | | | | | |
| 1. .0 | X | ENGINEERING LABOR (HOURS) | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| 1120 | X | OTHER DIRECT/MANUFACTURING LABOR (HOURS) | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| 1150 | X | OTHER COSTS ($): | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |

*1 OFFEROR REALISM CODE *2 EVALUATOR CONFIDENCE CODE

L = LOW M = MEDIUM H = HIGH

SIGNATURE/DATE:

**FORMAT A**

1.0 DESCRIPTION OF WBS ITEM:

2.0 ANALYSIS/RATIONALE FOR GOVERNMENT ESTIMATE:

## EVALUATION WORKSHEET LEGEND

PROJECT: CATEGORY:

OFFEROR: UNIT OF MEASURE: ☐ HOURS
☐ DOLLARS
☐ FACTOR

| SUB CATEGORY | RATE CODE | COMMENT |
|---|---|---|
| | | |
| | | |
| | | |
| | | |
| | | |
| | | |
| | | |
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| | | |

Note: Signature:
Date:

## VALUE WORKSHEET

PROJECT: CATEGORY:

OFFEROR: WBS:

| RATE CODE | VALUE | | | | | |
|---|---|---|---|---|---|---|
| | RUN 1 | RUN 2 | RUN 3 | RUN 4 | RUN 5 | RUN 6 |
| 1 | | | | | | |
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# APPENDIX C

# COST REPORTING REQUIREMENTS (CRR)

| DATA ITEM DESCRIPTION | 2. IDENTIFICATION NO(S). | |
|---|---|---|
| | AGENCY | NUMBER |
| 1. TITLE<br>C TRACT PRICING REPORT | PM TRADE EM | UDI-F-25796 (MOD 1) |

3. DESCRIPTION/PURPOSE

The purpose of this report is to provide a cost estimate structure by which the offeror submits to the Government a summary of incurred and estimated costs (and attached supporting information) suitable for detailed review and analysis.

4. APPROVAL DATE

8 October 1982

5. OFFICE OF PRIMARY RESPONSIBILITY

PM TRADE

6. DDC REQUIRED

8. APPROVAL LIMITATION

7. APPLICATION/INTERRELATIONSHIP

As part of the specific information required by this report the offeror must submit cost and pricing data which is verifiable and factual. In addition, he must submit any information reasonably required to explain the offeror's estimating process, including:

a. The judgmental factor applied and the mathematical or other methods used in the estimate including those used in projecting from known data, and

b. The contingencies used by the offeror in his proposed price.

9. REFERENCES (Mandatory as cited in block 10)

DAR 3-408
DAR 3-800
DAR 15-205

MCSL NUMBER(S)

10. PREPARATION INSTRUCTIONS

a. The contractor shall provide the Contract Pricing Report in the detail and structure described in the attachment, "Cost Reporting Requirements (CRR)", to this Data Item Description. The contractors may utilize any reporting format as long as the required information and data is provided to the Government.

b. For production estimates DI-F-6006 (MOD) shall be followed.

c. The Contract WBS extended by the contractor shall form the basis of all data reporting.

d. As the Cost Pricing Report is updated, the Contract WBS and dictionary per DI-A-3023/M-126-1 (MOD 1), "Contract WBS", shall be updated.

ATTACHMENT 1

COST REPORTING REQUIREMENTS (CRR)

COST REPORTING REQUIREMENTS (CRP)

1.0 GENERAL

The offeror shall prepare the cost proposal in accordance with the requirements of this document. The proposed cost shall be developed based on the Contract Work Breakdown Structure (CWBS) set forth in this Request For Proposal (RFP).

2.0 METHODOLOGY AND RATIONALE

a. Cost estimates fully supported by data which are sufficient to establish the reasonableness, realism, and completness of the proposed cost/price shall be submitted for each contract WBS item. The proposals shall include a complete description of the philosophy and methodology used in developing cost estimates. It has been standard practice for contractors to include "boilerplate" statements extracted from the company's estimating policy. This is unacceptable. The proposal shall explain what specifically was used for each estimate. Supporting detail provided, for example, should include cost estimating relationships and cost factors that have been used, as well as assumptions concerned with economics, technology, schedules, plant volume, learning curves, allocations, comparisons to similar products, etc. The contractor, in the preparation of this estimate, shall insure that all WBS items are covered by an identifiable statement of work document and/or paragraphs thereof. When necessary, the contractor shall develop a substatement of work document to insure that cost estimates for discrete items (lowest level CWBS) can be readily separated from the remainder of the contractor proposal documentation. This estimating methodology and rationale shall be provided for all elements of the proposal.

b. "Estimating Methodology" means the manner or method in which a cost is estimated, its factual base, and assumptions incorporated in the estimate. This information is cost and pricing data within the meaning of the Truth in Negotiations Act and is included in that information which the offeror must certify.

c. "Estimating Rationale" means that process of reasoning and judgement, reduced to narrative in the proposal, which would lead a reasonable man to conclude that the estimate was equitable and realistic.

d. Offerors shall not presume that certain estimating methodologies are inherently reasonable and need not be supported by rationale.

