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Savannah District Design Manual for Military Construction

Volume I of II
General and Administrative Requirements

US Army Corps of Engineers
Savannah District
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PREFACE

This manual prescribes standard procedures for design of military projects by architect-engineer firms under contract to the U.S. Army Corps of Engineers, Savannah District. This document is a part of the design contract and all requirements of this manual must be satisfied unless specifically exempted. Additional requirements are given in specific instructions and in listed applicable publications. The manual is intended to inform, instruct, and guide architect-engineer firms. It contains information on the organization of the Savannah District and requirements relating to administrative, general, and technical matters. The ultimate purpose of this manual, along with all other endeavors associated with the design process, is to produce a quality product, on time, within budget, which meets applicable criteria and User needs. It is the responsibility of the architect-engineer to ensure that copies of this manual, all specific instructions, and other documents pertaining to design requirements are furnished consultants in order to ensure a well-coordinated design. The manual consists of two volumes, which are:

VOLUME I
GENERAL AND ADMINISTRATIVE
REQUIREMENTS

And

VOLUME II
TECHNICAL, COST ESTIMATING,
AND VALUE ENGINEERING
REQUIREMENTS

Note: The term "architect-engineer firm" as used in this manual refers to designers, whatever their disciplines. For example, instructions for an "architect-engineer" will be valid for a project which may include only civil engineering work.

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VOLUME I

GENERAL AND ADMINISTRATIVE REQUIREMENTS

GENERAL

1. ***PURPOSE.*** The purpose of this chapter is to provide general design guidance to design agents for construction. These instructions are written for the purpose of assisting designers in the preparation of design documents for military construction and, in as is applicable, for civil works construction. It is limited in scope to technical rather than management aspects of design.

2. ***DESIGN POLICY.***

2.1 *References*.

2.1.1 UFC 1-200-01 General Building Requirements

2.1.2 Design Analysis ER 1110-345-700

2.1.3 UFC 1-300-07A Design Build Technical Requirements

2.1.4 Medical Design Guide UFC 4-510-01

2.1.5 Military Handbook MIL-HDBK 1190, for Air Force designs.

2.1.6 Occupational Safety and Health Act, Code of Federal Regulations, Title 29, Chapter XVII, Parts 1910 and 1926

2.1.7 USACE Centers of Standardization (COS) standards are available on the Internet at https://mrsi.erdc.dren.mil/cos.

2.1.8 Documents and specifications can be found at the following URL's:
http://www.wbdg.org and
http://www.sas.usace.army.mil/About/DivisionsandOffices/EngineeringDivision/EngineeringDesignCriteria.aspx
http://www.apd.army.mil
http://www.e-publishing.af.mil/ - Air Force

2.1.9 Standard Designs developed by the COE. Such reference documents are basic for distribution and design application, together with other specific policies as pertinent to the individual project contract. Use of standard design shall always be considered when applicable. Designs can be found at **https://mrsi.erdc.dren.mil/cos** .

2.2 Headquarters, U.S. Army Corps of Engineers (HQUSACE) design policy is established by Architect and Engineering Instructions and UFC 1-200-01. Directives and accompanying program/project data will be issued through HQUSACE respective Regional Division commanders. Except for standard designs and elements of medical and housing programs, the design responsibilities of HQUSACE are delegated to Division and District Commanders.

3. ***RESPONSIBILITIES.***

3.1 District staffs perform the technical requirements for each phase of design for "in-house" projects and review Architect-Engineer (AE) prepared designs from the earliest design submittal thorough final contract drawings.

3.2 Using services prepare the basic programming and budgeting documents for congressional funding and authorization of the construction project. These documents generally describe the construction functional requirements for the project and provide a basis for funding. The extent of professional design content of program documents varies with the personnel level and time available at various installations. These documents are reviewed for adequacy to initiate design prior to issuance to the design AE. Although the design agent has the responsibility for the preparation of final plans and specs, the Using services have final authority concerning functional relationships of the project.

3.3 AE's Design Agents as Planners, Designers, and Engineers provide design services to the Contracting Officer for timely completion of a quality design. Basic responsibilities are set forth in Section C – Scope of Work to the AE design contract. General guidance is provided by USACE criteria and this manual covers regional design procedures and requirements. Project-specific requirements will be covered by project design and engineering instructions. Where criteria are in conflict with sound project planning and design practice for project-specific conditions, present these conflicts and recommendations for resolution to the Corps of Engineers in the initial design analysis submittal for approval through SASEN, which has authority to grant deviations from technical criteria on a project-specific basis with approval from higher headquarters.

4. ***COORDINATION.*** During the predesign, design and construction phases of a project, an AE firm may interact with several agencies. These agencies and their relationships are as follows:

4.1 *U.S. Army Corps of Engineers (COE)*. The COE is represented by the Contracting Officer, or Contracting Officers Representative and supporting offices in Savannah District which report to the South Atlantic Division (SAD). The Savannah District representative at an installation is the Area Engineer or Resident Engineer (RE).

4.1.1 **Consultation with the client activity or User.** The Project Manager (PM) is the focal point between all Government representatives and the A/E regarding technical and performance issues. The A/E may be required to consult with the Installation Public Works Office or Public Works Business Center in matters concerning local conditions or operational requirements. Technical and design considerations which conflict with the

directions from the Government shall be brought to the PM's attention immediately.

4.2 *Army Installations.* At the Army installations the Director of Public Works (DPW) or Public Works Business Center (PWBC) reports to an installation commander and is, through the PM, the point of contact for all questions related to projects. The DPW or PWBC is responsible to the commander for all engineering activities of the installation for the Using agent or organization. This responsibility includes review of designs and inspection of construction performed by Contractors under contract to Savannah District.

4.3 *Air Force Installations.* On projects for the U.S. Air Force, the role of the Corps of Engineers remains the same as for Army projects, but the Base Civil Engineer (BCE) represents the using service at the installation level. Official contact with the Air Force is through the Air Force Center for Engineering and the Environment (AFCEE) and the major commands. Savannah District does business with the following Air Force major commands: Air Mobility Command (AMC) for Pope Field, Air Combat Command (ACC) for Seymour Johnson ARB N.C. Air Force Special Operations Command (AFSOC) for Moody AFB, GA, Air Force Material Command (AFMC) for Robins AFB, Headquarters at Robins AFB, and Air Force Reserve (AFRES) for Dobbins AFB, GA.

4.3.1 Pope Field has requested that notices of proposed construction or alteration on Ft. Bragg be filed directly with FAA. This includes notices for construction cranes. Typically we would require the contractors to file the required FAA Form 7460-1 within the contract documents.

4.3.2 Applicable regulations AR 95-2 para 8.6: http://www.apd.army.mil and FAA 7400.2E, chapters 5 & 6 and 7.

4.3.3 FAA Form 7460-1 is available on the FAA Web site http://www.faa.gov .This form details the specific conditions requiring notice. Notices are required to be filed a minimum of 30 days prior to the proposed construction or alteration is to begin.

4.3.4. The Ft. Bragg Point of Contact for these actions is the Installation Air Traffic and Airspace Manager (AT&A), Mr. Paul Tomacelli 910-432-1168/3230 or e-mail: tomacellip@bragg.army.mil . Copies of all notices should be provided to Mr. Tomacelli.

4.4 *Other Agencies.* Depending on the nature and scope of the project, various representatives of the Army, Air Force, and other agencies may be concerned with the project. Typically, these may be:

4.4.1 Training and Doctrine Command (TRADOC); major command for Fort Jackson, Fort Gordon, and Fort Benning.

4.4.2 Forces Command (FORSCOM); major command for Fort Bragg, Fort Stewart and Fort Gillem.

4.4.3 Special Operation Command (SOCOM); tenant at Fort Bragg, Fort Stewart/Hunter AAF and Fort Benning.

4.4.4 Chief, Army Reserve (USAR); various locations throughout the District.

4.4.5 The Information Systems Engineer Command, Ft. Detrick, Md.; responsible for Army communications.

4.4.6 Southern Communications; responsible for Air Force communications.

4.4.7 Army Center of Excellence, Subsistence, ASTM-CES, Ft. Lee, VA.; responsible for dining halls.

4.4.8 Huntsville Engineering and Support Center; responsible for Army Pollution Abatement Program and Energy Monitoring and Control System.

4.4.9 United Spinal Association; responsible for accommodations for the physically handicapped.

4.4.10 Health Facility Planning Agency; proponent for the Army Surgeon General and responsible for all Army medical facilities design.

4.4.11 Health Facilities Office; proponent for the Air Force Surgeon General and responsible for all Air Force medical facilities design.

4.4.12 U.S. Army Community and Family Support Center in Alexandria, VA; non-appropriated fund projects.

4.5 *Savannah District.* The AE will primarily be dealing with three Divisions of the Savannah District Office. The Engineering Division will furnish criteria, review the design for compliance with criteria and supervise and administer the A-E contract. The Programs and Project Management Division will coordinate advertisement and award the construction contract. Construction Division will perform a constructability review of the final design documents and will supervise and administer the construction contract.

4.5.1 Area and resident engineers may interact with the AE during site visits, shop drawing review, and design deficiencies discovered during the construction phase of a project.

5. ***PROJECT CRITERIA.*** The following forms of criteria will be furnished, all of which must be directed through the assigned district Project Manager (PM).

5.1 Functional criteria are established by the using service and may be furnished in the form of a DD form 1391, Requirements Document (RD) or Customer Concept Document (CCD). The using service and District Project Manager shall assure that sufficient data is furnished concerning personnel capacities and occupancies, operational requirements, access and clearances, life safety and future expansion prior to initial pre-negotiations or site conference. Subsequent to the initial conference, the design agent or AE shall confirm any missing or questionable data by discipline in order to expediently proceed with design. This process of AE coordination with the user functional requirements will be required under a basic AE contract with Savannah District and under the design portion of a Design Build contract administered by the Savannah District. Basic space allowances and operational standards are outlined in UFC 1-200-01 and Air Force Instructions.

5.2 Economic criteria include both program authorization (project cost limitation) and scope allowance (space limitation) which will be set forth in the funding documents, Project Description and Scope approved by Congress and/or project design or engineering instructions. It is the designer's responsibility to design the project within these limitations or report as early as practicable that the project cannot be designed within the authorized program and scope limitations.

5.3 Environmental criteria may be included in the DD form 1391, RD or CCD; however, it is the designer's responsibility to confirm and complete this criteria at the Pre-Design Conference and/or site investigations and to establish any natural, physical or social conditions which would affect the design and to present the design response to such conditions in the project design analysis. However, it is the installation's responsibility through their PWBC, DPW or BCE to obtain all environmental clearances such as wetlands, endangered species, etc. The design will include an erosion and sedimentation control plan that will meet requirements of the local approving authority.

5.4 Technical criteria for specific design subjects are the responsibility of the design agency and are identified in specific instructions if not identified in the discipline's chapter of this design manual. Technical manuals are available on the Internet at www.wbdg.org or other sources listed herein. The AE is responsible for using latest available criteria from these sources. Other sources of information are identified throughout this manual. If additional documents are needed, the designer shall request them through the Federal Government Publications Center.

6. ***TYPES OF DESIGN.*** Project criteria will direct use of varying levels of developed design documents to be used for project economy and standardization as follows:

6.1 New designs normally be based upon DD Form 1391, Design Directives and PDR documents providing budgetary and programming data. This data is generally developed for parametric estimate for funding and establishing general functional relationships. Since these documents normally require comprehensive development designers shall confirm design parameters and design flexibility.

6.2 Definitive design of repetitive building types are basic single line outline plans and design instructions for uniform development of complete project documents.

6.3 Site adapted designs are actual as-built project documents and field standards to be utilized for project design. It should be recognized that most site-adapt documents furnished for project design will require various levels of design development to meet regional, local and project conditions. The use of these documents may range from basic definitive layouts to complete working documents for construction. The AE contract or project documents shall, therefore specify the level of site-adaptation expected and explicitly set forth special design latitude for revising the documents. Where the site-adapted design conflicts with environmental design conditions and sound architectural and engineering practice, the designer shall present recommendations for modifications required in the design analysis for approval action. All references to amendments and contract modifications shall be removed from the drawings and the drawings shall be updated to current criteria. Original plates with the design agents name shall remain

unchanged. A stamp shall be utilized to indicate that the documents are site adapted from a previous project and will include the new design agent's name.

6.4 Standard designs are national and regional repetitive project documents which are to be utilized as completely as practicable for project design conditions. Analyses of foundations, structural and mechanical systems are normally authorized. Deviations from standard designs must be submitted through IMCOM to HQUSACE and Office of Assistant Chief of Staff for Installation Management (OACSIM) for resolution and approval.

6.5 Standard definitive designs are essentially 10 percent standard floor plans, without any detailed design. Standard definitive designs are available for about 20 different Army facilities such as Tactical Equipment Shops, Brigade Headquarters and Barracks. Use of these standards for Army projects is mandatory and will be required by the 1391 form. Deviations from these standards are not permitted without waiver authorities.

6.6 Renovation projects and additions to existing construction are the most difficult to assess for funding and design. Therefore, it is very important for the designer to make thorough site investigations and evaluate project criteria. Establishing the amount of renovation and additional new construction to achieve the optimum balance of improvement requires careful design and construction coordination.

7. ***SCOPE OF WORK.*** The scope of work is covered in Section C of the AE contract or Service Order. After the selection of an A/E, a copy of the Statement of Work will be forwarded to the A/E with a request for a fee proposal. The SOW will indicate the extent of the work to be accomplished by the A/E and serves as the basis for the A/E's fee proposal and the Government's estimate of the A/E fee. The SOW is a part of the contract between the A/E and the Government, therefore, it is essential that the two parties agree that the work to be accomplished as described therein is accurate and complete. Changes to the SOW, when necessary, will be made by the Contracting Officer in writing in accordance with the contract clauses. A change in the CCL shall not categorically constitute a change in scope nor justify any change in the Architect-Engineer's fee. The Architect-Engineer is required to design all projects at full scope as indicated on the DD Form 1391 or the specific instructions as originally negotiated plus any changes incorporated by contract modification regardless of the fluctuation in the construction cost limit in accordance with Section F, FAR 52-236.22. In instances where the construction cost for the full scope design exceeds the CCL, despite the A-E's best effort to design the project within the established cost limits, additive or optional construction items will be recommended and incorporated as required.

7.1 Specific Instructions. AE contract Specific Instructions documents may emphasize significant items directly pertinent to the project or which require special attention for design quality and review coordination. General instructions are provided in this manual.

7.2 Pre-Negotiations Conference. For certain projects, pre-negotiation visits to the Activity may be necessary for reviewing and clarifying the proposed items of A/E Services and to become more familiar with site conditions. The pre-negotiation conference will normally be attended by the PM and representatives of the Activity. AE attendance is voluntary and the Government will not be responsible for AE costs incurred by this visit.

7.3 Award of AE Contract. Upon receipt of the AE's fee proposal and subsequent

agreement on a price, the Government will issue a contract, signed by the Contracting Officer. The AE is authorized to begin work after the contract award date.

7.4 Design Submittals. The design submittals required should be covered at the pre-negotiations conference. This is a very important issue. See below for different submittal types. See Volume II for the required content of each type of design submittal.

8. **REVIEW STRATEGY.** A plan for a project covering the number, type, and timing of all Government reviews of AE prepared work, including related review conferences, is summarized in the Schedule of the SOW, and may include some combination of the following:

a. *Traditional review* - AE submits design documents and stops work while the Government reviews, typical stages are preliminary, final and corrected final

b. *In-progress review* - Same as traditional review except the A/E continues design effort while the Government reviews.

c. *On-board review* - Government reviewers and the AE visit the activity to review the design documents submitted by AE; designated on board/in progress, or on board/traditional depending on whether or not the AE continues or stops work while the Government reviews.

d. *Over-the-shoulder review* – Government reviewers visit the AE's office to review the AE's work in progress.

