US Army Corps
of Engineers
Savannah District

Fort Bragg
North Carolina

Solicitation Number
DACA21-03-R-0024
SOF Weapons Storage and Training Facility
FY-03, Line Item 43908
Volume I of III - Sections 00010 through 00800 and
Specifications w/Appendices A through D
April 2003

THIS SOLICITATION IS UNRESTRICTED PURSUANT TO THE
"BUSINESS OPPORTUNITY DEVELOPMENT REFORM ACT OF 1988"
(PUBLIC LAW 100-656)

U.S. ARMY ENGINEER DISTRICT, SAVANNAH
CORPS OF ENGINEERS
100 WEST OGLETHORPE AVENUE
SAVANNAH, GEORGIA 31401-3640

TABLE OF CONTENTS

00010 Solicitation/Contract Form and Bidding Schedule

00100 Instructions, Conditions, and Notices to Offerors

00600 Representations and Certifications

00700 Contract Clauses

00800 Special Contract Requirements

Attachment 1 to Section 00800

Specifications

SOLICITATION, OFFER, AND AWARD *(Construction, Alteration, or Repair)*	1. SOLICITATION NO. DACA21-03-R-0024-0001	2. TYPE OF SOLICITATION [ ] SEALED BID (IFB) [X] NEGOTIATED *(RFP)*	3. DATE ISSUED 11-Feb-2003	PAGE OF PAGES 1 OF 192

IMPORTANT - The "offer" section on the reverse must be fully completed by offeror.

4. CONTRACT NO.	5. REQUISITION/PURCHASE REQUEST NO.	6. PROJECT NO.

7. ISSUED BY CODE DACA21	8. ADDRESS OFFER TO *(If Other Than Item 7)* CODE
U.S. ARMY ENGINEER DISTRICT, SAVANNAH 100 WEST OGLETHORPE AVE SAVANNAH GA 31401-3640 TEL: FAX:	**See Item 7** TEL: FAX:

9. FOR INFORMATION CALL:	A. NAME	B. TELEPHONE NO. *(Include area code)* *(NO COLLECT CALLS)*
	ROSETTA J BRIGHTWELL	912/652-5903

SOLICITATION

NOTE: In sealed bid solicitations "offer" and "offeror" mean "bid" and "bidder".

10. THE GOVERNMENT REQUIRES PERFORMANCE OF THE WORK DESCRIBED IN THESE DOCUMENTS *(Title, identifying no., date):*

Contracting Officer: Colleen O'keefe
Contracting Officer E-mail: coleen.okeefe@sas02.usace.army.mil

SOF Weapons Storage & Training Facility
Fort Bragg, North Carolina

11. The Contractor shall begin performance within 5 calendar days and complete it within 540 calendar days after receiving [ ] award, [X] notice to proceed. This performance period is [X] mandatory, [ ] negotiable. *(See* Section 00800 *.)*

12 A. THE CONTRACTOR MUST FURNISH ANY REQUIRED PERFORMANCE AND PAYMENT BONDS? *(If "YES," indicate within how many calendar days after award in Item 12B.)* [X] YES [ ] NO	12B. CALENDAR DAYS 5

13. ADDITIONAL SOLICITATION REQUIREMENTS:

A. Sealed offers in original and 6 copies to perform the work required are due at the place specified in Item 8 by 02:00 PM *(hour)* local time 29 May 2003 *(date).* If this is a sealed bid solicitation, offers must be publicly opened at that time. Sealed envelopes containing offers shall be marked to show the offeror's name and address, the solicitation number, and the date and time offers are due.

B. An offer guarantee [X] is, [ ] is not required.

C. All offers are subject to the (1) work requirements, and (2) other provisions and clauses incorporated in the solicitation in full text or by reference.

D. Offers providing less than 60 calendar days for Government acceptance after the date offers are due will not be considered and will be rejected.

SOLICITATION, OFFER, AND AWARD (Continued)

(Construction, Alteration, or Repair)

OFFER ***(Must be fully completed by offeror)***

14. NAME AND ADDRESS OF OFFEROR *(Include ZIP Code)*	15. TELEPHONE NO. *(Include area code)*
	16. REMITTANCE ADDRESS *(Include only if different than Item 14)* **See Item 14**
CODE / FACILITY CODE	

17. The offeror agrees to perform the work required at the prices specified below in strict accordance with the terms of this solicitation, if this offer is accepted by the Government in writing within _____ calendar days after the date offers are due. *(Insert any number equal to or greater than the minimum requirements stated in Item 13D. Failure to insert any number means the offeror accepts the minimum in Item 13D.)*

AMOUNTS	SEE SCHEDULE OF PRICES

18. The offeror agrees to furnish any required performance and payment bonds.

19. ACKNOWLEDGMENT OF AMENDMENTS

(The offeror acknowledges receipt of amendments to the solicitation -- give number and date of each)

AMENDMENT NO.										
DATE										

20A. NAME AND TITLE OF PERSON AUTHORIZED TO SIGN OFFER *(Type or print)*	20B. SIGNATURE	20C. OFFER DATE

AWARD ***(To be completed by Government)***

21. ITEMS ACCEPTED:

22. AMOUNT	23. ACCOUNTING AND APPROPRIATION DATA

24. SUBMIT INVOICES TO ADDRESS SHOWN IN *(4 copies unless otherwise specified)*	**ITEM**	25. OTHER THAN FULL AND OPEN COMPETITION PURSUANT TO ☐ 10 U.S.C. 2304(c) ☐ 41 U.S.C. 253(c)
26. ADMINISTERED BY CODE		27. PAYMENT WILL BE MADE BY: CODE

CONTRACTING OFFICER WILL COMPLETE ITEM 28 OR 29 AS APPLICABLE

☐ 28. NEGOTIATED AGREEMENT *(Contractor is required to sign this document and return _____ copies to issuing office.)* Contractor agrees to furnish and deliver all items or perform all work, requisitions identified on this form and any continuation sheets for the consideration stated in this contract. The rights and obligations of the parties to this contract shall be governed by (a) this contract award, (b) the solicitation, and (c) the clauses, representations, certifications, and specifications or incorporated by reference in or attached to this contract.

☐ 29. AWARD *(Contractor is not required to sign this document.)* Your offer on this solicitation, is hereby accepted as to the items listed. This award consummates the contract, which consists of (a) the Government solicitation and your offer, and (b) this contract award. No further contractual document is necessary.

30A. NAME AND TITLE OF CONTRACTOR OR PERSON AUTHORIZED TO SIGN *(Type or print)*		31A. NAME OF CONTRACTING OFFICER *(Type or print)* TEL: EMAIL:	
30B. SIGNATURE	30C. DATE	31B. UNITED STATES OF AMERICA BY	31C. AWARD DATE

Section 00010 - Solicitation Contract Form

SUPPLIES OR SERVICES AND PRICES/COSTS

SCHEDULE
SOF WEAPONS TRAINING FACILITY
FORT BRAGG, NORTH CAROLINA

TOTAL BASE BID PLUS OPTIONS NOS. 1 THROUGH 6
(ITEMS 0001 THROUGH 0010)----------$_____

ITEM NO	SUPPLIES/SERVICES	QUANTITY	UNIT	UNIT PRICE	AMOUNT
0001		1	Lump Sum	_____	_____
	Base Bid Design effort and engineering services during construction through completion				

FOB: Destination

ITEM NO	SUPPLIES/SERVICES	QUANTITY	UNIT	UNIT PRICE	AMOUNT
0002		1	Lump Sum	_____	_____
	Base Bid Construction of new SOF Weapons Training Facility, Complete, to the 5.0 foot building line. This item will include the installation of all Intrusion Detection System (IDS) infrastructure conduit and utilities. IDS design of equipment and installation will be by others.				

FOB: Destination

ITEM NO	SUPPLIES/SERVICES	QUANTITY	UNIT	UNIT PRICE	AMOUNT
0003		1	Lump Sum	_____	_____
	Base Bid Construction of new SOF Weapons Inspection Building, Complete, to the 5.0 foot building line				

FOB: Destination

ITEM NO	SUPPLIES/SERVICES	QUANTITY	UNIT	UNIT PRICE	AMOUNT
0004		1	Lump Sum	_____	_____
	Base Bid Site preparation and development including utilities, everything outside the 5.0 foot building line through completion. This item will include the installation of all Intrusion Detection System (IDS) infrastructure conduit and utilities. IDS design of equipment and installation will be by others.				

