HEADQUARTERS
DEPARTMENT OF THE ARMY
Office of the Chief of Engineers
Washington, D. C. 20315

Regulation
No. 11-1-21

21 September 1964

ARMY PROGRAMS

Value Engineering

1. Purpose and Scope. This regulation describes the Chief of Engineers Value Engineering Program and provides guidance for developing, executing and reporting Value Engineering activities within the Corps of Engineers. It applies to OCE, Divisions, Districts, CEHMCO, AMS, GIMRADA, WES and USAERG.

2. References:

a. AR 11-26, Value Engineering

b. AR 11-20, Army Cost Reduction Program

c. AR 705-5, Research and Development of Materiel

d. Armed Services Procurement Regulation (ASPR), Section I, Part 17

e. ER 11-1-20, Corps of Engineers Cost Reduction Program

3. Policy.

a. Value Engineering will be an organized effort, the extent of which is to be determined by Division Engineers and heads of separate installations and activities.

b. Value Engineering will be applied in both Civil Works and Military activities and in the performance of work for others in the areas of design, development, procurement, production, maintenance, modification, storage and construction.

c. Design and design review should stress the application of Value Engineering.

d. Training of Corps personnel in the use of Value Engineering principles is essential for successful accomplishment of the program.

This regulation rescinds ER 11-1-21 dated 23 Dec 63.

e. Initially Value Engineering will be accomplished with present funding and manpower. Requests for additional manpower will be considered if justified by a need to increase the application of Value Engineering for increased cost reductions.

4. Responsibilities.

a. Office Chief of Engineers

(1) The Engineer Comptroller provides overall staff supervision of the program.

(2) The Directors of Military Construction, Topography & Military Engineering, and Civil Works will assure the effective performance of Project Officers designated in Appendix I.

(3) General Counsel provides legal advice.

(4) The Chief, Office of Personnel Administration provides assistance in developing requirements for manpower and obtaining training.

(5) The Engineer Inspector General will review Value Engineering Programs for quality, effectiveness and efficiency during field inspections.

(6) The Chief, Technical Liaison Office will publicize Value Engineering accomplishments.

b. Division and District Engineers and Commanding officers of CEBMCO, AMS, GIMRADA, WES and USAERG will appoint one project officer, as a minimum, within his organization. The project officer will be at an organizational level high enough to have authority commensurate with the importance of the Value Engineering responsibility and sufficient to delegate and assign Value Engineering duties.

5. Functional Statements for Value Engineering Project Officers. Following are functions to be performed by OCE and field Value Engineering Project Officers:

a. Provide continued motivation for the comprehensive application of Value Engineering as required by this ER and ER 11-1-20, i.e., not only in the specific Cost Reduction Area Ic (Elimination of Gold Plating or Value Engineering) of ER 11-1-20, but also in Area IIId (Improvement of Civil Functions) and the SPECIAL CORPS OF ENGINEERS AREA (Improvement of Non-Army Funded Activities).

b. Establish procedures by which Value Engineering is to be accomplished in various activities.

c. Promote and develop a unified teamwork effort of organizational elements.

d. Provide Value Engineering information to participation activities.

e. Report on industry's response to the Corps Value Engineering program as required by this ER.

6. Reports.

a. Quarterly reporting is required in accordance with ER 11-1-20.

b. A monthly report entitled, "Value Engineering Change Proposal Report, RCS DD-I&L(M)613, is required to ascertain the response by industry to the Value Engineering Program, as evidenced by the number of Value Engineering Change Proposals (VECP) submitted by contractors on all Army work and the speed with which these proposals are processed. Normally a VECP takes the form of an Engineering Change Proposal (ECP). However, any cost reduction proposal submitted under the provisions of Revision No. 6 (1 July 1964), ASPR, Section I, Part 17, subject: Value Engineering, whether or not a formal ECP is involved, is also considered a VECP. Districts, Mediterranean Division, New England Division, AMS, GIMRADA, WES and USAERG will submit a statistical summary and complete VECP details of all VECPs received in formats I and II as instructed in Appendix II. The report will cover and be separated as Army, Air Force, NASA, Civil, RDTE and "Other" work, i.e., there will be a Format I and II for each of the six categories of work, counting "Other" as one of the categories. Four copies will be submitted monthly in time to reach the Chief of Engineers, Attn: ENGEC-M not later than the 5th working day of the month following the report month.