8.1 AE Review of Work. It will be the responsibility of the AE, acting in a professional capacity, to ensure accuracy, completeness, and correctness of the design, cost estimate and all engineering concepts and details of the work, including the coordination of the various architectural, civil, structural, mechanical, electrical, and other subdivisions thereof with each other and with the specifications. The Government will not do a complete independent technical or coordination review of the project but only spot check and review for compliance with codes and criteria requirements. Design checklists and other methods as listed in the AE scope of work shall be submitted with each phase documenting the AE's Design Quality Control plan utilization.

8.2 Projnet/DrChecks. Projnet/DrChecks will be used for all submittal reviews. DrChecks is a web based module on the Internet at https://www.projnet.org/projnet/ or https://www.projnet.org/projnet2/ used for entering project submittal review comments. Training (telephonic) and access to the system is available free to the AE. Comments generally are available for viewing as soon as they are entered. If you are not yet a registered user in the system, contact your Project Manager for guidance on obtaining Vendor ID and registration instructions into the system. You will only be able to see projects and reviews that are assigned to you. If at any time you find you can not see a project or review, contact the Project Manager and he/she will assist in getting you access.

8.2.1 Action by AE. Once all reviewing organizations have completed the review or a suspense date is reached, the PM will close that review cycle and notify the AE. The AE has access to all the reports and to the Evaluate column for annotating the comments. Prior to the review conference for the submittal the AE shall annotate all comments that are out of scope, non-concurred and critical issues that need to be resolved and these comments shall be addressed at the review conference. All comments that are not annotated prior to the submittal review conference will be presumed "concur". Prior to the

next design submittal the AE shall annotate all prior submittal review comments to reflect decisions made and the incorporation of concurred comments in the design. As part of their review of the next submittal reviewers will backcheck all prior submittal comments to insure they were addressed per expectations.

8.2.2 Backcheck. Backcheck of the AE annotations by reviewers will occur when the next submittal is received. If there is not another formal design submittal scheduled, the PM will establish annotation and backcheck deadlines and all comment annotations shall include uploaded revisions to the design that demonstrate incorporation of the comment into the design. The reviewers shall access the system and check the AE's annotations to insure that they were acceptable and interpreted correctly or, when AE did not concur or the work was outside the scope of the AE's contract, that a satisfactory conclusion was reached. It is the intent that all valid review comments will be closed to the Government's satisfaction before the project is advertised.

9. ***ADMINISTRATIVE SECTIONS COORDINATION.***

All final design submittals and all final RFP submittals shall include contract administrative specification sections as well as technical specification sections. Responsibility for preparation of these sections varies. During final design/final RFP development AE shall submit all required administrative specification section information to the PM for internal coordination. The information to be submitted by the AE for coordination includes a draft bid schedule, a list of government-furnished equipment, an estimate of construction time and other items required for development of the administrative sections. See Chapter A-11 Specifications for detailed requirements. Depending upon the specification section, sections may be completed by the Government and provided to the AE for reproduction and distribution only. In some cases the AE is responsible for editing the specifications with Government input. Editing specifications and incorporation of review comments for all administrative sections will be coordinated by the PM and may vary on a project by project basis.

10. ***GENERAL SUBMITTAL REQUIREMENTS.***

10.1 General. Prior to each design submittal the AE shall ensure that the design has been thoroughly checked and coordinated between the various design specialties. All material submitted shall be dated in an appropriate location. Whenever items are corrected or later resubmitted, they will show a revised date in order to differentiate later material from the original submittal. Each page of the submittal shall be numbered consecutively by section, i.e, number the pages in Chapter A-2 - Structural; 2-1, 2-2, 2-3, etc. All material submitted shall identify the project, submittal and the firm preparing it. See Volume II for detailed content requirements for each submittal type below.

10.2 Packaging. Except as indicated below each submittal shall be separated into design packages and mailed to the District Office. Direct submittals shall be made to other reviewing agencies as indicated in Section C, Scope of Work

EXCEPTION: Under certain conditions it may be advantageous to have a responsible member of the firm hand carry the design documents, itemized above, to the District Office.

Examples of instances where this will be required are where certain aspects of the design are questionable or where the design Current Working Estimate (CWE) exceeds the Programmed Amount (PA).

11. ***FULL DESIGN SUBMITTAL REQUIREMENTS.***

11.1 *Preconcept Submittal Requirements*. If a Preconcept Submittal is required for a building, this submittal may consist of a site layout, floor plan and major elevations at the 10 percent design stage. For a large project, three separate schemes may be required. Review time will be short or layouts and schemes will be presented at the installation for onsite approval. Each section or discipline has unique preconcept submittal requirements. Respective chapters of the design manual should be reviewed to determine the exact nature of these requirements.

11.2 *Concept/Early Preliminary (35 Percent) Design Submittal Requirements*.

11.2.1 Concept/early preliminary design submittal content requirements are extensively defined by each discipline in Volume II. If a Concept/early preliminary design submittal is required, design will be stopped for this review phase unless stated otherwise by specific instructions. The installation, through the Savannah District PM, has approval authority for concept design(s). The concept submittal is typically a design analysis, drawings in half-size presenting the design, a construction cost estimate and an estimate of construction time and phasing (if applicable). The concept submittal must contain enough information for the reviewers to understand the functional and technical approach the designer is following to complete the project.

11.2.2 Medical Facilities. An additional pre-concept submittal (20 percent) and a corrected concept may be required in addition to a pre-concept (10 percent) and concept submittals.

11.2.3 Notice to Proceed. The AE will not proceed on the concept design subsequent to the receipt of a signed contract. The date of the notice to proceed will be listed in the contract and will have been agreed to by the AE and the PM.

11.3 *Preliminary (60 Percent) Submittal Requirements*. Submittals at the 60% stage may be either an over the shoulder review or a formal review as stated in the SOW or specific instructions.

11.3.1 Preliminary OVER THE SHOULDER *Submittal Requirements*. When required, this submittal consists of reproducing the **drawings in their state (degree of completion) at that particular point in time**, design analysis at this point and a cost estimate when design effort is not stopped. The submittal will be made approximately half-way through the final design phase. The submittal is required to check progress, cost, and the functional layout. Final design will not stop during review of this submittal. The intent is to give the customer an idea of the direction the design is proceeding, without stopping the design team to put together a formal submittal. Review comments however should be documented in DrChecks and annotated for the next review stage.

11.3.2 *Preliminary Design Submittal Requirements (60 Percent submittal)*. Sixty- percent submittal is a major submittal in which design is stopped until receipt of comments and consists of an expansion of the concept design drawings and a cost estimate. Preliminary submittals are required on all Air Force projects unless exception is made. Preliminary submittals may be required on Army projects in lieu of or in addition to concept submittals. The requirement for a preliminary submittal on an Army project will be established within the AE SOW or specific instructions and usually discussed at the pre-negotiations conference. The submittal will represent design progress halfway from concept acceptance to the final design phase. The intent is to check progress, cost, and layouts per customer and reviewers comments. See the submittal content requirements for each discipline in Volume II. Note that Chapter A-9 states that the same type of **cost estimate** is required for either type of **60% submittal. The PM must give clear direction to the AE to stop design or proceed during this design review phase.** Normally design effort toward final design will stop at 60 percent submittal unless the schedule dictates otherwise.

11.3.3 DO NOT submit originals with the preliminary submittal unless specifically requested.

11.4 *Final (100 Percent) Design Submittal Requirements*. The 100 percent submittal includes design analysis and bid documents which include administrative sections and are ready to advertise. All design work should be complete.

11.4.1 Comments. After the preliminary or concept design review is complete, the review comments will be furnished to the AE by the PM. Within 15 days of the receipt of the comments, the AE should notify the PM if he does or does not intend to comply with the comments. The PM will take whatever action is required to resolve any controversial comments. Notice to proceed on final design will be by separate letter signed by the Contracting Officer or the COR.

11.4.2 Checks. Prior to submission to the District Office the AE shall make a thorough check of plans, specifications, and other required data to eliminate errors, inconsistencies, and for coordination between architectural, structural, mechanical and other applicable phases of the work. Final reproducible specifications shall be completely proofed and corrected to eliminate typographical errors, misspelled words, etc. Copies of the checklists shall be included with the submittal in accordance with the design quality control plan.

11.4.3 Date Stamping of Changes. It is particularly important that all material submitted be dated in an appropriate place. Whenever items are corrected or later resubmitted, they will show a revised date in order to differentiate the later material from the original submitted.

11.4.4 Specifications. Specifications shall be complete and prepared with SPECSINTACT software. Specifications shall include all administrative sections, bid schedule and SPECSINTACT-generated submittal register.

11.4.5 Design Analysis. Bind design analysis similar to that required for preliminary submittal. Highlight major revisions made subsequent to preliminary submittal.

11.4.6 Checklist for AE Submittal of Final Designs. This particular checklist is attached to Section C of the AE's contract. The AE shall include this checklist in the PM's package of

the final submittal. Final payment for final design will be withheld until this checklist is received.

11.5 *Corrected Final Design Submittal Requirements*. AE's will normally be allowed from 7 to 21 days to incorporate any comments resulting from the final review.

11.5.1 Notice. Corrected final submittals are not considered a normal design review level and are required only when final submittals must be revised or corrected due to errors or omissions. The need for a formal corrected final submittal will be determined by the PM based on the nature and scope of the final design review comments.

11.5.2 Comments. Transmittal of final review comments and direction to submit corrected final documents will be by letter signed by the COR. Once again, the PM will resolve any controversial comments.

11.5.3 Correction, Originals, Prints. The AE is responsible for corrections to drawings, design analyses, specifications, cost estimate, color boards, etc., as a result of review of the final submittal. Corrected final submittal will consist of original corrected plans, specifications, design analyses, and project review comments with proper annotation of action taken on each comment. AE will furnish the negotiated copies of plans, specifications, design analyses, etc., marked as CORRECTED FINAL SUBMITTAL. The indicated sets of prints of corrected final drawings and specifications will be submitted to the PM with corrected final submittal. Additional sets required of the corrected final submittal may be established on a case-by-case basis at the pre-negotiations conference.

11.5.4 Reference Materials. At the completion of the project design the AE shall return to the District all reference materials, including Technical Manuals and Unit Price Books, which were originally furnished by the PM.

12. ***REQUEST FOR PROPOSAL (RFP) SUBMITTALS***

12.1 RFPs are developed in accordance with UFC 1-300-07A Design Build Technical Requirements and other guidance furnished by the Government. In some cases use of internet based “RFP wizard” is required. See Section A-11 Specifications for information on use of the RFP Wizard.

12.2 RFP Drawings. Submit half size drawings for all reviewers as directed in the specific instructions or pre-negotiations conference.

13. ***PROFESSIONAL QUALIFICATIONS.*** When this manual or any applicable publications require work which public laws, codes, standards, or criteria indicate should be performed by or under the supervision of Registered Professionals, then such registration shall be required. Evidence of credentials must be submitted no later than with the work done under their authority. A-E contractors will sign and stamp or seal design documents, permit applications or certifications as provided under the contract. When administratively requested by state or local authorities, an operating MSC or district may disclose this information, although not legally required to do so.

13.1 Specific Procedures for Signing and Sealing or Stamping AE Contract Deliverables (ER 1110-1-8152) A-E contracts will require the contractor to sign and stamp or seal and date at least one set of design documents, permit applications or certifications. The deliverables under each contract for A-E design services will include:

a. One set of properly signed, stamped or sealed and dated drawings;

b. A certified cover document showing for each discipline the name and stamp or seal of the professional who supervised the work, and the date each stamp or seal was affixed; or

c. An electronic equivalent that indicates for each discipline the name, stamp or seal of the professional who supervised the work, and the date each stamp or seal was affixed.

14. ***TECHNICAL ELEMENTS OF DESIGNS.*** The following major categories constitute parts of a total design. Whenever the term "design" is used in this manual it shall mean the coordinated design, including all parts. All work shall be coordinated between disciplines, checked and approved prior to all design submittals.

14.1 *Plans.* All drawings shall be prepared in accordance with Chapter A-10, Drawings.

14.2 *Specifications.* Prepare specifications in accordance with Chapter A-11, Specifications. Careful attention will be given to the preparation of the specifications, and they will be tailored to the project and checked against the drawings. Upon completion of design the designer shall review the design and correct the specifications as required to assure conformance with the latest guide specifications, codes, etc., to assure the specifications are up to date. Any changes required in the design to conform to code or other criteria changes shall be reported to the Contracting Officer for consideration. Such design changes may be the basis for a contract modification if a change in the design is directed.

14.3 *Estimates.* Prepare estimates in accordance with Chapter A-9, Cost Estimates.

14.4 *Design Analysis.* A design analysis is an assembly of information, calculations, data, and conclusions presented coherently with narrative explanations. In addition to the general requirements of ER 1110-345-700 and as stated here, all technical analyses required by this manual shall be included in the design analysis.

14.4.1 Content. Unless otherwise specified, design analysis shall include the following.

a. Listing of applicable criteria and publications.

b. Description of the project, including scope and applicable standard designs.

c. Statement of customer's goals and needs.

d. Calculations, research, technical analyses.

e. Narrative summaries of major decisions.

f. All technical comments with resolutions explained.

g. Other items as required by pertinent technical disciplines.

h. Listing of the names and credentials of all professionals involved.

14.4.2 Format. Unless otherwise specified, analyses shall conform to the following:

a. All documents shall be legible and reproducible on standard copiers.

b. Documents shall be bound, titled, dated and have a Table of Contents.

c. All pages shall be sequentially numbered.

d. Technical sections shall be tabbed and indexed.

14.4.3 Alternatives. Unless otherwise approved, all alternatives analyzed, studied or included in designs must meet the following requirements.

a. The overriding factor in all design decisions shall be the functional needs of the User at the installation. Alternatives must satisfy the functional use requirements within scope and authority limitations.

b. Selections between alternatives shall be based on obtaining the overall optimal design with the lowest Total Life Cycle Cost.

c. Alternatives must satisfy the Buy American Act.

d. Alternatives must have at least three competitive manufacturing sources.

14.5 Submittal Register. Submittals requiring Government approval by AE shall be flagged within the submittal register as requiring DDC funding after contract award.

14.6. *Dating Materials*. Drawings, design analyses, estimates, etc., which are submitted to the Savannah District shall be appropriately dated. When such material is revised, appropriately revised dates will be shown.

15. ***SCHEDULES.***

15.1 *Types of Funds.* Scheduling requirements vary with the type of funding for the project. The funding type will be identified on the design directive.

15.2 *Unique Requirements.* Each project may have unique scheduling requirements which should be established at the pre-negotiations conference. General statements concerning MCA and RPMA projects can be made as follows:

15.2.1 For projects authorized by Congress (not RPMA), there are three important milestones which must be met to either ensure that a project is awarded for construction rather than reprogrammed or to satisfy goals set by the Army for Savannah District. These milestones are:

a. For current fiscal year project: Projects must be awarded for construction prior to September 30 (end of fiscal year).

b. For current fiscal year plus 1 year projects: Project must be ready to advertise for construction prior to October 1 of current year.

c. For current fiscal year plus 2-year projects: Concept design must be completed, reviewed, and approved prior to August 1 of current year.

15.2.2 Milestones for RPMA are established by the installations.

15.3 *Meeting Schedules.* In spite of the fiscal year of the project, changes to the fiscal year and the milestones listed above, the AE is expected to have negotiated a realistic contract time and to maintain this schedule unless the contract is modified by the Contracting Officer. Staying with the schedule is extremely important to Savannah District in scheduling the work load. Missing the established schedule milestones is inefficient and disruptive. The schedule should never be changed as a result of AE inactions and not allowing sufficient time. The only changes which are acceptable will be due to criteria or User requested changes. The ability to meet schedules is a most important consideration in the consideration of an AE firm for future work with Savannah District.