FOB: Destination

ITEM NO	SUPPLIES/SERVICES	QUANTITY	UNIT	UNIT PRICE	AMOUNT
0005		1	Lump Sum	_____	_____
	Option 1 Install Comprehensive Interior Design (CID) Furniture/Furnishings				

FOB: Destination

ITEM NO	SUPPLIES/SERVICES	QUANTITY	UNIT	UNIT PRICE	AMOUNT
0006		1	Lump Sum	_____	_____
	Option 2 Install Lift Station and Force Main to connect to existing sanitary system and delete septic system design				

FOB: Destination

ITEM NO	SUPPLIES/SERVICES	QUANTITY	UNIT	UNIT PRICE	AMOUNT
0007		1	Lump Sum	_____	_____
	Option 3 Install Water main to connect to existing water main				

FOB: Destination

ITEM NO	SUPPLIES/SERVICES	QUANTITY	UNIT	UNIT PRICE	AMOUNT
0008		1	Lump Sum	_____	_____
	Option 4 Install Shop Equipment				

FOB: Destination

ITEM NO	SUPPLIES/SERVICES	QUANTITY	UNIT	UNIT PRICE	AMOUNT
0009		1	Lump Sum	_____	_____
	Option 5 Provide underground Redundant Primary System				

FOB: Destination

ITEM NO	SUPPLIES/SERVICES	QUANTITY	UNIT	UNIT PRICE	AMOUNT
0010		1	Lump Sum	_____	_____
	Option 6 Provide overhead Redundant Primary System				

FOB: Destination

CLAUSES INCORPORATED BY FULL TEXT

52.232-4001 COST LIMITATION – JUNE 1999

The contract award for design and construction of CLINS 0001 through 0010 shall not exceed $16,253,000.00 for this project.

(End of Clause)

NOTICE TO OFFERORS

HAND-CARRIED OR MAILED PROPOSALS:

All proposals must be clearly identified with the contractor's name and address. To ensure timely and proper handling, the lower left corner of the outermost wrapper should indicate the Request For Proposal No., Due Date of Proposal, Time by which Proposals are Due, and Title of Project.

The Government will not be responsible for proposals delivered to any location or to anyone other than those designated to receive proposals on its behalf as indicated below.

Proposals delivered by commercial carrier and those sent by U.S. Mail, including U.S. Express Mail, must be addressed as indicated below. Proposals shall not be addressed to any specific person.

U.S. Army Engineer District, Savannah
ATTN: CESAS-CT-C
100 West Oglethorpe Avenue
Savannah, Georgia 31401-3640

Mailroom personnel on the first floor of 100 West Oglethorpe Avenue must receive proposals sent by U.S. Mail or delivered by commercial carrier by the time specified in Block 13 of the SF1442 for receipt of proposals.

Offerors are cautioned that proposals sent via United States Postal Service Express Mail are first delivered to the Savannah District Post Office Box instead of 100 West Oglethorpe Avenue, "the office designated for receipt of proposals" therefore, allow sufficient mailing time.

Hand-carried proposals also must be delivered to mailroom personnel on the first floor of 100 West Oglethorpe Avenue by the time specified in Block 13 of SF1442 for receipt of proposals.

Offerors are cautioned that there is no parking in or around the building, therefore, when hand delivering proposals sufficient time should be allowed for transporting of proposal packages from your vehicle to mailroom personnel.

CLAUSES INCORPORATED BY FULL TEXT

52.204-6 DATA UNIVERSAL NUMBERING SYSTEM (DUNS) NUMBER (JUN 99)

(a) The offeror shall enter, in the block with its name and address on the cover page of its offer, the annotation "DUNS" followed by the DUNS number that identifies the offeror's name and address exactly as stated in the offer.

(b) If the offeror does not have a DUNS number, it should contact Dun and Bradstreet directly to obtain one. A DUNS number will be provided immediately by telephone at no charge to the offeror. For information on obtaining a DUNS number, the offeror, if located within the United States, should call Dun and Bradstreet at 1-800-333-0505. The offeror should be prepared to provide the following information:

(1) Company name.

(2) Company address.

(3) Company telephone number.

(4) Line of business.

(5) Chief executive officer/key manager.

(6) Date the company was started.

(7) Number of people employed by the company.

(8) Company affiliation.

(c) Offerors located outside the United States may obtain the location and phone number of the local Dun and Bradstreet Information Services office from the Internet Home Page at http://www.customerservice@dnb.com. If an offeror is unable to locate a local service center, it may send an e-mail to Dun and Bradstreet at globalinfo@mail.dnb.com.

(End of provision)

52.211-2 AVAILABILITY OF SPECIFICATIONS LISTED IN THE DOD INDEX OF SPECIFICATIONS AND STANDARDS (DODISS) AND DESCRIPTIONS LISTED IN THE ACQUISITION MANAGEMENT SYSTEMS AND DATA REQUIREMENTS CONTROL LIST, DOD 5010.12-L (DEC 1999)

Copies of specifications, standards, and data item descriptions cited in this solicitation may be obtained--

(a) From the ASSIST database via the Internet at http://assist.daps.mil; or

(b) By submitting a request to the--Department of Defense Single Stock Point (DoDSSP), Building 4, Section D, 700 Robbins Avenue, Philadelphia, PA 19111-5094, Telephone (215) 697-2667/2179, Facsimile (215) 697-1462.

(End of provision)

52.211-14 NOTICE OF PRIORITY RATING FOR NATIONAL DEFENSE USE (SEP 1990)

Any contract awarded as a result of this solicitation will be DX rated order; X DO rated order certified for national defense use under the Defense Priorities and Allocations System (DPAS) (15 CFR 700), and the Contractor will be required to follow all of the requirements of this regulation. [Contracting Officer check appropriate box.]

(End of provision)

52.214-5000 APPARENT CLERICAL MISTAKES (MAR 1995)--EFARS

(a) For the purpose of initial evaluations of bids, the following will be utilized in the resolving arithmetic discrepancies found on the face of bidding schedule as submitted by the bidder:

(1) Obviously misplaced decimal points will be corrected;

(2) Discrepancy between unit price and extended price, the unit price will govern;

(3) Apparent errors in extension of unit prices will be corrected;

(4) Apparent errors in addition of lump-sum and extended prices will be corrected.

(b) For the purpose of bid evaluation, the government will proceed on the assumption that the bidder intends his bid to be evaluated on basis of the unit prices, the totals arrived at by resolution of arithmetic discrepancies as provided above and the bid will be so reflected on the abstract of bids.

(c) These correction procedures shall not be used to resolve any ambiguity concerning which bid is low.

(End of statement)

52.215-1 INSTRUCTIONS TO OFFERORS--COMPETITIVE ACQUISITION (MAY 2001)

(a) Definitions. As used in this provision--

“Discussions” are negotiations that occur after establishment of the competitive range that may, at the Contracting Officer's discretion, result in the offeror being allowed to revise its proposal.

“In writing or written” means any worded or numbered expression which can be read, reproduced, and later communicated, and includes electronically transmitted and stored information.

“Proposal modification” is a change made to a proposal before the solicitation's closing date and time, or made in response to an amendment, or made to correct a mistake at any time before award.

“Proposal revision” is a change to a proposal made after the solicitation closing date, at the request of or as allowed by a Contracting Officer as the result of negotiations.

“Time”, if stated as a number of days, is calculated using calendar days, unless otherwise specified, and will include Saturdays, Sundays, and legal holidays. However, if the last day falls on a Saturday, Sunday, or legal holiday, then the period shall include the next working day.

(b) Amendments to solicitations. If this solicitation is amended, all terms and conditions that are not amended remain unchanged. Offerors shall acknowledge receipt of any amendment to this solicitation by the date and time specified in the amendment(s).

(c) Submission, modification, revision, and withdrawal of proposals. (1) Unless other methods (e.g., electronic commerce or facsimile) are permitted in the solicitation, proposals and modifications to proposals shall be submitted

in paper media in sealed envelopes or packages (i) addressed to the office specified in the solicitation, and (ii) showing the time and date specified for receipt, the solicitation number, and the name and address of the offeror. Offerors using commercial carriers should ensure that the proposal is marked on the outermost wrapper with the information in paragraphs (c)(1)(i) and (c)(1)(ii) of this provision.

(2) The first page of the proposal must show--

(i) The solicitation number;

(ii) The name, address, and telephone and facsimile numbers of the offeror (and electronic address if available);

(iii) A statement specifying the extent of agreement with all terms, conditions, and provisions included in the solicitation and agreement to furnish any or all items upon which prices are offered at the price set opposite each item;

(iv) Names, titles, and telephone and facsimile numbers (and electronic addresses if available) of persons authorized to negotiate on the offeror's behalf with the Government in connection with this solicitation; and

(v) Name, title, and signature of person authorized to sign the proposal. Proposals signed by an agent shall be accompanied by evidence of that agent's authority, unless that evidence has been previously furnished to the issuing office.

(3) Submission, modification, or revision, of proposals.

(i) Offerors are responsible for submitting proposals, and any modifications, or revisions, so as to reach the Government office designated in the solicitation by the time specified in the solicitation. If no time is specified in the solicitation, the time for receipt is 4:30 p.m., local time, for the designated Government office on the date that proposal or revision is due.

(ii)(A) Any proposal, modification, or revision received at the Government office designated in the solicitation after the exact time specified for receipt of offers is “late” and will not be considered unless it is received before award is made, the Contracting Officer determines that accepting the late offer would not unduly delay the acquisition; and--

(1) If it was transmitted through an electronic commerce method authorized by the solicitation, it was received at the initial point of entry to the Government infrastructure not later than 5:00 p.m. one working day prior to the date specified for receipt of proposals; or

(2) There is acceptable evidence to establish that it was received at the Government installation designated for receipt of offers and was under the Government's control prior to the time set for receipt of offers; or

(3) It is the only proposal received.