7. Value Engineering Services.

a. The Department of Defense has established a Value Engineering Service Office (VESCO) with a capability for providing assistance in con-

struction as well as other areas. A primary mission of this office is the augmentation of the existing field capability to conduct VE studies. Savings resulting from studies conducted by the VESO will be credited to the submitting activity. Projects recommended for this service should be forwarded to OCE, Attn: ENGEC-M, in the format of Appendix III, using the following guidelines:

(1) Priority should be given to Army-funded programs, since cost reductions of these funds are the only ones that can be applied to the Corps Value Engineering monetary goals.

(2) Projects should be selected that offer maximum cost reductions, determined by volume, unit cost and susceptibility to analysis.

(3) They should not require VE effort of a contractor.

(4) Normally they should be for projects beyond the capability of in-house effort.

(5) They should fully explain those features that are essential and those that are merely desirable.

(6) Each project should show name, title, and organizational location of individual who will be the contact point for preliminary project review and project effort if selected.

b. Inquiries from the field concerning any aspects of the Corps Value Engineering Program should be addressed to OCE using the attention symbol of the responsible Project Officer (See Appendix I).

FOR THE CHIEF OF ENGINEERS:

C. W. CHAPMAN, JR.
Colonel, Corps of Engineers
Executive

3 Appendixes
APP I - Assignment of Responsibilities to OCE Project Officers
APP II - Format I and II
APP III - Request for Construction VE Services

APPENDIX I

Assignment of Responsibilities
to OCE Project Officers
in Value Engineering Program

| OCE PROJECT OFFICER | RESPONSIBILITY |
|---|---|
| Chief, Management Division<br>Office, Engineer Comptroller<br>ENGEC-M | Corps-wide organization and administration.<br>Progress reports to Chief of Engineers.<br>Legal and training matters for referral to General Counsel and Office, Personnel Administration. |
| Chief, Construction Division<br>Dir/MC<br>ENGMC-C | Technical supervision of Value Engineering in all construction programs assigned to the Director of Military Construction.<br>Submission of monthly reports to Chief, R&D, D/A. |
| Chief, Nuclear Power Division<br>Dir/MC<br>ENGMC-N | Technical supervision of Value Engineering in Army Nuclear Program and review of related reports. |
| Chief, Topographic Science Div.<br>Dir/T&ME<br>ENGTE-T | Technical supervision of Value Engineering in the mapping & geodesy program and Nuclear Weapons Effect Research; review of related reports. |
| Chief, Operations Division<br>Dir/CW<br>ENGCW-O | Technical supervision of Value Engineering in Civil Works activities. |

APPENDIX II

FORMAT I

STATISTICAL SUMMARY OF VALUE
ENGINEERING CHANGE PROPOSALS

Month _____ Year _____

Reporting Office _____

| Value Engineering Change Proposals (VECPs) | Number of VECPs | | Estimated $ Savings From VECPs |
|---|---|---|---|
| | Total | On Hand Over 60 Days | |
| | a | b | c |
| 1. On hand at beginning of month | | | |
| 2. Received during month | | (Omit) | |
| 3. Given final approval during month | | | |
| 4. Rejected during month | | | |
| 5. On hand at end of month | | | |

(TO BE TYPED AS REQUIRED)

INSTRUCTIONS FOR PREPARING FORMAT I, "STATISTICAL SUMMARY OF VALUE ENGINEERING CHANGE PROPOSALS"

Column a. Enter total number of VECPs on hand at beginning of month (Item 1a); received during month (Item 2a); given final approval during month (Item 3a); rejected during month (Item 4a); and on hand at end of month (Item 5a).

Column b. Enter number of VECPs on hand over 60 calendar days at beginning of month (Item 1b) and end of month (Item 5b). Use Item 4, Format II, to compute calendar days each VECP has been on hand. Enter number of VECPs given final approval during month, after processing time of 61 or more calendar days (Item 3b). Enter number of VECPs rejected during month, after processing time of 61 or more calendar days (Item 4b) (See Item 6, Format II, for processing time.).