The only cost which need not be supported by rationale are vendor costs where the amount is established under acceptable price competition or by catalog prices where the item is sold to the general public in

sufficient quantities in a competitive market. Failure to provide supporting rationale for all other elements of the cost proposal is unacceptable.

e. Historical costs typically [illegible] unrealized contingencies, obsolete and/or inappropriate methods and technology, and structural and managerial inefficiencies. Use of historical or comparison costs without supporting rationale particularly is unacceptable.

3.0 CWBS DICTIONARY

a. The offeror shall extend the Government Contract Work Breakdown Structure and provide a CWBS dictionary.

b. The CWBS extension and the CWBS dictionary shall be prepared in accordance with DI-A-3023/M-126-1 (MOD 1) "Contract Work Breakdown Structure (attachment I)".

4.0 DIRECT LABOR/COST DATA

The offeror shall provide the following information and data:

a. Labor Hours and Dollars

The offer shall , for each WBS element, at each level, prepare a spread sheet showing the following:

(1) Labor hours by functional labor category.

(2) Extended labor dollar cost by functional labor category.

(3) Labor hours and dollars by functional labor category and by time periods used as the basis of the proposed cost (months, quarters, or fiscal years).

(4) Total labor hours and dollars by functional labor category and by time periods (months, quarters, or fiscal years).

(5) Total labor hours and dollars by functional labor category and time periods.

(6) The time periods selected by the offeror for cost/hour spreading shall reflect the same approach used to develop the proposed cost.

(7) The functional labor categories provided shall be the lowest level of functional labor aggregation which is used by the offeror in preparing the proposed cost.

(8) The Contractor shall, for each labor category by WBS element, identify estimating methodology and rationale and show all calculations. All factors used shall be identified. The tasks performed by each labor category shall be described for each WBS element at the lowest level. The tasks shall be segregated as non-recurring or recurring. Define the non-recurring and recurring categories and their contents.

b. Burden Rates and Dollars

(1) If more than one overhead rate applies to labor in your accounting system, such as factory overhead, the labor categories shall be appropriately segregated.

(2) Labor rates applicable to each category by time period (month, quarter, or fiscal year).

(3) The applicable overhead rate(s) and dollars shall be shown by time period and total.

(4) Material handling burden, G&A, FCCM, etcetera, shall be applied to their appropriate base. Rates and dollars will be shown by time period and total. Each base shall be identified.

c. Subcontracts, Purchased Parts, Raw Materials, and Other Costs.

(1) The costs shall be segregated and shown in the time period in which the cost will be incurred.

(2) These costs shall be segregated and provided for each WBS element, at each level.

(3) For production contracts these costs shall be segregated and the non-recurring and recurring costs identified.

(4) The offeror shall provide the identification, estimating rationale and methodology, and detailed backup for all direct costs other than labor.

(5) The offeror shall provide a bill of materials prepared on DD Forms 346 and 347 and in accordance with the instructions on the reverse of the forms. A computer prepared list in the format of the DD Forms is acceptable. However, the prepared list shall be organized by WBS element.

d. All direct labor hours and cost data shall be presented in a manner which will allow the Government to readily extract the information according to the categories established in Format A, Cost/Hour Evaluation Worksheet. An example of complete worksheet is provided for reference. The offeror should provide any distinguishing information or detail which would assist the Government in extracting information from the cost proposal to complete Cost/Hour Evaluation Worksheet.

5.0 SUBCONTRACTOR COST AND PRICING DATA

The Contractor shall, in accordance with the criteria of paragraph 3-807.4 of the Defense Acquisition Regulation, obtain cost or pricing data from his subcontractors.

a. For each subcontractor (within the crieteria of DAR 3-807.4) the Contractor will submit that subcontractor's executed DD633 and (at a minimum)

the direct labor and cost data as required of the prime in this CPR, plus methodology and rationale.

b. Technical/Cost (best value) competition is not "adequate price competition" within the meaning of paragrapn 3-807 of the Defense Acquisition Regulation. (See DAR 3-807.7(a)).

