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ARMY REGULATION

AR 5-4

MANAGEMENT

**DEPARTMENT OF THE ARMY
MANAGEMENT REVIEW
AND
IMPROVEMENT PROGRAM (DAMRIP)**

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Effective 2d Quarter FY 74

HEADQUARTERS, DEPARTMENT OF THE ARMY

SEPTEMBER 1973

ARMY REGULATION }
No. 5-4

HEADQUARTERS
DEPARTMENT OF THE ARMY
WASHINGTON, DC, 4 September 1973

MANAGEMENT
DEPARTMENT OF THE ARMY MANAGEMENT REVIEW AND
IMPROVEMENT PROGRAM (DAMRIP)

Effective 2d Quarter FY 74

This regulation combines in one publication the policy and guidance necessary for the establishment and utilization of a management review and improvement program. Local supplementation of this regulation is permitted. If supplements are issued, Army Staff agencies and major Army commands will furnish one copy of each to HQDA (DACA-MRM), ATTN: DAMRIP, Washington, DC 20310. Other commands will furnish one copy of each to the next higher headquarters.

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*This regulation supersedes AR 1-65, 25 August 1967, including the Work Simplification Report, RCS CSCAM-120; AR 1-50, 12 April 1967, including all changes and the Work Measurement Summary, RCS CSCAM-107(R2); AR 5-11, 12 January 1970; AR 11-20, 27 September 1971, including the Army Cost Reduction Report, RCS CSGLD-1613; AR 11-26, 30 June 1972; Ltr, AGDA-A(M) (20 Apr 71) COMPT-M(M), 30 April 1971, subject: Department of the Army Management Improvement Program; Ltr, DAAG-PAP-A(M) (28 Mar 72) DACA-MRM, 7 April 1972, subject: Defense Integrated Management Engineering System (DIMES)-Work Measurement; Ltr, DAAG-PAP-A(M) (8 Nov 72) DACA-MRM, 15 November 1972, subject: DAMRIP-Interim Guidance; Ltr, DAAG-ASM, DACA-MRM, 20 April 1972, subject: Training and Usage Plan for Management Practices in TOE Units (MAP-TOE); Ltr, DAAG-ASM, DACA-MRM, 21 April 1972, subject: CONARC Tasks in Management Practices in TOE Units (MAP-TOE) Training.

CHAPTER 1

GENERAL

1-1. Purpose. This regulation—

a. Implements Department of Defense Directive 5010.28, Department of Defense Management Review and Improvement Program and Department of Defense Instruction 5010.32, Department of Defense Management Review and Improvement Program.

b. Establishes the Department of the Army Management Review and Improvement Program (DAMRIP).

1-2. Background. *a.* Responsive and economical management has always been a primary Army concern. Over the years many Army programs, both formal and informal, have stressed the urgency of doing a better job. DAMRIP provides a common framework for integrating the various management improvement programs into a unified effort. This regulation combines in one publication the policy and guidance necessary for the establishment and conduct of a management review and improvement program.

b. The Army Cost Reduction Program, an element of the DAMRIP, will continue to focus attention on the individual efforts of Army personnel to improve management and reduce costs at all levels of operation. The validation and reporting procedures required to meet higher authority requirements have been incorporated into this regulation.

c. The Work Simplification Program is disestablished as a separate Army Program. The techniques are taught to first-line supervisors in the MAP-TOE and MAP-TDA courses. These techniques will also be used by management analysts and industrial engineers in carrying out their management improvement responsibilities.

1-3. Scope. This regulation covers the policies, responsibilities, procedures and reporting instructions of the DAMRIP and applies to all Army activities both active and reserve.

1-4. Objectives. The objectives of the DAMRIP are to—

- a.* Increase productivity.
- b.* Provide better service.

c. Reduce the overall cost of Army operations, supplies and services.

d. Improve quality of outputs.

e. Promote a capability for innovation throughout the Army.

f. Improve management and operating practices.

g. Promote motivation and job satisfaction.

h. Stimulate the initiation of positive management improvement action.

1-5. Concept. *a.* The Department of the Army Management Review and Improvement Program (DAMRIP) is designed to improve management and operating practices at all levels and to stimulate the initiation of positive management improvement actions. The program enables the commander to identify and solve his management problems through these means:

(1) It concentrates in the comptroller's office the overall responsibility for management improvement efforts of the following program elements:

- (a)* Management Reviews.
- (b)* Priority Improvement Projects.
- (c)* Defense Integrated Management Engineering System (DIMES).
- (d)* Value Engineering.
- (e)* Management Improvement Incentives.
- (f)* Idea Interchange.
- (g)* Reports Management.
- (h)* Management Training.
- (i)* Productivity/Output Measurement.
- (j)* Cost Reduction.
- (k)* Zero Defects.

(2) It allows the command to exercise centralized management control of all program elements, thereby precluding fragmented responses from different organizational elements to multifaceted management problems. This provides a flexibility and strength in management response not previously available.

(3) It provides maximum latitude to the commander to develop his own management review and improvement program applicable to his unique management environment and associated

requirements and problems. The commands and installations can select those management techniques from the "management bag of tools," which will be provided to be used in conjunction with this regulation, which provide the highest payoff in terms of increased productivity, better service, improved quality and/or reduced costs.

(4) It requires both military and civilian personnel to accept and carry out their responsibilities to develop improvements. The central idea in DAMRIP is motivating individuals to make a commitment toward greater effectiveness and efficiency in their own work center. Often the meaning, responsibility, and sense of achievement are deleted from a job in the name of efficiency. However, in most cases efficiency, productivity, and motivation can be improved by enriching jobs rather than simplifying them. Fitting people with particular skills and interest with meaningful jobs is essential to produce a sense of satisfaction and achievement in the individual and is essential to achieve high performance.

b. To implement the DAMRIP, the comptroller must have well trained and highly skilled management experts for assignment to sudden high visibility management areas or problems where the commander determines that immediate management relief is required. However, the command's management experts, the comptroller management team, must also be capable of efficient and effective conduct of on-going management requirements. To give the commander this dual capability in a timely manner, the management personnel will be provided a "management bag of tools." These "tools," the DA Pam 5-4 series, are being developed and will be written in terms translatable to all personnel—not just the management experts. The pamphlets will be distributed to the field during CY 1974. HQDA is well aware that the command team of management experts might be limited to only a few professional management analysts and engineers. Physically, they could not possibly treat all of the different command management problems. However, the use of the tools listed below is one way to overcome this apparent lack of management resources. Each pamphlet is being designed as a self-teaching text for new management personnel or as a reference document for personnel already familiar with the techniques. The list is "open ended" in that new pamphlets

will be developed, as the Army management state-of-the-art changes and progresses.

(1) DA Pam 5-4-1, Management Survey Handbook, presents the general methodology and techniques for conducting a management survey, plus certain management information systems and automatic data processing considerations.

(2) DA Pam 5-4-, Work Simplification Handbook for Analysts, provides a self-teaching document for new management analysts and a reference source for analysts already familiar with work simplification techniques.

(3) DA Pam 5-4-, DIMES Handbook, provides the guidance for the development of a DIMES program. It provides guidance in the development of feasibility studies, methods improvement, performance standards, and for the determination of manpower requirements and the development of budget systems.

(4) DA Pam 5-4-, DIMES Installation Review Handbook, presents the general methodology and techniques for conducting a DIMES review. It is designed to acquaint the reviewer and the installation to be reviewed with the features that are to be considered in conducting a DIMES program review.

(5) DA Pam 5-4-, Value Engineering Handbook, covers the techniques used to obtain total value improvement in research, development, test and evaluation, production, procurement, quality assurance, administration, construction, supply, transportation, maintenance, storage and disposition of Army materiel.

(6) DA Pam 5-4-, Work Scheduling Handbook, provides scheduling techniques such as Gantt charts, Line-of-Balance charts, Lead-Time charts, etc., which can be used by command and installation management personnel at all levels.

(7) DA Pam 5-4-, Productivity Trend Analysis and Output Measurement Handbook, provides information on the computation of productivity indices and their interpretation and use by management personnel as well as information on the development and use of output measures and their relationships to decision making.

c. A management team formed under the comptroller that uses the professional management personnel available and the management tools provided will form the nucleus of the management

improvement effort. This team will have the flexibility to—

(1) Provide to any organizational element or individual of the command, management instruction in the form of the "bag of tools" reinforced by their own experience and expertise.

(2) Solve priority command management problems.

(3) Support on-going management requirements.

d. A command management program will be established and will include, as a minimum, the following:

(1) A program to motivate each individual to be constantly alert to the development and application of better ways to manage day-to-day operations. Procedures will be established so that any individual employee that has an idea or a management improvement proposal may contact the installation comptroller's office for assistance. This will in effect make the individual employee the "eyes and ears" of the Command Management Improvement Program.

(2) The use of the 5-4 series of DA pamphlets to provide in-depth "how to" coverage of the DAMRIP management improvement techniques.

(3) A program to cross-train management analysts and industrial engineers in all DAMRIP techniques. This cross-training will allow commanders to maximize the use of management resources and help preclude the requirement for additional personnel to handle all of the DAMRIP elements.

(4) A management improvement program to involve everyone from the senior commander down to the worker. The command/installation comptroller's management personnel form the nucleus of this "people oriented" program. As the nucleus of the DAMRIP program, these management personnel act as catalysts to obtain a management improvement commitment and involvement by all personnel. To make the DAMRIP a true people oriented program, the professional management personnel must do management missionary work to make people aware of the need for and a commitment to the management improvement effort. This will be accomplished through training courses such as MAP-TOE/MAP-TDA, DIMES orientation, command letters, posters, idea interchange, newspaper articles, personal visits, seminars, etc.

Concurrently, Command top managers must be sure that management personnel are readily available to provide assistance, timely feedback, and recognition to individuals. Proper feedback is accomplished by timely evaluation and response to suggestions for improvements. Individuals contributing significantly to the DAMRIP program will receive timely recognition through certificates, letters, plaques, cash awards, or articles in post newspapers or other media. The key to a successful DAMRIP program is individual commitment by everyone in the command or installation.

(5) The establishment of concrete management improvement goals with definite time suspenses; e.g., Command Priority Improvement Projects (see app F) and Management Reviews (see app E).

1-6. Policy. *a.* All management improvement programs will be consolidated in the comptroller's organization at all levels.

b. Management reviews will be appropriately planned and coordinated to preclude duplication and/or overlap and to insure adequate coverage of all significant programs and functions.

c. Priority management improvement projects will be selected on a yearly basis by major command and installation commanders.

d. Progress and/or results of the major command and installation management review and improvement program (DAMRIP) will be reviewed on a quarterly basis and corrective action taken whenever necessary.

e. Management analysts and industrial engineers will be cross-trained in all the management improvement techniques. The continual training and education of first-list managers/supervisors, management analysts and industrial engineers is an important aspect of the management review and improvement effort.

f. Individuals, groups, teams or organizations who contribute in an exceptional and outstanding manner toward achieving increased effectiveness and economy of operations will receive timely recognition and reward.

g. All savings reported from management improvement actions will be validated by an independent evaluation to insure accuracy of the reported accomplishment. The independent evaluation must—

(1) Be made by an element of the organization other than the reporting unit and;

(2) Assure that all reported accomplishments actually took place and are valid.

h. Appropriate means will be developed for the interchange of management review and improvement ideas.

i. All personnel will be encouraged to undertake vigorous and continued efforts to improve operating procedures and techniques, eliminate duplication and unessential activities, and increase productivity.

1-7. Responsibilities. *a. Department of the Army.*

(1) Comptroller of the Army.

(*a*) Is designated the Army Program Director for DAMRIP.

(*b*) Develops and disseminates management improvement doctrine.

(*c*) Establishes overall policy and guidance on the implementation of the DAMRIP.

(*d*) Coordinates the DA management review schedule.

(*e*) Disseminates instructions on Priority Improvement Projects.

(*f*) Prepares and submits the annual DAMRIP report to the Department of Defense.

(*g*) Announces the annual management improvement goals.

(*h*) Provides for Department of Army and Presidential recognition.

(*i*) Administers the Army-wide distribution of management improvement ideas.

(*j*) Provides overall policy direction and staff assistance concerning management practices training for managers and/or first-line supervisors and management analysts.

(2) Other DA general staff elements within their respective areas of responsibility:

(*a*) Insure that results of management reviews performed on major programs and operations are analyzed and corrective actions initiated as appropriate.

(*b*) Recommend to COA for Secretary of the Army approval, Priority Improvement Projects, including related goals and performance indicators by 1 March of each fiscal year.

(*c*) Provide guidance and supervision for development and application of management improvement goals and accomplishments in their areas of emphasis.

The DA Staff responsibilities for the specific management improvement areas of emphasis are listed below. A detailed description of each area is contained in table C-1, Management Improvement Areas of Emphasis.

●ASA(I&L)—Area 5, Procurement Management.

●DCSLOG—Area 1, Major Items; Area 2, Supply Management; Area 8, Transportation and Traffic Management; Area 9, Equipment Maintenance Management; Area 10, Real Property Management; and Area 11, Preservation, Packaging and Packing.

●DCSPER—Area 6, Schools, Education and Training.

●ACSC-E—Area 7, Telecommunications Management.

●COA—Area 4, Value Engineering (VE); Area 12, General Management Improvements.

●CRD—Area 3, Data Management.

b. Major commands and installations.

(1) Consolidate all management improvement programs under the comptroller.

(2) Designate the comptroller to coordinate the management review schedule.

(3) Implement an effective management review and improvement program.

(4) Prepare and submit the DAMRIP report.

(5) Recognize those individuals who have contributed significantly to the management review and improvement effort.

(6) Submit nominees for the Presidential management improvement award and the Zero Defects award.

(7) Establish an effective idea interchange system.

(8) Insure the continual training of first-line managers/supervisors (see DA Pam 5-2) and management analysts.

(9) When management practices training is conducted on the installation, it will be provided on a common-service-free basis to those units located or satellited on their installations for ad-

ministration and logistical support. (See AR 210-10 and para 3, AR 10-7.)

c. US Army Training and Doctrine command.

(1) Conducts instructor training course(s) to train management practices (MAP-TOE/MAP-TDA) instructors selected from units and installations throughout CONUS. The course(s) should also be made available to other major commands in CONUS and overseas, with priority of attendance being given to activities with the largest number of personnel to be trained.

(2) Continues management practices orientation or appreciation instruction in service schools.

(3) Reviews and approves management programs of instruction for any formal school courses conducted in oversea commands as directed in AR 10-7.

1-8. Reporting. *a.* The DAMRIP reporting system is based on the use of five standardized forms to be used by all reporting elements to meet all data flow requirements from the point where a management improvement takes place through successive Army echelons to final receipt of status information in HQDA and the Office of the Secretary of Defense. Only data that is necessary to ascertain progress in meeting established DAMRIP objectives and to comply with OSD reporting requirements is included in the DAMRIP report. Duplicate reporting requirements have been eliminated. Dollar savings data previously required to be reported under many management

improvement programs are now consolidated under one reporting requirement with uniform procedures prescribed for assuring that only validated savings are reported.

b. All major commands, agencies and DA Staff elements assigned responsibilities under paragraph 1-7 will submit the following DA forms in accordance with the schedule listed below:

<i>Forms for DAMRIP report</i>	<i>Frequency</i>
DA Form 4133 (Management Review and Improvement Information).	Semiannual and annual
DD Form 1905 (Priority Improvement Projects).	Annual and as required
DA Form 3145 (Management Improvement Action).	Continual and semiannual
DA Form 4136 (Management Improvement Area Summary).	Semiannual
DA Form 4134 (Recommendation for Management Improvement Award).	Annual

Specific instructions for the preparation of the above forms are contained in appendix C. The semiannual forms will cover 6-month periods and are due not later than 31 January and 31 July. The annual forms will cover the entire fiscal year and are due not later than 31 July of each fiscal year.

c. Reports will be submitted to HQDA (DACA-MRM) ATTN: DAMRIP Report, Washington, DC 20310.

d. Supplies of the above forms will be requisitioned through normal AG Publications supply channels.

CHAPTER 2

DAMRIP CYCLE

2-1. General. The DAMRIP cycle is represented graphically at figure 2-1.