(B) However, a late modification of an otherwise successful proposal that makes its terms more favorable to the Government, will be considered at any time it is received and may be accepted.

(iii) Acceptable evidence to establish the time of receipt at the Government installation includes the time/date stamp of that installation on the proposal wrapper, other documentary evidence of receipt maintained by the installation, or oral testimony or statements of Government personnel.

(iv) If an emergency or unanticipated event interrupts normal Government processes so that proposals cannot be received at the office designated for receipt of proposals by the exact time specified in the solicitation, and urgent Government requirements preclude amendment of the solicitation, the time specified for receipt of proposals will be

deemed to be extended to the same time of day specified in the solicitation on the first work day on which normal Government processes resume.

(v) Proposals may be withdrawn by written notice received at any time before award. Oral proposals in response to oral solicitations may be withdrawn orally. If the solicitation authorizes facsimile proposals, proposals may be withdrawn via facsimile received at any time before award, subject to the conditions specified in the provision at 52.215-5, Facsimile Proposals. Proposals may be withdrawn in person by an offeror or an authorized representative, if the identity of the person requesting withdrawal is established and the person signs a receipt for the proposal before award.

(4) Unless otherwise specified in the solicitation, the offeror may propose to provide any item or combination of items.

(5) Offerors shall submit proposals in response to this solicitation in English, unless otherwise permitted by the solicitation, and in U.S. dollars, unless the provision at FAR 52.225-17, Evaluation of Foreign Currency Offers, is included in the solicitation.

(6) Offerors may submit modifications to their proposals at any time before the solicitation closing date and time, and may submit modifications in response to an amendment, or to correct a mistake at any time before award.

(7) Offerors may submit revised proposals only if requested or allowed by the Contracting Officer.

(8) Proposals may be withdrawn at any time before award. Withdrawals are effective upon receipt of notice by the Contracting Officer.

(d) Offer expiration date. Proposals in response to this solicitation will be valid for the number of days specified on the solicitation cover sheet (unless a different period is proposed by the offeror).

(e) Restriction on disclosure and use of data. Offerors that include in their proposals data that they do not want disclosed to the public for any purpose, or used by the Government except for evaluation purposes, shall--

(1) Mark the title page with the following legend: This proposal includes data that shall not be disclosed outside the Government and shall not be duplicated, used, or disclosed--in whole or in part--for any purpose other than to evaluate this proposal. If, however, a contract is awarded to this offeror as a result of--or in connection with-- the submission of this data, the Government shall have the right to duplicate, use, or disclose the data to the extent provided in the resulting contract. This restriction does not limit the Government's right to use information contained in this data if it is obtained from another source without restriction. The data subject to this restriction are contained in sheets [insert numbers or other identification of sheets]; and

(2) Mark each sheet of data it wishes to restrict with the following legend: Use or disclosure of data contained on this sheet is subject to the restriction on the title page of this proposal.

(f) Contract award. (1) The Government intends to award a contract or contracts resulting from this solicitation to the responsible offeror(s) whose proposal(s) represents the best value after evaluation in accordance with the factors and subfactors in the solicitation.

(2) The Government may reject any or all proposals if such action is in the Government's interest.

(3) The Government may waive informalities and minor irregularities in proposals received.

(4) The Government intends to evaluate proposals and award a contract without discussions with offerors (except clarifications as described in FAR 15.306(a)). Therefore, the offeror's initial proposal should contain the offeror's best terms from a cost or price and technical standpoint. The Government reserves the right to conduct discussions if the

Contracting Officer later determines them to be necessary. If the Contracting Officer determines that the number of proposals that would otherwise be in the competitive range exceeds the number at which an efficient competition can be conducted, the Contracting Officer may limit the number of proposals in the competitive range to the greatest number that will permit an efficient competition among the most highly rated proposals.

(5) The Government reserves the right to make an award on any item for a quantity less than the quantity offered, at the unit cost or prices offered, unless the offeror specifies otherwise in the proposal.

(6) The Government reserves the right to make multiple awards if, after considering the additional administrative costs, it is in the Government's best interest to do so.

(7) Exchanges with offerors after receipt of a proposal do not constitute a rejection or counteroffer by the Government.

(8) The Government may determine that a proposal is unacceptable if the prices proposed are materially unbalanced between line items or subline items. Unbalanced pricing exists when, despite an acceptable total evaluated price, the price of one or more contract line items is significantly overstated or understated as indicated by the application of cost or price analysis techniques. A proposal may be rejected if the Contracting Officer determines that the lack of balance poses an unacceptable risk to the Government.

(9) If a cost realism analysis is performed, cost realism may be considered by the source selection authority in evaluating performance or schedule risk.

(10) A written award or acceptance of proposal mailed or otherwise furnished to the successful offeror within the time specified in the proposal shall result in a binding contract without further action by either party.

(11) The Government may disclose the following information in postaward debriefings to other offerors:

(i) The overall evaluated cost or price and technical rating of the successful offeror;

(ii) The overall ranking of all offerors, when any ranking was developed by the agency during source selection;

(iii) A summary of the rationale for award; and

(iv) For acquisitions of commercial items, the make and model of the item to be delivered by the successful offeror.

(End of provision)

52.216-1 TYPE OF CONTRACT (APR 1984)

The Government contemplates award of a Firm Fixed Price contract resulting from this solicitation.

(End of clause)

52.217-5 EVALUATION OF OPTIONS (JUL 1990)

(a) Except when it is determined in accordance with FAR 17.206(b) not to be in the Government's best interests, the Government will evaluate offers for award purposes by adding the total price for all options to the total price for the basic requirement. Evaluation of options will not obligate the Government to exercise the option(s).

(b) The Government may reject an offer as nonresponsive if it is materially unbalanced as to prices for the basic requirement and the option quantities. An offer is unbalanced when it is based on prices significantly less than cost for some work and prices which are significantly overstated for other work.

(End of provision)

52.219-4001 SUBCONTRACTING PLAN FOR SMALL BUSINESS CONCERNS
(SEP 2002 CESAS-CT)

(a) In accordance with FAR Clause 52.219-9, large businesses must submit a subcontracting plan. A sample subcontracting plan is located in Section 00800.

(b) The subcontracting targets (expressed in terms of percentages of total planned subcontracting dollars) of the Savannah District are as follows:

Small Business	-	57.2%
Small Disadvantaged Business	-	8.9%
HUBZone Small Business		3.0%
Women-Owned Business	-	8.1%
Veteran-Owned Small Business		0%*
Service-Disabled Veteran-Owned Small Business	-	3.0%**

If you cannot reach the above-stated targets, you must provide written justification with your subcontracting plan detailing the reasons you cannot meet the requirements.

*(c) While Savannah District does not have a specific target for subcontracting with Veteran-Owned small businesses, this must be addressed in any subcontracting plan.

**(d) Service-disabled Veteran-owned Small Business (SD/VOSB) is a composite of Veteran-Owned Small Business. The SD/VOSB target must be included in the Veteran-Owned small business target.

52.222-23 NOTICE OF REQUIREMENT FOR AFFIRMATIVE ACTION TO ENSURE EQUAL EMPLOYMENT OPPORTUNITY FOR CONSTRUCTION (FEB 1999)

(a) The offeror's attention is called to the Equal Opportunity clause and the Affirmative Action Compliance Requirements for Construction clause of this solicitation.

(b) The goals for minority and female participation, expressed in percentage terms for the Contractor's aggregate workforce in each trade on all construction work in the covered area, are as follows:

Goals for minority participation for each trade	Goals for female participation for each trade
26.2%	6.9%

These goals are applicable to all the Contractor's construction work performed in the covered area. If the Contractor performs construction work in a geographical area located outside of the covered area, the Contractor shall apply the goals established for the geographical area where the work is actually performed. Goals are published periodically in the Federal Register in notice form, and these notices may be obtained from any Office of Federal Contract Compliance Programs office.

(c) The Contractor's compliance with Executive Order 11246, as amended, and the regulations in 41 CFR 60-4 shall be based on (1) its implementation of the Equal Opportunity clause, (2) specific affirmative action obligations required by the clause entitled "Affirmative Action Compliance Requirements for Construction," and (3) its efforts to meet the goals. The hours of minority and female employment and training must be substantially uniform throughout the length of the contract, and in each trade. The Contractor shall make a good faith effort to employ minorities and women evenly on each of its projects. The transfer of minority or female employees or trainees from Contractor to Contractor, or from project to project, for the sole purpose of meeting the Contractor's goals shall be a violation of the contract, Executive Order 11246, as amended, and the regulations in 41 CFR 60-4. Compliance with the goals will be measured against the total work hours performed.