15.4 *Schedules and Evaluations.* Staying on schedule is a very important consideration in a satisfactory performance evaluation.

16. ***PROJECT BUDGET.*** For each and every submittal, including amendments to bid documents and construction contract modifications, the project budget must be considered and a cost estimate will be necessary. Possibly the most important consideration as far as the budget is concerned is that engineer regulations will not permit bids to be opened or the proposals evaluated on a project unless there is an approved Government estimate. Just as important authority to advertise a project for construction bids will not be granted without a time-consuming waiver if the estimate is above the programmed amount even by a minute amount.

EXCEPTION: Installation Commanders can give authority on RPMA projects.

16.1 *Terms.* In discussions of budget, four terms must be understood. These terms are:

16.1.1 Programmed Amount (PA). The programmed amount represents the total funds, excluding design, which are available for the project. The programmed amount is for cost of construction in place, cost of supervision and administration during construction, contingencies, cost of value engineering studies performed during design, cost of communications over and above the basic contract, cost of as-built drawings, cost of energy monitoring and control system connections and possibly other costs. The programmed amount is set by law and cannot be changed except by Congress (except for RPMA and BRAC). However, HQUSACE and the Secretary of the Army have limited authority to fund projects in excess of the programmed amount provided funds are available within their agency.

16.1.2 Current Working Estimate (CWE). The current working estimate compares with the programmed amount and obviously should consider all elements cited above which comprise the PA.

16.1.3 Construction Cost Limit (CCL). The construction cost limit should be compared with the construction bid for the project. The CCL is the amount of funds available to build the project after the cost of all other elements of the construction cost, in excess of the cost of the project in place, are subtracted from the PA. If no better figures are available, the CCL equals 89.0 percent of the PA for all except RPMA projects for which the CCL equals 87.5 percent of the PA.

16.1.4 Escalated Contract Cost (ECC). The escalated (to midpoint of construction) contract cost is the Government estimate of the bid price for the construction work to be performed by a contractor. The ECC must always be below the CCL, just as the CWE must always be below the PA. Otherwise, bid additives or options must be established. Obviously, economical design is preferable to bid additives.

16.2 *Purposes of Estimates.* Estimates prepared in conjunction with submittals are for purposes outlined as follows:

16.2.1 Concept/Early Preliminary Estimate. The concept/early preliminary estimate will, in many cases, be the basis on which Congress establishes the programmed amount. It may be impossible to change the programmed amount based on later estimates; therefore, the importance of the concept estimate is obvious.

16.2.2 Preliminary or 60 Percent Estimates. The preliminary or 60 percent estimate is used as a check to eliminate last minute adjustment during the advertisement period. Adjustments to the programmed amount may be possible at the preliminary stage, depending on the status of the budget process.

16.2.3 Final Estimate. As stated earlier, bids cannot be opened without an approved Government estimate. Programmed amounts can almost never be changed as a result of a final estimate except on RPMA projects where changes in the Programmed Amount do not exceed the installations authority level.

16.2.4 Several items which must be covered to prevent problems with final estimates are as follows:

a. Prepare estimate based on completed design package, not on incomplete coordination drawings. Project schedule should allow designer to give complete design to cost engineers.

b. Coordinate estimates with plans and specifications.

c. Provide detailed cost breakdowns and backup material.

d. Get latest communication cost from PM.

e. Prepare estimate in accordance with specific instructions and Technical Design Manual.

f. Research to ensure lowest reasonable unit cost is used.

g. AE's estimate of construction contract time should be approved based on 60 percent submittal.

16.2.5 Amendments to Bid Documents. Obviously, the cost of work added by amendments, especially omissions, will affect the Government estimate, and consequently, the authority to open bids. Estimates must be provided with each amendment and will be complete, accurate, and timely.

16.2.6 Construction Contract Modifications. The Government cannot enter into negotiations with a construction contractor without an approved Government estimate of the contract cost.

16.3 *Special Action.* Due to the critical nature of estimates, cost engineers will at times be required to take special action. Examples are as follows:

16.3.1 Cost engineers will almost always be required to participate in negotiated construction contracts.

16.3.2 If a final estimate is inadequate and time is critical, the estimator will be required to come to Savannah for a working session.

16.4 *Design Within PA.* It is the AE's responsibility to design projects within programmed amounts. If this is impossible, for all except RPMA projects, the AE's are

required to develop a base bid package with a CWE equal to or less than 89.5 percent of the PA for a project. For RPMA projects the installation commander has the option of increasing the PA. BRAC projects PA's can be increased without a congressional action.

16.4.1 The AE is to contact the PM prior to completing the estimate to obtain the amounts for Value Engineering, communications and EMCS connection.

16.4.2 For any projects not in the RPMA program, if the AE computes an "OCE CWE" which is greater than 90 percent of the PA, then he must establish additives to produce a base bid which is less than or equal to 90 percent of the CWE. The AE should immediately notify the PM to discuss the establishment of additives. Items of discussion will include:

a. Suggested additives or options.

b. Plan for installation approval and/or recommendations of additives.

c. Time frame for design of additives or options. Delay additives or options at final submittal stage or wait and display at corrected final.

16.5 *Change in CCL.* It is conceivable that the construction cost limit of a project can and, in most cases, will change between the time the project is negotiated and the time final design is complete. The AE will be advised of all changes in the construction cost limit. A change, or changes, in the construction cost limit shall not categorically constitute a change in scope nor justify any change in the AE's fee.

17. ***QUALITY.*** The AE is required to prepare a logical Design Quality Assurance (DQA) Plan to accomplish design services. This plan is considered to be merely a formalized version of the plan that an AE uses on all his projects for private industry. The AE will be expected to closely follow the DQA Plan throughout the course of the project to assure a quality end product. Should events dictate revisions to the approved DQA Plan, the AE is required to notify the PM in writing and submit the revised plan for approval. The following are the basic elements to be included in the Design Quality Assurance Plan.

17.1 *Management Approach.* Define the specific management methodology to be followed during the course of the contract including such aspects as design coordination procedures, quality control, communications, and managerial continuity and flexibility.

17.2 *Management Structure.* Delineate the organizational composition of the firm to clarify the interrelationship of the management, the design quality control manager, and design team components including all consultants. Include organization chart to identify the key design and review team members showing their specific organizational responsibilities. The AE is required to advise the PM if he changes a designer/professional/team member during the design.

17.3 *Quality Control.* The professional quality, technical accuracy and the coordination of all designs, drawings, specifications and other services to be provided by the AE is of major importance. It is, therefore, a requirement for the AE to have a logical and functional quality control program to assure that errors or deficiencies in all submittals are maintained at a minimum. The QC plan will cover such items but not be limited to:

17.3.1 Coordination between disciplines; e.g., Mechanical - Electrical.

17.3.2 Coordination between drawings and specifications.

17.3.3 Site investigation to verify existing, as built conditions and ensure proper interface with new work.

17.3.4 Preparation of Cost Estimates - content and format.

17.3.5 Incorporation of specialized User needs; e.g., Government-furnished equipment, occupancy during construction, special security, construction phasing requirements. To meet this requirement, the AE will be required to perform technical reviews and to correct all errors and deficiencies in the design documents prior to submitting them to the Government for review.

The AE is cautioned to place special emphasis on this aspect of the DQA Plan. The contractual obligations of the AE to provide complete, well coordinated, and error free documents has far-reaching consequences. In the event possible subsequent damage to the Government results from negligent performance of any of the services to be furnished under this contract, the AE will be held liable for such damages. The Government's reviews in no way will relieve the AE of these contractual responsibilities. For this reason, an effective quality control plan is essential.

17.4 *Planning and Scheduling.* Include a time-scaled bar chart or CPM design schedule showing the sequence of the events involved in carrying out the project task within the specified period of service. This should be a general level of scheduling with planning efforts focused on identifying major items that most often control the flow of work. Indicate the AE review and correction period prior to submittal. All DQC checks must be performed by the AE prior to submittal of the documents to the Corps of Engineers. Copies of checklists used and other documentation of an active DQC program must be provided with each submittal. This schedule should show work to be performed by consultants. The schedule should also show when the drawings are available to begin the cost estimate to ensure that the cost estimate is included with the design submittal and include time frames for site investigation and field investigation. This schedule should be a forward-planning as well as a project monitoring tool.

18. ***PRE-NEGOTIATIONS CONFERENCE.*** The purpose of the pre-negotiations conference is for the AE to develop a thorough understanding of the scope of work and to meet the appropriate personnel associated with the project.

18.1 *Importance.* The pre-negotiations conference is possibly the most important meeting that will be held concerning the design of a project. It will probably be the only opportunity, without calling a special meeting, for the AE to meet collectively and receive input from representatives of the user of the project, installation engineers, the major command over the installation, agencies which develop criteria, such as Army Center of Excellence, Subsistence, ASTM-CES, and the Corps of Engineers. Field investigations made after contract award are generally only attended by the installation and not the other agencies mentioned. Representatives of each discipline involved in the project should be present.

18.2 *Parts.* The pre-negotations conference should consist of three parts, which are:

18.2.1 Review of data pertaining to the specific project.

18.2.2 Administrative/contractual requirements.

18.2.3 Site visits.

18.3 *Checklist.* The AE should have a clear understanding of all items on any predesign checklist as to how they relate to the project under design. An understanding of the items should be clear by the end of the pre-negotiations conference if at all possible, but under no circumstances should the negotiations be completed until an understanding is reached.

18.4 *Minutes.* Detailed minutes covering each of the three parts and items addressed under each part will be recorded and distributed to all attendees by the Project Manager. The AE is to provide his minutes along with the fee proposal.

19. ***FEE PROPOSALS. Requirements for fee proposals will be detailed in Section C of the AE's contract.***

20. ***ARCHITECT-ENGINEER CONTRACT MODIFICATIONS.***

20.1 *Negotiations Prior to Work.* Normally the AE fee for a modification to the AE contract will be negotiated prior to the performance of the work. However, in special cases, the AE will be directed to perform the work and to submit a request for adjustment within 30 days. Whether or not the fee is negotiated prior to the performance of the work, in no case is the AE to perform work unless directed to do so in writing by the Contracting Officer. The COR during design, ARCO or ACO during construction, can request a fee proposal; however, only the Contracting Officer can direct that the work be performed.

20.2 *Work Outside Scope.* The Contracting Officer wishes to process valid modifications reflecting bonafide increases in required services beyond the scope of the contract as quickly as possible; therefore, the AE will evaluate all interim, written and/or telephoned instructions and required review comments on submittals to determine if by his interpretation any of the above are beyond the scope of services in the contract. Such items as he believes to be subject to modification should be reported to the Contracting Officer within 1 week, with the exception of review comments where 15 days will be allowed for reporting. In many instances, clarification of intent may avoid necessity for modification.

20.3 *Fee Proposal Response Period.* If within 30 days of a request for a fee proposal, the proposal has not been received, the lack of a response will indicate there will be no additional charge for the work.

21. **PAYMENT REQUESTS.** ***Requirements for payments will be detailed in Section C of the AE's contract.***

22. ***ARCHITECT-ENGINEER EVALUATIONS.***

22.1 *Interim Evaluations.* An interim AE evaluation will be made for each submittal received from the AE. These evaluations are for internal use only and they will not be furnished to the AE nor to any person or agency outside of Savannah District. The only action which may result from an interim appraisal is in the event that the PM determines that work is unsatisfactory, the AE may be called in to Savannah District to discuss how the performance may be improved.

22.2 *Interim Evaluation after Final Submittal*. A design evaluation will be completed by the PM once the design has been completed and this evaluation will be entered into the ACASS system.

22.3 *Project Final Evaluation.* The projects' final evaluation will be completed by the PM after construction is complete and before the AE contract is closed. This evaluation will replace the interim final-design evaluation. For each discipline involved in the design, the AE's design and firm are rated on performance factors as follows:

22.3.1 Accuracy.

22.3.2 Completeness.

22.3.3 Cooperation.

22.3.4 Coordination.

22.3.5 Management.

22.3.6 Meeting schedule.

22.3.7 Personnel ability.

22.3.8 Work quality.

Services during construction are considered in the evaluation.

22.4 *Evaluation Database.* The final evaluation results are entered into a database that currently carries data for the Army, Navy, and Air Force. Data from other Government agencies will soon be carried in the system. The data is carried for a period of 6 years.

23. ***BIDDER INQUIRIES AND AMENDMENTS.***

23.1 Bidder Inquiries. The AE will use a module within Projnet/DrChecks to respond to bidder inquiries. This is the only allowable manner of responding to bidder inquiries; it is **critical** that AE shall not respond to any bidder inquiries unless they are generated through Projnet. Once the project is advertised, proposers can self-register into the system and add “requests for information, (RFI)” or ‘bidder inquiries”. The Project Manager and the design team assigned will automatically receive an e-mail when a bidder inquiry is added. The AE then responds to the question in the system. The PM will then copy the response or generate different response to the Proposers and close the comment. Proposers will be notified via e-mail that there is a response to their comment. Proposers will only see the final response, none of the intermediate correspondence. Prompt response to all bidder inquiries by the AE is imperative so as not to cause a delay in contract award.

23.2 Amendments. The AE is responsible for preparation of amendments, for corrections to drawings as a result of amendments required to clarify design, for coordinating drawings with specifications, and for correcting design errors. Drawing changes are to be incorporated by the AE to the drawing files, noted in the revision block, re-plotted and mailed to Savannah District at the time each amendment is developed. When issued, copies of all amendments will be mailed to the AE. Meeting the time requirements is imperative because the drawings must be processed, reproduced, and furnished to the Contractor so as not to cause a delay in the start of construction.

24. ***CONSTRUCTION CONTRACT MODIFICATIONS.*** The need for a contract modification is usually identified by means of a request for information (RFI). If the response to the RFI necessitates a change to the contract, the modification should be initiated. Prior to the transmittal of a letter outlining the scope of work, the PM will contact the AE to discuss the urgency of the response and the methods to expedite the process. Negotiations will be held and notices to proceed will be issued in the most expeditious possible way. Overnight mail, fax and e-mail procedures will be used.

25. **SERVICES DURING CONSTRUCTION.**

25.1 *Types of Service.* During the construction phase of a project, AE firms may be used for:

25.1.1 Shop Drawing Review of "G, AO" or G, DO level shop drawings, requiring Government approval before construction. These designations represent AE Office or District Office review for conformance and compliance to specifications.

25.1.2 Periodic site visits and inspections of construction materials.

25.1.3 Preparation of Operation and Maintenance Manuals, Test Procedures and Training.

25.1.4 Assistance during construction.

25.2 *Engineering Services During Construction.* AE firms are frequently called upon to provide engineering services during construction phase (formerly called Title II Services). These services can include construction inspection and shop drawing reviews by an AE firm through Architect-Engineer Contracts. Traditionally this has been done by modifying the original design contract or initiating a new contract.

25.2.1 Government Approval Action. The Unified Facilities Guide Specifications have submittal requirements identified as Government Approval (GA) being necessary. It is the A/E's responsibility to edit this paragraph of each specification section to indicate the approval entity (typically Designer or Resident Office). A spreadsheet of generally recommended review levels will be furnished giving guidance on this matter but some of the choices depend on the type of design and editor must make choices. At the final design phase the AE shall print out the DA Form 4288 from SPECINTACT showing the review levels by the designer or Corps. If the initial design contract did not include shop drawing review, the PM should subsequently initiate appropriate contract modification action for this work. Fee proposal will be requested and modification negotiated.

25.2.2 Shop Drawing Submittal. The construction Contractor submits shop drawings to the Resident Office, who in turn forwards the shop drawing to the PM or mails it directly to the AE with ENG Form 4026 to document recommended review action.