2-2. Step 1—Schedule and Conduct Management Reviews. The DAMRIP cycle begins with Management Reviews.

a. Explanation. Management reviews are scheduled and conducted to objectively examine, analyze and appraise the effectiveness and efficiency of operating programs, functions and activities. Prior to the beginning of each fiscal year the command/installation comptroller, with assistance from the major activity directors, coordinates the various management reviews that are planned each year to insure adequate review coverage of all significant programs, functions, and organizational units and preclude duplication or overlap by the various review groups. Types of management reviews conducted in the Army are listed in appendix E.

b. Reporting. At the end of each reporting fiscal year, the command prepares a summary of plans for the upcoming fiscal year and completes item 4, DA Form 4133 (Management Review and Improvement Information).

2-3. Step 2—Identify Possible Management Improvement Actions. *a. Explanation.* Prior to the fiscal year the command/installation evaluates the results of management reviews to identify areas which should be established as Command Priority Improvement Projects.

b. Reporting. At the end of each reporting fiscal year, the comptroller identifies the significant results of management reviews in the reporting year and completes item 5, DA Form 4133 (Management Review and Improvement Information).

2-4. Step 3—Select Priority Improvement Projects. *a. Explanation.* Prior to the beginning of each fiscal year the commanders will select areas requiring top level management attention and designate them as Command/Installation Priority Improvement Projects. Priority Improvement Projects should be areas requiring improvement during the fiscal year based on an assessment of all applicable evaluation sources, including management review recommendations. Criteria to

be used for selecting Priority Improvement Projects are contained in appendix F.

b. Reporting. Prior to each fiscal year, major activity directors select projects requiring concentrated effort and high level attention and submit DD Form 1905 (Priority Improvement Projects) to the comptroller. The comptroller prepares a list of all Priority Improvement Projects recommended by the major activity directors and submits the list to the commander for review together with DD Form 1905 (Priority Improvement Projects).

2-5. Step 4—Formulate Goals and Performance Indicators. *a. Explanation.* Improvement goals and performance indicators will be established by the major activity directors for each Priority Improvement Project selected in Step 3 above. Goals will be expressed in quantitative terms so progress can be measured. Improvement goals must be challenging yet attainable. Performance indicators must permit continuous and total assessment of progress in the attainment of each improvement objective and will reflect as appropriate—

- (1) Increases in productivity.
- (2) More timely service rendered.
- (3) Better quality in the output.
- (4) Reduced costs for the operating program or supporting function.

b. Reporting. Prior to each fiscal year, improvement goals and performance indicators will be established for each Priority Improvement Project by the appropriate major activity director and included as part of DD Form 1905 (Priority Improvement Projects) (app F) that the comptroller furnishes to the commander.

2-6. Step 5—Initiate Management Improvement Action. *a. Explanation.* This is the beginning of the flexible managerial response to accomplish the priority improvement projects. During the year, all military and civilian personnel are encouraged to develop and apply better ways to perform day-to-day tasks. In addition to individual participation in developing and implementing management improvements, comptrollers form responsive management teams composed of individuals with the necessary functional or manage-

ment expertise to assist commanders and activity directors. The team members will use the management tools to assist them in recommending the necessary improvements.

b. Reporting.

(1) All during the fiscal year each management improvement action with savings of \$100,000 or more in any one of the three program years are recorded on DA Form 4135 (Management Improvement Action). Management improvement actions with savings of under \$100,000 are not required to be redocumented on DA Form 4135 if adequate documentation already exists to support a claimed savings. Existing documentation must include identification of the appropriation and budget activity that is affected and the disposition of savings in current years funds. If documentation does not exist for a management improvement action, a DA Form 4135 is prepared regardless of the amount of dollar savings. (See validation procedures, app D.)

(2) Savings data from all validated management improvement actions (regardless of amount) are consolidated semiannually by area on DA Form 4136 (Management Improvement Area Summary). Those DA Forms 4135 indicating savings of \$500,000 or more in any one of the 3-program years (i.e., current year, budget year, future budget year) are forwarded semiannually with a DA Form 4136 to the next higher consolidating level for each area being reported.

(3) Throughout the fiscal year the comptroller prepares and circulates a DA Form 4135 for each management improvement idea which has potential application beyond the originating activity. In addition, the comptroller continuously selects DA Forms 4135 which contain ideas that are applicable to other Army installations, major commands and other Services and Government agencies. The comptroller forwards these DA Forms 4135 through channels for review by the next higher command which has authority to implement the improvement idea on a wider basis.

2-7. Step 6—Compare Performance and Initiate Corrective Action. *a. Explanation.* Each quarter the comptroller and activity directors meet to analyze actual performance against the goals and indicators formulated in Step 4. Projects not meeting their quarterly goals may require further corrective action by the responsible individual or

the management team established by the comptroller in Step 5.

b. Reporting. At the end of each quarterly review, DD Forms 1905 (Priority Improvement Projects) developed during Step 4 are reviewed by the comptroller and activity director and updated.

2-8. Step 7—Assess Improvement Results. *a. Explanation.* Semiannually, the comptroller and activity directors will make an overall assessment of the improvement results. At the end of each fiscal year, priority improvement projects that did not meet established goals during the fiscal year are recycled and added to Priority Improvement Projects list for the upcoming fiscal year.

b. Reporting.

(1) Semiannual—Comptroller will prepare and forward designated items in part 8 (VE) of DA Form 4133 and DA Forms 4136 (Management Improvement Area Summary) together with required DA Forms 4135 (Management Improvement Action) in accordance with instructions contained in appendix C, Reporting Instructions.

(2) Annually.

(a) The comptroller will complete and forward DA Form 4133 (Management Review and Improvement Information) in accordance with instructions contained in appendix C. The commander's statement, item 9, should cover, as a minimum, the major accomplishments during the reporting year, plans for the upcoming fiscal year and problem areas requiring higher command attention.

(b) The comptroller and activity directors annually select nominees for Presidential Management Improvement awards or Zero Defects awards. DA Form 4134 is prepared for each nominee and submitted in accordance with instructions contained in appendix C and appendix I, Management Improvement Incentives.

(c) Selected priority improvements projects, DD Form 1905, that the commander considers to be of special interest to HQDA may be forwarded as part of the annual DAMRIP report.

(3) All during the fiscal year the comptrollers will forward each management improvement action (DA Form 4135) which has potential application beyond the originating activity in accordance with instructions contained in appendix J.

ANNUAL MANAGEMENT REVIEW AND IMPROVEMENT CYCLE

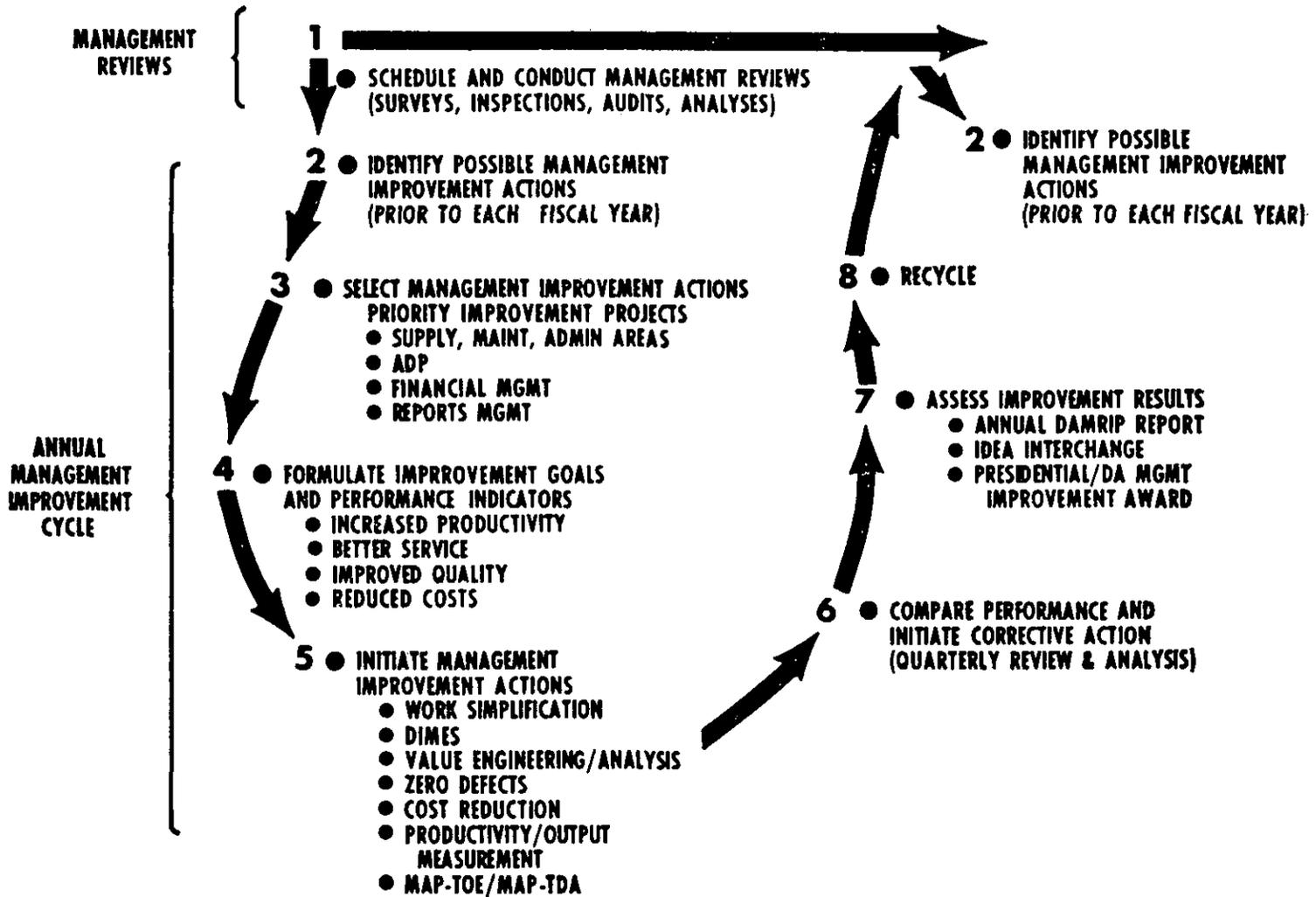


Figure 2-1

APPENDIX A

REFERENCES

DA PAM 5-4-1, Management Survey Handbook (TBP)
DA PAM 5-2, Improvement Tools for Soldier Managers
DA PAM 5-2-1, MAP-TOE Manager's Handbook
DA PAM 5-2-2, MAP-TOE Instructor's Guide
MF 61-5718 Better Ways For Doing Work
MF 61-5719 Who Does What to What
MF 61-5720 Roadmap to Less Effort
MF 61-5721 Counting What Counts
MF 61-5722 Make Fewer Motions
MF 61-5723 Take Fewer Steps
MF 61-5724 Where Do We Go From Here
T(SL) 61-4 A thru 137—Management Practices in TOE Units (MAP-TOE)

APPENDIX B

GLOSSARY

Defense Integrated Management Engineering System (DIMES)—DIMES is the application of Industrial Engineering/Management Engineering techniques through the maximum economic use of performance standards to provide a basis for methods improvement, performance evaluation, productivity improvement, and an assurance of an optimum balance between workload and resources.

Earned Hours—A common denominator that can be used in determining the efficiency of a work force for specific jobs, functions or activities. Earned hours represent the amount of time, based upon engineered or non-engineered standards, that it should have taken an individual, crew or organization to perform the work actually accomplished on specific jobs or during specific periods of time. Earned hours can be related to jobs at any level of management.

Engineered Standards—The time (man-hours) it should take a trained worker or a group of trained workers, working at a normal pace, to produce a described unit of work of an acceptable quality according to a specified method under specific working conditions. It is derived from a complete, objective analysis and measurement of the task (engineered standards are developed through the use of time study, predetermined time systems, standard time data, rated work sampling, or any combination of these techniques that will give a comparable level of accuracy).

Feasibility Study (DIMES)—An in-depth study of the entire organization to determine:

1. Where, when, how DIMES can be economically applied.
2. The logical mix of performance standards.
3. The cost vs. benefits of installing DIMES.
4. The plan of action to implement DIMES.

Instant Contract—The contract under which a value engineering change proposal is accepted by the Government.

Job Enrichment—The creative molding and reshaping of the content and discretion of jobs to produce meaningful and challenging work for individuals.

Logical Mix (DIMES Standards)—The best judgment applied to choosing the most effective and economical combination of engineered, non-engineered, and man-hour allowance standards.

Management Improvement—An effort implemented by a command or agency that increases productivity, renders more timely service, provides better quality or reduces costs of an operating program in relation to the achievement of its objective.

Management Review—An objective examination, analysis, and appraisal made by a command or agency of its operating programs, functions or organizational units.

Man-hour Allowance—The time it should take an individual or group possessing required skills to produce a work unit at a normal pace as forecast by technically qualified individuals and based upon a detailed analysis of its components.

Materials Handling Analysis—A study conducted to minimize the movement distances and handling of materials to reduce the handling and damage costs. Material handling problems are normally encountered in receiving, production, warehousing, and distribution.

Military Worth—The intrinsic value of military equipment resulting from the possession of such characteristics as performance, reliability, maintainability, quality, producibility and availability required to perform specific functions toward the attainment of a military mission.

Non-Engineered Standard—The time it should take an individual or group to perform a work unit using one or more of the techniques of work measurement (e.g., historical, statistical, and/or technical knowledge) which does not meet the requirement of an engineered standard.

Operational Value Engineering—Implies the timely application of VE and/or the VE contract incentive provisions.

Output Measurement—A means of identifying the end-product of an organization or function against which its consumption of resources can be analyzed to facilitate operational and managerial decisions.

Performance efficiency—The primary indicator of labor performance. It is determined by a comparison of "earned hours" and "actual hours." This ratio is obtained by dividing the number of standard man-hours by the actual number of man-hours consumed and multiplying by 100 to obtain a percentage.

Productivity Measurement—A measurement of the relationship between output (workload) and input (manpower used) during a specified period and expressed in an index number. Productivity measurement uses a base year as a focal point against which all other years are compared.

Value Engineering Project—A project, one of whose primary objectives is to reduce costs, in which appropriate VE techniques are utilized. Projects may be accomplished by individuals, teams, or task forces. Formal VE projects are those identified as such to or by management.

Value Engineering (VE)—An organized effort directed at analyzing the functions of DOD systems, equipment, facilities, procedures, and supplies for the purpose of achieving the required function at the lowest total cost of effective ownership, consistent with requirements for performance, reliability, quality and maintainability.

Value Engineering Task Team—Composed of members with a variety of background and skills, organized to apply the analytical VE techniques to a system, equipment, item, or procedure with high cost reduction opportunity.

Value Engineering Task Force—Two or more VE task teams organized under single management.

Value Engineering Change Proposals (VE CP)—A specific cost reduction proposal, developed and submitted by a contractor under VE contract provisions which requires a

change to the contract specifications, purchase description, or statement of work.

Value Engineering Proposal (VEP)—A specific proposal developed internally by Army personnel for total value improvement through the use of VE techniques; however, the term also can be applied to contractor-originated proposals which do not require a contract change to be implemented.

Value Engineering Project—A project, one of whose primary objectives is to reduce costs, in which appropriate VE techniques are utilized. Projects may be accomplished by individuals, teams, or task forces. Formal VE projects are those identified as such to or by management.

Value Engineering Contract Incentives—Special provisions in Section I, Part 17, ASPR, as follows:

a. Value engineering incentive clause.

This clause is used in procurement and construction contracts to motivate contractors to submit proposals for changes in drawings, designs, specifications, or other contractual requirements for the purpose of stimulating cost reduction and to provide for compensation to contractors on acceptance of such proposals.

b. Value engineering program requirements clause. This clause is used primarily in design and development contracts and to some extent in production contracts to require the contractor to perform value engineering work at a stated level of effort during the course of performance of the contract and to provide compensation for performance of such work and to share in savings resulting therefrom.

Value Improvement—The result of effective VE application to existing management systems, resources, and materiel during all phases of a program's life cycle to increase the capability and efficiency of operations, deplete backlogs, and/or decrease fund, time, manpower, and facility requirements.

Work Center—An organizational element of a unit comprised of a first-line manager and his subordinates who usually perform similar day-to-day work in the same general area. Some examples are: An orderly room, a supply room, paint shop, mess hall, or message center.