(d) The Contractor shall provide written notification to the Deputy Assistant Secretary for Federal Contract Compliance, U.S. Department of Labor, within 10 working days following award of any construction subcontract in excess of $10,000 at any tier for construction work under the contract resulting from this solicitation. The notification shall list the --

(1) Name, address, and telephone number of the subcontractor;

(2) Employer's identification number of the subcontractor;

(3) Estimated dollar amount of the subcontract;

(4) Estimated starting and completion dates of the subcontract; and

(5) Geographical area in which the subcontract is to be performed.

(e) As used in this Notice, and in any contract resulting from this solicitation, the "covered area" is North Carolina, Cumberland, Fayetteville.

(End of provision)

52.225-10 NOTICE OF BUY AMERICAN ACT REQUIREMENT--CONSTRUCTION MATERIALS (MAY 2002)

(a) Definitions. Construction material, domestic construction material, and foreign construction material, as used in this provision, are defined in the clause of this solicitation entitled “Buy American Act --Construction Materials” (Federal Acquisition Regulation (FAR) clause 52.225-9).

(b) Requests for determinations of inapplicability. An offeror requesting a determination regarding the inapplicability of the Buy American Act should submit the request to the Contracting Officer in time to allow a determination before submission of offers. The offeror shall include the information and applicable supporting data required by paragraphs (c) and (d) of the clause at FAR 52.225-9 in the request. If an offeror has not requested a determination regarding the inapplicability of the Buy American Act before submitting its offer, or has not received a response to a previous request, the offeror shall include the information and supporting data in the offer.

(c) Evaluation of offers. (1) The Government will evaluate an offer requesting exception to the requirements of the Buy American Act, based on claimed unreasonable cost of domestic construction material, by adding to the offered

price the appropriate percentage of the cost of such foreign construction material, as specified in paragraph (b)(3)(i) of the clause at FAR 52.225-9.

(2) If evaluation results in a tie between an offeror that requested the substitution of foreign construction material based on unreasonable cost and an offeror that did not request an exception, the Contracting Officer will award to the offeror that did not request an exception based on unreasonable cost.

(d) Alternate offers.

(1) When an offer includes foreign construction material not listed by the Government in this solicitation in paragraph (b)(2) of the clause at FAR 52.225-9, the offeror also may submit an alternate offer based on use of equivalent domestic construction material.

(2) If an alternate offer is submitted, the offeror shall submit a separate Standard Form 1442 for the alternate offer, and a separate price comparison table prepared in accordance with paragraphs (c) and (d) of the clause at FAR 52.225-9 for the offer that is based on the use of any foreign construction material for which the Government has not yet determined an exception applies.

(3) If the Government determines that a particular exception requested in accordance with paragraph (c) of the clause at FAR 52.225-9 does not apply, the Government will evaluate only those offers based on use of the equivalent domestic construction material, and the offeror shall be required to furnish such domestic construction material. An offer based on use of the foreign construction material for which an exception was requested--

(i) Will be rejected as nonresponsive if this acquisition is conducted by sealed bidding; or

(ii) May be accepted if revised during negotiations.

(End of provision)

52.232-4006 SUBJECT TO AVAILABILITY OF FUNDS STATEMENT (SEP 1999 SASCT) (Ref. AFARS 5101.602-2)

This is a high priority requirement as defined in Army Federal Acquisition Regulation (AFAR) Supplement 5101.602-2. Subject to the availability of funds, the accounting classification will be 97305000.5600 308 8021 P10000 3230 S09133. This statement is not a commitment of funds. Funds are not presently available for this acquisition. No contract award will be made until appropriated funds are made available from which payment for contract purposes can be made.
(End of provision)

52.233-2 SERVICE OF PROTEST (AUG 1996)

52 Protests, as defined in section 33.101 of the Federal Acquisition Regulation, that are filed directly with an agency, and copies of any protests that are filed with the General Accounting Office (GAO), shall be served on the Contracting Officer (addressed as follows) by obtaining written and dated acknowledgment of receipt from
U.S. Corps of Engineers, Savannah District
100 West Oglethorpe Avenue
Savannah, GA 31401

(b) The copy of any protest shall be received in the office designated above within one day of filing a protest with the GAO.

(End of provision)

52.236-27 SITE VISIT (CONSTRUCTION) (FEB 1995)

(a) The clauses at 52.236-2, Differing Site Conditions, and 52.236-3, Site Investigations and Conditions Affecting the Work, will be included in any contract awarded as a result of this solicitation. Accordingly, offerors or quoters are urged and expected to inspect the site where the work will be performed.

(b) Site visits may be arranged during normal duty hours by contacting:
Name: Mr. Jeff Agee
Address: P.O. Box 77069
Ft. Bragg, North Carolina 28307
Telephone: 910-432-8121

(End of provision)

52.236-4011 Disclosure of Magnitude of Construction (FAR 36.204 and DFARS 236.204)

The estimated price range for this project is between over $10,000,000 and $20,000,000.

.

Section 00110

PROPOSAL SUBMISSION REQUIREMENTS AND INSTRUCTIONS

1. PROPOSAL OVERVIEW.

1.1 General. In as much as the proposal will describe the capability of the offeror to perform any resultant contract, as well as describe its understanding of the requirements of the Statement of Work, it should be specific and complete in every detail. The proposal should be prepared simply and economically, providing straight-forward, concise delineation of capabilities to satisfactorily perform the contract being sought. The proposal should therefore be practical, legible, clear and coherent.

1.1.1 Project Description. This solicitation is for the design, permitting, site preparation and construction of a 73,000 SF Weapons Maintenance and Training Facility and a 3,000 SF detached Weapons Inspections Building. This project, to replace an outdated facility, is a new multi-functional Weapons Maintenance and Training Facility consisting of an armament and weapons training center. The armament center includes weapons issue/turn-in/cleaning shop, organizational shop, light weapons shop, heavy weapons shop, weapons parts/supply room, optical shop, chemical refinishing shop, Secure Weapons Vault housing category II, III & IV weapons, dock and remote receiving/access control area (Weapons Inspections Building), air defense artillery and anti-tank (ADA/AT) Soviet simulator systems: storage, maintenance and roof top deck, platform for ADA/AT trajectory tracking, and indoor test firing range. The weapons training center includes classrooms, instructional preparation space for instructors, instructor offices, and support spaces. Antiterrorism force protection measures inside the five-foot building line will include laminated glass, intrusion detection systems, closed circuit television, personnel entry control point, and special construction systems.

1.2 Proposal Submissions and the Two (2) Phase Design-Build Process. This process requires potential contractors to submit their performance and capability information initially (Phase 1) for review and consideration by the Government. Following the review, evaluation, and rating of these proposals, the Government will select up to five of the highest rated contractors to receive the technical requirements package and provide a technical and cost proposal for consideration by the Government at Phase 2. The technical and cost proposals of the selected contractors, will be reviewed by the Government. The technical information contained in this Phase 2 proposal will be reviewed and evaluated by the Government in accordance with the evaluation criteria set out in Section 00120 – PART 2, PHASE 2 EVALUATION MANUAL. The final evaluation rating used for comparison, selection, and award will reflect both the rating received in Phase 1 and the evaluation rating received in Phase 2. Cost information will not be rated in either phase but will be evaluated in response to the funding limitations set out in Section 00010 – PRICE PROPOSAL SCHEDULE and other offeror's price proposals.

1.3 FOR ALL THOSE CONTRACTORS WHO COMPETE IN BOTH PHASE 1 AND PHASE 2, THE CONTRACTOR'S PROPOSAL SHALL BE DEFINED AS ALL INFORMATION WHICH WAS SUBMITTED IN RESPONSE TO THE REQUIREMENTS OF BOTH PHASES OF THE SOLICITATION.

1.4 Compliance Statement: The Offerors selected to compete in Phase 2 are required to certify that all items submitted in its technical proposal comply with the RFP requirements and any differences, deviations or exceptions have been identified and explained. Offerors are required to complete the statement and submit it with their technical proposal. Even if there are no differences, deviations or exceptions, the Offeror must submit the Compliance Statement and state that none exist.

Statement of Compliance

[*Insert name of the offeror*] hereby certifies that all items submitted in this proposal and final design documents (after contract award) comply with the solicitation requirements. The criteria specified in Request for Proposal No. [*Insert RFP Number*] are binding contract criteria and in case of any conflict after award, between [*Insert RFP Number*] and the contractor's proposal, the Request for Proposal criteria shall govern unless there is a written and signed agreement between the contractor and the Government waiving a specific requirement. Should this proposal result in the award of a contract. this statement will be included on each sheet of drawings and on the cover of the specifications.

1.5 Exceptions. Exceptions to the contractual terms and conditions of the solicitation (e.g., standard company terms and conditions) must not be included in the proposal.

2. PHASE 1 PROPOSAL SUBMISSION INSTRUCTIONS

2.1 Who May Submit.

2.1.1 Proposals may be submitted by firms formally organized as design/build entities, or by design firms and construction contractors that have associated specifically for this project. In the latter case, a single design firm or construction contractor may offer more than one proposal by entering into more than one such association. For the purpose of this solicitation, no distinction is made between formally organized design/build entities and project-specific design/build associations. Both are referred to as the design/build offeror, (or simply "Offeror"), or the design/build contractor, (or simply "Contractor"), after award of a contract.