25.2.3 Review Action. The reviewer shall date stamp the drawings upon receipt and shall initiate review action promptly. Typical construction contract provisions allow 30 days duration for shop drawing review. This includes mail time back to the Resident Office. Monetary delay claims to the Government are justifiable if review action is not received within this 30-day period. The AE shall review the shop drawings for compliance with contract requirements and compliance with applicable referenced codes. The reviewer shall mark necessary corrections in red and green markings on the drawings. Red indicating new correction and green indicating deletion. Provide REVIEW ACTION CODE recommendation on ENG Form 4026. The recommendation

will be considered but final decision shall be made by the Contracting Officer. The AE shall promptly return the reviewed shop drawings to the Resident Office requesting the review.

26. ***VISITS TO INSTALLATIONS AND PHOTOGRAPHS.*** When making site inspection visits at the installation, the necessary arrangements for such visits will normally be made with the PM. The AE is responsible for determining existing site conditions and coordinating new work with existing conditions. As-built drawings for typical buildings furnished the AE may not necessarily reflect the existing conditions; therefore, each building in the contract must be field checked and drawings revised to indicate the existing conditions. AE's shall document visits to installations in two ways - by signing in at the area/resident office and by preparing a trip report.

26.1 *Contact Area/Resident Engineer.* The area/resident engineer is Savannah Districts' primary representative at an installation. As such, they should be aware of all activities at the installation taking place under the administration of the District Office.

26.2 *Coordination by Project Manager.* The Savannah District PM should be called prior to any visit for the purpose of coordinating the visits with persons or activities at the installation.

26.3 *Trip Reports.* When the AE visits the site and discusses the project with representatives of the DPW or Base Civil Engineer and/or using service or other personnel, a brief report of the visit, or conclusions reached or commitments made shall be furnished to the Savannah District Office PM. A sample Trip Report format is at Exhibit I-A-4.

26.4 *Photographs.* AE is responsible for obtaining permission to take photos from Installation and User and coordinating with field office and DPW or BCE to assure sensitive images are not contained in photos. AE is also responsible for obtaining prior approval for all images before disseminating in the public domain.

27. ***SITE ADAPTATIONS.*** The District frequently reuses existing AE or Government prepared designs to meet construction needs. The site adapting AE will be furnished plans, specifications, and design analyses for the existing design with specific instructions outlining the aspects of the design that are to be changed to meet the new site conditions and the need of the new user. The site adapting AE shall review the design and design analysis and shall use the existing design as a guide in developing his design. The site adapting AE shall perform whatever additional calculations and checks as are necessary to ensure that the portion of the design that is reused is correct. The site adapting AE shall revise the existing design as needed for compliance with current criteria. Responsibility for errors and omissions shall be with the site adapting AE. In addition to this check, additional design to meet user or site needs shall be performed as indicated in the specific instructions. As a minimum, new design will be required in the following areas:

a. Exterior paving, grading, utilities and other site preparation beyond the 5-foot building line.

b. Foundation design.

c. Revision of the exterior finishes to insure the new design is compatible with surrounding structures and the installation design guide.

d. Rewriting specifications to update them to the latest criteria and to add any additional sections required by new design.

e. Verification that the wind, snow, seismic, heating, air conditioning, and energy conservation designs are appropriate for the proposed site.

28. ***HEALTH AND SAFETY STANDARDS.*** The facilities, systems and equipment design standards of the Occupational Safety and Health Act, Code of Federal Regulations, Title 29, Chapter XVII, Parts 1910 and 1926 as applicable will be incorporated into all engineering designs and analyses furnished pursuant to the A/E contract. Any problem in incorporating these standards due to conflict with other technical criteria will be promptly submitted to the Contracting Office for decision. The following categories correspond to OSHA citation criteria:

a. Category 1 - Imminent Danger: There is reasonable certainty that the hazard will cause death or serious physical harm (or catastrophic damage to property or equipment) either immediately or within a short period of time.

b. Category II - Serious Violation: There is substantial probability that death or serious physical harm (or major property or equipment damage) could result at some point in time from exposure.

c. Category III - Nonserious Violation: A hazard that could result in an accident or occupational illness, but probably not death or serious irreversible physical harm. A hazard that could cause substantial damage to property or equipment.

d. Category IV - DeMinimus Violation: A hazard which would probably not affect employee safety or health, but is nevertheless in violation of a specific standard. A hazard that could result in minor damage to property or equipment.

END OF SECTION

LIST OF EXHIBITS

SUBMITTAL DISTRIBUTION

L.I. _____, FY-__, _____, Fort _____

DESIGN PHASE		Code 3 Design			Concept/Early Prelim/Prelim Design				60% Design		Final Design					Corrected Final Design				
Submittal Items		Plans	Dgn Anal/ Narrative	Cost Est	Plans	Dgn Anal/ Narrative	Cost Est	Other	Plans	Cost Est	Plans	Spec	Dgn Anal/ Narrative	Cost Est	Other	Plans	Spec	Dgn Anal/ Narrative	Cost Est	Other
SAS Submittals																				
Design Branch	EN-D	1	1	0	1	1	0	0	1	0	1	1	1	0	0	0	0	0	0	0
Structural	EN-DAS	1	1	0	1	1	0	0	1	0	1	1	1	0	0	0	0	0	0	0
Architectural	EN-DAS	1	1	0	1	1	0	0	1	0	1	1	1	0	0	0	0	0	0	0
Interior Design	EN-DAS	1	1	0	1	1	0	0	1	0	1	1	1	0	0	0	0	0	0	0
Mechanical	EN-DEM	1	1	0	1	1	0	0	1	0	1	1	1	0	0	0	0	0	0	0
Energy Analysis	EN-DEM	1	1	0	1	1	0	0	1	0	1	1	1	0	0	0	0	0	0	0
Fire Protection	EN-DEM	1	1	0	1	1	0	0	1	0	1	1	1	0	0	0	0	0	0	0
Electrical	EN-DEM	1	1	0	1	1	0	0	1	0	1	1	1	0	0	0	0	0	0	0
Environmental	EN-DG	1	1	0	1	1	0	0	1	0	1	1	1	0	0	0	0	0	0	0
Site Development	EN-DG	1	1	0	1	1	0	0	1	0	1	1	1	0	0	0	0	0	0	0
Geotechnical	EN-GG	1	1	0	1	1	0	0	1	0	1	1	1	0	0	0	0	0	0	0
HTRW	EN-GH	1	1	0	1	1	0	0	1	0	1	1	1	0	0	0	0	0	0	0
Soils/Geotech	EN-GS	1	1	0	1	1	0	0	1	0	1	1	1	0	0	0	0	0	0	0
Cost Engineering	EN-EC	1	1	0	1	1	1	0	1	1	1	1	1	1	0	0	0	0	1	0
Specifications	EN-DGO	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0
CADD	EN-EP	1	0	0	1	0	0	0	1	0	1	0	0	0	0	0	0	0	0	0
Files	EN-ESF	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Project Manager	PM-M	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Construction	CD-QT	0	0	0	0	0	0	0	0	0	2	2	0	0	0	1	1	0	0	0
Value Engineer	EN-V	0	0	0	2	2	2	0	0	0	0	0	0	0	0	0	0	0	0	0
Originals (Full/Half Size)		0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	1	1
Subtotal		17	16	2	19	18	5	2	17	3	19	19	16	3	2	4	4	3	4	3
External Submittals																				
Installation		12	12	1	12	12	1	0	2	1	12	12	12	1	1	2	2	2	1	0
Area Engineer		1	1	0	1	1	0	0	0	0	2	2	0	0	0	1	1	0	0	0
USAISEC-CONUS		0	0	0	1	1	0	0	0	0	1	1	1	0	0	0	0	0	0	0
COS Design Agency		1	1	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Army Ctr of Excellence (Din Fac)		1	1	0	1	1	0	0	0	0	1	1	0	0	0	0	0	0	0	0
ITR Agency		0	0	0	0	0	0	0	0	0	1	1	1	0	0	1	1	1	0	0
MACOM		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
SAD		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
HQ USACE		1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
OACSIM		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Design A-E		3	3	1	3	3	1	1	3	1	3	3	3	1	1	0	0	0	0	0
Subtotal		19	19	3	19	19	2	1	5	2	20	20	17	2	3	4	4	3	1	0
Total		36	35	5	38	37	7	3	22	5	39	39	33	5	5	8	8	6	5	3

Predesign Checklist

LOCATION: _____ **DATE:** _____
FY: ____ **LINE NO.:** _____ **DESCRIPTION:** _____
DIRECTIVE NO.: _____ **DATE:** _____**SCOPE:** _____
BASIS OF DESIGN: ORIGINAL: ____ **DEFINITIVE:** ____ **SITE ADAPT:** ____

Item	Predesign	Concept	Preliminary	Final	Remarks
A. General Sitting: **(CESAS-PM)**					
1. Complies with Master Plan: _____	( )	( )	( )	( )	_____
2. Orientation: _____	( )	( )	( )	( )	_____
3. Clean Site:	( )	( )	( )	( )	_____
3.a. DPW letter on hand: _____	( )	( )	( )	( )	_____
4. Future Expansion: _____	( )	( )	( )	( )	_____
5. Relocation's: _____	( )	( )	( )	( )	_____
6. Demolition:	( )	( )	( )	( )	_____
6.a. By whom: _____	( )	( )	( )	( )	_____
6.b. Date: _____	( )	( )	( )	( )	_____
7. Real Estate Action: _____	( )	( )	( )	( )	_____
8. Phasing: _____	( )	( )	( )	( )	_____
9. Special working Restrictions: ____	( )	( )	( )	( )	_____
10. Special Problems: _____	( )	( )	( )	( )	_____
B. Criteria: **(CESAS-PM)**					
1. Approved Site Plan: _____	( )	( )	( )	( )	_____
2. Design Cost Target: _____	( )	( )	( )	( )	_____
3. Functional Dsgn Data: _____	( )	( )	( )	( )	_____
4. Engineering Inst.: _____	( )	( )	( )	( )	_____
5. Specific Inst.: _____	( )	( )	( )	( )	_____
C. Basic Information: **(CESAS-PM)**					
1. Topography: _____	( )	( )	( )	( )	_____
2. Existing Imp: _____	( )	( )	( )	( )	_____
3. Foundation Survey: _____	( )	( )	( )	( )	_____
4. As-Built Plans:	( )	( )	( )	( )	_____
4.a. Bldg.: _____	( )	( )	( )	( )	_____
4.b. Utilities: _____	( )	( )	( )	( )	_____
5. Utility Outage Req.: _____	( )	( )	( )	( )	_____
6. Street Crossing restr: _____	( )	( )	( )	( )	_____
7. Other Restrictions: _____	( )	( )	( )	( )	_____
D. Building (Structural): **(CESAS-EN-DAS)**					
1. Special Foundations: _____	( )	( )	( )	( )	_____
2. Special Loading: _____	( )	( )	( )	( )	_____
3. Framing: _____	( )	( )	( )	( )	_____

E. Building (Architectural): **(CESAS-EN-DAS)**

1. Type (AFM 88-15): _____ ( ) ( ) ( ) ( ) _____
1.a. "N": _____ ( ) ( ) ( ) ( ) _____
1.b. "C": _____ ( ) ( ) ( ) ( ) _____
1.c. Fire Resistive: _____ ( ) ( ) ( ) ( ) _____
2. Type AR 210-18: _____ ( ) ( ) ( ) ( ) _____
3. Type EM 1110-3-101: _____ ( ) ( ) ( ) ( ) _____
4. Construction Materials: ( ) ( ) ( ) ( ) _____
4.a. Optional dsgns: _____ ( ) ( ) ( ) ( ) _____
4.b. Departure frm plans: _____ ( ) ( ) ( ) ( ) _____
4.c. Special Reqs: _____ ( ) ( ) ( ) ( ) _____
5. Painting (Color Ref.): _____ ( ) ( ) ( ) ( ) _____
6. Security Features: _____ ( ) ( ) ( ) ( ) _____
6.a. Hardware: _____ ( ) ( ) ( ) ( ) _____
6.b. Penetration: _____ ( ) ( ) ( ) ( ) _____
6.c. Values: _____ ( ) ( ) ( ) ( ) _____
7. Master Keying: _____ ( ) ( ) ( ) ( ) _____
8. Materials in short supply: _____ ( ) ( ) ( ) ( ) _____
9. Mat long proc time: _____ ( ) ( ) ( ) ( ) _____
10. Other: _____ ( ) ( ) ( ) ( ) _____
_____ ( ) ( ) ( ) ( ) _____
_____ ( ) ( ) ( ) ( ) _____
_____ ( ) ( ) ( ) ( ) _____
_____ ( ) ( ) ( ) ( ) _____
_____ ( ) ( ) ( ) ( ) _____

F. Building (Mechanical): **(CESAS-EN-DEM)**

1. Heat., Vent., & Air Conditioning:
1.a. Type:
1.a.1. Heat _____ ( ) ( ) ( ) ( ) _____
1.a.2. Vent: _____ ( ) ( ) ( ) ( ) _____
1.a.3. A C: _____ ( ) ( ) ( ) ( ) _____
1.b. Controlling Design Factors:
_____ ( ) ( ) ( ) ( ) _____
1.c. Humidity: _____ ( ) ( ) ( ) ( ) _____
1.d. Temp Special Req.: _____ ( ) ( ) ( ) ( ) _____
1.e. Heat Generation of
Equipment (by room): _____ ( ) ( ) ( ) ( ) _____
1.f. Outside Air Req.: _____ ( ) ( ) ( ) ( ) _____
1.g. Diversity Factors: _____ ( ) ( ) ( ) ( ) _____
1.h. Personnel Loads: _____ ( ) ( ) ( ) ( ) _____
1.i. Type Fuel: _____ ( ) ( ) ( ) ( ) _____
1.j. Standby: _____ ( ) ( ) ( ) ( ) _____
1.k. Outage Requirements on
Existing Systems: _____
_____ ( ) ( ) ( ) ( ) _____
2. Steam: _____
_____
_____ ( ) ( ) ( ) ( ) _____
3. Refrigeration: _____
_____
_____ ( ) ( ) ( ) ( ) _____
4. Compressed Air: _____
_____

_____ ( ) ( ) ( ) ( ) _____

5. Controls: _____

_____

_____ ( ) ( ) ( ) ( ) _____

6. Venting: _____

_____

_____ ( ) ( ) ( ) ( ) _____

7. Special Access: _____

_____

_____ ( ) ( ) ( ) ( ) _____

8. Space Allocation: _____

_____

_____ ( ) ( ) ( ) ( ) _____

9. Separate Boiler Plant: _____ ( ) ( ) ( ) ( ) _____

10. Separate Equip. Room: _____ ( ) ( ) ( ) ( ) _____

11. Phasing Requirements: _____

_____

_____ ( ) ( ) ( ) ( ) _____

12. Optional Materials: _____

_____ ( ) ( ) ( ) ( ) _____

13. Plumbing:

13.a. Special Features: _____ ( ) ( ) ( ) ( ) _____

_____

13.b. Rough-in for equipment: ____ ( ) ( ) ( ) ( ) _____

_____

13.c. Fixtures: _____ ( ) ( ) ( ) ( ) _____

_____

13.d. Sumps: _____ ( ) ( ) ( ) ( ) _____

_____

13.e. Avail Pressure: _____ ( ) ( ) ( ) ( ) _____

_____

13.f. Optional Materials: _____ ( ) ( ) ( ) ( ) _____

_____

14. Sound Suppression: _____ ( ) ( ) ( ) ( ) _____

_____

15. Fire Protection:

15.a. Sprinklers:

15.a.1. Type: _____ ( ) ( ) ( ) ( ) _____

15.a.2. GPM: _____ ( ) ( ) ( ) ( ) _____

15.a.3. Demand: _____ ( ) ( ) ( ) ( ) _____

15.a.4. GPM: _____ ( ) ( ) ( ) ( ) _____

15.a.5. Storage: _____ ( ) ( ) ( ) ( ) _____

15.b. Hose racks: _____ ( ) ( ) ( ) ( ) _____

_____

15.c. Extinguishers: _____ ( ) ( ) ( ) ( ) _____

_____

15.d. Automatic: _____ ( ) ( ) ( ) ( ) _____

_____

15.e. Existing System: _____ ( ) ( ) ( ) ( ) _____

_____

15.e.1. Tie in Rqmts: _____ ( ) ( ) ( ) ( ) _____

_____

G. BUILDING (ELECTRICAL): **(CESAS-EN-DEM)**

Predesign Checklist

1. Lighting:
   1.a. Ineand: _____ ( ) ( ) ( ) ( ) _____
   1.b. Fluor: _____ ( ) ( ) ( ) ( ) _____
   1.c. Intensity: _____ ( ) ( ) ( ) ( ) _____
   1.d. Hazard areas: _____ ( ) ( ) ( ) ( ) _____
   1.e. Refrig areas: _____ ( ) ( ) ( ) ( ) _____
   1.f. High bay: _____ ( ) ( ) ( ) ( ) _____
   1.g. Low bay: _____ ( ) ( ) ( ) ( ) _____
   1.h. Special process
   (safelight, ultra violet, etc): ____ ( ) ( ) ( ) ( ) _____
   1.i. Controls (dimming,
   contactors, etc): _____ ( ) ( ) ( ) ( ) _____
   1.j. Wiring:
      1.j.1. Conduit: _____ ( ) ( ) ( ) ( ) _____
      1.j.2. Cable: _____ ( ) ( ) ( ) ( ) _____
      1.j.3. Trough: _____ ( ) ( ) ( ) ( ) _____
      1.j.4. Duct: _____ ( ) ( ) ( ) ( ) _____
      1.j.5. Bus: _____ ( ) ( ) ( ) ( ) _____
   1.k. Shock: _____ ( ) ( ) ( ) ( ) _____
   1.l. Shield: _____ ( ) ( ) ( ) ( ) _____
   1.m. Mount: _____ ( ) ( ) ( ) ( ) _____
   1.n. Phasing
   Requirements: _____ ( ) ( ) ( ) ( ) _____
   1.o. Optional materials: _____
   _____ ( ) ( ) ( ) ( ) _____

2. Power:
   2.a. Voltage: _____ ( ) ( ) ( ) ( ) _____
   2.b. Frequency: _____ ( ) ( ) ( ) ( ) _____
   2.c. Demand: _____ ( ) ( ) ( ) ( ) _____
   2.d. Loads: _____ ( ) ( ) ( ) ( ) _____
   2.e. Special outlets: _____ ( ) ( ) ( ) ( ) _____
   2.f. Transformers: _____ ( ) ( ) ( ) ( ) _____
   2.g. Rectifiers: _____ ( ) ( ) ( ) ( ) _____
   2.h. Generators: _____ ( ) ( ) ( ) ( ) _____
      2.h.1. Standby: _____ ( ) ( ) ( ) ( ) _____
      2.h.2. Micro power: _____ ( ) ( ) ( ) ( ) _____
   2.i. Transfer:
      2.i.1. Auto.: _____ ( ) ( ) ( ) ( ) _____
      2.i.2. Manual: _____ ( ) ( ) ( ) ( ) _____
   2.j. Shock: _____ ( ) ( ) ( ) ( ) _____
   2.k. Shielding: _____ ( ) ( ) ( ) ( ) _____
   2.l. Mounting: _____ ( ) ( ) ( ) ( ) _____
   2.m. GFE Ratings: _____ ( ) ( ) ( ) ( ) _____
   2.n. Outage Restrictions: _____ ( ) ( ) ( ) ( ) _____
   _____
   2.o. Optional Materials: _____ ( ) ( ) ( ) ( ) _____
   _____

3. Switches:
   3.a. Explosion proof: _____ ( ) ( ) ( ) ( ) _____
   3.b. Moisture proof: _____ ( ) ( ) ( ) ( ) _____

4. Special controls:
   4.a. Security: _____ ( ) ( ) ( ) ( ) _____
   4.b. Interlock: _____ ( ) ( ) ( ) ( ) _____

H. COMMUNICATIONS: **(CESAS-EN-DEM)**

1. Fire Alarm: ( ) ( ) ( ) ( ) _____
   1.a. Type:
      1.a.1. Auto.: _____ ( ) ( ) ( ) ( ) _____
      1.a.2. Manual: _____ ( ) ( ) ( ) ( ) _____
      1.a.3. Sprinkler: _____ ( ) ( ) ( ) ( ) _____
   1.b. Match exists: _____ ( ) ( ) ( ) ( ) _____
   1.c. Canceled: _____ ( ) ( ) ( ) ( ) _____
   1.d. Exposed: _____ ( ) ( ) ( ) ( ) _____
   1.e. Temp: _____ ( ) ( ) ( ) ( ) _____
   1.f. Smoke: _____ ( ) ( ) ( ) ( ) _____
   1.g. Flame: _____ ( ) ( ) ( ) ( ) _____
   1.h. C02: _____ ( ) ( ) ( ) ( ) _____
   1.i. Foam: _____ ( ) ( ) ( ) ( ) _____
   1.j. Halon: _____ ( ) ( ) ( ) ( ) _____
2. Intercom:
   2.a. Nurse call: _____ ( ) ( ) ( ) ( ) _____
   2.b. Dr. Paging: _____ ( ) ( ) ( ) ( ) _____
   2.c. PA: _____ ( ) ( ) ( ) ( ) _____
   2.d. Radio: _____ ( ) ( ) ( ) ( ) _____
   2.e. TV: _____ ( ) ( ) ( ) ( ) _____
   2.f. Phono: _____ ( ) ( ) ( ) ( ) _____
   2.g. Transcript: _____ ( ) ( ) ( ) ( ) _____
   2.h. Dict.: _____ ( ) ( ) ( ) ( ) _____
   2.i. Conduit only: _____ ( ) ( ) ( ) ( ) _____
   2.j. Complete: _____ ( ) ( ) ( ) ( ) _____

I. LIGHTNING PROTECTION: **(CESAS-EN-DEM)**

_____
_____ ( ) ( ) ( ) ( ) _____

J. CATHODIC PROTECTION: **(CESAS-EN-DEM)**

1. Existing: _____ ( ) ( ) ( ) ( ) _____
2. Soil Resistivity: _____ ( ) ( ) ( ) ( ) _____
3. Coverage: _____ ( ) ( ) ( ) ( ) _____

K. OUTSIDE ELECTRICAL: **(CESAS-EN-DEM)**

1. Primary:
   1.a. O'hd: _____ ( ) ( ) ( ) ( ) _____
   1.b. Under.: _____ ( ) ( ) ( ) ( ) _____
   1.c. Direct lay: _____ ( ) ( ) ( ) ( ) _____
   1.d. DuctS.: _____ ( ) ( ) ( ) ( ) _____
   1.e. Manholes: _____ ( ) ( ) ( ) ( ) _____
   1.f. Grounding: _____ ( ) ( ) ( ) ( ) _____
   1.g. Shielding: _____ ( ) ( ) ( ) ( ) _____
   1.h. Characteristics: _____
_____ ( ) ( ) ( ) ( ) _____
   1.i. Configuration: _____ ( ) ( ) ( ) ( ) _____
   1.j. Grounding: _____ ( ) ( ) ( ) ( ) _____
   1.h. Shielding: _____ ( ) ( ) ( ) ( ) _____
   1.i. Aluminum: _____ ( ) ( ) ( ) ( ) _____
   1.j. Copper: _____ ( ) ( ) ( ) ( ) _____
   1.k. Guying: _____ ( ) ( ) ( ) ( ) _____
   1.l. Relocate: _____ ( ) ( ) ( ) ( ) _____

_____

1.m. Phasing requirements: ( ) ( ) ( ) ( ) _____
_____
1.n. Optional Materials: ( ) ( ) ( ) ( ) _____
_____

2. Substation:
2.a. Mounting:
2.a.1 Pole: _____ ( ) ( ) ( ) ( ) _____
2.a.2. Pad: _____ ( ) ( ) ( ) ( ) _____
2.a.3. Transclosure: _____ ( ) ( ) ( ) ( ) _____
2.b. Voltage: _____ ( ) ( ) ( ) ( ) _____
2.c. Integrater: _____ ( ) ( ) ( ) ( ) _____
2.d. Grounding: _____ ( ) ( ) ( ) ( ) _____
2.e. Grading: _____ ( ) ( ) ( ) ( ) _____
2.f. Fencing: _____ ( ) ( ) ( ) ( ) _____
2.g. Signs: _____ ( ) ( ) ( ) ( ) _____
2.h. Other: _____ ( ) ( ) ( ) ( ) _____
_____
2.i. Phasing requirements: ____ ( ) ( ) ( ) ( ) _____
_____
2.j. Optional materials: _____ ( ) ( ) ( ) ( ) _____
_____

3. Secondary:
3.a. Size: _____ ( ) ( ) ( ) ( ) _____
3.b. Voltage: _____ ( ) ( ) ( ) ( ) _____
3.c. Voltage drop: _____ ( ) ( ) ( ) ( ) _____
3.d. Clearance: _____ ( ) ( ) ( ) ( ) _____
3.e. Insulators: _____ ( ) ( ) ( ) ( ) _____
3.f. Service drops: _____ ( ) ( ) ( ) ( ) _____
3.g. Type duct (und.): _____ ( ) ( ) ( ) ( ) _____
3.h. Stub-outs: _____ ( ) ( ) ( ) ( ) _____
3.i. Phasing reqs.: _____ ( ) ( ) ( ) ( ) _____
_____
3.j. Optional materials: _____ ( ) ( ) ( ) ( ) _____
_____

4. Street Lighting:
4.a. Pole:
4.a.1 Length: _____ ( ) ( ) ( ) ( ) _____
4.a.2. Class: _____ ( ) ( ) ( ) ( ) _____
4.a.3. Length mast: _____ ( ) ( ) ( ) ( ) _____
4.b. Mounting Ht.: _____ ( ) ( ) ( ) ( ) _____
4.c. Loc. of CCT on poles: _____ ( ) ( ) ( ) ( ) _____
4.d. Cable rating: _____ ( ) ( ) ( ) ( ) _____
4.e. Series: _____ ( ) ( ) ( ) ( ) _____
4.f. Lamp ratings: _____ ( ) ( ) ( ) ( ) _____
4.g. Transformation: _____ ( ) ( ) ( ) ( ) _____
4.h. Regulation: _____ ( ) ( ) ( ) ( ) _____
4.i. Light pattern: _____ ( ) ( ) ( ) ( ) _____
4.j. Control: _____ ( ) ( ) ( ) ( ) _____
4.k. Phasing reqs: _____
_____ ( ) ( ) ( ) ( ) _____
4.l. Optional materials: _____
_____ ( ) ( ) ( ) ( ) _____

5. Fence lighting:
5.a. Purpose:

5.a.1. In: _____ ( ) ( ) ( ) ( ) _____
5.a.2. Out: _____ ( ) ( ) ( ) ( ) _____
5.b. Security:
5.b.1. OH: _____ ( ) ( ) ( ) ( ) _____
5.b.2. UG: _____ ( ) ( ) ( ) ( ) _____
5.c. Circuitry: _____ ( ) ( ) ( ) ( ) _____
5.d. Fixture type: _____ ( ) ( ) ( ) ( ) _____
5.e. Control: _____ ( ) ( ) ( ) ( ) _____
5.f. Interference: _____ ( ) ( ) ( ) ( ) _____
6. Parking area lighting:
6.a. Pole protection: _____ ( ) ( ) ( ) ( ) _____
_____
6.b. Shielding from building: ___ ( ) ( ) ( ) ( ) _____
_____
6.c. Phasing: _____ ( ) ( ) ( ) ( ) _____
_____

K. WATER: **(CESAS-EN-DEM)**
1. Demand:
1.a. Domestic: _____ ( ) ( ) ( ) ( ) _____
1.b. Industrial: _____ ( ) ( ) ( ) ( ) _____
1.c. Fire: _____ ( ) ( ) ( ) ( ) _____
2. Storage: _____ ( ) ( ) ( ) ( ) _____
3. Treatment: _____ ( ) ( ) ( ) ( ) _____
4. Outage restrictions: _____ ( ) ( ) ( ) ( ) _____
_____
5. Optional materials: _____ ( ) ( ) ( ) ( ) _____
_____
6. Phasing requirements: _____ ( ) ( ) ( ) ( ) _____
_____

M. SEWAGE & IND. WASTE: **(CESAS-EN-DEM)**
1. Collection: _____ ( ) ( ) ( ) ( ) _____
_____
2. Treatment: _____ ( ) ( ) ( ) ( ) _____
_____
3. Disposal: _____ ( ) ( ) ( ) ( ) _____
_____
4. Outage Restrictions: _____ ( ) ( ) ( ) ( ) _____
_____
5. Optional Materials: _____ ( ) ( ) ( ) ( ) _____
_____
6. Phasing Requirements: _____ ( ) ( ) ( ) ( ) _____
_____

N. AGRONOMY: **(CESAS-EN-DG)**
1. Erosion Control: _____ ( ) ( ) ( ) ( ) _____
2. Shrubs: _____ ( ) ( ) ( ) ( ) _____
3. Grassing:
3.a. Seeding: _____ ( ) ( ) ( ) ( ) _____
3.b. Spot sod: _____ ( ) ( ) ( ) ( ) _____
3.c. Solid soil: _____ ( ) ( ) ( ) ( ) _____
4. Sprinklers: _____
_____ ( ) ( ) ( ) ( ) _____

O. WALKS: **(CESAS-EN-DG)**

1. Type: _____ ( ) ( ) ( ) ( ) _____
2. Width: _____ ( ) ( ) ( ) ( ) _____

P. ROADS & DRIVES: **(CESAS-EN-DG)**

1. Loading: _____ ( ) ( ) ( ) ( ) _____
2. Class: _____ ( ) ( ) ( ) ( ) _____
3. Width: _____ ( ) ( ) ( ) ( ) _____
4. Radii: _____ ( ) ( ) ( ) ( ) _____
5. Limit: _____ ( ) ( ) ( ) ( ) _____
6. Curbs: _____ ( ) ( ) ( ) ( ) _____
7. Gutters: _____ ( ) ( ) ( ) ( ) _____
8. Surface: _____ ( ) ( ) ( ) ( ) _____
9. Traffic Control: _____ ( ) ( ) ( ) ( ) _____
10. Temp. by pass req.: _____ ( ) ( ) ( ) ( ) _____
11. Phasing: _____ ( ) ( ) ( ) ( ) _____
12. Optional Materials: _____ ( ) ( ) ( ) ( ) _____

Q. PARKING AREA: **(CESAS-EN-DG)**

1. Size: _____ ( ) ( ) ( ) ( ) _____
2. Surface: _____ ( ) ( ) ( ) ( ) _____
3. Location: _____ ( ) ( ) ( ) ( ) _____
4. Access: _____ ( ) ( ) ( ) ( ) _____
5. Load: _____ ( ) ( ) ( ) ( ) _____
6. Angle: _____ ( ) ( ) ( ) ( ) _____