6.0 TRAVEL COSTS

The Contractor will set forth his travel costs in detail, (number of men, number of trips, locations, costs, etc.) together with his estimating methodology and rationale. He shall identify, and supply upon further request, his published corporate travel policy document.

7.0 FOREIGN TAXES, CUSTOMS, DUTIES, ROYALTIES, EXCISE TAXES, AND OTHER SPECIAL COSTS

The Contractor shall identify all costs which the terms of this RFP required to be separately reported and/or that the Contractor is required to certify the extent to which they are or are not included in the proposed cost. If none, for any given category, so state.

8.0 OTHER DIRECT COSTS

The Contractor shall identify and include here any costs not included elsewhere that will be charged as a direct cost to the contract. They will be broken down in detail and the estimating methodology and rationale provided.

9.0 TRANSPORTATION COSTS

The Contractor shall set forth the transportaion costs for shipment of the equipment from the Contractor's plant to the destination points specified in Section E, Deliveries of Performance of the RFP.

10.0 OVERHEAD, BURDEN RATES, PROFIT, AND RISK

a. The Contractor shall document all costs that will be allocated to the contract on an indirect basis.

b. Offeror shall, for each account in his accounting system (examples: engineering, overhead, manufacturing overhead, material handling overhead, G&A expense, etc.) reflect all costs that will be allocated for each account and specifically identify, in detail, the cost bases (by labor, material, etc. categories) to which each account is applicable. Identify the contents (pools) within each account.

c. Offeror shall submit DD Form 1861 and all backup thereto to reflect Facilities Capitol Cost of Money.

## 11.0 INFLATION RATE SUMMARY AND EXPLANATION

A table shall be provided showing all inflation rates used to prepare the cost proposal broken out by time periods and functional categories (at least material, subcontracts, labor, and other costs). The value of all weighted inflation rates used shall be provided. The basis for all area used shall be explained.

## 12.0 GFE COST DATA

The offeror's cost proposals shall identify the GFE being proposed. To insure that the government evaluates all offerors on a comparable basis the following data is required from both the prime offeror and subcontractor:

a. A list of all GFE (including quantities) proposed by WBS.

b. For each government furnished item identified in response to the preceding paragraph the offeror shall briefly describe the item and provide a CFE cost for providing the equivalent item, including the offeror's equivalent associated costs. The cost of each item of GFE shall be provided from current government stock list documentation.

c. The estimated fair rental value for the use of government property shall be furnished in summary (identifying both facility and other property dollars) with the cost documentation.

d. It is necessary that the Government be able to determine total program cost. Therefore, the offeror shall also address all associated costs such as test support, use of special test Government facilities, etc. The offeror should provide cost differences, quoted on each item (including quantities required) to assist the Government in determining the economics of providing the items as GFE in lieu of CFE.

## 13.0 PROJECT MASTER SCHEDULE MASTER PHASING CHART

Provide a master schedule chart depicting the milestones for each WBS element that controls the time phasing of the total project to meet the project schedule. This chart shall include major contract milestone requirements, especially contract award, post award conference, project planning review, computer program system management guidance conference, preliminary design reviews, critical design reviews, release of purchase orders for critical items with long lead times, critical functional computer program modules completion, DT&E test procedures delivery complete, real-time operation complete, and ready for government tests, tooling, CFE/GFE deliveries.

Identify critical interfaces between functional department schedules which support the master schedule, review the required contract milestone, comment specifically on the reasonableness of each milestone, and an ability to meet each milestone.

14.0 Cost Data Summary Report

For each contract the offeror shall prepare the Cost Data Summary Report (DD Form 1921) in accordance with DI-F-6006 MOD (attachment 2). In lieu of the contract line item and reporting elements (columns a and b), the WBS element number and name shall be provided for all WBS elements at each level to at least level 3. The proposed non-recurring, recurring and total costs shall be provided for each WBS element (columns d, e, and f). Omit columns g, h, i, and j. A separate DD 1921 shall be prepared for each subcontractor whose services require non-recurring effort. Provide definitions and explanations of the contents of both the non-recurring and recurring categories.

15.0 Manufacturing Data

Any manufacturing rationale in data form shall be explained. Definitions shall be provided for each variable. A clear explanation of the manufacturing estimate and calculations shall be provided.

16.0 Technical Data and Information

Prepare a list of the CDRL items and the price of each.