Work Measurement—The relationship of productive man-hours expended to work units produced and techniques expressing such relationship.

Work Simplification—The systematic analysis of all factors that affect or will affect work being done in order to save effort, time and money. The techniques used are: Work Distribution Charting (DD Form 1724); Flow Process

Charting (DD Form 1723); Procedure Charting (DA Form 3820); Layout Charting (DA Form 3825); Man-Machine Charting; and, Motion Economy.

Work Unit—An item of work or unit of measurement selected to express quantitatively the work accomplished in a work area (e.g., 1 pound of laundry washed, 1 door hung, 1 voucher audited).

APPENDIX C

REPORT INSTRUCTIONS

C-1. Purpose. This appendix provides specific instructions on the preparation of the five DA Forms that comprise the annual DA Management Review and Improvement Program (DAMRIP) Report, RCS CSCAM-197.

C-2. Preparation and disposition of DA Form 4133 (Management Review and Improvement Information). *a. Disposition.* The original and one copy of signed report will be forwarded to HQDA (DACA-MRM). Only designated items in section 8 of DA Form 4133 will be forwarded to reach HQDA by 31 January. All blocks on DA Form 4133 will be completed and forwarded to reach HQDA by 31 July.

b. Preparation.

(1) *Block 1.* Insert the fiscal year or period that the report covers.

(2) *Block 2.* HQDA (DACA-MRM), Washington, DC 20310.

(3) *Block 3.* The name, address, and ZIP code of the major command, agency or DA staff element that is submitting the report.

(4) *Block 4.* A summary of management review plans for the upcoming fiscal year. This summary should highlight the significant operating programs, functions, activities, and units to be reviewed.

(5) *Block 5.* A summary of significant findings and/or changes in programs, operations, procedures, etc., which resulted from management reviews conducted during the reporting year. Significant changes occurring in management review procedures during the reporting year will be specifically highlighted.

(6) *Block 6a.* Report total TDA authorized strength. (Only military and direct-hire civilian.)

(7) *Block 6b.* Enter the total number of authorized personnel that could be covered by either engineered or non-engineered standards.

(8) *Block 6c(1).* Enter the number of authorized personnel covered by engineered standards.

(9) *Block 6c(2).* Enter the number of authorized personnel covered by non-engineered standards.

(10) *Block 6d.* Enter total number of authorized and assigned personnel to DIMES. Report total number of personnel whose job assignment is full-time to the reporting agency's DIMES effort (i.e., work measurement technicians and their supervisors, including personnel who may be assigned full-time to DIMES but who actually devoted less than full-time because of special details, TDY, etc.).

(11) *Block 6e.* Enter the total man-hours devoted to planning, directing, executing, and maintaining DIMES. Include assigned personnel from block 6d. Use 2,080 hours = one man-year.

(12) *Block 6f.* A summary of the DIMES plan for the upcoming year. The summary could include plans for implementation or revitalization, standards coverage goals, items requiring DA attention, and the number and location of DIMES reviews scheduled for the next fiscal year.

(13) *Block 7a.* Enter the number and cost of recurring reports at the beginning and end of the reporting year. Enter the difference between the two.

(14) *Block 7b.* Summarize the type of actions which created the difference in numbers and cost of reports, citing specific examples of improvements initiated within your reports control jurisdiction; i.e., Project FASTCUT, panel reviews, etc.

(15) *Block 7c.* Summarize the reports management improvements planned for the upcoming year. Include a goal in terms of a reduction percentage and dollar value.

(16) *Block 8.* All entries are cumulative from beginning of Fiscal Year to end of reporting period except block 8a.

(17) *Block 8a.* Enter number of full-time VE personnel assigned as of the end of the fiscal year.

(18) *Blocks 8b and 8c.* Enter number of actions.

(19) *Block 8d(1).* Actual net dollar value to DOD component for this fiscal year.

(20) *Block 8d(2).* Cumulative net dollar value to DOD component for next two fiscal years.

(21) *Block 8e*. Total number of contracts initiated during reporting period with program requirement clauses.

(22) *Block 8f*. Total contract expenditures of DOD funds for VE program requirements clauses listed in item 8e.

(23) *Block 8g(1)*. Name of each contractor who has submitted one or more VECP that were approved by the government during the reporting fiscal year that will result in a combined total net dollar value to DOD of more than \$100,000.

(24) *Block 8g(2)*. Total number of VECP approved from each contractor listed in 8g(1).

(25) *Block 8g(3)*. Total estimated net dollar value to DOD this fiscal year and next two fiscal years for VECP in 8g(2).

(26) *Block 8g(4)*. Estimated total net dollar value to each contractor for VECP in 8g(2) for this fiscal year and next two fiscal years (or less, depending upon sharing arrangement).

(27) *Block 9*. A brief statement by the commander concerning his management review and improvement program. The statement could include major accomplishments during the reporting year, priority improvement projects for the upcoming year, or problems which impinge on the effective execution of his management review and improvement program which require DA assistance.

(28) *Block 10*. Enter the name, grade and title of the commander of the unit or activity entered in block 3.

(29) *Block 11*. Signature of commander.

(30) *Block 12*. Indicate the number and title of the inclosures:

Example. 6—Rec for Mgmt Improve Awd or
6—DA Form XXXX

(31) *Block 13*. Enter the date that the commander signed the report.

C-3. Preparation and Disposition of DD Form 1905 (Priority Improvement Project). *a. Disposition.* Commands will use this form for their own priority improvement projects and may submit items of special interest as part of the annual DAMRIP report to reach HQDA (DACA-MRM), WASH, DC 20310, on or before 31 July of each year.

b. Preparation.

(1) *Block 1*. Enter the name, location, ZIP code of the reporting organization.

(2) *Block 2*. Enter the title of the Priority Improvement Project.

(3) *Block 3*. Enter the day, month, and year of the end of the fiscal quarter.

(4) *Block 4*. Enter a concise description of the project and the overall management objective established for the current fiscal year as well as future years if the project covers more than the current fiscal year.

(5) *Block 5a*. Enter performance indicator and indicate the unit of measure (man-hours, dollars in thousands, percent of complaint reduction, percent of error or scrap reduction, etc.).

(6) *Block 5b*. In this column enter the appropriate base period reference identification code (see footnote on form).

(7) *Block 5c*. Enter the performance data for the past fiscal year for each performance indicator.

(8) *Block 5d*. Enter the performance data for the current fiscal year for each performance indicator.

(9) *Block 5e*. Enter the approved qualitative objective for the past and current year for each performance indicator. If it is a new project the past year goal column will be left blank. The goal represents the level of performance to be attained by the end of the current fiscal year or the level of performance to be maintained throughout the year.

(10) *Block 5f*. Enter the allowable predetermined acceptable range of performance for each performance indicator ($\pm 5\%$) would be indicated as 95/105.

(11) *Block 6*. Provide a concise summary analysis of results indicating reasons for performance which either exceeds or falls short of the acceptable range established for the area. Indicate corrective action initiated to correct identified deficiencies and provide estimated target date for return to satisfactory performance in relation to the goal.

(12) *Block 7*. Enter date submitted.

C-4. Preparation and Disposition of DA Form 4135 (Management Improvement Action) (see also para 2-6b(1), chap. 2).

a. Disposition. An original and 4 copies will be prepared and forwarded to reach HQDA (DACA-MRM), WASH DC 20310 on or before 31 January and 31 July of each fiscal year for management improvement actions that do not have broader application. DA Form 4135 will be for-

warded all during the fiscal year for each management improvement idea that has potential application beyond the originating activity.

b. Preparation. Enter the following:

(1) *Block 1.* A short descriptive title for the management action. For example: "Reduced Course length," "Consolidation of Maintenance Facilities."

(2) *Block 2.* The number and title of the area in which the savings are reported (e.g., Area 1—Major Items). (See table C-1.)

(3) *Block 3.* Appropriate document control or action reference number used by the reporting agency (optional).

(4) *Block 4.* HQDA (DACA-MRM) WASH, DC 20310.

(5) *Block 5.* The name, address, and ZIP code of the major command, staff support or field operating agency that is submitting the report.

(6) *Block 6a.* The abbreviated title of the appropriation affected by the management action (e.g., OMA, RDT&E). For savings in the Army Stock Fund and Army Industrial Fund, enter ASF or AIF, as appropriate.

(7) *Block 6b. (a).* For all appropriations enter the Army Management Structure (AMS) code under which the savings is achieved to the program element level (i.e., all digits to the left of the decimal point).

(b) For Army Industrial Fund and Army Stock Fund savings, leave blank.

(c). In the case of a base operation activity code (.Z000) both the OMA carrier program and the base operation activity code will be shown, for example: 203296.Z (.B100). (AR 37-100-XX.)

(8) *Block 6c.* The last two digits identifying the current year in the columnar heading and enter the savings for the current year.

Note. If an action produces savings in more than one appropriation or AMS code, show the savings separately for each appropriation and AMS code; add the individual savings reported for each year and show a total in column c, d, e, and f.

(9) *Block 6d.* The last two digits identifying the year (budget year) following the current year and enter the savings expected to be realized in the budget year from the current year action.

(10) *Block 6e.* The last two digits identifying the second successive year (future budget year) following the current year, and enter the savings

expected to be realized in the future budget year from the current year action.

(11) *Block 6f.* The sum of the savings reported in columns c, d, and e for each appropriation and AMS code.

(12) *Block 6g.* The code (table C-2) which most nearly explains the anticipated disposition of the resources saved in the current year.

(13) *Block 7.* The authorized manpower spaces actually eliminated at the reporting activity, or transferred between cost centers, organizational units, etc., at the reporting activity during the current year in the appropriate blocks, a, b, and c. In block d, enter the sum of the military and civilian spaces eliminated or transferred in the current year (blocks a+b+c). In blocks (1) and (2), indicate the manpower spaces eliminated/transferred in the current year as a result of DIMES and all other management improvement techniques.

(14) *Block 8.* Place a check in appropriate box.

(15) *Block 9.* Check the appropriate management improvement action responsible for the savings.

(16) *Block 10.* Type or print the name and organization of the individual reporting the action, who will then sign and enter the date of signature in the appropriate blocks.

(17) *Block 11.* Type or print the name and organization of the manager, supervisor, or director responsible for the area in which the action is taken. The manager, supervisor, or director will review the report, particularly the description of the action and the savings calculation, and sign and enter the date of signature in the appropriate blocks. When a functional manager approves a savings action, he is attesting that he considers it a new, improved, or intensified action and that the reported savings are supportable and represent a reasonable estimate of the monetary benefits which have resulted or will result from the action.

(18) *Block 12.* The comptroller or budget officer will review each savings action and complete this item. Such completion will represent the following:

(a) For savings in Army appropriations (except those covered in (b) below). Verification that the savings, the AMS code(s), and disposition of realized savings are accurate, based on

information available as of the date of signature, and acknowledgement that the effect of the action involved will be considered in determining budget requirements.

(b) For savings of PEMA funded free issue items at station or installation level. Verification that the savings and the AMS code(s) are accurate, based on information available as of the date of signature.

(c) For savings in the funds of another DOD component or other government agency. Verification that the savings and appropriation title are accurate based on information available as of the date of signature.

(19) *Block 13.* This item will be completed by the office designated to validate management improvement savings reports. (See app D.)

(20) *Block 14a.* Give a concise description of the policy, procedure, or technique which was in existence prior to the management action or which normally would have been followed or applied under the circumstances.

(21) *Block 14b.*

(a) Describe concisely the change resulting from the management action showing clearly whether it represents:

1. Application of a policy, procedure, or technique which has not been applied previously at the reporting activity;

2. A change in a policy, procedure, or technique which was in existence at the reporting activity; or,

3. A broader application or increased emphasis with respect to existing policies, procedures, or techniques.

(b) The description of the action should clearly show how the reported action constitutes something different or unusual from that which normally would have occurred under the circumstances.

(c) The description of the action should be written in clear, easy to understand, nontechnical terms. It should also contain a reference to appropriate documentation and records which support the action and the savings computation as appropriate.

(d) In addition to the description, show the date of the first cost impact of the action.

(e) Show how the savings entered in item 6 were computed. The computation must show for each fiscal year:

1. The cost which would have been incurred in each year without the action, using either the cost actually being incurred under the previous policy, procedures, or technique or a supportable estimate of the cost which would have been incurred without the action, whichever is most appropriate.

2. The cost after the action—either actual or estimated cost, as appropriate under the circumstances.

3. Readily identifiable and directly related offsetting costs which are or will be incurred as a result of the action including increases in costs in other areas, at other activities or at other DOD or government agencies if resulting directly from the reported action.

4. The net savings for each fiscal year.

C-5. Preparation and Disposition of DA Form 4136 (Management Improvement—Area Summary). (See also para 2-6b(2), chap. 2.)

a. Disposition. An original and 4 copies will be prepared and forwarded to reach HQDA (DACA-MRM) WASH, DC 20310 on or before 31 January and 31 July of each fiscal year.

b. Preparation. Enter the following:

(1) *Block 1.* The fiscal year covered by the report.

(2) *Block 2.* The number and title of the management improvement area (see table 1).

(3) *Block 3.* The name, address and ZIP code of the office to which the report will be submitted.

(4) *Block 4.* The name, address, and ZIP code of the activity preparing the report.

(5) *Block 5.* The current year goal for the area.

(6) *Block 6.* The net dollar savings achieved in the management improvement area during the current report period.

(7) *Block 7.* The percent of savings to goal for the current year for the area.

(8) *Block 8.* For each code enter the dollar amount of current year savings. (See table C-2.) (The total in item 6 should equal the sum of codes A-E.)

(9) *Block 9a and b.* The digits representing the next 2 fiscal years following the current

fiscal year (i.e., the budget fiscal year, and the future budget year). Enter the estimated savings effect resulting from actions taken in the current year.

(10) *Block 9c.* Enter total 3-year savings (total of blocks 6, 9a and 9b).

(11) *Block 10a.* The number of actions reported in the current year which will produce a savings of less than \$500,000 in any one of the 3 fiscal years.

(12) *Block 10b.* The total savings for the 3-year period which are expected to be realized from the number of actions entered in 10a.

(13) *Block 10c.* The number of actions reported in the current year which will produce savings of \$500,000 or more in any one of the 3-fiscal years.

(14) *Block 10d.* The total savings for the 3-year period which are expected to be realized from the number of actions entered in 10c.

(15) *Block 10e.* The total number of qualifying actions reported for the current period (the total entered should equal the sum of columns 10a, and 10c).

(16) *Block 10f.* The total savings for the 3-year period which are expected to be realized from all actions reported in the current year. (Total amount should equal the sum of columns 10b and 10d and equal the amount entered in item 9c).

(17) *Block 11.* Recap of manpower spaces actually eliminated or transferred during the current year resulting from DIMES and other management improvements.

(18) *Block 12.* Include a recap of the dollars saved in the current fiscal year and the next 2 fiscal years (budget year and future budget year) under the appropriate management improvement action responsible for the savings.

(19) *Block 13.* Self-explanatory.

(20) *Blocks 14 through 18.* Type or print the name, grade, organization and telephone number of the individual preparing the report, who will then sign and enter the date of signature in the appropriate blocks.

C-6. Preparation and Disposition of DA Form 4134 (Recommendation for Management Improvement Award). *a. Disposition.* An original and 10 copies of each nomination for Presidential

recognition and an original and 3 copies for Zero Defects Award, will be inclosed with DAMRIP report DA 4134 and sent to HQDA (DACA-MRM) WASH, DC 20310. If more than one nomination is submitted, their order of preference must be indicated. Procedures for the disposition of major command nominations will be established by each command and included in their supplement to this regulation.

b. Preparation.

(1) *Block 1.* Recommended award. Place a check in the appropriate block.

(2) *Block 2a.* Enter name of individual recommended for the award.

(3) *Blocks 2b, c, d, and e.* Enter social security number, grade, position title, and unit of individual listed in block 2a.

(4) *Block 2f.* Enter the inclusive dates of the accomplishment.

(5) *Block 2g.* If an interim award, such as a letter of appreciation was given, check the appropriate block and indicate the award.

(6) *Block 3.* If the nomination is for a team, group, unit or organization, enter the necessary data. The name of the leader of the group would be entered in block 2a.