Column c. Enter sum of Estimated Savings (Item 8c, Format II) for VECPs on hand at beginning of month (Item 1c); received during month (Item 2c); given final approval during month (Item 3c); rejected during month (Item 4c); and on hand at end of month (Item 5c).

Corrections and revisions. Corrections and revisions of reports previously submitted will be reflected as adjustments in subsequent reports. Corrected copies of past reports are not required. A brief explanation should be footnoted; for example, "Three VECPs were submitted in May but not previously reported; Format II is attached for each".

FORMAT II

DETAILS OF VALUE

ENGINEERING CHANGE PROPOSAL

Office _____ Month _____ Year ____

Reporting Agency Office, Chief of Engineers

1. Item:

2. Part, component or assembly:

3. Description of VE change (Brief):

4. Date received:

5. Approved _____ Rejected _____ (Check one). Date:

6. Processing Time in Calendar Days (#4 to #5):

7. Contractor:

8. Estimated Net Savings from VECP

   a. Savings on current contract: $
   b. Additional savings, if any: $
   c. Total $

9. Type of VE Contract Clause (Check one): _____ VE Program Requirement

   _____ VE Incentive

   _____ None

10. Contractor's share of net savings: _____ %

11. If rejected, give reason (Brief):



(TO BE TYPED AS REQUIRED)

## INSTRUCTIONS FOR PREPARING FORMAT II, "DETAILS OF VALUE ENGINEERING CHANGE PROPOSALS"

General. One copy of Format II will be submitted for each VECP mentioned in Items 3a and 4a of Format I.

Item 1. End Item: Enter designation of project or item or equipment concerned. For example: Minuteman missile site, Military Hospital, Headquarters building, generator set, refrigeration equipment.

Item 2. Part, Component or Assembly: Enter part, component, or assembly affected by VECP. For example: Conduits, girders, roof decking, diesel engine, doors, piping, floor slabs.

Item 3. Description of VE Change: Give brief account of change.

Item 4. Date Received: Enter date when Contractor transmitted the VECP to an appropriate Government representative, such as the Contracting Officer or Plant Representative.

Item 5. Check whether Approved or Rejected. Enter date on which a representative of the Department responsible for approving the VECP gave official notification to the Contractor of the Department's decision to approve or reject the VECP. In the case of an approved VECP, this date reflects the point at which the contractor is authorized to proceed to implement the approved change.

Item 6. Processing Time in Calendar Days: Enter calendar days elapsed from Item 4 to Item 5.

Item 7. Contractor: Enter contractor's name and address.

Item 8.

a. Estimated Savings on Current Contract: Enter the Contractor's estimate of the net reduction in cost of performing the contract. If the responsible Department revises this estimate, so indicate and list the revised estimate. This estimate should reflect net savings after deducting all offsetting costs directly associated with implementing the proposed VE change, such as tooling, scrapping usable spare parts, and preparation of technical documentation. This estimate includes both the Contractor's share and the Government's share of the net savings.

b. Estimate Additional Savings: If additional savings will be realized by the Government outside the scope of the contract or subsequent to the contractual period, such as reduced reprocurement or maintenance costs, enter estimated additional savings.

c. Enter sum of Items 8a and 8b.

Item 9. Type of VE Contract Clause: Check appropriate block. See ASPR for definitions of VE Contract Clauses.

Item 10. Contractor's Share of Net Savings: Enter percentage of net savings that will accrue to Contractor, under provisions of VE clause. If none, enter "0%".

Item 11. If Rejected, Give Reason: Give brief account of reason for rejection.

APPENDIX III

REQUEST FOR
CONSTRUCTION VALUE ENGINEERING SERVICES

1. Project title

2. Construction feature

3. Status of feature

In design _____ Ready for construction _____
Standard design _____ Other _____

4. Description:

a. General characteristics (Provide a photograph, artists conception, or drawing, if available)

b. Broad purpose

c. Functions (Indicate essential and desirable)

5. Present Cost per unit

6. Annual Maintenance Cost per unit
Annual Repair Cost per unit

7. Quantity

a. Current Fiscal Year _____

b. FY plus 1 _____

c. FY plus 2 _____

d. FY plus 3 _____

8. Date by which study must be completed to optimize savings.

9. Desired cost reduction per unit.

(TO BE TYPED AS REQUIRED)