## 17.0 SUMMARY OF COST PROPOSAL INFORMATION REQUIRED

a. Material: $ by category by WBS by time spread.

b. Subcontractor: $ by category by WBS by time spread.

c. Field Support Labor: $ and hours by functional category by WBS by time spread.

d. Engineering Labor: $ and hours by functional category by WBS by time spread.

e. Manufacturing Labor: $ and hours by functional category by WBS by time spread.

f. Other Costs: $ by category by WBS by time spread.

g. Overhead: $, basis and rated by time spread.

h. Burden: $, basis and rates by time spread.

i. Labor Rates: $ by functional labor category by time spread.

j. Travel: Number of people each trip, number of trips, locations, type of labor, costs (per diem/transporation) and time spread.

k. Transportation: Identify costs and describe.

l. Other Direct Costs: Identify costs and describe.

m. Special Costs: Identify costs and describe.

n. Contract WBS: CWBS extension and CWBS dictionary.

o. Inflation Factors: Inflation rates by functional category and time spread.

p. Methodology and Rationale: Basis of bid, calculations, factors, tasks by WBS and non-recurring vs. recurring.

q. GFE: Separately identify and cost by WBS.

r. Each Contract: Non-recurring efforts. $ and hours segregated from recurring efforts, $ and hours.

s. Subcontractor Information: Same above requirements as the Prime Contractor.

# COST / HOUR EVALUATION WORKSHEET

| PROJECT: | WBS NO: | | CI | NO: |
|---|---|---|---|---|
| EXAMPLE | 1.1.1.4 | | | |
| OFFEROR: | WBS TITLE: | | | |
| XYZ Corp. | Cockpit Sturcture - Panels (Example Only) | | | |

| | RATE CODE | CATEGORY | ESTIMATES | | | | ≈ ± |
|---|---|---|---|---|---|---|---|
| | | | OFFEROR | *1 | GOVERNMENT | *2 | |
| 1010 | X | MATERIAL ($) | | | | | |
| | 1 | 101 Purchased Parts | 5000 | | | | |
| | 2 | 102 Other Manuf. Mat. | 100 | | | | |
| | 3 | 103 Other Engr. Mat. | 50 | | | | |
| 1020 | X | SUBCONTRACT COSTS ($) | | | | | |
| | 1 | A. B. Duke | 3000 | | | | |
| | 2 | F. C. D. | 25000 | | | | |
| 1050 | X | FIELD SUPPORT LABOR (HOURS) | | | | | |
| | 1 | 203 F/S | 200 | | | | |
| 1090 | X | ENGINEERING LABOR (HOURS) | | | | | |
| | 1 | 305 Systems Engineer | 100 | | | | |
| | 2 | 307 Visual Engineer | 150 | | | | |
| | 3 | 308 Proj. Sys. Engr. | 30 | | | | |
| | 4 | 310 Mech. Design | 80 | | | | |
| | 5 | 312 Clerical | 50 | | | | |
| 1120 | X | OTHER DIRECT/MANUFACTURING LABOR (HOURS) | | | | | |
| | 1 | 401 Fabrication | 25 | | | | |
| | 2 | 402 Subassembly | 15 | | | | |
| | 3 | 403 Final Assembly | 10 | | | | |
| 1150 | X | OTHER COSTS ($): | | | | | |
| | 1 | 206 Travel & Subsistence | 500 | | | | |
| | 2 | 207 Shipping | 1000 | | | | |
| | 3 | 208 Computer | 75 | | | | |

SAMPLE

*1 OFFEROR REALISM CODE *2 EVALUATOR CONFIDENCE CODE

L = LOW M = MEDIUM H = HIGH

SIGNATURE/DATE:

FORMAT A

| DATA ITEM DESCRIPTION | 2. IDENTIFICATION NO(S). | |
|---|---|---|
| | AGENCY | NUMBER |
| 1. TITLE<br>Contract Work Breakdown Structure | | DI-A-3023/<br>M-126-1 (MOD 1) |

3. DESCRIPTION/PURPOSE

The contract work breakdown structure (contract WBS) establishes the framework for reporting program cost schedule, and technical performance. It provides a basis for uniform planning and reporting status and program visibility and assignment of responsibilities.

4. APPROVAL DATE

5. OFFICE OF PRIMARY RESPONSIBILITY

6. DDC REQUIRED

8. APPROVAL LIMITATION

7. APPLICATION/INTERRELATIONSHIP

Used on programs where either cost/schedule control system criteria, in accordance with DOD Instruction 7000.2, or cost/schedule planning and control system requirements are to be applied.