(7) *Part II.* Specifically highlight the ingenuity, innovation, extraordinary dedication or exceptional skill demonstrated by the nominee(s) to warrant recognition by a Presidential or DA Management Improvement Award, or a DA Zero Defects Award.

(8) *Part III.* For nominations pertaining to increased effectiveness describe in quantitative terms the benefits derived from the achievement.

(9) Enter typed name, grade, title and telephone number of person initiating the recommendation.

(10) *Signature.* The signature of the person initiating the recommendation.

(11) *Date.* Enter date form was signed.

C-7. Cost Reduction Goals. Prior to 1 June of each year, major commanders and heads of agencies will submit a recommended monetary savings goal for the ensuing fiscal year for each management improvement area listed in table C-1 having a functional applicability to the command/agency. Recommended goals will be forwarded to HQDA (DACA-MRM) WASH, DC 20310. The

recommended goals should be based upon an evaluation of the potential for improvement of each activity performed by the command/agency using such factors as potential for requirements reductions, for productivity increases, and for realignments of organizations, facilities or procedures. Based on the command/agency recommendations, the Department of the Army will formally assign goals prior to 1 July of each fiscal year.

C-8. Feedback. HQDA will advise each command not later than 45 days after receipt of a report from the command as to the action on reported savings. Commands will similarly provide for appropriate feedback to subordinate echelons. DA

feedback will identify those management improvement actions which—

a. Have been accepted for inclusion in the DAMRIP Progress Report.

b. Have not been accepted and the specific reasons for nonacceptance.

c. Are being returned to the command for additional information and expected resubmission.

C-9. Administration. Each activity or command initiating or forwarding DAMRIP reports will maintain adequate records for the current administration of the program. Offices which initiate reports will, as the office of record, hold file copies of the reports with substantiating documents and working papers.

Table C-1. Management Improvement Areas of Emphasis

Identification number	Management improvement area	Definition	Scope	HQDA staff area monitor
1.....	Major items.....	Any item of equipment which is separately identified on a line item basis in a departmental/agency budget submitted to the Office of the Secretary of Defense.	Includes all qualifying actions (usually taken by weapons systems managers and major items managers) which— a. Decrease the quantity of major items programmed for procurement; or b. Reduce the unit price or total cost of major items programmed for procurement.	DCSLOG
2.....	Supply management.....	The areas of supply management encompasses the functions of— a. Requirements determinations of all items of equipment and materiel other than major items (as defined in area 1), including initial provisioning and supply replenishment. b. Receipt, storage, and distribution (other than transportation actions as defined in area 8) of such items, including the issue of personal property. c. The development and operation of systems established to accomplish the above functions.	Includes all qualifying actions taken by supply personnel acting within the area defined. Actions which— a. Reduce the buy requirement, the unit price, or the total cost of items other than those defined as major items; or b. Decrease costs associated with the performance of supply functions, are examples of the type of actions which fall within the scope of this area.	DCSLOG
3.....	Data management.....	The area of data management encompasses all types of technical data (manuals, drawings, and reports) which are used primarily in the procurement or maintenance of supplies and equipment, and which are procured from commercial contractors or other Government agencies or prepared in-house.	Includes those qualifying actions which reduce quantitative or qualitative data requirement, or decrease the unit price or total cost of data. This area does not include administrative manuals, data, and reports or the development, maintenance, and operation of ADP systems. Qualifying actions involving these functions will be reported in area 11 or other appropriate functional areas such as area 2, or area 9.	CRD
4.....	Value Engineering (VE).....	An organized effort directed at analyzing the function of Army systems, operations, equipment, facilities, procedures, methods, and supplies to achieve the required function at the lowest total cost of effective development, production, and/or ownership, consistent with requirements for performance, reliability, quality, maintainability and safety.	Includes both internal VE proposals and contractor-initiated VE change proposals (VECP). Savings reported on internal VE proposals must result from a written value engineering project or be supported by a proposal form prescribed by existing approved configuration management systems or a proposal form meeting the minimum requirements in paragraph D-2h.	COA

Table C-1. Management Improvement Areas of Emphasis—Continued

Identification number	Management improvement area	Definition	Scope	HQDA staff area monitor
5.....	Procurement management.*	The area of procurement management encompasses all procedural aspects of the procurement process as well as changes in procurement plans, techniques, methods, and types of contracts.	Includes those qualifying actions taken by procurement personnel which reduce the cost of an item or service procured by DOD components. It includes actions which result in more economical procurement of items and services, whether taken by central or local purchase procurement activities.	ASA (I&L)
6.....	Schools, education and training.	Schools, education, and training encompasses the administration and operation of schools, training centers, and other educational facilities.	Includes those qualifying actions which reduce the cost of accomplishing training of both military and civilian personnel as well as those actions which decrease the cost of administration and operation of schools and educational facilities.	DCSPER
7.....	Telecommunications management.	Any transmission, emission, or reception of signs, signals, writing, images, and sound or intelligence of any nature by wire, radio, visual or other electromagnetic systems.	Includes those qualifying actions initiated by personnel responsible for communications operations and management which reduce telecommunications cost (procurement, construction, capital equipment, or operations and maintenance) of telecommunications systems, networks, and facilities.	AGSC-E
8.....	Transportation and traffic management.	Transportation and traffic management encompasses the movement of persons and things by in-house as well as by commercial land, sea, and air resources.	Includes those qualifying actions initiated by transportation and traffic management personnel which reduce the cost of moving persons and things or decrease the administration and operating costs of transportation systems and facilities.	DCSLOG
9.....	Equipment maintenance management.	The phases of equipment maintenance include, but are not limited to, equipment servicing, overhaul, progressive maintenance, conversion, activation, inactivation, renovation, analytical rework, modification, repair, inspection and testing, manufacture, and reclamation of military and commercial type equipment. It also includes indirect support services such as programing and planning maintenance support, maintenance engineering and technical analysis, development and manufacture of shops, tools and equipment and the maintenance, alteration	Includes those qualifying actions that are initiated by personnel engaged in or responsible for the servicing and maintenance of all types of equipment other than real property installed equipment. It includes actions which reduce the cost of maintaining military and commercial type equipment whether used for tactical or administrative purposes. It also includes actions initiated by maintenance personnel which reduce new procurement of items used in maintaining items of equipment. Also included are actions derived from the use of management	DCSLOG

10.....	Real property management.	and improvement in maintenance shops and shop equipment. Real property management encompasses the construction, maintenance, and operation of real property including family housing (buildings, railroads, roads, pavement, and grounds); maintenance, repair and operation of utility plants and electrical heating, fuel, water, sewage waste and pollution control systems; and installation support, such as fire protection, refuse collection and disposal, entomology, and custodial services.	engineering techniques, such as Engineered Performance Standards, which result in improved operations or increased productivity. Includes those qualifying actions initiated by personnel associated with real property management which reduce the cost of maintaining, operating, and constructing real property and real property installed equipment.	DCSLOG
11.....	Preservation, packaging, and packing.	Preservation, packaging, and packing encompasses the materials and techniques used to protect equipment and supplies during shipment, handling and storage.	Includes those qualifying actions which reduce costs incurred to preserve, package, or pack equipment, materiel, and supplies. It also includes transportation savings which result directly from an improvement in the preservation, packaging, and packing processes.	DCSLOG
12.....	General management improvement.	The area of general management improvements encompasses the broad spectrum of management of all functions and activities at headquarters and field levels of the Army such as DIMES, Work Simplification, MAP-TOE, MAP-TDA, Output Measurement, Productivity Measurement and Zero Defects.	Includes all qualifying actions which are not reportable in any other specific area. This area offers a challenge to the ingenuity of managers at every organizational level, particularly to personnel having overall staff responsibility for management analysis, for organizational and system analysis, and for the broad range of management activities. It also includes actions relating to the management of hospitals and clinics; local logistics and service functions; and operation, management, and use of automatic data processing systems not reportable in other areas. To encourage participation by these activities, the area 12 goals may be formally distributed among them.	COA

*Special guidance. a. Price reductions resulting from normal or usual price negotiations will not qualify for reporting. However, price reductions which result from specific actions, such as changes in delivery schedules or changes in scope of work should be evaluated for reporting even though they occur during the price negotiation process.

b. The following are examples of actions considered to be in accordance with the definition of a new or improved management action and are, therefore, reportable provided the requirements set forth in c below is satisfied:

(1) The first-time application of the multiyear procurement or breakout technique to an item after a history of procurement of that item under another method.

(2) A change in procurement technique or contracting procedure from that which has been applied in the same or similar circumstances in the past.

(3) Application of a procurement technique or contracting procedure as a result of positive management action which differs from that which was previously planned, approved, or funded.

(4) A first-time change to competitive procurement following one or more production procurements made on a sole-source basis.

c. The reporting activity must be able to develop a reasonable and supportable estimate of the cost which would have been incurred under the normal or usual procedure or technique and, must have funds available or be able to demonstrate that funds would have been available from a higher headquarters to have effected the procurement under the higher cost method.

Table C-2. Disposition Savings Codes

<i>Code</i>	<i>Anticipated disposition of resources saved</i>
A	Make funds available in the same budget activity or revolving fund to finance other approved requirements.
B	Reduced the cost of items of service sold to a DOD component by an industrially funded activity.
C	Reprogramed to another appropriation or budget activity to finance other approved requirements. When this code is used the anticipated use of the funds in the gaining appropriation or budget activity will be described in item 13 (DA Form 1436) or on an addendum sheet.
D	Made time available to perform other essential functions (para D-2j, app D).
E	Other. This code will be used for all types of savings such as: <ol style="list-style-type: none">(1) Reduced the quantity of free issue items requisitioned from central inventory managers.(2) Represented an increase in productivity of the reporting activity.(3) Increased the amount of funds to be deposited to the US Treasury.(4) Increased the amount of funds received from the sale or lease of an item or service to a commercial contractor, private individual or foreign government.(5) Saved funds of another DOD component or another Government agency.(6) Placed in reserve, or applied to reducing the President's budget.(7) Returned to higher headquarters for disposition.

APPENDIX D

VALIDATION PROCEDURES

D-1. General. *a.* The purpose of validation is to assure that the savings reported represent reasonable computations and estimates, are the result of specific new or improved management actions, and are the net savings realized after deduction of identifiable offsetting cost increases.

b. Each commander or agency head reporting a management improvement action is responsible for assuring its validity. An element other than the reporting unit (e.g., the Internal Review Staff), should be used for this purpose.

c. Individual management improvement actions with savings of \$100,000 or more in any one of the three program years require signature in item 13, DA Form 4135 (Management Improvement Action) following validation. Validation of actions with savings of lesser amounts is optional at the discretion of the commander/agency head.

d. Those DA Forms 4135 indicating savings of \$500,000 or more in any one of the three program years (current year, budget year, future budget year) are forwarded semiannually with a DA Form 4136 to the next higher consolidating level for each area being reported.

e. Management improvement actions containing savings of \$500,000 or more will be reviewed at HQDA and appropriate feedback provided to commands (para C-9, app C).

f. Paragraph 6b(1), AR 36-5 provides that commanders and DA Staff agency heads may request the advisory financial management services of the US Army Audit Agency. This provision may be used if a question exists as to the validity of a very high value savings action.

g. Management improvement actions must :

(1) Represent new or improved management as related to an individual item, job, operations, or function, or represent an increase in productivity.

(2) Be initiated by Army personnel except as provided in paragraph D-2h below.

(3) Produce a supportable benefit which is quantified in terms of dollars, or results in an increase in the amount of funds deposited to the Miscellaneous Receipts Account of the US Treasury.

(4) Represent deliberate management improvement actions as opposed to those actions taken in the normal discharge of an assigned task or mission.

h. The monetary benefit resulting from each qualifying action will be calculated and separately identified for 3 fiscal years—the current year (fiscal year action is reported), the budget year (fiscal year following the current year) and the future budget year (fiscal year following the budget year). Savings may be determined by comparing before and after costs of specific actions or by computing monetary benefits resulting from increased productivity.

(1) *Current year savings* reported for each action will represent the monetary benefit that will accrue in the fiscal year that the action is reported.

(2) *Budget year savings* reported for each action will represent an estimate of the amount of additional appropriated or revolving funds which would have been required in the budget year except for the management improvement action.

(3) *Future budget year savings* reported for each action will represent an estimate of the additional appropriated or revolving funds which would have been required for the future budget year except for the management improvement action.

i. An activity initiating a management improvement action which saves funds of another DOD component (e.g., Air Force, Navy, Defense Supply Agency, or another government agency) may report the savings.

j. Management improvement actions will not be validated that decrease mission effectiveness or operational capability, violate safety requirements, or impair technical performance. In addition, management improvements that result from the following will not be reported :

(1) A change in mission or a decline in demand for the output of the reporting activity.

(2) Deferral or postponement of projects, activities or expenditures.

(3) Transfer of a function or activity to another organization except to the extent that there is a net savings to the government.

(4) Use of voluntary uncompensated overtime in lieu of increased staffing, paid overtime or contractual services.

D-2. Procedures. *a. Use existing date.* Data from existing official records should be used to the maximum extent in savings calculations. Such records include: the Five-Year Defense Program, approved procurement programs, financial plans, command operating budgets, accounting records, cost records, payroll records, job records, work orders, inventory records, contracts, contractual change documents, payment vouchers, value engineering studies and other similar records.

b. Savings computations. The most appropriate techniques and the latest data available at the time a saving report is submitted will be used in savings computations. Generally accepted sampling techniques and methods may be used for computing savings when an individual action is applicable to a group or class of items.

c. Consider all costs. The 3-year savings effect must be calculated for each action and only net savings may be reported. All directly associated costs incurred as a result of implementing a management improvement action either within the Army, in another DOD component, or in another government agency must be deducted from the resulting gross savings. If the offsetting costs equal or exceed the first year's savings, zero savings will be reported for the current year and any remaining offsetting costs must be deducted from the budget year and future budget year savings as necessary to eliminate all readily identifiable offsetting costs.

d. Computing depreciation. Offsetting costs for the purchase of equipment, systems, buildings, utilities, or plans should be based on the depreciation rate. This applies to savings resulting from the purchase of such resources that were previously leased or from situations wherein purchased equipment reduces the cost of performing a job, operation or function. The following procedure will be used for computing depreciation:

(1) Purchase, maintenance and depreciation costs will be spread (amortized) over the period of use from the date of purchase to the estimated removal or discontinuance date. This time span, however, will not exceed the maximum deprecia-

tion years set forth in figure 4-2, AR 235-5, Commercial and Industrial-Type Activities. Guidance for computing depreciation cost is contained in table 4-1 of the same regulation.

(2) The total of life costs will be divided by the number of months to removal or discontinuance date to give monthly costs. The monthly costs will be subtracted from the actual or projected monthly costs under the previous method (e.g., rental or labor costs) to yield net monthly savings.

(3) The net monthly savings will be used to compute savings for the current fiscal year and the following two fiscal years or until the month of removal, whichever is earlier. Savings will be reported beginning with the month of purchase or installation, whichever is later.

e. Items and services purchased.

(1) Many qualifying actions will reduce the quantity, unit price or total cost of an item that will be purchased from a commercial contractor, another government agency, another DOD department or agency, or another activity within the Army.

(2) When the item is a major item (an item that is separately identified on a line item basis in Army budgets and programing documents), the latest approved procurement program will be used as a base for measuring savings. If the action affects only the quantity, savings may be reported to the extent that a reduction is made in the total quantity programed for procurement during the current year, budget year and future budget year. If the action reduces the unit price, savings will be calculated by multiplying the unit price reduction by the quantity programed for procurement in each year (the current year, budget year and future budget year).

(3) For all items, other than major items, the savings will be based on the computed buy requirement which existed before the action was taken minus the computed buy requirement after the action was taken. (A computed buy requirement is the difference between the quantity of items which a reporting activity is authorized and the quantity on hand and on order.)

f. Centrally procured free issue equipment and materiel.

(1) Some items of equipment and materiel are procured centrally by the Army and furnished on a free issue basis to requisitioning activities

within the Army. To encourage such activities to take actions that will decrease the quantity of such items requisitioned from central inventory managers, savings may be reported based upon guidelines set forth in (2) and (3), below.