R. GRADING & DRAINAGE: **(CESAS-EN-DG)**

_____
_____
_____ ( ) ( ) ( ) ( ) _____

S. FENCING: **(CESAS-EN-DG)**

_____
_____
_____ ( ) ( ) ( ) ( ) _____

T. AIRFIELD PAVING: **(CESAS-EN-DG)**

1. Type: _____ ( ) ( ) ( ) ( ) _____
2. Alternate: _____ ( ) ( ) ( ) ( ) _____
3. Loading: _____ ( ) ( ) ( ) ( ) _____
4. Grade limitation: _____ ( ) ( ) ( ) ( ) _____
5. Overrun: _____ ( ) ( ) ( ) ( ) _____
6. Clearance: _____ ( ) ( ) ( ) ( ) _____
7. Blast pads: _____ ( ) ( ) ( ) ( ) _____
8. Blast deflectors: _____ ( ) ( ) ( ) ( ) _____
9. Warm-up pad: _____ ( ) ( ) ( ) ( ) _____
10. Shoulders: _____ ( ) ( ) ( ) ( ) _____
11. Painting, marking: _____ ( ) ( ) ( ) ( ) _____
12. Relocation's: _____ ( ) ( ) ( ) ( ) _____
13. Fencing: _____ ( ) ( ) ( ) ( ) _____
14. Hazard removal: _____ ( ) ( ) ( ) ( ) _____
15. Real estate: _____ ( ) ( ) ( ) ( ) _____
16. Anchors: _____ ( ) ( ) ( ) ( ) _____
17. Phones: _____ ( ) ( ) ( ) ( ) _____

18. Hydrants: _____ ( ) ( ) ( ) ( ) _____
19. Dust & erosion control: _____ ( ) ( ) ( ) ( ) _____
20. Overrun barriers: _____ ( ) ( ) ( ) ( ) _____
21. Lighting: _____ ( ) ( ) ( ) ( ) _____
22. Power: _____ ( ) ( ) ( ) ( ) _____
23. Navaids: _____ ( ) ( ) ( ) ( ) _____
24. Hydra Refuel: _____ ( ) ( ) ( ) ( ) _____
25. Special Criteria: _____ ( ) ( ) ( ) ( ) _____
26. Waivers: _____ ( ) ( ) ( ) ( ) _____
27. Construction Phasing: _____ ( ) ( ) ( ) ( ) _____

_____

U. SPOIL & BORROW AREA: **(CESAS-EN-DG)**

_____
_____
_____
_____ ( ) ( ) ( ) ( ) _____

V. DRAWINGS/SUBMITTALS: **(CESAS-EN-EP)**

1. Comply with Design Mn.: ___ ( ) ( ) ( ) ( ) _____
2. Drawings Legible: _____ ( ) ( ) ( ) ( ) _____
3. Reproducible Quality: _____ ( ) ( ) ( ) ( ) _____

W. ENVIRONMENTAL ISSUES: **(CESAS-PM-H)**

1. HTRW Concerns: ____ ( ) ( ) ( ) ( ) _____
2. Air/Water/Noise Pollution & Abatement:_____ ( ) ( ) ( ) ( ) _____
3. Other Environmental Impacts to Include Wetlands:_____ ( ) ( ) ( ) ( ) _____

X. SPECIAL REQUIREMENTS: **(CESAS-EP)**

1. Studies & Investigations: ____ ( ) ( ) ( ) ( ) _____

_____

2. Specintact Training for AE ____

3. MCASES Training f/AE: ____

4. Utility Tie-ins: _____ ( ) ( ) ( ) ( ) _____

_____

5. Expansion Consideration: ___ ( ) ( ) ( ) ( ) _____

_____

6. GFE:
   - 6.a. List: _____ ( ) ( ) ( ) ( ) _____
   - 6.b. Responsibility: _____ ( ) ( ) ( ) ( ) _____
   - 6.c. Availability: _____ ( ) ( ) ( ) ( ) _____
7. Additive Item Priority: _____ ( ) ( ) ( ) ( ) _____
8. Special Use Criteria: _____ ( ) ( ) ( ) ( ) _____
9. Source: _____ ( ) ( ) ( ) ( ) _____
10. Special App./Concurrence: __

_____ ( ) ( ) ( ) ( ) _____

11. Operating Manuals: _____ ( ) ( ) ( ) ( ) _____
12. Oper Training: _____ ( ) ( ) ( ) ( ) _____

13. Utilities Service Contracts: ___ ( ) ( ) ( ) ( ) _____

_____ ( ) ( ) ( ) ( ) _____

14. Cost Limitations: _____
15. Est. Cost vs. Program Amounts: ( ) ( ) ( ) ( ) _____
_____
16. Real Estate:
16.a. Acquisition: _____ ( ) ( ) ( ) ( ) _____
16.b. Entry: _____ ( ) ( ) ( ) ( ) _____
16.c. Permits: _____ ( ) ( ) ( ) ( ) _____
17. Utility Service Outages: _____ ( ) ( ) ( ) ( ) _____
_____
18. Project Office Space: _____ ( ) ( ) ( ) ( ) _____
_____
19. Construction Phasing: _____ ( ) ( ) ( ) ( ) _____
_____
19. Security Clearance
for Personnel: _____ ( ) ( ) ( ) ( ) _____
_____
20. Avail Utilities for Construction: ( ) ( ) ( ) ( ) _____
_____
21. Justification for Short
Construction Period: _____ ( ) ( ) ( ) ( ) _____
_____
_____
22. Justification for
Restrictive Items: _____ ( ) ( ) ( ) ( ) _____
_____
23. Solicitation Advertisement Method
23a. EBS on CD only/paper for field ( ) _____
23b. EBS CD and Internet / Paper for field ( ) _____

24. Other: _____ ( ) ( ) ( ) ( ) _____
_____
_____
_____

The undersigned agree that this document represent the agreements reached and the understanding of the scope at the indicated stage. Conditions or requirements may change due to circumstances beyond the control of this parties.

ATTENDANTS: Name Office Symbol/Org Tel No./Fax No. E-Mail Address
Project Manager: _____
Technical Manager: _____
Installation DPW/BCE: _____
MAJCOM: _____
Area/Resident Engineer: _____
Designer (A-E): _____
Others: Name Office Symbol/Org Tel No./Fax No. E-Mail Address
_____

(DATE) _____

MEMORANDUM FOR RECORD

SUBJECT: Report of Field Visit to _____

Project: _____, L.I. _____, FY-_____

AE Contract Number

_____

1. Time of Visit:

2. Place:

3. Purpose of Visit:

4. Persons Contacted and Making Inspections:

5. Specific Matters Considered:

6. Summary:

7. Instructions Issued and Commitments Made:

8. Comments and/or Recommendations:

SIGNATURE: _____

TITLE: _____

SAMPLE REPORT OF FIELD VISIT

EXHIBIT 4

PAYMENT ESTIMATE
CONTRACT PERFORMANCE
(ENG FORM 93)

SAMPLE

PAYMENT ESTIMATE – CONTRACT PERFORMANCE

For use of this form, see ER 37-2-10 and ER 37-345-10.

1. DATE: 10 July 1987

SHEET 1 of 1

2. CONTRACTOR AND ADDRESS: Smith, Brown and Jones Inc. 200 East St. Julian Street, Savannah, Georgia 31401

3. CONTRACT NO.: DACA21-83-C-0200

4. DISTRICT: Savannah

5. DESCRIPTION OF WORK: Architect-Engineer Services (or Engineering Svs)

6. APPROPRIATION AND PROJECT: Cy Appropriation # from contract

7. REQUIRED COMPLETION DATE: N/A

8. LOCATION: Fort State

9. PERIOD COVERED BY THIS ESTIMATE: FROM ____ THRU ____

10. JOB ORDER NO.: N/A

11. ESTIMATE NO.: Start w/1"

ITEM NO. a	DESCRIPTION b	CONTRACT QUANTITY AND UNIT c	CONTRACT UNIT PRICE d	CONTRACT AMOUNT e	TOTAL TO DATE QUANTITY AND UNIT f	TOTAL TO DATE AMOUNT g
	Design of (Name of project as shown on the contract)			(Copy from contract)	(Percentage of completion)	(Cumulative Earnings)
	Phase I, Concept Design	-	LS		%	
	Phase II, (Option), Final Dsg	-	LS		%	
	Modification No. P00001	-	LS		%	

I CERTIFY THAT THIS BILL IS CORRECT AND JUST AND PAYMENT HAS NOT BEEN RECEIVED

INCLUDES MODIFICATION THRU: TOTAL CONTRACT → $ TOTAL EARNINGS TO DATE → $

12. PRESENTED FOR PAYMENT

PAYEE (Type name of Firm as shown on contract)

PER (signature of official)

DATE

TITLE (Title of official Signing)

13. APPROVED FOR PAYMENT

I CERTIFY that I have checked the quantities covered by this bill or estimate; that the work was actually performed; that the quantities are correct and consistent with all previous computations as actually checked; that the quantities and amounts are wholly consistent with the requirements of the contract or other instrument involved.

SIGNATURE THIS SPACE RESERVED FOR SAVANNAH DISTRICT APPROVALS AND SIGNATURES

TITLE

DATE

CONTRACTING OFFICER APPROVAL (Signature)

DATE

14.A. PREVIOUS DEDUCTIONS OTHER THAN RETAINED PERCENTAGE**	0
B. PREVIOUS RETAINED PERCENTAGE	
C. PREVIOUS PAYMENTS	
D. PREVIOUS EARNINGS (A+B+C)	
E. EARNINGS THIS PERIOD (TOTAL EARNINGS TO DATE MINUS D)	
F. LESS RETAINED PERCENTAGE	
G. LESS DEDUCTION OTHER THAN RETAINED PERCENTAGE FOR	0
H. TOTAL DEDUCTIONS THIS PERIOD (F+G)	
I. RETAINAGE REFUNDED	
J. OTHER REFUNDS	0
K. TOTAL REFUNDS THIS PERIOD	
L. AMOUNT DUE CONTRACTOR (E-H+K)	
15. RECAPITULATION:	
TOTAL RETAINED PCTG. (B+F-I) $.	TOTAL PAID (C+L) $

ENG FORM 1 MAR '78 '93 PREVIOUS EDITION OF THIS FORM IS OBSOLETE

**USE REVERSE SIDE FOR DETAILED EXPLANATION AND/OR REMARKS

ENG FORM 93

1. Submit original and 1 signed copy.
2. Be sure to include the following statement on each request for payment:
"I CERTIFY THAT THIS BILL IS CORRECT AND JUST AND PAYMENT HAS NOT BEEN RECEIVED."
3. Send ENG Form 93 to the following address:
Commander, U.S. Army Engineer District, Savannah, ATTN: (Appropriate Project Manager), P.O. Box 889, Savannah, GA 31402

PAYMENT ESTIMATE – CONTRACT PERFORMANCE

SAMPLE

For use of this form, see ER 37-2-10 and ER 37-345-10.

1. DATE	10 July 1987
SHEET	1 of 1
2. CONTRACTOR AND ADDRESS	Smith, Brown and Jones, Inc. 201 East St. Julian Street, Savannah, GA 31401
3. CONTRACT NO.	DACA21-83-C-0200
4. DISTRICT	Savannah
5. DESCRIPTION OF WORK	Architect-Engineer Services
6. APPROPRIATION AND PROJECT	2192050 908-9223 P6300.2000-2570 S09133
7. REQUIRED COMPLETION DATE	N/A
8. LOCATION	Fort Benning, GA
9. PERIOD COVERED BY THIS ESTIMATE	FROM 1 May 87 THRU 30 Jun 87
10. JOB ORDER NO.	N/A
11. ESTIMATE NO.	1

ITEM NO. a	DESCRIPTION b	CONTRACT: QUANTITY AND UNIT c	CONTRACT: UNIT PRICE d	CONTRACT: AMOUNT e	TOTAL TO DATE: QUANTITY AND UNIT f	TOTAL TO DATE: AMOUNT g
	Design of Military Operations in Built-up Areas					
	Phase I, Concept Design	-	LS	25,250.00	75%	18,938.00
	Phase II (Option), Final Design	-	LS	55,000.00	0%	0
	I CERTIFY THAT THIS BILL IS CORRECT AND JUST AND PAYMENT HAS NOT BEEN RECEIVED					
INCLUDES MODIFICATION THRU:		TOTAL CONTRACT →		$ 80,250.00	TOTAL EARNINGS TO DATE →	$ 18,938.00

12. PRESENTED FOR PAYMENT

PAYEE	PER
Smith, Brown and Jones Inc.	
DATE: 10 July 1987	TITLE: Vice-President

13. APPROVED FOR PAYMENT

I CERTIFY that I have checked the quantities covered by this bill or estimate; that the work was actually performed; that the quantities are correct and consistent with all previous computations as actually checked; that the quantities and amounts are wholly consistent with the requirements of the contract or other instrument involved.

SIGNATURE	TITLE	DATE

CONTRACTING OFFICER APPROVAL (Signature) | DATE

14.		
A. PREVIOUS DEDUCTIONS OTHER THAN RETAINED PERCENTAGE**	0	
B. PREVIOUS RETAINED PERCENTAGE	0	
C. PREVIOUS PAYMENTS	0	
D. PREVIOUS EARNINGS (A+B+C)		0
E. EARNINGS THIS PERIOD (TOTAL EARNINGS TO DATE MINUS D)		18,938.00
F. LESS RETAINED PERCENTAGE 10% *	1,894.00	
G. LESS DEDUCTION OTHER THAN RETAINED PERCENTAGE FOR	0	
H. TOTAL DEDUCTIONS THIS PERIOD (F+G)		1,894.00
I. RETAINAGE REFUNDED	0	
J. OTHER REFUNDS		
K. TOTAL REFUNDS THIS PERIOD		0
L. AMOUNT DUE CONTRACTOR (E-H+K)		17,044.00

15. RECAPITULATION: TOTAL RETAINED PCTS. (B+F-I) $ | TOTAL PAID (C+L) $

ENG FORM 93, MAR 70 PREVIOUS EDITION OF THIS FORM IS OBSOLETE

**USE REVERSE SIDE FOR DETAILED EXPLANATION AND OR REMARKS

TYPICAL SAMPLE - CONCEPT DESIGN COMPLETE BUT NOT REVIEWED

NOTE: Use this example with the concept or preliminary design submittal. No more than 75% less 10% retainage for small business or 20% for large busine will be paid until project is reviewed and accepted. Use this payment estimate example if immediate payment is desired prior to review approval and acceptance.

* - 10% Small Business or 20% Large Business

SAMPLE

PAYMENT ESTIMATE — CONTRACT PERFORMANCE

2. CONTRACTOR AND ADDRESS: Smith, Brown and Jones Inc., 200 East St. Julian Street, Savannah, GA 31401	3. CONTRACT NO.: DACA21-83-C-0200	1. DATE: 10 July 1987	SHEET 1 of 1
5. DESCRIPTION OF WORK: Architect-Engineer Services	6. APPROPRIATION AND FUNDS: 2192050 948-9223 P6300.2000-2570	4. DISTRICT: Savannah	7. REQUIRED COMPLETION DATE: N/A
8. LOCATION: Fort Bennig, GA	9. PERIOD COVERED BY THIS ESTIMATE: FROM 1 May 87 THRU 30 Jun 87	10. JOB ORDER NO.: N/A	11. ESTIMATE NO.: 2

ITEM NO. a	DESCRIPTION b	CONTRACT QUANTITY AND UNIT c	CONTRACT UNIT PRICE d	CONTRACT AMOUNT e	TOTAL TO DATE QUANTITY AND UNIT f	TOTAL TO DATE AMOUNT g
	Design of Military Operations in Built-up Areas					
	Phase I, Concept Design	-	LS	25,250.00	100%	25,250.00
	Phase II (Option), Final Design	-	LS	55,000.00	0%	0
	I CERTIFY THAT THIS BILL IS CORRECT AND JUST AND PAYMENT HAS NOT BEEN RECIEVED					

INCLUDES MODIFICATION THRU: TOTAL CONTRACT $ 80,250.00 TOTAL EARNINGS TO DATE $ 25,250.00

12. PRESENTED FOR PAYMENT

PAYEE: Smith, Brown and Jones, Inc. PER:

DATE: 10 July 1987 TITLE: Vice-President

13. APPROVED FOR PAYMENT

I CERTIFY that I have checked the quantities covered by this bill or estimate; that the work was actually performed; that the quantities are correct and consistent with all previous computations as actually checked; that the quantities and amounts are wholly consistent with the requirements of the contract or other instrument involved.