2.1.2 Any legally organized Offeror may submit a proposal.

2.2 Where to Submit. Offerors shall submit their proposal packages to the Savannah District at the address shown in Block 7 of Standard Form 1442.

2.3 Submission Deadline. Proposals shall be received by the Savannah District no later than the time and date specified in Block 13 of Standard Form 1442.

2.4 General Requirements.

2.4.1 In order to effectively and equitably evaluate all proposals, the Contracting Officer must receive information sufficiently detailed to allow review and evaluation by the Government.

2.4.2 Tabs. Proposal shall be organized and tabbed as shown.

2.4.3 Size of Printed Matter Submissions.

2.4.3.1 Written materials shall be on 8-1/2" x 11" paper.

2.4.3.2 The proposals shall contain a detailed table of contents. If more than one binder is used, the complete table of contents shall be included in each. Any materials submitted but not required by this solicitation, (such as company brochures), shall be relegated to appendices.

2.4.4 Number of Copies. Offerors shall submit six (6) hard copies of their Phase One Proposal.

2.4.5 Electronic Copy of Submissions. In addition to the hard copies of the proposal, Offerors shall also submit the Phase 1 Proposal on a CD ROM disk. The proposal should be in MS Word, Adobe Acrobat PDF file, or WordPerfect format. The electronic version shall be either a single file tabbed in the same order as the hard copy or multiple files hyperlinked to a single table of contents.

2.5 Submission Format.

2.5.1 The Phase One Proposal will be tabbed and submitted in a three ring binder in the following format:

PHASE 1 PROPOSAL

TAB A

- SF 1442
- Section 00600 – Representations and Certifications
- PROPOSAL DATA SHEET – include Offeror's DUNS # and A-E ACASS ID # and Contractor's CCASS #

TAB B – FACTOR 1-1 Offeror Past Performance on Recent Relevant Projects Information

- PAST PERFORMANCE ON RECENT RELEVANT PROJECTS INFORMATION Sheets

TAB C – FACTOR 1-2 Recent Relevant Specialized Experience

- RELEVANT SPECIALIZED EXPERIENCE Sheets (Example Projects)

TAB D – FACTOR 1-3 Technical Approach Narrative

-

TAB E – FACTOR 1-4 Offeror Sustainable Design Experience

- SUSTAINABLE DESIGN EXPERIENCE Sheets (Example Projects)

TAB F - Other Information

2.6 TAB B – FACTOR 1-1 Offeror Past Performance on Recent Relevant Projects. A sample Past Performance of Recent Relevant Project Evaluation Questionnaire is included at the end of this section. The offeror shall identify the three completed (or substantially complete) recent relevant projects to be used for reference and evaluation purposes and provide a questionnaire to the Point of Contact for each project listed for completion. When the Offeror is made up of separate construction and design companies, three evaluations should be completed for each of the two primary design and construction companies. When completed, these forms shall be mailed, faxed or e-mailed to the Savannah District Contract Specialist identified in the sample transmittal letter provided. It is the contractor's responsibility to ensure that the reference documentation is provided. The Government may not make additional requests for Past Performance of Recent Relevant Project Evaluation Questionnaires from the references. Copies of the evaluation form shall be provided to the Savannah District directly from the reference. Projects from which

questionnaires are received shall have been completed (or substantially completed) within three years of the date of the solicitation. The Government may contact sources other than those provided by the Offeror for information with respect to past performance. These other sources may include CCASS (Construction Contractor Appraisal Support System), ACASS (Architect-Engineer Contractor Appraisal Support System), telephone interviews with organizations familiar with the Offeror's performance, and Government personnel with personal knowledge of the Offeror's performance capability. In addition to the questionnaires provided by third party points of contact, the Offeror should also provide information on the recent relevant past performance projects in accordance with the sample information sheet attached. Provide no more than 10 projects that have been completed (or substantially completed) within the last three years. If the offeror is made up of separate construction and design companies, provide no more than 10 for each. Three of the ten must be the projects for which questionnaires were sent to third parties. Indicate in the space provided on the information sheet which projects had questionnaires sent out. Include all of the information sheets under this TAB.

2.7 TAB C - 1-2 Recent Relevant Specialized Experience. Provide examples (at least three) of projects for which the offeror has been responsible. The examples should be as similar as possible to this solicitation in project type and scope. Provide references (with contract names and telephone numbers) for all examples cited. Each example shall indicate the general character, scope, location, cost, and date of completion of the project. If the offeror represents the combining of two or more companies for the purpose of this RFP, each company shall list project examples. Example projects must have been completed not later than three years prior to the date of the solicitation. The experience of individuals will not be credited under this factor but will be evaluated under "Project Key Personnel" in Phase 2.

2.8 TAB D – FACTOR 1-3 Technical Approach Narrative. Describe in general terms how the offeror will approach the design and construction of these facilities. Technical Approach Narrative shall be limited to a maximum of ten (10) typewritten pages, 12 pitch, and double spaced**.** At a minimum the narrative should address the following:

- Does the Offeror demonstrate a suitable understanding of the process to enable it to adequately address and anticipate the risks associated with Design/Build processes?

- The roles and responsibilities of the various sub-contractors for both design and construction shall be addressed.

- How does the Offeror continue the design phase of the project and incorporate User comments and reviews into the process?

- The Offeror's Design Quality Control Program shall be briefly described.

- What is the design team's involvement throughout the construction period?

- How does the Offeror integrate construction subcontractors into the design process?

- What are the Offeror's processes for handling construction and design problems.

Offerors are cautioned that this narrative shall not exceed ten (10) pages and that the Government review staff will review and evaluate only the information contained on the first ten pages in this section.

2.9 TAB E – FACTOR 1-4 Offeror Sustainable Design Experience. Provide examples of at least two projects for which the Offeror has been responsible and which included sustainable features. Specific experience in LEED/SPIRIT application will be given more favorable consideration. Provide references (with contract names and telephone numbers) for all examples cited. Each example shall indicate the general character, scope, location, cost, and date of completion of the project. Each example shall also indicate what sustainable features the project included, a

quantification of the results as applicable (i.e. “diverted 25% of construction waste”) and the role(s) the Offeror had in the accomplishment of each sustainable goal. If the Offeror represents the combining of design and construction companies for the purpose of this RFP, each of the primary design and construction companies shall both list two project examples. Example projects must have been completed not earlier than three years prior to the date of the solicitation. See sample sheets attached.

2.10 No cost information shall be included in the Phase 1 proposal package.

3. PHASE 2 PROPOSAL SUBMISSION INSTRUCTIONS

3.1 Who May Submit. Proposals may be submitted by the Offerors who receive written notification from the Savannah District Contracting Officer that their firm has been selected to participate in Phase 2 of this solicitation. No more than five Offerors will compete in Phase 2 under typical circumstances. The Government intends to announce the names of Offerors selected for Phase 2 in the FEDBIZOPS website unless an Offeror provides written notification and explanation for not wanting this information released.

3.2 General Requirements.

3.2.1 Title Page. Include the title of the solicitation, solicitation number, Offeror name, and date of the submittal.

3.2.2 Table of Contents. The proposals shall contain a detailed table of contents. If more than one binder is used, the complete table of contents shall be included in each. Any materials submitted but not required by this solicitation, (such as company brochures), shall be relegated to appendices.

3.2.3 Tabs. Proposal shall be organized and tabbed as shown.

3.2.4 Size of Printed Matter Submissions.

3.2.4.1 Written materials: 8-1/2" x 11" format.

3.2.5.2 Drawing sheets:

3.2.5.2.1 Offerors shall submit one set of full size drawings(30” x 42”).

3.2.5.2.2 Offerors shall submit five half size sheets(15” x 21”).

3.2.5.3.3 Drawings shall be bound.

3.2.5.3.4 Drawings submitted for the proposal may be done with any CAD software available to the Offeror. However, the drawings for 60% and Final design submittals will be done and submitted in the latest version of Microstation format only. Conversions from AutoCAD are discouraged because of file incompatibility and the added work necessary for the conversion.

3.2.5.4 Electronic Submission. In addition to the hard copies required above, all Offerors that advance to Phase 2 shall submit on a CD-ROM their complete submittal. This includes the Phase One Submission and the Phase Two Submission (Volumes I and II) including all drawings. Written portions of the proposal should be in MS Word, Adobe Acrobat PDF, or WordPerfect format. The electronic version shall be either a single file tabbed in the same order as the hard copy or multiple files hyperlinked to a single table of contents. Drawings should be in one of the following formats: Microstation DGN, Adobe Acrobat PDF, Max View CAL (with Sendable INDEX.SVD), or Auto Cad DWG. Any portion of the proposal not available in electronic format, i.e. cut sheets, should be scanned in Adobe Acrobat PDF format. The CD ROM must be clearly labeled by solicitation number, project name, installation, and Offeror's name.

3.3 PHASE 2 PROPOSAL, VOLUME I – Contract Requirements & Price Proposal

3.3.1 Submit original and one (1) copy of VOLUME I - Contract Requirements & Price Proposal. This information shall be submitted in separate three-ring binders labeled "Contract Requirements & Price Proposal."