(2) Savings may be reported by a requisitioning activity when they initiate an action which decreases the quantity of centrally procured free issue items that they (the requisitioning activity) would have—

(a) Requisitioned during the current year from a central inventory manager; or

(b) Consumed during the current year in the manufacture of an end item or in the accomplishment of a job, operation, or function.

(3) Savings may be reported by an activity which initiates an action to reduce requirements (TDA or TOE) for administrative use vehicles to the extent that overall major command requirements for such vehicles are correspondingly reduced.

(4) The appropriation and AMS code used to finance procurement of the centrally procured free issue items on which savings are reported will be shown in Blocks 6a and 6b of DA Form 4135. Disposition Savings Code E will be shown for all such savings (see table C-2, app C).

g. Equipment returned to stock or redistributed. New or improved actions taken by units organized under TOE/MTOE and TDA/MTDA may result in turn-in or redistribution of items of equipment. In this event, the savings may be reported if the items are still being procured by the central inventory manager. This determination should be obtained from the applicable National Inventory Control Point. Disposition Savings Code E will be shown for all such savings (see table C-2, app C).

h. Joint contractor-army actions.

(1) The Army's share of savings resulting from contractor-initiated improvement actions which must be individually approved by the Army, may be reported.

(2) Savings to the Army resulting from approved VE change proposals (VECP) are reportable in area 4, Value Engineering. Such savings are limited to those accruing on procurement programs which have been approved for the current year, the budget year and the future budget year.

i. Jobs, operations, functions and activities.

(1) Savings may be reported whenever a qualifying action reduces the cost (labor, material and overhead) of a job, operation or function which is performed in-house by the reporting element. Current year savings will represent the difference between:

(a) the cost which the reporting element was actually incurring to accomplish the job, operation or function before implementation of the action or an estimate of the cost which the reporting element would have incurred in the current year without the action; and

(b) the cost which the reporting element actually incurs in the current year or an estimate of the cost which the reporting element will incur in the current year to accomplish the job, operation or function after implementation of the action.

(2) Normally, all elements of cost (material, labor and overhead) should be included in savings computations on jobs, operations or functions. Material should be costed at either actual or standard prices, whichever is more appropriate, on a case-by-case basis. Labor should be costed at either actual or average salary costs used for budgetary purposes, whichever is more appropriate. Related salary costs, such as the Government's contribution for retirement, social security, health insurance, and life insurance may be included in savings calculations. An average percentage of direct salary costs may be used for these related elements of salary costs. Overhead and indirect costs should be included in savings calculations if they are allocated to the item, job, operation or function under an existing accounting system. For military costs, official military compensation rate tables will be used.

j. Time (labor) savings.

(1) Savings may be reported when a qualifying management action reduces the time (labor) which is expended to accomplish a job, operation or function without affecting the cost of material or overhead. In such cases, savings may be determined by comparing the cost of the time (labor) expended in accomplishing the job, operation or function "before" and "after" implementation of a qualifying action. (It will not be necessary to show material and overhead costs in the savings

computations since they remain the same both "before" and "after" the action was taken.)

(2) The reporting activity must be able to substantiate the amount of time which was actually expended to accomplish the job, operation or function both "before" and "after" implementation of the qualifying cost reduction action. When the reduction cannot be substantiated by normally maintained records such as time or job costs records, other techniques may be used; e.g., time and motion studies, sampling of labor consumed under "before" and "after" conditions, estimates of supervisory personnel.

(3) At industrially funded activities, the hourly industrially funded billing rate should be used in time savings calculations when other than an industrially funded billing rate is used.

(4) Disposition Savings Code D will be assigned for all time (labor) savings. (See table C-1, app C). No other explanation is required as to the disposition of the additional time made available.

k. Reduction in authorized manpower spaces.

(1) Savings may be reported based upon a reduction in manpower spaces authorized for an organizational element of a reporting activity, provided the reduction resulted from a qualifying action initiated by the reporting activity.

(2) Whenever practical, reported savings should represent the actual salary cost of the spaces eliminated or transferred. In other cases, savings may be based upon average costs used for budget purposes.

(3) Whenever authorized manpower spaces are eliminated or transferred (moved to another work unit, cost center, function, etc., at the reporting installation, or released by the reporting activity to a higher command for disposition) as a result of a management improvement action, the number of spaces eliminated or transferred in the current year will be shown on the Management Improvement Action, DA Form 4135 (see app C).

(4) A manpower space is considered eliminated when it is returned to the next higher level of command for disposition. A manpower space is considered transferred when it is reallocated to another shop, department, or activity at the same level of command which took the cost reduction action.

(5) The reporting of net authorized manpower spaces eliminated or transferred is limited to the current year. (Anticipated *monetary savings*, however, will be reported for 3 fiscal years.) Such reports will not include estimates of spaces expected to be eliminated or transferred in the budget year and future budget years.

(6) Eliminations and transfers of authorized spaces are reportable irrespective of whether the spaces are filled. Both direct hire and indirect hire foreign national authorized space changes will be reported.

(7) Reductions in contract technicians and other contractor personnel will not be reported as reductions in authorized manpower spaces.

l. Miscellaneous receipts. Whenever a qualifying action increases the amount of funds deposited to the Miscellaneous Receipts Account of the US Treasury, the resulting increase will be reported as current year savings. Disposition Savings Code E will be assigned for these savings.

m. Sale or lease of property, items and services. Whenever a qualifying action increases the amount of revenue which a reporting element receives in the current year from the sale or lease of property, items or service, which previously was available and could have been sold or leased, the increase will be reported as current year savings. Disposition Savings Code E will be assigned for these savings.

n. Actions initiated by industrially funded activity.

(1) Industrially funded activities will report the savings that result from qualifying actions which they initiate. It will not be necessary to identify the savings by benefiting DOD component.

(2) Current year savings should be determined on a case-by-case basis by making a comparison between the cost which the industrially funded activity would have incurred and initially paid for without the action, and the cost which is or will be incurred.

o. Use of long supply, excess and surplus inventory.

(1) Every effort must be made to use equipment, supplies and other items which are in a long supply, excess or surplus state in lieu of procuring new items. Whenever use of such items results from a new or improved action, the resulting savings

should be reported in the management improvement area most closely related to the primary function of the initiating activity responsible for the action; e.g., major items, supply management, communications, equipment maintenance.

(2) Each qualifying action is reportable in the year that the use of a long supply, excess or surplus item eliminates a new procurement which was approved and funded or reduces the quantity of items which the reporting activity would have obtained on a free issue basis.

(3) The measure of savings for each reportable action will be the cost of the new item which otherwise would have been procured/obtained less offsetting costs for the long supply, excess or surplus item which was used in lieu of new procurement. These offsetting costs will include—

(a) The scrap, salvage or reclamation value of the long supply, excess or surplus items;

(b) Costs incurred in modifying the long supply excess or surplus item, and

(c) All other readily identifiable offsetting costs.

(4) Some of the types of actions which normally indicate a new or improved action in connection with the use of long supply, excess and surplus materiel are illustrated in (a) through (e) below.

(a) The item was not coded in the supply catalog as an interchangeable item for the item that was to be procured.

(b) The item required modification to some degree in order to be usable for the purpose that would have been satisfied by the new item which otherwise would have been procured. (The same type of modification in a subsequent year would not constitute a new or improved action for that year.)

(c) The item was used for a purpose other than that for which it was originally designed.

(d) A requirement for a new end item was satisfied by using in-house resources to manufacture the end item from components that were in a long supply, excess or surplus status.

(e) Use of the item resulted from: The application of existing procedures in which more than normal or routine effort was involved; a change in existing procedures or techniques; or special interrogation on an interservice basis.

p. Guidelines for determining reporting year. Generally, each action must be reported in the fiscal year that it first produces a monetary benefit before considering offsetting costs. However, when actions which were reportable during a previous fiscal year are omitted from the year-end report, they may be reported in the next fiscal year so long as they reduce the amount of appropriate or revolving funds which the reporting element had authority to and would have obligated in the current year for the purchase or procurement of an item or service; or reduce the cost of a job, operation or function which the reporting element will accomplish in the current year. The amount of savings reported for such actions will be limited to those expected to occur in the current year (the year the action is reported) and the budget year. If the first or only effect of an action is reflected in an annual budget estimate submitted to Congress, the action must be reported in the year the budget estimate is submitted. In such cases, the current year monetary benefits will be reported as zero and the benefits reported for the budget year and future budget year will represent an estimate of the additional obligational authority which otherwise would have been requested for each year if the action had not been taken. In most other cases, the reporting year can be determined from the following guidelines:

(1) If the action reduces the quantity, unit price or cost of an item or service which is being purchased under an existing contract, it is reportable when the supplier has been notified of the change and the reporting activity has sufficient data available to compute the resultant savings.

(2) If the action reduces the quantity, unit price or cost of an item or service that the reporting activity will subsequently purchase, it is reportable when a contract or other purchase agreement for the item or service is subsequently awarded.

(3) If the action reduces the quantity of an item which the reporting activity obtains on a free issue basis, it is reportable when the reporting activity would have requisitioned the additional items.

(4) If the action reduces either labor consumed or the cost (labor, material and overhead) of an item produced or modified in-house, or a job, operation or function performed in-house, it is

reportable after work has commenced and the reporting activity has sufficient data available to compute the resultant saving.

(5) If the action reduces authorized manpower spaces of a section, department, unit or activity, it is reportable when the reduction is actually implemented.

g. Validating productivity savings. The following criteria will be used in determining reportable savings which result for increases in productivity. These provisions do not rescind or supersede any criteria prescribed in other sections for reporting savings based on individual management improvement actions.

(1) *Effects of management improvement actions.* The effect of many management improvement actions become too intermingled to relate specific effects with specific action. The cumulative effect of such actions is reflected in the productivity of an activity or organization. Therefore, measurement of productivity is one method of determining the result of many intermingled management actions.

(2) *Expressing productivity.* Productivity will be expressed as the ratio of output (goods produced or services rendered) to input (resources used). Measurement of productivity involves a comparison of output with input. Productivity is determined by dividing the outputs by the inputs.

(3) *Requirements for a meaningful measure of productivity.*

(a) Certain specific requirements must be satisfied in order to have a meaningful measure of productivity. First, both outputs and inputs must be measurable. Second, the end products (goods produced or services rendered) for use outside of a shop, department, activity or organization and not the services or products used within a shop, department, activity or organization must represent the outputs. In summary, only final products should be measured. These outputs represent the basic mission (goods or services) of a shop, department, activity, or organization. Finally, when more than one homogeneous output is produced by a shop, department, activity, or organization, all outputs (products produced or services rendered) and all inputs must be included in the measurement process.

(b) Theoretically, productivity should be measurable at any level of an organization. There

are practical limits, however. Meaningful productivity measurement can be difficult and perhaps impossible whenever the nature, quality, and purpose of output change frequently or rapidly, or where output is undefinable or not homogeneous. The amount of effort required to measure productivity will vary between activities and functions and in some instances productivity measurement cannot be made from data currently provided by existing records and systems.

(4) *Changes in productivity.*

(a) In most instances, improvements in productivity result from many influences and factors rather than from a single identifiable action. Changes in productivity can result from improvements in management, improvements in employee skills, increased efforts of employees, changes in technology, organization and equipment, changes in workload, and other influences of a similar nature. Some of these changes, such as improvements in technology, may be cumulative and permanent. Others, such as changes in workload, may be temporary.

(b) An increase in productivity results when there is an increase in the ratio of output to input. This occurs when: A constant product output is accomplished with a reduced labor input. An increase in product output is accomplished without an increase in labor input; there is any variation of product output and labor input which produces a higher ratio of product output to labor input.

(5) *Measurement of productivity changes.*

(a) There are several acceptable methods for expressing productivity such as output per man-hour and output per employee. Regardless of the method used to express productivity, the gain in output of the final product or service must exceed the gain in total resources input in order to claim savings based on an increase in productivity. A gain in productivity of some intermediate output or a decrease in time required to perform an element of a task or function does not support a claim of increased productivity for a shop, department, activity, or organization.

(b) The following steps must be taken in calculating and reporting savings which result from increased productivity: First, determine the percentage of increase in productivity; and second, determine the dollar value of the increase.

(c) The percentage increase is determined by comparing the ratio of product output to labor input in the current year (reporting period) with the ratio achieved in the base year (year preceding the current year). Output may be expressed in terms of units produced, students trained, records maintained, etc. Input (labor resources used) may be expressed in terms of total man-hours available, average number of personnel assigned, etc. (Dollar cost comparisons between periods of fiscal years is not a measure of productivity.)

(6) Whenever "increased productivity" savings are reported, the management improvement action, DA Form 4135, must show:

(a) Product or service output for both the base year and the reporting period of the current year.

(b) Labor input (resources used) for both the base and the reporting period of the current year.

(c) The ratio of output to input for both the base year and the reporting period of the current year. The gross dollar value of the increase in productivity should be determined by applying the percentage of productivity increase to current year labor costs, both direct and indirect, when applicable. (Normally material costs are not affected by increases in productivity.) The net reportable savings are then determined by deducting all offset costs, such as equipment replacement or modernization cost from the gross dollar savings.

(7) Table D-1 is an example of the preferred method of reporting and calculating increased productivity savings.

(8) Reporting year for increased productivity.

(a) Savings should be reported for the budget year and the future budget year to the extent that the increase in productivity will reduce the amount of appropriated and revolving funds which would have been required in those years. If the increase in productivity is not expected to decrease fund requirements in the budget and future budget years, savings should be reported only for the current year.

(b) Existing reporting systems and supporting data should be used to the maximum extent in calculating savings. Sampling techniques should be used as appropriate.

(9) What to include in savings calculations.

(a) All identifiable costs, both direct and indirect, incurred in producing the final product or service should be included in savings calculations. Payroll costs should include direct salary costs plus other direct costs, such as the Government's contribution for retirement, social security, health insurance, and life insurance. Indirect support costs which are not readily associated to the final product or service or which normally are not allocated to the shop, department, activity, or organization should not be included in savings computations. Costs associated with central procurement of supplies and services, civilian personnel offices, finance offices, and departmental, command, intermediate, and installation headquarters ordinarily fall in this latter category.

(b) Only net dollar savings are reportable. All readily identifiable and directly associated offsetting costs must be considered in savings calculations. For example, the replacement or modernization of equipment may have been one contributing factor to a reported increase in productivity. The cost of such equipment replacement or modernization must be deducted from the gross savings and only the remaining net savings may be reported as an increased productivity saving.

(c) Productivity measurement shows the cumulative effect of all influences and factors, and, in many instances, it is not practical to attempt to identify the measure and effect of any single contributing influence or factor. Therefore, the net saving (gross saving less identifiable offsetting costs) resulting from increased productivity may be reported as a saving. A narrative description of principal management improvement actions contributing to the increase in productivity substantially accounting for the savings will be shown on DA Form 4135.

(d) The amount of increase in productivity represents the total benefit resulting from all management improvement actions affecting labor (personnel). Consequently, activities and organizations choosing to report savings based upon increases in productivity may not duplicate such savings by reporting savings based upon identifiable individual management actions which contribute to the increase in productivity.

(10) Measuring progress. The level of performance (productivity) for the year immedi-

ately preceding the current year will be used as a base for measuring progress. Productivity for the current year may be determined and reported for each reporting period, when practical. Estimates may be used for the last reporting period of each year or portion thereof as necessary to meet reporting deadlines. The year end report should

reflect the total current year saving based upon a comparison of the total current year level of performance (productivity) with the level achieved in the base year.

(11) Appendix M provides information on the use of productivity measurement data as a management tool.