9. REFERENCES (Mandatory as cited in block 10)

MIL-STD-881

MCSL NUMBER(S)

10. PREPARATION INSTRUCTIONS

The contract WBS will be reflected in a report which consists of two parts, Part I is an Index, and part II will be the Dictionary.

a. Part I, Index. The contract WBS Index will contain the data elements as shown in the attached format. Instructions are as follows:

Header - Self explanatory.

Columns:

4 - Line No. Enter line item number entry.

5 - Work Breakdown Structure Elements/Tasks. Enter the title of the WBS element and indentured to reflect the level. Level 1 is the total contract. Levels 2, 3, etc., are successively lower levels of the program.

6 - WBS Number. Enter the WBS number as provided by the Government and extended by the contractor.

7 & 8 - RDT&E Prod. Place a checkmark in the appropriate columns to show whether the WBS element is associated with the RDT&E phase or the production phase, or both.

**ATTACHMENT 1**

9 - (Untitled.) This column will be used for other program phases such as a formal component improvement program.

10 - Contract Line Item. Enter the number of the contract line item which is associated with the WBS element.

11 - Para No. Enter the applicable paragraph numbers from the Statement of Work (SOW) which are associated with the WBS element.

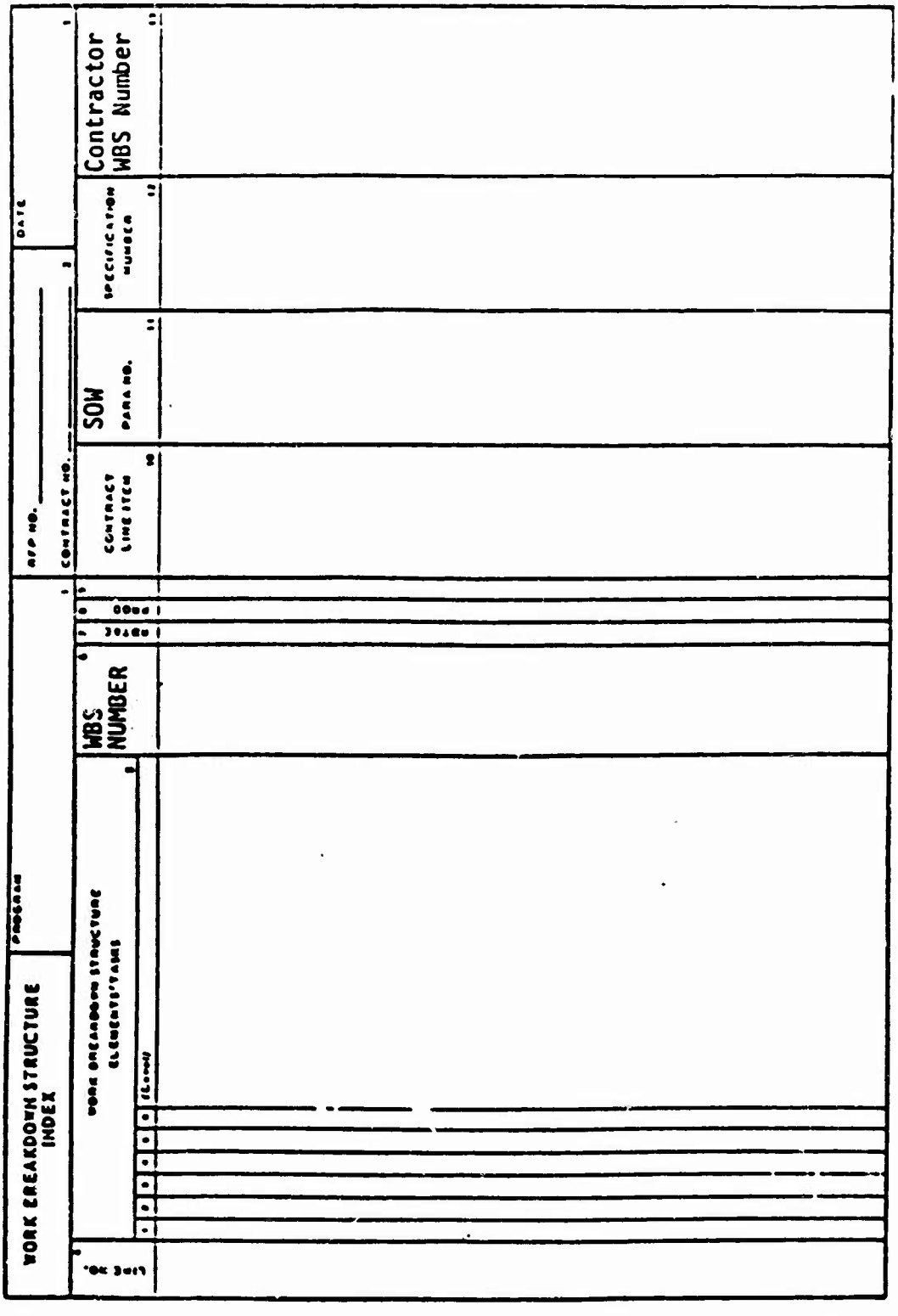
12 - Specification Number. Where applicable, enter the number of the specification which covers the WBS element. If the specification is associated with more than one WBS element, indicate which paragraphs are applicable to the WBS element.