3.3.2 Volume I – CONTRACT REQUIREMENTS & PRICE PROPOSAL shall be organized as follows:

VOLUME I - Contract Requirements & Price Proposal

TAB A – Standard Form 1442, completed and signed by an authorized person from the company or team.

TAB B – Proposal Schedule "Supplies or Services Price/Cost"

TAB C – Bid Bond

TAB D – Section 00600 – Representations and Certifications .

TAB E – Financial Information (e.g. latest financial statement, annual reports, Dun & Bradstreet Ratings, and or number, etc.)

TAB F – Statement of Compliance (See paragraph 1.4)

3.4 PHASE 2 PROPOSAL, VOLUME II – Technical information.

3.4.1 Number of copies. Offerors shall submit six (6) copies of VOLUME II of their Phase 2 Proposal and six (6) half-size copies of all drawings and one (1) full-size copy of all drawings.

3.4.2 This information shall be submitted in separate three-ring binders labeled "Technical Information." This category consists of design documents, drawings, sketches, outline specifications, design analysis, catalog cuts, and other information.

3.4.3 VOLUME II – TECHNICAL INFORMATION shall be organized as follows:

VOLUME II – TECHNICAL INFORMATION

TAB A – BETTERMENTS

TAB B – FACTOR 2-1: BUILDING FUNCTION AND AESTHETICS

TAB C – FACTOR 2-2: BUILDING SYSTEMS

TAB D – FACTOR 2-3: SITE DESIGN CONSIDERATIONS

TAB E – FACTOR 2-4: SITE ENGINEERING

TAB F – FACTOR 2-5: SUSTAINABLE DESIGN CONSIDERATIONS

TAB G – FACTOR 2-6: OFFEROR MANAGEMENT PLANS AND SCHEDULES

TAB H – Any other information provided by the Offeror

DRAWINGS (Minimum drawings required are outlined in each section)

3.4.4 The technical data described in Paragraphs 4 through 9 below shall be submitted as part of the formal proposal. All alternate designs shall be graphically described on separate drawings from the basic proposal. Offerors are advised that the required data listed below will be utilized for technical review and evaluation and used for determination of a "Quality Rating" by a Technical Evaluation Team. Materials indicated in the design/construction criteria, but not indicated in the Offeror's specifications, will be assumed to be included and a part of the proposal.

3.4.5 Incomplete proposals. Failure to submit all the data indicated in this section may be cause for determining a proposal incomplete and, therefore, not considered for technical evaluation in Phase 2, or for subsequent award.

4. TAB A – BETTERMENTS

4. 1 Definition of Betterments. A "Betterment" is defined as any component or system, which meets and exceeds the minimum requirements stated in the Request for Proposal. This includes all proposed betterments listed in accordance with the "Proposal Submission Requirements" of this TAB, and all Government identified betterments.

4.2 During discussions, the Government may request that betterments be removed from the Offeror's proposal in order to reduce costs.

4.3 The minimum requirements of the contract are identified in the Request for Proposal. All betterments offered in the proposal become a requirement of the awarded contract.

4.4 Submission of Betterments. The Offeror shall identify "Betterments" in the following manner:

- Short descriptive title of the betterment and how it exceeds RFP requirements.
- Narrative of the proposed betterment and rationale as to why it has been included.
- Reference in the Offeror's proposal where the betterment is shown or specified.
- Estimated value of the betterment.

5. TAB B – FACTOR 2-1: BUILDING FUNCTION AND AESTHETICS

5.1 Architectural Narrative. State the proposed image or design theme of this proposal. Describe interior design theme. Describe any special features or finishes that contribute to the proposed design theme. Describe construction of typical interior partitions. List any architectural deviations from the minimum RFP requirements that are included in the proposal. Also state whether the Building exterior materials and appearance is in compliance with the Installation Design Guide.

5.2 Certifications.

5.2.1 Mechanical Room Certification. Provide signed and dated certification that the mechanical room is of sufficient size to accommodate, serve, and eventually replace all mechanical equipment shown and specified by the mechanical design.

5.3 Architectural Drawings. Drawings shall be provided in sufficient detail for reviewers to visualize how the designer has interpreted the RFP functional and operational requirements in his proposal. Drawings shall include, but not be limited to, the following:

5.3.1 Floor Plan(s). Floor plans for each floor shall be drawn accurately to scale and shall be shown at 1/8 " = 1'-0" minimum scale unless otherwise noted. Show gross floor area tabulations on lower portion of plate. Label all spaces. Indicate net area of all spaces. Show all doors, windows, plumbing fixtures, toilet partitions and built-in casework. Show required workstations as dashed-line blocks to demonstrate that the spaces accommodate the required workstations. Show overall building dimensions. If the floor plan(s) must be drawn in segments in order to comply with the requirements on the proper scale, provide a separate 1/16"=1'-0" or smaller scale composite floor plan showing exterior walls, interior partitions, circulation elements and cross referencing for enlarged floor plans.

5.3.2 Building Elevations. Exterior elevations shall be drawn to 1/8"=1'-0" scale for all four major building elevations. If elevations must be drawn in segments in order to comply with the requirements on proper scale, provide separate 1/16"=1'-0" or smaller composite elevations as required to fit on one sheet. Elevations shall show all windows, doors, canopies, and platforms. All building exterior materials and roof pitches shall be noted clearly.

5.3.3 Typical Wall Section. Provide one exterior wall section for each different exterior wall type indicating the exterior wall and wall/roof intersection condition. Show overall wall thickness and eave height. Note all materials. Wall section shall be unbroken where practical and drawn at ¾"= 1'-0" scale.

5.3.4 Roof Plan. Roof plans for the building shall be drawn accurately to scale and shall be shown at least 1/16 " = 1'-0" minimum scale unless otherwise noted. All roof slopes shall be indicated.

5.3.5 Roof Bid Option. If a bid option exists for an alternative roof, provide any information required by paragraphs 5.3.2 through 5.3.6 of this TAB for the alternative roof if that information differs from the Base Bid roof information..

5.3.6 Exterior Colors. Describe the concept for the exterior color scheme and how it relates to the Installation Design Guide.

6 TAB C – FACTOR 2-2: BUILDING SYSTEMS

6.1. STRUCTURAL SUBMITTAL REQUIREMENTS. The structural portion of the proposal must outline the proposed methods and materials of design and construction. The submittal shall include the following:

6.1.1 Structural Narrative. Provide a general description of the scope of the project and all of the major structures. Give overall building dimensions and a description of the principal features such as wall and roof construction proposed. If the building is irregularly shaped, explain where seismic joints will be placed to create regular shapes or provide a statement that a dynamic analysis of the building will be performed.

6.1.1.1 Provide a description of the framing system chosen.

6.1.1.2 Provide a description of the lateral load resisting system and how these loads will be transmitted to the foundations.

6.1.1.3 Provide a description of the anticipated foundations based on information provided in the RFP.

6.1.1.4 Provide a list of special design features including features to be used in compliance with the Anti-terrorism/Force Protection requirements.

6.1.2 Fire Resistance Statement. State the required fire resistance criteria for all portions of the structural system and the proposed method of meeting these requirements.

6.2 MECHANICAL SUBMITTAL REQUIREMENTS.

6.2.1 Heating, Ventilating, and Air Conditioning Narrative. Narrative of design analysis will contain the following:

6.2.1.1 Design conditions used in calculations - inside and outside temperatures, personnel load, outside air or ventilation requirements, U-factors, and other special conditions.

6.2.1.2 Block loads for heating and cooling shall be provided and calculated using ASHRAE-based methods. Where passive solar applications prove feasible and cost effective, the Offeror shall employ a load calculation method that can incorporate all applicable passive solar factors. All load calculation software must be traditionally used by the industry.

6.2.1.3 A description of all HVAC systems to be considered in a life cycle cost analysis (LCCA). A LCCA, using the program LCCID, of each of the HVAC systems described shall be submitted by the successful contractor – after contract award, verifying that the system selected for the building is the most efficient and is within the energy budget. For additional requirements, see Section 01020.

6.2.1.4. A description of piping systems including type of pipe, insulation requirements, and whether concealed or exposed.

6.2.1.5 **Controls System Narrative.** A description of the proposed Direct Digital Controls System to be used.

6.2.2 Plumbing Narrative. Plumbing analysis to determine number of fixture units, cold and hot water capacity requirements, and equipment or capacities of miscellaneous and special systems.

6.2.2.1 Fixture determination listing quantity and type of fixtures for both men's and women's toilets, and other fixtures such as drinking water fountains, service sinks, etc.

6.2.2.2 Description of domestic water heating and storage equipment, including capacity, type (gas, electric, boiler, water), materials, and insulation.

6.2.2.3 Piping types and location (concealed or exposed), together with material proposed and insulation requirements.

6.2.2.4. Brief description of miscellaneous systems such as compressed air (capacity, pressure, piping, location of air outlets, etc.), roof drainage, natural gas (pressure, quantity, and equipment to be served), and other special systems.