Table D-1. Example of the Preferred Method of Reporting and Calculating Increased Productivity Savings

<i>Facts</i>	<i>1971</i>	<i>1972</i>
Number of Units Produced (Weekly Average).....	1,000	1,248
Number of Available Direct Labor Hours (Weekly Average).....	500	520
Total Labor Cost (Direct and Indirect) (Weekly Average).....	n/a	\$5,200
New Equipment Cost.....		\$10,000

Computation of Increased Productivity

	<i>Weekly average</i>		<i>Ratio</i>
	<i>Output (Units)</i>	<i>Input (Direct hours)</i>	
1972	1,248	520	2.4 Units per Direct Hr.
1971	1,000	500	2.0 Units per Direct Hr.
Increase in Productivity			.4 Units per Direct Hr.
% of Increase in Productivity (.4 units ÷ 2.0 units) =			20%

Computation of Increased Productivity Savings

Weekly Labor Cost for FY 1972.....	\$5,200
% of Increase in Productivity.....	× 20%
Gross Weekly Savings from Increase in Productivity.....	\$1,040
Gross Annual Savings (\$1,040 × 52 weeks).....	\$54,080
Less: New Equipment Cost.....	- 10,000
Net Reportable Savings—FY 1972.....	\$44,080

APPENDIX E

MANAGEMENT REVIEWS

E-1. General. *a.* Management reviews are conducted to objectively examine, analyze, and appraise operating programs, functions, and activities performed to ascertain that each element is being carried out efficiently and effectively.

b. Management reviews will be coordinated by Comptrollers at all levels to insure adequate coverage and to preclude duplication or overlap by different review groups.

E-2. Guidance. Management reviews will include as a minimum:

a. Establishment of review schedules to assure that appropriate planning and coordination precedes initiation of management reviews.

b. An examination and analysis of major operating programs and functions to determine whether they are being performed efficiently and effectively.

c. An appraisal of available alternatives to determine whether the operating program or function being reviewed can be accomplished in a more cost-effective manner.

d. An assessment of management review findings and recommendations to determine appropriate corrective action.

e. Prompt dissemination of findings and recommendations to the level capable of initiating timely corrective actions.

f. Controls to insure satisfactory implementation of all approved corrective actions.

g. A screening, at least annually, of all management review findings and recommendations to identify areas (trends or symptoms) which should be recommended as Priority Improvement Projects.

E-3. Types of management reviews. The following are types of management reviews which should be considered when planning and coordinating the command's management review effort.

a. Management Analysis/Surveys—the evaluation and design of management policies and sys-

tems, organization structure, procedures and methods. The methodology for management surveys is described in DA Pam 5-4-1, Management Survey Handbook.

b. DIMES Reviews—periodic evaluations of the DIMES effort.

c. Value Engineering Reviews—periodic inspections of the Value Engineering effort.

d. Internal Reviews/Audits—the examination or audit of known or anticipated problem areas to check associated internal controls; to locate causes or sources of troubles, difficulties, or deficiencies; and to recommend actions for their solution, elimination, or correction.

e. Inspector General Inspections—conducted by Inspectors General in accordance with AR 20-1.

f. US Army Audit Agency audits—an independent, objective, and constructive evaluation of the Army's management and control systems and procedures, and their implementation.

g. Command/Program Analyses—periodic studies, conducted by the Office, Comptroller of the Army, of major commands and programs, and studies conducted by all levels of command.

h. Regional Analyses—periodic studies, conducted by the Office, Comptroller of the Army, of regions containing a high density of military organizations.

i. Office of Management and Budget Surveys—studies conducted by the Office of Management and Budget with Department of the Army personnel to examine and evaluate the management capabilities of the organizations being surveyed.

j. Government-Wide Studies—periodic studies conducted by the Office of Management and Budget of Government-wide operations which require Department of the Army participation.

k. Manpower Surveys—periodic studies conducted to determine the minimum manpower required to accomplish assigned functions of units.

APPENDIX F

PRIORITY IMPROVEMENT PROJECTS

F-1. General. *a. Priority improvement projects* are specifically designated areas requiring top management attention each fiscal year. The areas selected should provide commanders with a high payoff in relation to the resources expended. Typical priority improvement areas are supply, maintenance, medical, financial and administrative, automatic data processing and management of reports where the payoff would represent increased productivity, more timely service, better quality, or reduced costs.

b. There are two types of priority improvement projects.

(1) Department of the Army Priority Improvement Projects, and;

(2) Command Priority Improvement Projects.

F-2. Procedures. *a. Selection.*

(1) *Department of the Army Priority Improvement Projects.* Prior to the beginning of each fiscal year each DA staff element will submit recommended priority improvement projects to the Office, Comptroller of the Army. The Comptroller of the Army will consolidate the list and forward it to the Secretary of the Army. The Secretary of the Army selects a limited number of projects from the recommended list as DA Priority Improvement Projects. The final selections will be announced by the Comptroller of the Army. Those DA Staff elements and major commands involved will be notified and will report results on a quarterly basis to HQDA. The reporting instructions for DA Priority Improvement Projects are contained in appendix C.

(2) *Command priority improvement projects.* Prior to the beginning of each fiscal year, major activity directors and the comptroller will review the findings and recommendations of the command's management review effort. The comptroller will submit a list of recommended projects to the commander for his selection. The projects selected by major commands and installations are not required to be reported to HQDA.

b. Selection criteria. The following criteria will be used for selecting Priority Improvement Projects:

(1) The need for improving the operating program or function in terms of accomplishing the mission.

(2) The cost effectiveness of an improvement in terms of potential benefits to be obtained.

(3) The availability of resources needed for the proposed improvement in terms of command or activity-wide priorities.

(4) The opportunity presented by an improvement for new initiatives that will encourage the better use of resources.

c. Objective and performance indicators. Management improvement objectives and performance indicators will be established, and quantified where appropriate, for each priority improvement project. Performance indicators must permit continuous and total assessment of progress in the attainment of each improvement objective and should reflect—

(1) Increases in productivity;

(2) More timely service rendered;

(3) Better quality of the output; or,

(4) Reduced costs for the operating program.

d. Implementation.

(1) Department of the Army Priority Improvement Projects will be implemented through the appropriate DA Staff element and the major commands.

(2) Command Priority Improvement Projects will be implemented through the appropriate major activity director with the assistance of the comptroller's management teams.

e. Periodic evaluation. Actual performance achieved will be compared against each performance indicator on a quarterly basis and further necessary corrective action initiated through the appropriate DA Staff element, major command or activity director. Comparisons will reflect a balanced assessment of productivity, service, quality, and cost indicators to assure that corrective actions foster the total improvement desired for each improvement objective.

APPENDIX G

DEFENSE INTEGRATED MANAGEMENT ENGINEERING SYSTEM (DIMES)

G-1. General. DIMES is the principal work measurement system used in the Department of the Army. The data derived from DIMES establishes a common data base to meet management objectives. It relies on Industrial Engineering techniques and management engineering principles to improve performance and productivity. It relates manpower workload and costs into a total package for management planning and decision making. Major commands, installations, agencies, and activities, will apply DIMES wherever economically advantageous.

G-2. Objective. The overall objective of DIMES is to—

a. Improve labor productivity through the application of Industrial Engineering techniques and management engineering principles.

b. Provide a common base of Work Measurement and productivity data which can be used in the development of methods improvement, budget estimates, manpower requirements, work planning and control, productivity performance indices relating outputs to inputs, and other management purposes.

G-3. DIMES Procedures. *a.* Major commands, installations, agencies, and activities will establish uniform DIMES procedures which include, as a minimum, provisions for:

(1) Development and optimum utilization of DIMES feasibility studies. Feasibility studies (see app B) will be documented, updated yearly, and available for review.

(2) Development of a logical mix (see app B) of engineered performance standards, non-engineered standards, and man-hour allowances for use in scheduling work assignments, evaluating actual performance against planned performance, and in determining standard and unit costs.

(3) Use of appropriate Industrial Engineering techniques in Methods Improvement Studies, prior to the development of engineered and non-engineered standards.

(4) Maximum utilization of standard time data in the development of standards.

(5) Periodic review and update of methods and standards to insure validity, with priority of review to those methods and standards which account for the majority of the earned hours or those used for highly repetitive workloads. All standards and methods will be reviewed and updated *at least every 2 years* to insure their continued validity.

(6) Controlling and evaluating indirect labor.

(7) Summarizing DIMES data for use in the development of financial and manpower requirements and in the balancing of workload and manpower resources at appropriate management levels.

(8) Conducting periodic field reviews to insure that DIMES is effectively implemented at all levels of responsibility.

(9) Funding of DIMES staffing, training and reviews.

b. Performance standards will be developed at the work center level. The standard will be used for work planning, scheduling and control and serve as a basis for performance evaluation by the work center supervisor.

c. Performance goals for all work covered by DIMES is 100 percent efficiency against the established standard. However, for evaluation, a range of 80 percent—120 percent should be established for performance efficiency. This policy does not preclude the establishment of a closer tolerance for engineered standards as circumstances warrant.

d. All DIMES feasibility and method studies and performance standards will be documented and maintained by the office of record. The supporting documentation will be signed and dated by responsible supervisors. If responsible management personnel do not concur with the study recommendations, the nonconcurrence will be explained, signed, and dated. The above studies, with supporting documents, will be maintained and made available for reference and audit. Support-

ing documentation will include, but not be limited to, the items listed below:

(1) *Engineered standards.*

(a) Time study rating sheets and all computations, including allowances and adjustments.

(b) Flow charts and methods description (old and improved method).

(c) Sketches of layouts, tools, and equipment where they influence methods and standards.

(d) Standard time data sheets.

(e) Pace-rated work sampling sheets.

(f) Standards sheet(s), giving the name and adequate description of the standard, work unit, point of count, production rate per hour, the standard in decimal hours, date set and revised, organization and cost/work center applied to, and authorizations/nonconcurrences by competent authority with dates of action.

(2) *Non-engineered standards.*

(a) Non-engineered standards development, description of work performed, source of the data, standard establishment sheet, standard time in decimal hours, work unit, point of count, production rate per hour, and dates of establishment and revisions.

(b) Technical estimate standards showing the derivation of all time values established and all computations, as well as the name of participants in the development of the technical estimate.

(3) *Man-hour allowances.*

(a) Man-hour data in the form of workload and man-hours worked justifying man-hour allowances.

(b) Copies of letters, memorandums, or other documentation for positions authorized by management.

(c) Staffing guides must be referenced.

e. The Earned Hour concept, a measure of efficiency, will be developed and maintained without regard to work type and mix of work accomplished.

f. Performance efficiency, determined by a comparison of "earned hours" and "actual hours," is a primary indicator of labor performance. A level or rate of performance efficiency should be determined for all tasks, jobs, functions and activities which are accomplished under engineered and non-engineered standards. A low rate or changes in the level of performance efficiency can be used to highlight areas requiring management attention.

g. All direct and indirect labor expended (whether measured or unmeasured) will be analyzed and used in determining the overall performance efficiency of an activity and organizational elements thereof. The level of past performance efficiency, modified to incorporate estimated future improvements in efficiency, is one element that should be used in forecasting future requirements for manpower and dollars.

h. Several of the basic Industrial Engineering techniques to be used in methods studies are listed below:

(1) *The Work Distribution Chart (DD Form 1724).* A device for analyzing division of labor which gives the overall view of *what* is being done and by *whom*, so that obsolete or duplicate operations can be changed or improved. The Task List (DA Form 3819) and the Activity List (DA Form 3818) are used with the Work Distribution Chart. The use of the three forms tie together workload and manpower.

(2) *The Flow Process Chart (DD Form 1723).* A chart which presents a picture of what happens in a single work procedure. The flow process chart records the steps of a single process, *either* the actions of one man during an operation *or* the events that occur to one item of material as it is processed. The flow process chart can help identify steps in a procedure which can be eliminated, combined or changed by bringing to light unnecessary delays, operations and transportation, as well as steps that should be assigned to another person.

(3) *The Procedure Chart (DA Form 3820).* A special form of the flow process chart used mainly to chart paper work activities, although it could be employed for certain maintenance and supply situations. The procedure chart shows both actions taken by people and the actions performed on the item charted.

(4) *Multiactivity analysis.* In many operations the worker is involved with machine(s) or other workers which may control all or part of the work cycle. In these cases, slightly different forms of flow process charts can be used to record the activities of the men and the machine(s) or a group of workers to show the interaction of such activities. One such chart is the Man and Machine Chart. This records the operation of a machine(s) in relation to the operator's work. It is a graphic

means of indicating the work done by the operator and the machine(s) during the work cycle and shows the relationship between the man and the machine.

(5) *Motion Economy*. Stresses the elimination of unnecessary actions by the workers. Motion economy establishes the best work method for each worker within a particular work center. However, it is not a device for speeding up or exacting extra effort. Motion economy is especially helpful in operations such as assembling, sorting, repairing and clerical procedures.

(6) *Layout Chart* (DA Form 3825). This is a plan of the physical facilities of an office, plant, shop or warehouse whose purpose is to economize on time, distance and space in order to provide better working conditions for the workers. Layout charting shows the functional arrangement of equipment in a work process. It helps determine and develop a proper relationship between buildings, grounds, equipment and operations. Layout charting can cover any type of activity—from rearranging an assembly position or office to planning a new major facility.

G-4. DIMES guidance. *a.* DIMES will be implemented, operated and maintained in accordance with objectives and policies contained in this regulation.

b. The following is provided as guidance for planning and determining the number of DIMES analysts required (excluding supervision and clerical support) to implement and maintain a DIMES effort:

(1) For areas susceptible to engineered standards, a ratio of one DIMES analyst to each 100 individuals whose work is to be covered by the standards, will be used.

(2) For areas susceptible to other non-engineered standards, i.e., statistical standards or technical estimates, a ratio of one DIMES analyst to each 400 individuals whose work is to be covered by the standards will be used.

(3) DIMES orientation training will be given to top and middle management and appropriate staff personnel. First-line supervisors will receive a DIMES orientation as part of their MAP-TOE or MAP-TDA training.

G-5. Army facilities engineering. The work management system, an integrated system of planning, estimating, scheduling, control, and evaluation of real property maintenance, incorporates the use of engineered performance standards (EPS) that are designed for maintenance type work and meet the intent of the objectives and policies outlined above. AR 420-17 (Repairs and Utilities Work Management), DA Pam 420-4 (Repairs and Utilities Work Sampling), DA Pam 420-5 (Facilities Engineering Work Performance Standards for Post Engineering), DA Pam 420-6 (Repairs and Utilities, The Work Management System), and Army Technical Bulletins 420-1 through 420-30 implement the Army Facilities Engineering Work Measurement System.

APPENDIX H

VALUE ENGINEERING

H-1. General. Value Engineering is a functionally oriented management tool designed to be used by all personnel to effect economy and promote cost effectiveness. This discipline was originally conceived as a technique for achieving better value in hardware items. Due to the success of VE in the hardware area, this technique has been expanded to systems, equipment, facilities, procedures, methods, software, and supplies. It can be applied by the individual, the team or task force approach.

H-2. Purpose. The purpose of Value Engineering (VE) is to direct an organized effort to analyze the function of Army systems, operations, equipment, facilities, procedures, methods and supplies in order to achieve the required function at the lowest total cost of effective development, production, and/or ownership consistent with requirements for performance, reliability, quality, maintainability and safety.

H-3. Objectives. The objectives of Value Engineering are—

a. To reduce the overall cost of Army operations, supplies and services by:

(1) Eliminating or modifying unessential characteristics and functions.

(2) Extending financial, manpower and materiel resources.

(3) Fostering timely adoption of economically advantageous technical change.

(4) Simplifying Army materiel, with consequent general improvements in operational availability and logistic support.

(5) Instilling cost consciousness in Army personnel.

b. To obtain total value improvement in research, development, test and evaluation, production, procurement, quality assurance, administration, construction, supply, transportation, maintenance, storage and disposition of Army materiel.

H-4. Procedures. The following procedures should be followed to effectively implement or sustain value engineering:

a. Allocate VE goals down to operating levels (project and line management organizations).

b. Establish and maintain an active and aggressive in-house and contractual VE effort and assign such resources to the program as may be necessary to achieve assigned goals and objectives.

c. Conduct quarterly management reviews of VE activity in order to place increased emphasis and priority on in-house value engineering proposals (VEP's) and contractor-originated value engineering change proposals (VECP's) which have cost reduction potential. This will include as a minimum—

(1) In-house VE results.

(2) Results from use of VE contract provisions.

(3) Processing time for evaluation and action on VEPs and VECPs which require government approval.