13 - Contractor WBS Code. Enter the WBS coding devised by the contractor when different from column 6 (WBS Number).

b. Part II, WBS Dictionary and Contract Requirements. The Dictionary/ Contract Requirements will describe the technical,physical, and cost content of every WBS element. It will describe what the element is and efforts associated with the WBS element (such as design, development, and manufacturing). It will also describe the physical configuration and components as well as distinguishing performance parameters of the hardware and software. For the WBS elements specified elsewhere for cost reporting, the WBS Dictionary definitions will also include the exact narrative of the directly associated work statement paragraphs. General arrangement of the Dictionary will be as displayed on the attached Part II format:

(1) The elements will be in the same order as the contract WBS index.

(2) Following the description of the element will be a listing of the next level of WBS element.


WORK BREAKDOWN STRUCTURE INDEX
PROGRAM
DATE
RFP NO.
CONTRACT NO.
WBS NUMBER
CONTRACT LINE ITEM
SOW PARA NO.
SPECIFICATION NUMBER
Contractor WBS Number

CONTRACT WORK BREAKDOWN STRUCTURE
PART II-WBS DICTIONARY AND CONTRACT REQUIREMENTS

ITEM NO.

PROGRAM TITLE

WBS ELEMENT TITLE AND NUMBER

DATE

ELEMENT TASK DESCRIPTION

TECHNICAL CONTENT

APPLICABLE WORK STATEMENT NARRATIVE

PHYSICAL DESCRIPTION AND PERFORMANCE

SPECIFICATION NUMBER

SPECIFICATION TITLE

COST CONTENT

SYSTEM CONTRACTOR

ASSOCIATE/SUB/SUB SUBCONTRACTOR

C-15

DI-A-3023/M-126-1 (MOD 1) (Continued)
Preparation Instructions (Continued)

**ATTACHMENT 2**

| DATA ITEM DESCRIPTION | 2. IDENTIFICATION NO(S). | |
|---|---|---|
| | AGENCY | NUMBER |
| 1. TITLE<br>Cost Data Summary Report (DD Form 1921) | DOD | DI-F-6006(MOD) |

**3. DESCRIPTION/PURPOSE**

To collect costs for all work breakdown structure (WBS) elements for providing cost backup for funds estimates. The report is used in preparing estimates in support of the Five Year Defense Program, developing independent government and parametric cost estimates in support of cost and price analyses and contract negotiations, evaluating contractors' proposals and responding to requirements for summary information to higher levels of management. It segregates actual and estimated costs into their recurring and non-recurring components.

**4. APPROVAL DATE**
November 1973

**5. OFFICE OF PRIMARY RESPONSIBILITY**
OASD(C)

**6. DDC REQUIRED**

**8. APPROVAL LIMITATION**

**7. APPLICATION/INTERRELATIONSHIP**

a. The Cost Data Summary Report is applicable to major systems contracts for some large advanced development prototype efforts, full-scale development, and production with a total RDT&E estimate of over $50 million or cumulative production estimates of over $200 million or as specified in Chapter 1 of the Contractor Cost Data Reporting (CCDR) system.

b. This report is related to the Functional Cost-Hour Report, DID DI-F-6007; the Progress Curve Report, DID DI-F-6008; and the Plant-Wide Data Report, DID DI-F-6009.

**9. REFERENCES** (Source(s) to be cited in Block 10)
OMB 22-R-0322
DODI 7000.11
Contractor Cost Data Reporting (CCDR) system, NAVMT P 5241, AMCP 715-8, AFLCP/AFSCP 800-15.
Military Standard 881.