6.2.3 Mechanical Drawings. Provide plan view showing the following:

6.2.3.1 Heating, Ventilating, and Air Conditioning Drawings. Heating, ventilating, and air conditioning equipment layout - chillers or refrigeration compressors, boilers, pumps, condensers or cooling tower, air handling units, fans, hoods, and other items of major equipment required for the facility. A ductwork layout is not required.

6.2.3.2 Plumbing Drawings. Plumbing fixture layout, floor and area drains, and plumbing equipment layout (hot water generator, storage tank, air compressors, etc.).

6.2.3.3 Mechanical Room(s) Drawings. Provide a 1/4 inch = 1 foot scale (1:50) plan showing equipment layout of major components in mechanical rooms. The Engineer/ Architect of record will be required to certify that adequate

space has been provided for safe operation of equipment, maintenance capability, and eventual replacement. Mechanical equipment layouts shall comply with Section 01020.

6.3 ELECTRICAL SUBMITTAL REQUIREMENTS.

6.3.1 Interior Electrical System Design Narrative. Provide an overview of the interior electrical design describing the major features of the power, lighting, communication and security systems.

6.3.2 Interior Electrical Distribution. For typical areas within the various buildings, describe the type of power and communication wiring systems proposed (e.g., cable tray, rigid metallic conduit, rigid nonmetallic conduit, electrical metallic tubing, nonmetallic-sheathed cable).

6.3.3 Interior Electrical Drawings. Provide lighting, power and signal plans. The plans shall indicate locations of devices and fixtures only; no wiring shall be shown. Fixtures shall be marked to correlate to the Interior Concept Lighting Schedule.

6.3.4 Exterior Electrical Distribution System Design Narrative. Provide an overview of the exterior electrical design describing the major features of the power, lighting and communication systems.

6.3.5 Exterior Electrical Drawings. Provide a separate electrical site plan indicating all existing to be removed, existing to remain, and new utility lines and equipment required to serve the project. Utility lines shown shall include electrical power lines, telephone and other communication lines. The plan shall also show all buildings, trees, roads and driveways, parking areas, and any other items necessary for functional and operating adequacy. Indicate the connection points and the approximate routing of lines through the site. Indicate the locations of transformers, switches and cable termination cabinets. Also indicate on the drawings the lighting fixture type proposed within each area (no layout is required).

6.3.6 Energy Conservation Design Narrative. Energy conservation measures shall be indicated. The narrative shall describe measures and techniques that are proposed in the electrical design that will conserve energy.

6.4 FIRE PROTECTION SUBMITTAL REQUIREMENTS.

6.4.1. Fire Protection Narrative. A narrative will be provided addressing the following items for each building type in this project:

6.4.1.1 Automatic fire extinguishing systems and hose standpipe systems: Identification of all areas provided with sprinkler protection and the type of sprinkler system provided, sprinkler hazard classification for these areas, areas protected by other automatic suppression systems and the type system provided, and buildings provided with hose standpipe systems and the type of standpipe system provided and indication if a fire pump is required and where the pump will be located.

6.4.1.2 The type of alarm and detection system, location of the fire alarm and detection equipment including fire alarm control panel, and catalog data sheets of major components

6.4.2 Credentials of Fire Protection Engineer. Provide the credentials of the fire protection engineer in the proposal submittal. The design of the fire protection features shall be by a qualified fire protection engineer meeting one of the following conditions: a.) An engineer with a Bachelor of Science or Masters of Science Degree in fire protection engineering from an accredited university engineering program, plus a minimum of 5 years' work experience in fire protection engineering. b.) A registered professional engineer who has passed the National Council of Examiners for

Engineering and Surveys (NCEE) fire protection engineering written examination. c.) A registered P.E. in a related engineering discipline with a minimum of 5 years' experience dedicated to fire protection engineering.

7. TAB D – FACTOR 2-3 SITE DESIGN CONSIDERATIONS. This factor considers the layout and planning of the site and various specialties that comprise a good site development plan. The goal and direction of the Barracks Complex is to produce a "campus like" setting and to encourage a positive relationship between the site development and soldier needs. All elements of site design will be considered in this factor, with the exception of the design and materials utilized for utility systems that will be evaluated under a different factor. The following subfactors shall be considered in evaluation this factor. The levels of importance are as follows:

7.1 Area Development Plan. This subfactor evaluates the overall development concept proposed in the Offeror's plan with respect to the placement and orientation of the facilities, parking areas, pedestrian ways, circulation paths, site lighting, and other aspects which comprise the overall site development. Proposals that reflect the design intent and direction as outlined in the Statement of Work will receive the most consideration during the evaluation process.

7.2 Force Protection Considerations. This subfactor evaluates the inclusion of the site restraints imposed by the Force Protection requirements in the Statement of Work into the Offeror's proposal. The proposal must address this subfactor specifically. If a proposal is rated "unsatisfactory" in this subfactor the proposal may be eliminated from further consideration.

7.3 Grading. This subfactor evaluates the proposed grading alterations to the existing site to suit the new development. The Offeror's proposal will be evaluated on the amount and type of site grading required as well as the provision for positive storm drainage away from the new facilities and parking areas.

7.4 Landscaping. This subfactor evaluates the design, quality, quantity, and location of all planting materials in the proposal. Considerations should include the use of landscaping as screening for exterior equipment and for decorative purposes. The following items shall be considered in evaluating this subfactor:
7.4.1 Does the proposal include landscaping materials to provide screening for external equipment?
7.4.2 Does the proposal include decorative plantings to enhance the appearance and environment of the complex?
7.4.3 Have the plant materials selected reflected those indicated in the Installation Design Guide?
7.4.4 Have trees (shading and decorative) been included in the proposal?
7.4.5 Have the parking areas been provided with attractive planting areas to break up the large areas of paving?
7.4.6 Has the landscaping plan been integrated into the Sustainable Design considerations addressed by the proposer? Does the landscaping provided offer any environmental benefit to the Installation?

7.5 Parking Areas. This subfactor evaluates the provision of parking for the new facilities. In this subfactor the following items should be considered:
7.5.1 Proximity to new facilities.
7.5.2 Layout of Parking Areas (with more than 5 spaces)
7.5.3 Internal Circulation considerations
7.5.4 Clear exit and entrance pathways
7.5.5 Ninety (90) degree entrances/exits to primary streets
7.5.6 Separation of parking areas entrances/exits from street intersections.

7.6 Pedestrian Circulation. This subfactor evaluates the design of the pedestrian walkways and sidewalks to facilitate movement of pedestrians from one facility to another. The pedestrian walkways and sidewalks developed in the Offeror's proposal must represent an extension of the existing adjacent systems. Some items for consideration in evaluating this subfactor are as follows:
7.6 1 Are all parking areas served by sidewalks?
7.6.2 Does the proposed sidewalk system provide direct, convenient access to all facilities from the associated parking areas?
7.6.3 Has a sidewalk system around and between facilities been provided?

7.7 Site Amenities. This subfactor evaluates the provision of site amenities to enhance the outdoor livability of the Weapon Training Facility. The requirements shown in the Statement of Work are considered minimums. Offerors are encouraged to include additional items or considerations to enhance the nature of the facility.

8. TAB E –FACTOR 2-4. SITE ENGINEERING. This factor evaluates the technical performance of the proposed site utility and exterior utility distribution systems. The quality of the proposed design as well as the materials selected will be considered in this item. Emphasis will be placed on durability, corrosion resistance, ease of maintenance, and life cycle cost of materials selected. Consideration will be given to the suitability of the chosen materials for the site soil conditions present. Site engineering will consider all aspects of the proposal beyond the 5-ft line from all new facilities. The subfactors listed below will be considered as follows:

8.1 SANITARY SEWER Evaluates system design, material quality, and maintainability.

8.2 STORM SEWER SYSTEM Evaluates system design, material quality, and maintainability.

8.3 PAVEMENTS Evaluates pavement design, material quality, and maintainability.

8.4 WATER SYSTEM Evaluates system design, material quality, and maintainability.

8.4 FUEL PIPING AND STORAGE Evaluates piping sizes, material quality, layout, accessibility, and cutoff isolation.

8.5 ELECTRICAL DISTRIBUTION Evaluates system design, material quality, and maintainability.

8.6 COMMUNICATIONS (TV, Telephone, etc). Evaluates system design, material quality, and maintainability.

9. TAB F – FACTOR 2-5. SUSTAINABLE DESIGN SUBMITTAL REQUIREMENTS.

9.1 SPIRIT Summary Table. Submit the Appendix "SPIRIT Requirements and Summary Table" with the "Proposal Points" column filled in to reflect the points contained in your proposal, including the total. A "SPIRIT Requirements and Summary Table" shall be provided for each individual occupied building type in project. The requirement is to achieve a minimum of 25 points in each summary table using the SPIRIT Project Rating Tool for Sustainable Design. NOTE: The points indicated on this summary will be considered contract requirements upon award. Do not modify any of the spaces in this column that were filled in on the solicitation.