(4) The number and status of formal in-house VE projects at the operating level.

d. Identify and conduct timely formal VE projects on systems, equipment, facilities, procedures and supplies with significant potential for cost reduction and increased military worth.

e. Monitor contractor VE program requirement clause performance to insure contract compliance and determine progress of resultant savings versus program cost.

f. Continually encourage contractors to submit technically sound VECPs. Responsibility for major portions of this program shall be assigned to line and project managers, program directors and contracting officers.

g. Insure that managers, engineers, technicians, buyers, auditors, logisticians, and contracting officers and negotiators understand Army VE objectives, precepts, policies, goals, methods and contract incentive, and program clause provisions. VE courses listed in the Defense Management Education and Training Catalog 5010.16-C or specialized VE courses will be utilized as appropriate for military and civilian personnel engaged in VE activities.

h. Sponsor projects to develop new and improved value engineering techniques and communicate such techniques to HQDA as idea inter-

change. See appendix J. Any such projects qualifying under the definition of research or technical development will be appropriately identified in the Army RDTE programs, as prescribed in AR 70-45.

H-5. Guidance. *a.* VE will be given full recognition and primary emphasis by commanders, technical directors, program and project managers, and chiefs of operating agencies having responsibility for research, development, test and evaluation, procurement and production, operations and services, maintenance, supply, transportation, construction, storage and final disposition of Army materiel and facilities.

b. VE provisions will be included in all contracts for supplies, services, facilities, and materiel as provided in Section I, Part 17, ASPR. To maximize benefits, the objective evaluation and processing of:

(1) VEPs and VECPs affecting configuration identification documentation will be expedited in accordance with AR 70-37, Configuration Management.

(2) VEPs and VECPs not affecting configuration identification documentation will be expedited in accordance with command/agency requirements. In either instance, the originator of a proposal will be notified within 45 days of a proposal receipt date, of acceptance or rejection, or a target date for acceptance or rejection when additional time is required to fully evaluate the proposal. When a VEP or VECP affects a federal or military specification, and the action to change the specification cannot otherwise be affected, Army commands and agencies will notify the specification preparing activity by use of DD Form 1426, as outlined in DOD Manual 4120.3-M.

c. Materiel and items of equipment in logistics support status will undergo VE review on a selective basis, based on a high rate of return potential. When redesign of an end item or component is initiated, VE techniques will be used in preparing the redesign. VE consideration will be integrated with product improvement proposals submitted to HQDA for approval (AR 700-35).

d. A plan to conduct VE studies on a systematic basis will be established for each new major program. The plan will be integrated with requests for proposals to enter the validation or full scale development phases for items under development.

VE recommendations that exceed the authority of the program manager will be considered during the Army Systems Acquisition Review Council/In Process Review (AR 70-1). Approved VE changes will be included in the technical data package of the item/system and used with future contracts and other materiel to which such changes may apply. Approved VE changes to items/systems subsequent to type classification will be reflected in the technical procurement data to be used for future procurement of those or like items/systems. Such VE changes will be screened to determine whether type reclassification is required under the provisions of AR 71-6. When VE changes are not approved, the project files will be documented to indicate that consideration was given to the proposed design change and reasons why the design improvements could not be used.

H-6. Value engineering budget guidance and procedures. *a. General.* While the acceptance and implementation of VEPs and VECPs produces lower overall costs to the government, the time period or fiscal account in which savings accrue frequently will not coincide with the time period or fiscal account in which the cost of DOD investment or share payments to a contractor occur. In recognition of the overall cost benefits to be derived, it is the policy of the Army to include in all budget estimates and operating budgets such amounts as are necessary to pay for VEPs, VECPs, testing and other costs, arising from value engineering.

b. Funding principles.

(1) Except as specified below, the appropriation financing the prime benefiting program normally will bear the costs and share in the benefits arising from VE actions.

(2) VE (internal or contractor) performed during design and development normally will be funded from the RDTE appropriation.

(3) VE performed pursuant to either a program requirements clause or an incentive clause on major end items in production or in the operational inventory such as weapons, military equipment and components as well as minor items will be funded as follows:

(*a*) If the VE effort requires redesign entailing related development, test, and evaluation work which increases the then current perform-

ance envelope, the VE effort will be funded from the RDTE appropriation.

(b) VE actions, other than those included in (a) above, normally will be financed from the account financing the prime benefiting program.

(4) VE performed by a contractor pursuant to a VE program requirements clause will be financed as a separate line item in the contract from the same appropriation cited in the contract.

H-7. Budget procedures. *a. Sharing on VE incentive and program requirement clauses.*

(1) *Instant contract.*

(a) *Description of method.* The contractor shares in a reduction in the cost of performing the instant contract as a result of a VE change proposed by the contractor and accepted by the Government. The sharing is limited to the instant contract and the quantity of the item procured under the contract. The contractor is compensated by limiting the reduction in the instant contract price to that share of the savings accruing to the contractor.

(b) *Financing.* The appropriation cited in the instant contract will finance the contractor's share of the savings, since this share will be included simply as a part of the payment to the contractor at the reduced contract price. If the instant contract includes more than one fund citation, the savings will be prorated in the same proportion as the quantity procured for the different appropriations. If the instant contract includes a fund citation, which results from a consolidated order from two or more customers, the savings will be passed on in the same proportion as the quantities procured.

(2) *Lump sum payments on future acquisition savings.*

(a) *Description of method.* In addition to sharing in savings for items procured under the instant contract as (1)(a) above, the contractor may also be paid a share of the anticipated savings resulting from the authorized use of an accepted VECP on quantities of the same item which are procured subsequently by the same procuring activity, or as otherwise indicated. The contractor's share per unit will be determined the same as for items procured under the instant contract. This share per unit will be extended to the estimated number of units to be procured subsequently. The provision in the instant contract which authorizes

the lump sum payment on future acquisition savings will specify the estimated number of units to be procured subsequently. The contract will be compensated by means of a lump sum, one-time payment under the instant contract.

(b) *Financing.* The contractor's share of the savings may be charged initially to the appropriation cited in the instant contract and, where determined appropriate by the Army, transferred to the applicable account in accordance with the funding principles in paragraph H-6b. The acceptance of a VECP is subject to prior determination that funds are available in the account that will ultimately bear the charge.

(3) *Royalty payments on future acquisition savings.*

(a) *Description of method.* In addition to sharing the savings under the instant contract, but always in lieu of any sharing by lump sum payments, an agreement may be made in the instant contract to pay the contractor a "royalty" based on actual future procurements of the same item which incorporate the instant VE change and which are made by the same procuring activity within a stated time period. Agreement in the instant contract to make royalty payments based on actual future procurement does not constitute a commitment or obligation of funds. Also, the agreement to pay royalties does not extend to procurements of the item by any other DOD component, even though the instant VE change is incorporated in such procurements. The contractor's share per unit is determined generally in the same manner as for lump sum payments. The contractor will be paid royalty payments in reasonable increments of not more than 6 months based on the actual quantities purchased. Although the royalty payments will be made pursuant to the contract under which the proposal was accepted, they shall be made from the appropriation supporting the succeeding contract.

(b) *Financing.* The contractor's share of savings under the royalty method will be financed by the appropriation account cited in the subsequent procurement or construction contract irrespective of whether that contract is with the instant contractor. Where subsequent procurement is made for another DOD component under a Military Interdepartmental Purchase Request (MIPR), funds cited for the procurement or con-

struction will include amounts required for royalty payments. Where responsibility for procurement or construction is transferred to another DOD component under logistical transfer procedures, the losing component will transfer responsibility for making royalty payments to the gaining component and that component will accept such responsibility.

(4) *Payments for collateral savings.*

(a) *Description of method.* As a result of acceptance of a VE change under the instant contract, the contractor may be compensated for a share in collateral savings expected to be realized from the change, such as reduced Government-furnished property requirements, reduced cost of operating the contract item, or reduced logistic support costs. Compensation will always be a one-time, lump sum payment under the instant contract. Sharing of collateral savings will not extend to any subsequent purchases of the same items by any other DOD component.

(b) *Financing.* The lump sum payment for collateral savings may be charged initially to the appropriation cited in the instant contract and transferred, as determined by the Army procuring activity, to the applicable account in accordance with the funding principles in paragraph H-6b. The acceptance of a VEC P is subject to prior determination that funds are available in the account that will ultimately bear the charge.

b. Value engineering program requirements clause. This clause requires a stated level of VE effort by the contractor and is provided as a separate line item. Funding will be in accordance with the funding principles set forth in paragraph H-6b.

c. Testing. A determination that a VEP or a VEC P is acceptable and does not adversely affect the function of an item can be made only after appropriate tests. Tests are generally prerequisite to acceptance of proposals by contractors. Costs for testing will be included in the budget estimates and operating programs of the operation and maintenance appropriation or other applicable appropriation.

d. Unsolicited proposals. The Armed Services Procurement Regulation, Section I, Part 17, permits consideration by DOD components of unsolicited proposals submitted by sources other than those holding current defense contracts. When the Army accepts such an unsolicited proposal which is expected to result in a reduction in the cost of supplies or services to be procured or performed under contract or to be produced or furnished in-house in an Army facility, the Army activity will provide in the agreement accepting such proposal for a payment either as a lump sum or as a royalty chargeable in accordance with the foregoing funding principles on a case-by-case basis.

APPENDIX I

MANAGEMENT IMPROVEMENT INCENTIVES

I-1. Recognition. *a.* Each deserving individual participating in the Department of the Army Management Review and Improvement Program should receive timely recognition commensurate with his or her contribution. Recognizing such efforts appropriately and promptly affords personal satisfaction to contributors, attests to management's sincere desire to improve operations, and provides incentive for participation in the program.

b. The following existing methods to recognize individuals should be considered in the formulation of the command's management review and improvement program:

(1) *Civilian and military personnel.* Incentive and cash awards program (AR 672-20).

(2) *Civilian personnel.*

(a) Special act or service awards (AR 672-20).

(b) Those provisions of the Federal Salary Reform Act of 1962 which permit the granting of within grade quality increases for sustained high quality performance when such performance satisfies the criteria contained in CPR 990-2.

(3) *Military personnel:* The provisions of AR 672-5-1.

I-2. Management improvement awards. *a.* In addition to granting local management improvement awards, major commands and installations are encouraged to nominate individuals, units, or groups for the Presidential Management Improvement Award, or the Department of the Army Zero Defects Award. Nominations for these awards will be submitted on DA Form 4134 (Recommendations for Management Improvement Award). See appendix C for specific instructions.

b. Presidential management improvement award. This award represents the pinnacle of management improvement recognition afforded by the Federal Government. The competition is extremely keen throughout the entire Federal sector. Heads of Army staff agencies and major commanders are invited to submit nominations for this award. The nominations will be limited to individuals, small working groups or teams, and

organizational units which have done an exceptional job of reducing costs or improving operating effectiveness. The COA will convene special committees composed of representatives from the DA Staff to screen and select a number of nominations that are most deserving of Presidential recognition. Those nominations selected will be recommended by the Department of the Army to OSD for the annual Presidential Management Improvement Award. All remaining nominations will be considered by the committees for a DA Management Improvement Program Award for Exceptional Performance or for a Comptroller of the Army letter of appreciation.

c. Department of the Army Zero Defects Award. Zero Defects is a generic term applied to the performance of work at the level of the standards set by the commander or established by authorized standards and specifications. In many instances these standards include the use of tolerance limits. Work coming within these limits is considered to be Zero Defects work. The Zero Defects concept includes the achievement of Zero Defects-level work by the individual the first time the work is performed rather than through rework or error correction effort.

(1) DA Zero Defects Awards are established as the highest awards in the Department of the Army for Zero Defects achievements and performance. The awards are intended to recognize only those achievements and accomplishments that are truly outstanding. The awards shall consist of the following types: individual and group awards, and organizational awards.

(2) DA Zero Defects Awards are intended to supplement but not replace individual DA Staff agency and major command ZD awards.

(3) All DA military and civilian personnel are eligible for consideration for DA Zero Defects Awards.

(4) Individual and group awards shall consist of a DA Zero Defects Award Certificate and Plaque and shall be presented to individuals and/or groups (persons in the same work unit) who meet the following criteria:

APPENDIX J

IDEA INTERCHANGE

J-1. General. An effective system for interchanging ideas is one of the most important elements of the Department of the Army Management Review and Improvement Program and is essential to insure that maximum benefit is received from each management improvement action. Major commands will establish an internal system for surfacing and evaluating ideas and circulating those which have potential for application within their organization. Ideas which have potential for application throughout the Army, Department of Defense, or the Federal Government will be submitted to HQDA on DA Form 4135 (Management Improvement Action). See appendix C for specific instructions.

J-2. Sources. Ideas originate at all work and supervisory levels and can come from a variety of sources such as students who attended MAP-TOE or MAP-TDA training, value engineering studies, DIMES reviews, work simplification studies, Army suggestion plan and validated management improvement actions. Special emphasis will be placed on the dissemination of information concerning quantitative improvement techniques such as value analysis, economic analysis, and cost effectiveness analysis.

APPENDIX K

REPORTS MANAGEMENT

K-1. General. The Army Reports Control System is the major tool for reports and information management. Reports control policies and procedures are based on the fact that information generation and transmission, whether oral or written, manual or electronic, is a major user of Army resources. All decisions to require or continue reporting must have a cost effective basis and meet stern tests of essentiality.

K-2. Guidance. The policies, procedures, and responsibilities for the reports management function are specifically described in the following sources:

a. AR 335-15, Reports Control System, which establishes policy, prescribes rules, and defines responsibilities for a worldwide reports control system.

b. AR 335-20, Reports Control at Tactical Units, which extends the system to units at the division and separate brigade level.

c. AR 335-30, Periodic Review of Reports, which requires a continuing periodic review of all recurring controlled reports.

K-3. Procedures. *a.* All elements of the Department of the Army Management Review and Improvement Program interact with each other. Reports management is a tool for these elements; the instrument for implementing improvements and a management tool itself. The Army reports control system is administered by Reports Control Officers (RCO) with jurisdiction in assigned areas. As part of the responsibility assigned to RCO's, central records are maintained of all reports, their costs and workload, and data elements involved.

b. Any action under DAMRIP which involves information requirements must be coordinated with the RCO. This coordination is for assistance in identifying current data availability and potential reporting changes.

c. Any action under the reports management program which could impact upon organization, functions, manpower utilization or productivity must be coordinated by the RCO with the comptroller.

d. Information concerning the reports management effort will be reported on DA Form 4133 (Management Review and Improvement Information). See appendix C for specific instructions.

APPENDIX L

MANAGEMENT TRAINING

L-1. General. The Army has established two separate, but similar management practices training courses—Management Practices in TOE Units (MAP-TOE) and Management Practices in TDA Units (MAP-TDA). MAP-TOE is designed for first-line soldiers managers in TOE Units while MAP-TDA is oriented toward both military and civilian first-line supervisors in TDA organization. Both courses have been designed to be conducted at installation level so the individual can actually make improvements in his own work center. In addition to the basic 24-hour course for first-line managers, both MAP-TOE and MAP-TDA include orientation and appreciation courses for top and middle management. The program of instruction for each course is contained in DA Pam 5-2-2. The course may be modified to fulfill the particular needs of the major command or installation.

L-2. Course length. The basic MAP-TOE and MAP-TDA courses consist of 24 hours of classroom instruction and 96 hours of on the job training. Both courses will be scheduled over a 3-week period. Half-day sessions are used during the first week. These sessions allow the instructor to issue homework assignments pertaining to the students' work center while not completely divorcing the student from his primary duty. During the second week, the student continues to observe his own work center with the idea of making improvements. He will also work toward completing his Managers/Supervisors Handbook. The instructor will be available for consultation and will visit each student's work center and provide further assistance. Toward the end of the third week, the instructor will conduct a seminar type discussion (results session) to exchange ideas and to demonstrate ways and means to further improve operations. The instructor will inspect each student's handbook to determine whether the student has made sufficient effort to successfully complete the course.

L-3. Class structure and size. The ideal class is a grouping of 15-20 individuals with common interests or from like functional areas to facilitate classroom instruction and discussion. Smaller

groups, as dictated by requirements, may be convened for orientation, appreciation or refresher sessions.

L-4. Refresher training. Personnel trained in the basic MAP-TOE/MAP-TDA course should be encouraged to attend a 4-hour (appreciation course) refresher course within 3 years after completion of the basic course.