**MCSL NUMBER**
AMSL No. 71556.

**10. PREPARATION INSTRUCTIONS**

a. The contractor shall prepare deliverable reports (DD Form 1921) in accordance with the instructions contained herein.

b. The contractor may submit hard copy printouts from his punched cards or magnetic tapes, in lieu of the OMB-approved DD Form 1921, Cost Data Summary Report, provided that the printouts are identical in content and structure with the DD Form 1921 (Chapter 3, Contractor Cost Data Reporting (CCDR) system).

c. DD Form 1921 - Cost Data Summary Report. The Cost Data Summary Report summarizes all activities included in the contract and aggregates costs against the reporting elements selected from the work breakdown structures defined in MIL-STD-881 and/or specified in the contract. The report shall provide information to at least level 3 of the WBS.

(1) The following instructions apply to DD Form 1921, the Cost Data Summary Report. Leave items 4, 6, 7, 8, and 9 blank, unless otherwise specified by the DOD component. Also omit columns g, h, i, and j.

(a) Item 1 Program

Identify the system designator or the type, model, and series of the prime item or items being purchased under contract or being proposed for contract. If the contract or proposal is for or includes services (research, flight tests, etc.), specify the work to be performed. In the case of associate contractors and subcontractors reporting separately, identify the end item being purchased on the contract and the program for which it is being procured (e.g., aft body section of the F-X, wind

tunnel tests for the B-X, launch equipment for missile X).

(b) Item 2 Contract RFP Program Estimate - Check the RFP box.

(c) Item 3 RDT&E Procurement - Check the appropriate box.

(d) Item 5 Report As Of - Enter the reporting date.

(e) Item 10 Prime/Associate Subcontractor

Check the Prime/Associate box if the contractor reporting is the prime or associate contractor for the work to be performed on contract or being proposed and enter the name, division (if applicable), and address of the reporting contractor. Check the subcontractor box if the report is being submitted by a subcontractor and enter the name, division (if applicable) and address of the reporting subcontractor.

(f) Item 11 Name of Customer

If the report is being submitted by a subcontractor enter the name of the customer for whom the work on contract is being performed. If the report is being submitted by a prime or associate contractor, leave item blank.

(g) Column a Contract Line Item (Work Breakdown Structure Element)

Enter the WBS element number as specified in the contract which relates to the reporting element in column b.

(h) Column b Reporting Elements (WBS Name)

Enter the reporting elements (WBS Name) specified in the contract or by the DOD component for which cost data is to be reported.

(i) Column c Element Code

Not applicable.

(j) Columns d, e, and f To Date - Cost Incurred - Nonrecurring, Recurring, and Total

(1) Costs of all reporting elements reported are to be segregated into nonrecurring and recurring classifications. For some elements these costs are clearly differentiated. For example, all systems or component tests (other than quality control tests, acceptance tests, etc.) mock-ups and construction of facilities are nonrecurring, regardless of whether these activities continue through the life of the program. Other elements are not so easily differentiated. Nevertheless, every attempt will be made to achieve a consistent and reasonable identification of these costs.

(2) General principles to be applied in the determination of nonrecurring and recurring costs apply to all research and development and production programs, as well as to any major modification during a program.

(a) Nonrecurring Costs - Nonrecurring costs include costs of the following:

(1) Preliminary design effort encompassing the translation of weapon systems concepts and requirements into specifications for new systems as well as for major modification of existing systems.

(2) Design engineering that entails the specifications and preparation of the original set of detailed drawings for new systems as well as for major modifications of existing systems.

(3) With respect to (a) and (b), above, it is preferable to identify the point of segregation between nonrecurring and recurring engineering costs as a specific event or point in time. Ideally, the event used would be the point at which "design freeze" takes place as a result of a formal test or inspection, and after which formal engineering change proposal (ECP)procedures must be followed to change design. If no reasonable event can be specified for this purpose, then all engineering cost incurred up to the date of 90 percent engineering drawing release may be used. The precise method used for segregating recurring and nonrecurring engineering costs will be identified and explained in the "Remarks" space.

(4) Systems test and evaluation regardless of when it occurs in the life of a program.

(5) All partially completed reporting elements manufactured for tests (e.g., static, fatigue, dummy missiles, ground integration millile components, inert missiles).

(6) Costs of all tooling, manufacturing, and procurement effort specifically incurred in performing development or tests, except for the manufacture of complete units during the development program.

(7) The initial set of tools and all duplicate tools produced to permit the attainment of a specific rate of production for a program.

(8) Training of service instructor personnel.

(9) Initial preparation of technical data and manuals.

(10) Start-up costs such as plant lay-out, operations planning, plant rearrangement, tooling design and planning, the original industrial engineering efforts to perfect a manufacturing technique.