SIGNATURE | TITLE | DATE

CONTRACTING OFFICER APPROVAL (Signature) | DATE

14.		
A. PREVIOUS DEDUCTIONS OTHER THAN RETAINED PERCENTAGE		
B. PREVIOUS RETAINED PERCENTAGE	1,894.00	
C. PREVIOUS PAYMENTS	17,044.00	
D. PREVIOUS EARNINGS (A+B+C)		18,938.00
E. EARNINGS THIS PERIOD (TOTAL EARNINGS TO DATE MINUS D)		6,312.00
F. LESS RETAINED PERCENTAGE 10%	631.00	
G. LESS DEDUCTION OTHER THAN RETAINED PERCENTAGE FOR	0	
H. TOTAL DEDUCTIONS THIS PERIOD (F+G)		631.00
I. RETAINAGE REFUNDED	0	
J. OTHER REFUNDS		
K. TOTAL REFUNDS THIS PERIOD		0
L. AMOUNT DUE CONTRACTOR (E-H+K)		5,681.00

15. RECAPITULATION: TOTAL RETAINED TO DATE (B+F-I) $ 2,525.00 TOTAL PAID (C+L) $ 22,725.00

ENG FORM 93, 1 MAR 78 — PREVIOUS EDITION OF THIS FORM IS OBSOLETE — *USE REVERSE SIDE FOR DETAILED EXPLANATION AND OR REMARKS

TYPICAL SAMPLE - RETAINACE RELEASE FOR CONCEPT DESIGN

NOTE: Use this example when the preliminary or concept design has been submitted, reviewed, and accepted with corrections to be made during the final design. (Retainage will be refunded only after NTP has been issued on Phase # or corrections have been made to the concept design documents.)

This pay estimate No. 2 may be submitted as early as pay estimate No. 1 however, will not be processed until submittal has been reviewed, approved, and accepted. This will require approximately 30 days.

SAMPLE PAYMENT ESTIMATE – CONTRACT PERFORMANCE
For use of this form, see ER 37-2-10 and ER 37-345-10.

1. DATE	10 July 1987
SHEET	1 of 1
2. CONTRACTOR AND ADDRESS	Smith, Brown, and Jones, Inc. 200 East St. Julian Street, Savannah, GA 31401
3. CONTRACT NO.	DACA21-83-C-0200
4. DISTRICT	Savannah
5. DESCRIPTION OF WORK	Architect-Engineer Services
6. APPROPRIATION AND PROJECT	2192050 908-9223 P6300.2000-2570 S09133
7. REQUIRED COMPLETION DATE	N/A
8. LOCATION	Fort Benning, Georgia
9. PERIOD COVERED BY THIS ESTIMATE	FROM 1 May 87 THRU 30 Jun 87
10. JOB ORDER NO.	N/A
11. ESTIMATE NO.	3

ITEM NO. a	DESCRIPTION b	CONTRACT: QUANTITY AND UNIT c	CONTRACT: UNIT PRICE d	CONTRACT: AMOUNT e	TOTAL TO DATE: QUANTITY AND UNIT f	TOTAL TO DATE: AMOUNT g
	Design of Military Operations in Built-up Areas					
	Phase I, Concept Design	-	LS	25,250.00	100%	25,250.00
	Phase II, (Option), Final Design	-	LS	55,000.00	45%	24,750.00
	I CERTIFY THAT THIS BILL IS CORRECT AND JUST AND PAYMENT HAS NOT BEEN RECEIVED.					
INCLUDES MODIFICATION THRU		TOTAL CONTRACT →		$80,250.00	TOTAL EARNINGS TO DATE →	$50,000.00

12. PRESENTED FOR PAYMENT
PAYEE: Smith, Brown and Jones, Inc.
PER:
DATE:
TITLE: Vice-President

13. APPROVED FOR PAYMENT
I CERTIFY that I have checked the quantities covered by this bill or estimate; that the work was actually performed; that the quantities are correct and consistent with all previous computations as actually checked; that the quantities and amounts are wholly consistent with the requirements of the contract or other instrument involved.

SIGNATURE	TITLE	DATE

CONTRACTING OFFICER APPROVAL (Signature) | DATE

14.		
A. PREVIOUS DEDUCTIONS OTHER THAN RETAINED PERCENTAGE**	0	
B. PREVIOUS RETAINED PERCENTAGE	2,525.00	
C. PREVIOUS PAYMENTS	22,725.00	
D. PREVIOUS EARNINGS (A+B+C)		25,250.00
E. EARNINGS THIS PERIOD (TOTAL EARNINGS TO DATE MINUS D) 10%		24,750.00
F. LESS RETAINED PERCENTAGE	2,475.00	
G. LESS DEDUCTION OTHER THAN RETAINED PERCENTAGE FOR	0	
H. TOTAL DEDUCTIONS THIS PERIOD (F+G)		2,475.00
I. RETAINAGE REFUNDED	2,525.00	
J. OTHER REFUNDS	0	
K. TOTAL REFUNDS THIS PERIOD		2,525.00
L. AMOUNT DUE CONTRACTOR (E-H+K)		24,800.00

15. RECAPITULATION:
TOTAL RETAINED PCTG. (B+F-I) $ 2,475.00 TOTAL PAID (C+L) $ 47,525.00

ENG FORM 1 MAR 78 93 PREVIOUS EDITION OF THIS FORM IS OBSOLETE
**USE REVERSE SIDE FOR DETAILED EXPLANATION AND/OR REMARKS

TYPICAL SAMPLE - PARTIAL PAYMENT OF FINAL DESIGN

NOTE: Use this example for partial payment of final design. No more than 75% will be paid on progress to date on final design less 10% or 20% retainage. Progress to date in this case will be 60% (75% x 60% = 45%)

* - 10% Small Business or 20% Large Business

SAMPLE

PAYMENT ESTIMATE – CONTRACT PERFORMANCE
For use of this form, see ER 37-2-10 and ER 37-345-10.

1. DATE	10 July 1987
SHEET	1 of 1
2. CONTRACTOR AND ADDRESS	Smith, Brown and Jones Inc. 200 East St. Julian Street, Savannah, Georgia 31401
3. CONTRACT NO.	DACA21-83-C-0200
4. DISTRICT	Savannah
5. DESCRIPTION OF WORK	Architect-Engineer Services
6. APPROPRIATION AND PROJECT	2192000 508-9223 P6300.2000-2570 S09133
7. REQUIRED COMPLETION DATE	N/A
8. LOCATION	Fort Benning, Georgia
9. PERIOD COVERED BY THIS ESTIMATE	FROM 1 May 87 THRU 30 Jun 87
10. JOB ORDER NO.	N/A
11. ESTIMATE NO.	4

ITEM NO. a	DESCRIPTION b	CONTRACT: QUANTITY AND UNIT c	CONTRACT: UNIT PRICE d	CONTRACT: AMOUNT e	TOTAL TO DATE: QUANTITY AND UNIT f	TOTAL TO DATE: AMOUNT g
	Design of Military Operation in Built-up Areas					
	Phase I, Concept Design	-	LS	25,250.00	100%	25,250.00
	Phase II (Option), Final Design	-	LS	55,000.00	75%	41,250.00
	I CERTIFY THAT THIS BILL IS CORRECT AND JUST AND PAYMENT HAS NOT BEEN RECEIVED					
INCLUDES MODIFICATION THRU:		TOTAL CONTRACT →		$ 80,250.00	TOTAL EARNINGS TO DATE →	$ 66,500.00

12. PRESENTED FOR PAYMENT		14.		
PAYEE: Smith, Brown and Jones, Inc.	PER	A. PREVIOUS DEDUCTIONS OTHER THAN RETAINED PERCENTAGE**	0	
		B. PREVIOUS RETAINED PERCENTAGE	2,475.00	
		C. PREVIOUS PAYMENTS	47,525.00	
DATE: 10 July 1987	TITLE: Vice-President	D. PREVIOUS EARNINGS (A+B+C)		50,000.00
13. APPROVED FOR PAYMENT		E. EARNINGS THIS PERIOD (TOTAL EARNINGS TO DATE MINUS D) 10%		16,500.00
I CERTIFY that I have checked the quantities covered by this bill or estimate; that the work was actually performed; that the quantities are correct and consistent with all previous computations as actually checked; that the quantities and amounts are wholly consistent with the requirements of the contract or other instruments involved.		F. LESS RETAINED PERCENTAGE	1,650.00	
		G. LESS DEDUCTION OTHER THAN RETAINED PERCENTAGE FOR	0	
		H. TOTAL DEDUCTIONS THIS PERIOD (F+G)		1,650.00
SIGNATURE / TITLE / DATE		I. RETAINAGE REFUNDED	0	
		J. OTHER REFUNDS	0	
		K. TOTAL REFUNDS THIS PERIOD		0
		L. AMOUNT DUE CONTRACTOR (E-H+K)		14,850.00
CONTRACTING OFFICER APPROVAL (Signature)	DATE	15. RECAPITULATION: TOTAL RETAINED PCTG. (B+F-I) $4,125.00	TOTAL PAID (C+L) $ 62,375.00	

ENG FORM 1 MAR 78 99 — PREVIOUS EDITION OF THIS FORM IS OBSOLETE — **(SEE REVERSE SIDE FOR DETAILED EXPLANATION AND OR REMARKS)

TYPICAL SAMPLE - FINAL DESIGN COMPLETE BUT NOT REVIEWED

NOTE: Use this example with submittal of unreviewed final submittal. No more than 75% less 10% retainage for Small Business or 20% for Large Business will be paid until project is reviewed and accepted.

10% Small Business or 20% Large Business

SAMPLE

PAYMENT ESTIMATE – CONTRACT PERFORMANCE
For use of this form, see ER 37-2-10 and ER 37-345-10.

2. CONTRACTOR AND ADDRESS: Smith, Brown and Jones Inc. 200 East St. Julian Street, Savannah, Georgia 31401		3. CONTRACT NO. DACA21-83-C-0200		1. DATE 10 July 1987		SHEET 1 of 1
5. DESCRIPTION OF WORK: Architect-Engineer Services		6. APPROPRIATION AND PROJECT 2192050 908-9223 P6300.2000-2570 S09133			4. DISTRICT Savannah	7. REQUIRED COMPLETION DATE N/A
8. LOCATION: Fort Benning, Georgia		9. PERIOD COVERED BY THIS ESTIMATE FROM 1 May 87 THRU 30 Jun 87		10. JOB ORDER NO. N/A		11. ESTIMATE NO. 5

ITEM NO. a	DESCRIPTION b	CONTRACT QUANTITY AND UNIT c	CONTRACT UNIT PRICE d	CONTRACT AMOUNT e	TOTAL TO DATE QUANTITY AND UNIT f	TOTAL TO DATE AMOUNT g
	Design of Military Operations in Built-up Areas					
	Phase I, Concept Design	-	LS	25,250.00	100%	25,250.00
	Phase II (Option), Final Design	-	LS	55,000.00	100%	55,000.00

I CERTIFY THAT THIS BILL IS CORRECT AND JUST AND PAYMENT HAS NOT BEEN RECEIVED

INCLUDES MODIFICATION THRU. TOTAL CONTRACT → $ 80,250.00 TOTAL EARNINGS TO DATE → $ 80,250.00

12. PRESENTED FOR PAYMENT	14. A. PREVIOUS DEDUCTIONS OTHER THAN RETAINED PERCENTAGE**	0	
PAYEE: Smith, Brown and Jones Inc. FOR:	B. PREVIOUS RETAINED PERCENTAGE	4,125.00	
DATE: 10 July 1987 TITLE: Vice-President	C. PREVIOUS PAYMENTS	62,375.00	
	D. PREVIOUS EARNINGS (A+B+C)		66,500.00
13. APPROVED FOR PAYMENT	E. EARNINGS THIS PERIOD (TOTAL EARNINGS TO DATE MINUS D)		13,750.00
I CERTIFY that I have checked the quantities covered by this bill or estimate; that the work was actually performed; that the quantities are correct and consistent with all previous computations as actually checked; that the quantities and amounts are wholly consistent with the requirements of the contract or other instrument involved.	F. LESS RETAINED PERCENTAGE 10%	1,375.00	
	G. LESS DEDUCTION OTHER THAN RETAINED PERCENTAGE FOR	0	
	H. TOTAL DEDUCTIONS THIS PERIOD (F+G)		1,375.00
SIGNATURE / TITLE / DATE	I. RETAINAGE REFUNDED	0	
	J. OTHER REFUNDS	0	
	K. TOTAL REFUNDS THIS PERIOD		12,375.00
CONTRACTING OFFICER APPROVAL (Signature) / DATE	L. AMOUNT DUE CONTRACTOR (E-H+K)		74,750.00
	15. RECAPITULATION: TOTAL RETAINED PERC. (B+F-I) $ 5,500.00 TOTAL PAID (C+L) $ 74,750.00		

ENG FORM 1 MAR 70 93 — PREVIOUS EDITION OF THIS FORM IS OBSOLETE — **(USE REVERSE SIDE FOR DETAILED EXPLANATION AND/OR REMARKS)

REDUCED TO 10% AFTER FINAL REVIEW IS COMPLETE AND SATISFACTORY

NOTE: Use this example if payment is desired after final design has been reviewed, approved, and accepted subject to comments and corrections to be made.

* – 10% for Small Business – 20% for Large Business

This pay estimate No. 5 may be submitted as early as pay estimate No. 4 but will not be processed for payment until final desigg has been reviewed and accepted. This will require approximately 30 days.

SAMPLE

PAYMENT ESTIMATE — CONTRACT PERFORMANCE

For use of this form, see ER 37-345-?? and ER 37-2-10.

1. DATE: 10 July 2987 — SHEET 1 of 1

2. CONTRACTOR AND ADDRESS: Smith, Brown and Jones Inc., 200 East St. Julian Street, Savannah, GA 31401

3. CONTRACT NO.: DACA21-83-C-0200

4. DISTRICT: Savannah

5. DESCRIPTION OF WORK: Architect-Engineer Services

6. APPROPRIATION AND ALLOTMENT: 2192050 908 P6300.2000-2570

7. REQUISITION NO.: 609133 — CONTRACT COMPLETION DATE: N/A

8. LOCATION: Fort Benning, GA

9. PERIOD COVERED BY THIS ESTIMATE: FROM 1 May 87 THRU 30 Jun 87

10. JOB ORDER NO.: N/A — 11. ESTIMATE NO.: 6

ITEM NO. a	DESCRIPTION b	CONTRACT QUANTITY OR UNIT c	CONTRACT UNIT PRICE d	CONTRACT AMOUNT e	TOTAL TO DATE QUANTITY AND UNIT f	TOTAL TO DATE AMOUNT g
	Design of Military Operation in Built-up Areas					
	Phase I, Concept Design	-	LS	25,250.00	100%	25,250.00
	Phase II (Option), Final Design	-	LS	55,000.00	100%	55,000.00

I CERTIFY THAT THIS BILL IS CORRECT AND JUST AND PAYMENT HAS NOT BEEN RECEIVED

INCLUDES MODIFICATION THRU:

TOTAL CONTRACT → $80,250.00 — TOTAL EARNINGS TO DATE → $80,250.00

12. PRESENTED FOR PAYMENT

PAYEE: Smith, Brown and Jones, Inc. — PER:

DATE: 10 July 1987 — TITLE: Vice-President

13. APPROVED FOR PAYMENT

I CERTIFY that I have checked the quantities covered by this bill or estimate; that the work was actually performed; that the quantities are correct and consistent with all previous computations so actually checked; that the quantities and amounts are wholly consistent with the requirements of the contract or other instrument involved.