L-5. Graduation certification. Each first-line supervisor that participates in management practices training (MAP-TOE/MAP-TDA) is required to prepare a supervisor's handbook, based on his own work center, in order to successfully complete the course. The degree of completeness of the supervisor's handbook and the amount of effort by the student will be the criteria for successful completion. The final judgment as to who graduates is left to the discretion of the instructor. A certificate of training will be issued upon successful completion. Names of personnel successfully completing MAP-TOE/MAP-TDA training should be provided to personnel officers so appropriate entries can be made on DA Forms 20, 66, and 2302. Enlisted supervisors will earn three promotion credits for successful completion of the course. Records of personnel trained should be properly maintained to assure the proper administration of the basic program and the refresher course.

L-6. Instructors. Installations conducting MAP-TOE and MAP-TDA should use an appropriate mix of military and civilian instructors depending on the composition of potential students. The same instructors should be used to teach both courses where feasible.

L-7. Management analyst training. Professional development and cross-training of management and industrial engineering staff personnel is necessary for the successful implementation of the command's management review and improvement program. Selection of individual courses is dependent on the particular field of specialization or management level of the individual concerned. Listed below are titles of appropriate management

courses. The course description and prerequisites are found in DOD Defense Management Education and Training Catalog, DOD 5010.16a.

- a. ADP Appreciation (JT) 73-7F.
- b. DIMES Analyst Basic Course (JT) 7A-F19.
- c. Methods—Time Measurement (JT) 7A-F24.
- d. Organization Planning (JT) 7A-F8.
- e. Seminar for Chiefs of Management Engineering Functions (JT) 7AF6.
- f. Standard Time Data (JT) 7A-F17.
- g. Systems and Procedures Analysis (JT) 7A-F18.
- h. Work Methods and Standards Appreciation (JT) 7A-F20.

i. Work Planning and Control Systems (JT) 7A-F21.

j. Management Statistics (JT) 7E-F15.

k. Seminar for Middle Managers (JT) 7A-F5.

l. Network Based Management Techniques (JT) 7A-F13.

m. Contractual Aspects of Value Engineering 560 (JT).

n. Product Assurance Appreciation (JT) 8D-F28.

o. Principles and Application of Value Engineering (JT) 8D-F27.

p. Military Comptrollership Course (7D-2800) (see DA Pam 350-10).

APPENDIX M

PRODUCTIVITY MEASUREMENT

M-1. General. Productivity measurement is a means of relating output (workload) to resource inputs (men, supplies, equipment, facilities, contract services and dollars). The most publicized measurement is the productivity of labor. However productivity measurement can be applied to any resource or to total dollars which is a common denominator of all resources (productivity of capital). The purpose is to develop a simple indicator of productivity for an organization, a function, or a process which can be used for management of resources. It provides the manager an additional dimension to plan, direct, control, and evaluate mission accomplishment.

M-2. Objectives and management use. Productivity measures and related analyses provide a framework for and complement the use and evaluation of other management tools such as work measurement (DIMEŠ), value engineering, work simplification, quality control, and job enrichment. Within this framework, managers can accomplish the following:

a. Review and examine trends in order to isolate and correct problems which are blocking productive results (e.g., under utilization of capacity, improper distribution of work, need for more capacity).

b. Validate the quantitative output measure (unit of work) which accurately represents the work being done in the activity, function or organization.

c. Forecast the need and obtain the correct level of resources to accomplish mission tasks that may be expressed in terms of output desired.

d. Develop statistical standards, factors, and relationships for use in setting goals and for monitoring the use of resources during the execution of mission tasks.

M-3. Techniques. *a. Measurement and trend analysis.*

(1) Trend analysis is the comparison of activity within an organization, function or work center over a series of time periods (year by year, month by month). The purpose is to measure the difference in level of activity between time periods

in order to isolate undesirable changes. Once these undesirable changes are identified, further analysis can be made by managers to determine the cause of the undesirable change, and the actions required to prevent its recurrence. A productivity index is a consistent and comparable number that can be used for trend analyses to measure efficiency from period to period. An index number is constructed by relating data for a base year with data for all other periods. The Federal Government's base year is FY 1967. The base year chosen for analysis should be representative of "normal" or "standard" activity. Steps in computing the index are:

(a) *Compute weighting factor.* Base-year man-years (or man-hours) divided by the base-year output (performance factor).

(b) *Compute weighted output.* Fiscal year output (performance factor) times weighting factor in M-1, above. This step translates actual outputs into man-years at the base year rate for comparison to actual man-years used. It is evident why the base year data should be a "normal" or "standard."

(c) *Compute productivity index.* Fiscal year weighted output (translated to man-years) divided by fiscal year actual man-years.

(2) Table M-1 is an example computation for the Supply Management Operations activity for the entire Army for the years FY 1967 to 1971. Data was taken from the Army Automated Budget System. The output measure (Performance Factor) is Requisition Line Items Processed.

(3) Table M-1 shows an erratic trend in labor productivity. Very simply, the analysis shows that there may be problems in FY 68 and FY 71 if the base year is representative (i.e., it should, on the average, take 1.263 people to process one requisition line item). The objective for managers is to determine what caused the decrease in productivity and then take any actions needed to insure that it does not recur in FY 72 and future years. Some possible causes may be—

(a) Requisition line items processed may not represent accurately supply activity (invalid output measure).

(b) Manpower may not have been reduced (and rightfully so) when the workload temporarily dropped in FY 68 and FY 71.

(c) Workload may not have been predicted accurately in FY 68 and FY 71. (Underutilized capacity.)

(d) The base year may not be "normal." (Compare weighted factor with work measurement standard where available.)

(e) Management may be weak. (Lack of productivity goals and objectives, follow-up, shifting resources as mission changes.)

(f) The workload in FY 67, 69 and 70 may have been arbitrarily increased and/or the output may be of inferior quality. (Check quality control results where available.)

b. Output measure.

(1) Output measurement is an integral part of productivity analysis. Output measurement is the process of identifying and validating outputs (unit of work) of a process, function, or organization. The purpose is to enable managers to measure results of operations in specific, quantitative outputs that can be directly linked to planned objectives, missions, and to the level of resources needed, (men, supplies, equipment, services, funds). Outputs at installations that produce the DA end products must be logically summarized at successive echelons of command. Programs and program elements that are used at DA and DOD to decide overall Army objectives and resource requirements must have output measures that can be broken down readily to mission activity and output at installations.

(2) A valid output measure drives the use of resources. As the number of outputs change, there is a corresponding and proportionate change in resources needed. In other words, the rate of change in resources is a function of the number of outputs. The process of output validation identifies and makes explicit the relationship between the number of outputs and the number of resources required over the capacity range of the process, function or organization being analyzed. The Army Management Structure (AR 37-100-XX) prescribes Performance Factors for Army activities. These Performance Factors should be used as output measures in productivity measurement unless these factors cannot be validated.

(3) Many output measures are obvious, and require only common sense to validate. This is particularly true for industrial production processes. However, outputs of such mission operations as Unit Readiness Training may be less obvious. In these cases, analysis may aid common sense judgment in selecting an appropriate output measure by clarifying relationships through rigorous mathematical processes. Furthermore, analysis can serve to determine if output measures used at major commands and DA for activities which have been summarized are valid and/or alternatively, if such summarizations indeed are appropriate for decisionmaking purposes.

(4) Methods for validating output measures (performance factors) are prescribed in a DA program entitled Command Analysis of OMA Funding, more commonly referred to as the Maroun System. One basic method is statistical correlation/regression analysis. This method in its simplest form makes use of the same data used to construct indexes for trend analysis. Basically correlation/regression produces statistics which may indicate—

(a) If a dependency relationship exists between the output and the resource; and,

(b) How dependable/predictable is this relationship. This method also results in a straight line equation (estimating relationship) which can be used for gross predictions of resource levels under certain circumstances which will be discussed in the next section.

(5) To assure complete validation of the output measure, it should be analyzed against both labor (man-years, man-hours) and total cost. This is particularly important for processes in which labor is not the principal resource input (e.g., highly automated processes, aircraft operations). Analyzing total costs and resources independently assures balance, programs and can be used by managers in determining points at which changes in inputs of specific resources cease to be cost effective (marginal analysis).

c. Predicting budgets, number of people required and establishing criteria:

(1) Managers can use forecasting factors and estimating equations developed in the preceding analyses, can be used to assist in predicting budgets and number of people needed to support a planned

number of outputs (units or work) and for establishing criteria for controlling execution. For very broad estimates of manpower, the weighting factor can be used in conjunction with planned workload for a future period. For example, using the data developed in *a*(2) before, for a projected workload of 7,000 requisition line items for FY 75 the projected average manning level would be 8,841 man-years (700×1.273). The simple factor approach assumes no fixed/static costs and resources.

(2) The regression line formula developed in the output validation process includes the concept of static and variable resources and may be used by managers to predict required resources with slightly more accuracy.

(a) The example of Base Operations at Fort Campbell depicts the development of total cost and per unit cost curves that can be used to establish standards and to set goals and objectives (ranges) for control (fig. M-1).

1. The linear regression of historical cost and workload data was used to approximate the total cost function for the installation.

2. Per capita costs were computed by dividing total costs on the regression line by corresponding military man-years (MMY) at points along the line. A per capita curve was then plotted using MMY as the independent variable.

3. The minimum economic cost is that cost which does not change within the defined Workload Range with a change in MMY.

4. The Workload Range is depicted by the vertical dashed lines on the graphs. The per capital cost line is used to determine the lower limit of the range and the minimum economic cost level for the installations. This limit represents the least number of man-years that is economically feasible to support considering the unique cost structure of the post. It is a matter of judgment and is determined by choosing the highest acceptable cost per man. At Fort Campbell, the minimum workload was set at 16,000 MMY based upon a cost per man of \$1,162. This results in a minimum economic cost level of \$18,600,000, which is the point on the total cost line where the lower limit

line intersects. The minimum economic cost then is the statistically derived static cost plus the variable cost for the first 16,000 MMY. The upper limit of the range is the maximum number of soldiers that can be housed and trained based on the buildings and grounds at the post. For Fort Campbell, the upper limit is 35,000 MMY.

(b) The capacity range is based on the establishment of upper and lower limits on the organization's workload. The upper limit is usually based on physical constraints, i.e., troop housing availability, work space limitations, the lack of additional storage space. The lower limit is that point at which it is no longer economically feasible to operate the organization; i.e., the highest acceptable cost per unit of work.

(c) Managers can use capacity limits as decision points in that when the workload reaches either point, signalling the requirement for a decision whether to add or subtract physical plant/manpower/equipment.

(d) When using the above techniques, predictions are good only over the capacity range established. Beyond that range some management decision is required which will change the equation values and create a new set of curves.

(e) The previous example used in the prediction of total costs can also be used by managers to predict personnel requirements.

(3) The analyses just discussed can be used to set goals and objectives (ranges) for control and as a basis for exception reporting in order to reduce the volume of reported data.

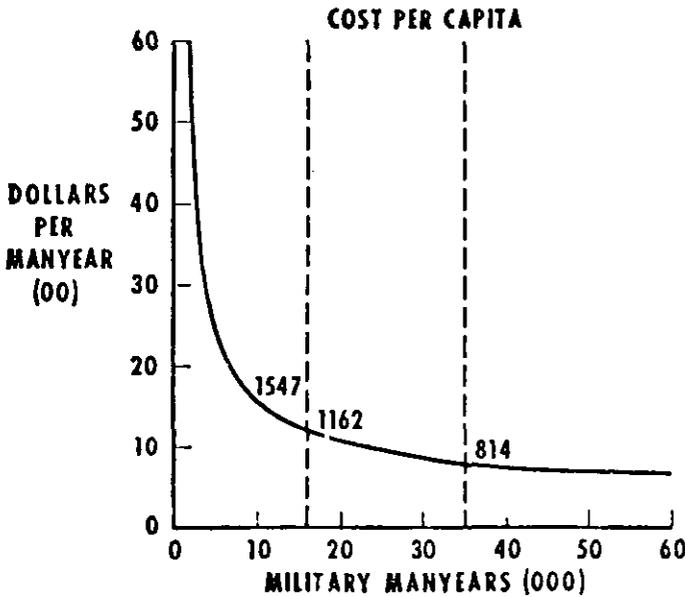
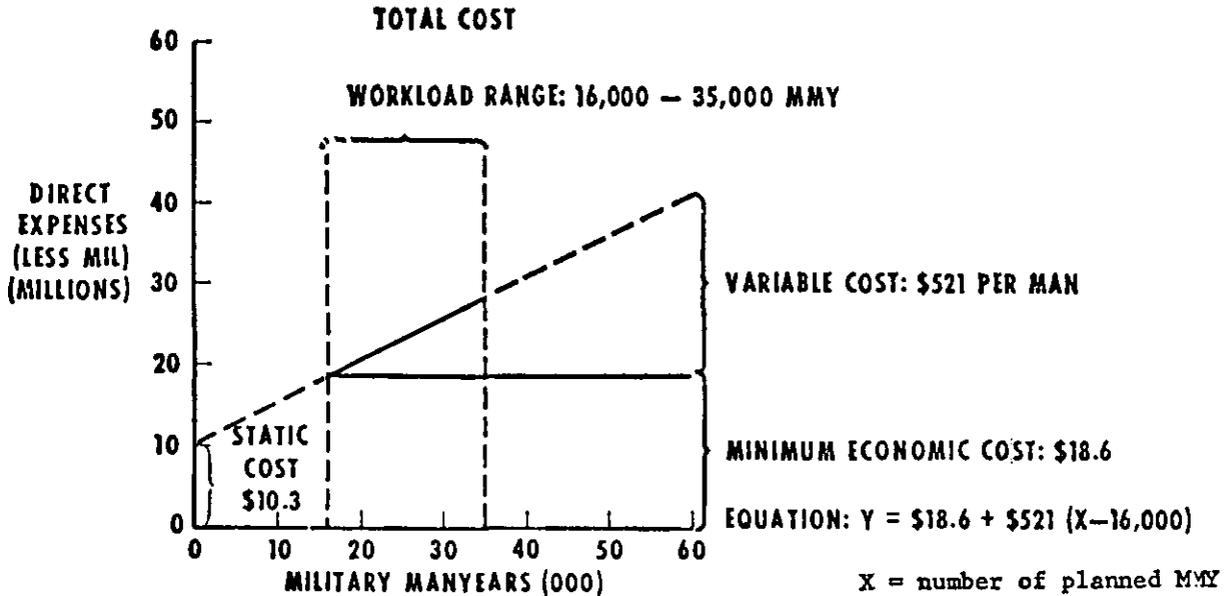
d. Development of standards and factors.

(1) The statistical standards developed in the above analyses can be used to check engineered standards (DIMES) or they can be used where no DIMES standards exist.

(2) The values developed in the equations can be used as cost factors for determining incremental cost changes to budgets and programs as a result of workload changes.

M-4. Validation of savings. Appendix D, Validation Procedures provides detailed instructions on the validation of savings obtained through the use of productivity measurement.

FT. CAMPBELL BASE OPERATIONS



COMPUTATIONS: (000)	
<u>35,000 MMY</u>	
VARIABLE 521 (35-16):	\$ 9.9
MINIMUM ECONOMIC:	<u>18.6</u>
UPPER LIMIT COST:	<u>\$28.5</u>
<u>16,000 MMY</u>	
VARIABLE:	-0-
MINIMUM ECONOMIC:	<u>\$18.6</u>
LOWER LIMIT COST:	<u>\$18.6</u>

BASED ON: (AVERAGE FOR FY 65 THROUGH FY 70)
 WORKLOAD RANGE: 16,000-35,000 MMY
 WORKFORCE MIX: TOTAL: 3084; CIV: 1834; MMY/TOT: 7; MMY/CIV: 12; CIV-59%
 WORKLOAD MIX: GARRISON: 1633; OPERATING FORCES: 11,388; TRAINEES: 6264;
 OTHER TENANTS: 654; CLASS I: 1876; TOTAL: 21,815

Figure M-1

**Table M-1. Example Computation for the Supply Management Operations activity for the entire Army—
FY 1967-71**

FY	Output PF	Weighted output (man-years)	Actual man-years	Weighting factor (man- years per output)	Productivity index
1967.....	8, 425	-----	10, 641	(1. 263)	100%
1968.....	8, 292	(10, 473)	10, 754	-----	97. 0%
1969.....	9, 370	(11, 834)	10, 897	-----	108. 6%
1970.....	9, 275	(11, 714)	10, 415	-----	112. 5%
1971.....	6, 741	(8, 514)	9, 685	-----	87. 8%



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