(b) Recurring Costs-Recurring costs include the following:

(1) Engineering required for redesign, modifications, reliability, maintainability, associated evaluation and liaison.

(2) Complete reporting elements produced either for test (e.g., R&D flight test, operational evaluation flight test, quality assurance, design evaluation, etc.) or for operational use.

(3) Tool maintenance, modification, rework, and replacement.

(4) Training all Service personnel to operate and maintain equipment.

(5) Reproduction and updating of technical data and manuals.

(3) For each reporting element in Column b, the reporting contractor will show an entry in separate lines for:

(a) Total costs (less G&A) from the inception of the contract excluding payments of those subcontractors separately reported on Cost Data Summary Reports.

This requires that the prime contractor deduct from the total cost of each reporting element all amounts paid to each subcontractor reporting separately. The resultant figure reported by the prime contractor will be the prime contractor's costs plus the payments to all subcontractors not separately reporting less payments to separately reporting subcontractors. Cost should be reported without regard to ceilings established for incentive contracts, or the price on firm fixed price contracts.

(b) The cost for that portion of a reporting element being developed or manufactured by a separate reporting subcontractor. If a subcontractor has been designated to prepare a separate Cost Data Summary Report to the prime contractor, the prime contractor will insert in columns d, e, and f from the subcontractor's Cost Data Summary Report the costs for the selected reporting elements. If the subcontractor reports directly to the Department of Defense, the prime contractor will enter the appropriate price in column f for the subcontract utilizing billing data.

(4) Following the last reporting element (column b) the following summary entries are required in separate lines:

(a) Subcontractor G&A - Enter in column f the G&A costs for each of the subcontractors who report to the prime contractor. The prime contractor will enter the appropriate figures on his report from the subcontractor's report and submit the subcontractor's report to the government with his own. For subcontractors reporting directly to the government, no entry is required since such costs are included in the data reported under each reporting element.

(b) Subcontractor Profit or Fee - Enter in column f the Profit or Fee for each of the subcontractors who report directly to the prime contractor. The prime contractor will enter the appropriate figures from the subcontractor's report and submit the original of the subcontractor's report to the government with his own. For subcontractors reporting directly to the government, no entry is required since such costs are included in the data reported under each reporting element.

(c) The G&A and Profit or Fee entries will cover all work performed by the subcontractor and not relate to any specific reporting element.

(d) Total Cost (less reporting contractor's G&A and Profit or Fee) - Enter the total cost in column f.

(e) Reporting Contractor's G&A - Enter in column f the reporting contractor's G&A costs.

(f) Reporting Contractor's Profit or Fee - Enter in column f the reporting contractor's Profit or Fee.

(g) Total - In column f enter the sum of the following line entries:

(i) Total Cost (less Reporting Contractor's G&A).

(ii) Reporting Contractor's G&A.

(iii) Reporting Contractor's Profit or Fee.

(5) Page ___ of ___

Enter the page number and total number of pages of the Cost Data Summary Report being submitted.

CLASSIFICATION

| COST DATA SUMMARY REPORT (Dollars in _____) | 1. PROGRAM | 2. ☐ CONTRACT ☐ RFP ☐ PROGRAM ESTIMATE | 3. ☐ INITIAL ☐ PROCUREMENT<br>4. MULTIPLE YEAR CONTRACT ☐ YES ☐ NO | 5. REPORT AS OF<br>6. FY FUNDED |
|---|---|---|---|---|
| 7. CONTRACT TYPE | 8. CONTRACT PRICE | 9. CONTRACT CEILING | 10. ☐ PRIME/ASSOCIATE ☐ SUBCONTRACTOR (Name and Address, Include ZIP Code) | 11. NAME OF CUSTOMER (Subcontractor use only) |

| CONTRACT LINE ITEM | REPORTING ELEMENTS | ELEMENT CODE | TO DATE — COSTS INCURRED | | | AT COMPLETION | | | |
|---|---|---|---|---|---|---|---|---|---|
| | | | NON-RECURRING | RECURRING | TOTAL | UNITS | COSTS INCURRED | | |
| | | | | | | | NON-RECURRING | RECURRING | TOTAL |
| | | | d | e | f | g | h | i | j |
| | | | | | | | | | |

REMARKS

| NAME OF PERSON TO BE CONTACTED | SIGNATURE | DATE |
|---|---|---|
| | | |

DD FORM 1921

CLASSIFICATION

FIGURE 3-1. COST DATA SUMMARY REPORT