SIGNATURE — TITLE — DATE

CONTRACTING OFFICER APPROVAL (Signature) — DATE

14.		
A. PREVIOUS DEDUCTIONS OTHER THAN RETAINED PERCENTAGE	0	
B. PREVIOUS RETAINED PERCENTAGE	5,500.00	
C. PREVIOUS PAYMENTS	74,750.00	
D. PREVIOUS EARNINGS (A+B+C)		80,250.00
E. EARNINGS THIS PERIOD (TOTAL EARNINGS TO DATE MINUS D)		0
F. LESS RETAINED PERCENTAGE	0	
G. LESS DEDUCTION OTHER THAN RETAINED PERCENTAGE FOR	0	
H. TOTAL DEDUCTIONS THIS PERIOD (F+G)		0
I. RETAINAGE REFUNDED	5,400.00	
J. OTHER REFUNDS	0	
K. TOTAL REFUNDS THIS PERIOD		5,400.00
L. AMOUNT DUE CONTRACTOR (E-H+K)		5,400.00

15. RECAPITULATION: TOTAL RETAINED PCTG. (B+F-I) = 100.00 — TOTAL PAID (C+L) $

ENG FORM 1 MAR 78 93 — PREVIOUS EDITION OF THIS FORM IS OBSOLETE — (USE REVERSE SIDE FOR DETAILED EXPLANATION AND OR REMARKS)

TYPICAL SAMPLE - RETAINAGE RELEASED FOR CONCEPT DESIGN

NOTE: Use this example for payment after all design is complete and no corrections required.

* $100.00 retainage is required to keep the contract open

SAMPLE

PAYMENT ESTIMATE – CONTRACT PERFORMANCE
For use of this form, see ER 37-345-10.

2. CONTRACTOR AND ADDRESS: Smith, Brown and Jones Inc. 200 East St. Julian Street, Savannah, GA 31401	1. DATE: 10 July 1987	SHEET 1 of 1	
5. DESCRIPTION OF WORK: Architect-Engineer Services	3. CONTRACT NO.: DACA21-83-C-0200	4. DISTRICT: Savannah	
8. LOCATION: Fort Benning, GA	6. APPROPRIATION AND PROJECT: 2192050 908-9223 P6300.2000-2570	S09133	7. REQUIRED COMPLETION DATE: N/A
	9. PERIOD COVERED BY THIS ESTIMATE: FROM 1 May 87 THRU 30 Jun 87	10. JOB ORDER NO.: N/A	11. ESTIMATE NO.: 7

ITEM NO. a	DESCRIPTION b	CONTRACT: QUANTITY AND UNIT c	CONTRACT: UNIT PRICE d	CONTRACT: AMOUNT e	TOTAL TO DATE: QUANTITY AND UNIT f	TOTAL TO DATE: AMOUNT g
	Design of Military Operation in Built-up Areas					
	Phase I, Concept Design	-	LS	25,250.00	100%	25,250.00
	Phase II (Option), Final Design	-	LS	55,000.00	100%	55,000.00
	I CERTIFY THAT THIS BILL IS CORRECT AND JUST AND PAYMENT HAS NOT BEEN RECEIVED					
INCLUDES MODIFICATION THRU		TOTAL CONTRACT		$ 80,250.00	TOTAL EARNINGS TO DATE	$ 80,250.00

12. PRESENTED FOR PAYMENT		14.		
PAYEE: Smith, Brown and Jones, Inc.	FEH	A. PREVIOUS DEDUCTIONS OTHER THAN RETAINED PERCENTAGE**	0	
		B. PREVIOUS RETAINED PERCENTAGE	100.00	
DATE: 10 July 1987	TITLE: Vice-President	C. PREVIOUS PAYMENTS	80,240.00	
		D. PREVIOUS EARNINGS (A+B+C)		80,250.00
13. APPROVED FOR PAYMENT		E. EARNINGS THIS PERIOD (TOTAL EARNINGS TO DATE MINUS D)		0
I CERTIFY that I have checked the quantities covered by this bill or estimate; that the work was actually performed; that the quantities are correct and consistent with all previous computations as actually checked; that the quantities and amounts are wholly consistent with the requirements of the contract or other instrument involved.		F. LESS RETAINED PERCENTAGE	0	
		G. LESS DEDUCTION OTHER THAN RETAINED PERCENTAGE FOR	0	
		H. TOTAL DEDUCTIONS THIS PERIOD (F+G)		0
SIGNATURE	TITLE / DATE	I. RETAINAGE REFUNDED	100.00	
		J. OTHER REFUNDS		
		K. TOTAL REFUNDS THIS PERIOD		100.00
CONTRACTING OFFICER APPROVAL (Signature)	DATE	L. AMOUNT DUE CONTRACTOR (E-H+K)		100.00
		15. RECAPITULATION: TOTAL RETAINED PCTG. (B+F-I) $	TOTAL PAID (C+L) $	

ENG FORM 1 MAR 78 93 PREVIOUS EDITION OF THIS FORM IS OBSOLETE

**USE REVERSE SIDE FOR DETAILED EXPLANATION AND OR REMARKS

TYPICAL SAMPLE - RETAINAGE RELEASED

NOTE: Use this example for payment of retainage to pay design in full, normally at 100% of construction

DEPARTMENT OF THE ARMY
SAVANNAH DISTRICT, CORPS OF ENGINEERS
P.O. BOX 889
SAVANNAH, GEORGIA 31402-0889

REPLY TO
ATTENTION OF:

SASEN-EA DATE: _____

SUBJECT: Release of Claims - To be Submitted with Final Payment Estimate

CONTRACT NO. _____

ARCHITECT-ENGINEER/CONTRACTOR _____

ADDRESS _____

PROJECT _____

LOCATION _____

The undersigned Architect-Engineer/Contractor, under above numbered contract, between the United States of America and said Architect-Engineer/Contractor, in accordance with the PAYMENTS clause of said Contract, hereby releases the United States, its officers, agents, and employees from any and all claims arising under or by virtue of said Contract or any modification or change thereof except with respect to those claims, if any, listed below:

_____

_____

_____

_____

DATE _____ FIRM _____

_____
(Signature)

_____
(Title)

PAYMENT ESTIMATE – CONTRACT PERFORMANCE

For use of this form, see ER 37-2-10 and ER 37-345-10.

1. DATE	SHEET ___ of ___

2. CONTRACTOR AND ADDRESS	3. CONTRACT NO.	4. DISTRICT
5. DESCRIPTION OF WORK	6. APPROPRIATION AND PROJECT	7. REQUIRED COMPLETION DATE
8. LOCATION	9. PERIOD COVERED BY THIS ESTIMATE FROM THRU	10. JOB ORDER NO. / 11. ESTIMATE NO.

ITEM NO. a	DESCRIPTION b	CONTRACT QUANTITY AND UNIT c	CONTRACT UNIT PRICE d	CONTRACT AMOUNT e	TOTAL TO DATE QUANTITY AND UNIT f	TOTAL TO DATE AMOUNT g
INCLUDES MODIFICATION THRU:			TOTAL CONTRACT →	$	TOTAL EARNINGS TO DATE →	$

12. PRESENTED FOR PAYMENT		14.		
PAYEE	PER	A. PREVIOUS DEDUCTIONS OTHER THAN RETAINED PERCENTAGE**		
		B. PREVIOUS RETAINED PERCENTAGE		
		C. PREVIOUS PAYMENTS		
DATE	TITLE	D. PREVIOUS EARNINGS (A+B+C)		
13. APPROVED FOR PAYMENT		E. EARNINGS THIS PERIOD (TOTAL EARNINGS TO DATE MINUS D)		
I CERTIFY that I have checked the quantities covered by this bill or estimate; that the work was actually performed; that the quantities are correct and consistent with all previous computations as actually checked; that the quantities and amounts are wholly consistent with the requirements of the contract or other instrument involved.		F. LESS RETAINED PERCENTAGE		
		G. LESS DEDUCTION OTHER THAN RETAINED PERCENTAGE FOR		
		H. TOTAL DEDUCTIONS THIS PERIOD (F+G)		
SIGNATURE / TITLE / DATE		I. RETAINAGE REFUNDED		
		J. OTHER REFUNDS		
		K. TOTAL REFUNDS THIS PERIOD		
		L. AMOUNT DUE CONTRACTOR (E-H+K)		
CONTRACTING OFFICER APPROVAL (Signature) / DATE		15. RECAPITULATION: TOTAL RETAINED PCTG. (B+F-I) $	TOTAL PAID (C+L) $	

ENG FORM 1 MAR 78 93 PREVIOUS EDITION OF THIS FORM IS OBSOLETE

**(USE REVERSE SIDE FOR DETAILED EXPLANATION AND-OR REMARKS)

SAMPLE DD FORM 1391
PROGRAMING DOCUMENT

2000			29 JUL 1998
ARMY			28 AUG 1991

Fort Benning
Georgia — Ammo Holding Facility - LAAF

442 60	38974	1,400

1.00 U.S./US$

PRIMARY FACILITY				625
Ammo Holding Shed	m2	929.03	357.58	(332)
Hardstand	m2	5,435	53.90	(293)
SUPPORTING FACILITIES				619
Electric Service	LS	--	--	(89)
Paving, Walks, Curbs And Gutters	LS	--	--	(123)
Storm Drainage	LS	--	--	(266)
Site Imp(141) Demo( )	LS	--	--	(141)

ESTIMATED CONTRACT COST	1,244
CONTINGENCY PERCENT (5.00%)	62
SUBTOTAL	1,306
SUPERVISION, INSPECTION & OVERHEAD (6.00%)	78
TOTAL REQUEST	1,384
TOTAL REQUEST (ROUNDED)	1,400
INSTALLED EQT-OTHER APPROPRIATIONS	(44)

Construct a covered shed with truck loading dock and hardstand. Supporting facilities include electric service, exterior lighting, lightning protection, paving, storm drainage, blast protection, and site improvements.

---

11. REQ: 929 m2 ADQT: NONE SUBSTD: NONE

PROJECT:
Construct an ammunition holding/loading facility. (Current Mission)

REQUIREMENT:
An ammunition holding facility is required for temporary storage, or ammunition sorting if required by a mission change and preparation for loading of palletized ammunition onto aircraft to support the 3D Brigade, 3D Infantry Division rapid deployment mission of the Division Ready Force Fly-away and

Fort Benning
Georgia

Ammo Holding Facility - LAAF 38974

REQUIREMENT: (Continued)
Immediate Ready Company. Additionally, 463 L pallet loads require handling to meet air load planning requirements of the 75th Ranger Regiment. The covered shed must have a minimum interior height of 18 feet and have lighting that will not affect aircraft operations. The new hot load area is to be located 1,300 feet from the center of the airfield runway. This vehicle hardstand is required to keep tracked vehicles clean as they are being prepared for loading onto deployment aircraft.

CURRENT SITUATION:
Since 1984, ammunition for deployment/contingency missions has been brought to Lawson Army Airfield's (LAAF) Holding Area 32 where it is unloaded, stored, sorted and prepped for loading onto aircraft. This is an unimproved grassed area, which is not level and is poorly drained. Transfer of the ammunition from trucks to storage, final changes to the palletization of ammunition and movement from storage to the aircraft is slow and unpredictable at best. Inclement weather magnifies these problems due to the exposed ammunition and muddy conditions, thus slowing work and causing greater potential hazards. Temporary lighting must be acquired and set up for each operation. The potential for delays in deployment is significant, especially for the Ranger Regiment's 10 hour deployment requirement and the 18 hour requirement of the 3D Brigade. Fort Benning's current hot load area is located on an old taxiway approximately two miles from the aircraft loading apron.

IMPACT IF NOT PROVIDED:
If this project is not provided, the ammunition will continue to be exposed to weather. Excessive wear and tear on loading equipment will continue, and a significant potential for deploying aircraft being delayed will persist.

ADDITIONAL:
This project has been coordinated with the installation physical security plan, and all required physical security and/or combatting terrorism (CBT/T) measures are included. This project complies with the scope and design criteria of DOD 4270.1-M, Construction Criteria, that were in effect 1 January 1987, as implemented by the Army's Architectural and Engineering Instructions (AEI), Design Criteria, dated 3 July 1994. Alternative methods of meeting this requirement have been explored during project development. This project is the only feasible option to meet the requirement.

/S/ CARL F. ERNST
Major General, USA
Commanding

ROUTING OF SHOP DRAWINGS, EQUIPMENT DATA, MATERIAL SAMPLES OR MANUFACTURER'S CERTIFICATES OF COMPLIENCE FOR APPROVAL (ENG FORM 4026)

ROUTING OF SHOP DRAWINGS, EQUIPMENT DATA, MATERIAL SAMPLES, OR MANUFACTURER'S CERTIFICATES OF COMPLIANCE FOR APPROVAL

(Used to route ENG Form 4025 with items attached. Not to become a part of the Contractor's record.)

	TO:	FROM:	DATE
1			

The attached items listed on ENG Form 4025 are forwarded for approval action.

CONTRACT NUMBER	CONTRACTOR
TRANSMITTAL NUMBERS	PROJECT TITLE AND LOCATION

COMMENTS *(Attach additional sheet, if necessary.)*

NO. OF INCL.	TYPED NAME AND TITLE	SIGNATURE

	TO:	FROM:	DATE
2			

COMMENTS *(Attach additional sheet, if necessary.)*

NO. OF INCL.	TYPED NAME AND TITLE	SIGNATURE

	TO:	FROM:	DATE
3			

COMMENTS *(Attach additional sheet, if necessary.)*

NO. OF INCL.	TYPED NAME AND TITLE	SIGNATURE

	TO:	FROM:	DATE
4			

The following action codes are given to items listed on ENG Form 4025:

ACTION CODES

A - APPROVED AS SUBMITTED.

B - APPROVED, EXCEPT AS NOTED ON DRAWINGS. RESUBMISSION NOT REQUIRED.

C - APPROVED, EXCEPT AS NOTED ON DRAWINGS. REFER TO ATTACHED SHEET. RESUBMISSION REQUIRED.

D - WILL BE RETURNED BY SEPARATE CORRESPONDENCE.

E - DISAPPROVED (SEE ATTACHED)

F - RECEIPT ACKNOWLEDGED

G - OTHER *(specify)*

ACTION CODES TO BE INSERTED IN COLUMN G, SECTION I, ENG FORM 4025 *(Attach sheets, when required.)*

ITEM NO. *(Taken from ENG Form 4025)*								
CODE GIVEN								

REMARKS

NO. OF INCL.	TYPED NAME AND TITLE	SIGNATURE

ENG FORM 1 NOV 74 4026 EDITION OF NOV 66 MAY BE USED.

☆U.S. Government Printing Office: 1978—256-819/8584

DEPARTMENT OF THE ARMY
SAVANNAH DISTRICT, CORPS OF ENGINEERS
P.O. BOX 889
SAVANNAH, GEORGIA 31402-0889

REPLY TO
ATTENTION OF:

SASEN-ES DATE: _____

SUBJECT: Release of Claims - To be Submitted with Final Payment Estimate

CONTRACT NO.
_____

ARCHITECT-ENGINEER/CONTRACTOR
_____

ADDRESS
_____

PROJECT
_____

LOCATION
_____

The undersigned Architect-Engineer/Contractor, under above numbered contract, between the United States of America and said Architect-Engineer/Contractor, in accordance with the PAYMENTS clause of said Contract, hereby releases the United States, its officers, agents, and employees from any and all claims arising under or by virtue of said Contract or any modification or change thereof except with respect to those claims, if any, listed below:

_____

_____

DATE _____ FIRM _____

_____
(Signature)

_____
(Title)

Exhibit I-A-7