9.2 Sustainable Design Narrative. Organize the narrative in the same order as SPIRIT summary table with one paragraph devoted to each proposed item on the chart. Briefly describe the activities and/or features proposed to earn each point indicated on your proposal. For mandatory points and requirements the narrative may be limited to repeating the statement found in the "Remarks" column of the SPIRIT summary table.

10. TAB G – FACTOR 2-6 OFFEROR MANAGEMENT PLANS AND SCHEDULES. This factor evaluates the Offeror's Project Management Plans as well as the proposed schedule for completion of the entire design-build project. Through this factor the Government will evaluate the Offeror's understanding of the solicitation provisions with respect to an integrated design-build process and the associated quality control, scheduling, coordination, and contract close out provisions. Each of the subfactors below are equal in importance.

10.1 Offeror Project Key personnel. The Government will evaluate and rate the Key Personnel identified in the Phase 1 proposal package. The resumes and levels of responsibility of the principal managers and technical personnel who will be directly responsible for the day-to-day design and construction activities will be evaluated. Data should indicate whether each individual has had a significant part in any of the project examples cited. If reassignment of personnel is considered possible, the names and resumes of the alternative professionals for each assignment will be evaluated. Additional consideration will be given to individuals who have past experience with

Corps of Engineers construction project operations and who have completed the Corps sponsored Quality Control Class.

10.2 Quality Control Plan. The Offeror's sample quality control plan will be reviewed and evaluated for inclusion of specific quality control practices and requirements necessary for the successful completion of all phases of this project. These phases include design stages as well as construction specialties. The Offeror's plan must show the inclusion of the Corps Three Phase Inspection process, and address the implications and operations of the Quality Control Plan and its integration with the Quality Assurance Operations performed by the Government. The personnel and qualifications of the individuals performing in the Quality Control organization will be evaluated under the Phase 1 submission, however, if personnel changes have occurred since the Phase 1 submittal, these individuals must be evaluated as part of the Phase 2 evaluation process.

10.3 Schedule Information. The schedule will be evaluated to assess the inclusion of "fast tracking" and the rationale of how the Offeror intends to comply with the submitted schedule. The schedule must reflect a single task oriented structure for both design and construction. The schedule will be reviewed for completeness and the inclusion of required milestones. A schedule that improves on the Government supplied maximum duration will be considered more favorably during the evaluation.

10.4 Closeout Plan. The Offeror's closeout plan will be reviewed and evaluated to determine the Offeror's understanding the RFP's close out requirements. Particular emphasis will be placed on O&M Manual production and Installation Staff training methods and processes.

10.5 Sub-Contracting Plan. The Offeror's proposed subcontracting plan will be evaluated in terms of achieving the required special emphasis group participations and the completeness and rationale for the plan proposed. Offerors who are not required to submit a subcontracting plan (i.e., Small Business concerns) will be assigned a rating equal to the highest evaluation of any subcontracting plan submitted in response to this solicitation

PROPOSAL DATA SHEET – PHASE 1

NOTE TO OFFERORS
This OFFEROR PERFORMANCE CAPABILITY PROPOSAL DATA SHEET must be completed and attached as the first page of the body of your proposal. The information required by this data sheet may be completed directly on this form or attached to the form as supplemental data sheets.

1. NAME OF OFFEROR.

Name of Offeror(s):

If a joint venture or contractor-subcontractor association of firms, list the individual firms and briefly describe the nature of the association.

Firm 1:

Firm 2:

Nature of Association:

2. DUNS NUMBER FOR OFFEROR
(If more than one DUNS number is to be considered explain affiliation to offeror)

3. ACASS identification number for design firm and CCASS identification number for construction firm.

4. AUTHORIZED NEGOTIATORS. FAR 52.215-11

The offeror represents that the following persons are authorized to negotiate on its behalf with the Government in connection with this Request for Proposals (RFP).

[List names, titles, and telephone number of the authorized negotiator.]

Name of Person Authorized to Negotiate:

Negotiator's Address:

Negotiator's Telephone:

5. PAST PERFORMANCE ON RECENT RELEVANT PROJECTS.

5.1 Provide the Past Performance on Recent Relevant Project information for three completed or substantially completed projects, that are being or have been constructed by the Offeror, and are to be used for third party reference and evaluation purposes. These are the projects for which Past Performance of Recent Relevant Project Evaluation Questionnaires have been provided to a third party.

5.2 If the offeror is made up of separate design and construction companies that have combined for this project, then this item must be completed twice (once for each primary design and construction company), for a total of six projects.

5.3 For each project provide the information shown. Failure to provide this minimum information may result in lower ratings.

6. LIQUIDATED DAMAGES. On an attached sheet, list any projects within the last three years that have been assessed liquidated damages. Provide an explanation.

7. TERMINATED PROJECTS. On an attached sheet, list any projects within the last five years that have been terminated. Provide an explanation.

8. GOVERNMENT PROJECTS. On an attached sheet, list all contracts with the Government within the last three years. Indicate Government contract number and contracting agency (with contact names and telephone numbers).

9. CADD CAPABILITIES. On an attached sheet, describe your office capabilities for using CADD (Computer Aided Design and Drafting) and other forms of automation on this project. This information shall be limited to two 8 ½ by 11 sheets of paper, double spaced, 12 pitch font.

SAMPLE

FACTOR 1-1 PAST PERFORMANCE ON RECENT RELEVANT PROJECTS INFORMATION

A Project Evaluation Questionnaire was sent to a third party for this project? Yes____ No____

Project Title:

Location:

Contract number:

Procuring activity:

Procurement point of contact and telephone number:

List date of construction completion or percent completion if construction is underway:

Address of building(s):

Address and telephone number of owner:

Indicate type of project (private sector, Government, planned unit development, etc.):

General character:

Total cost:

Total cost of all modifications:

Describe how you believe this project is relevant to the project in this RFP:

SAMPLE

FACTOR 1-2 RECENT RELEVANT EXPERIENCE

Project Title:

Location:

Contract number:

Nature of involvement in this project, i.e. General Contractor, subcontractor, designer:

Procuring activity:

Procurement point of contact and telephone number:

List date of construction completion or percent completion if construction is underway:

Address of building(s):

Address and telephone number of owner:

Indicate type of project (private sector, Government, planned unit development, etc.):

General character:

Total cost:

SAMPLE

FACTOR 1-3 Technical Approach Narrative. (Describe in general terms how the oferor will approach the design and construction of these facilities). At a minimum the narrative should address the following:

Demonstrate a suitable understanding of the process to enable it to adequately address and anticipate the risks associated with Design/Build processes?

Describe the roles and responsibilities of the various sub-contractors for both design and construction shall be addressed.

Explain how the Offeror continue the design phase of the project and incorporate User comments and reviews into the process?

Explain the Offeror's Design Quality Control Program shall be briefly described.

Explain what is the design team's involvement throughout the construction period?

Explain how does the Offeror integrate construction subcontractors into the design process?

Explain what are the Offeror's processes for handling construction and design problems.

SAMPLE

FACTOR 1-4 SUSTAINABLE DESIGN EXPERIENCE.

On an attached sheet, provide information for in-progress or completed projects that include sustainable design features, that have been done by the offeror to be used for reference and evaluation purposes. For each project provide the following information:

Project Title:

Location:

Contract number:

Nature of involvement in this project, i.e. General Contractor, subcontractor, designer:

Procuring activity:

Procurement point of contact and telephone number:

List date of construction completion or percent completion if construction is underway:

Address of building(s):

Address and telephone number of owner:

Indicate type of project (private sector, Government, planned unit development, etc.):

General character:

Total cost:

Sustainable design features in project - for each provide the following:

- Brief description of SDD feature.
- Quantified SDD accomplishment or goals
- Nature of involvement in this SDD feature, i.e. General Contractor, subcontractor, designer:

SAMPLE TRANSMITTAL LETTER
AND
PAST PERFORMANCE OF RECENT RELEVANT PROJECT EVALUATION QUESTIONNAIRE

Date: _____

To: _____
_____
_____

We have listed your firm as a reference for work we have performed for you as listed on the attached questionnaire. Our firm has submitted a proposal under a project advertised by the U.S. Army Corps of Engineers, Savannah District: **SOF Weapons Training Facility, Fort Bragg**, . In accordance with Federal Acquisition Regulations (FAR), an evaluation of our firm's past performance will be completed by the Corps of Engineers. Your candid response to the attached questionnaire will assist the evaluation team in this process.

We understand that you have a busy schedule and your participation in this evaluation is greatly appreciated. Please complete the enclosed questionnaire as thoroughly as possible. Space is provided for comments. Understand that while the responses to this questionnaire may be released to the offeror, FAR 15.306 (e)(4) prohibits the release of the names of the persons providing the responses. Complete confidentiality will be maintained.

Please send your completed questionnaire to the following address to arrive NOT LATER THAN *(edit with the date and time set for receipt of Phase I proposals)* to:

U.S. Army Engineer District, Savannah
Contracting Division (CESAS-CT-C)
ATTN: Rosetta J. Brightwell
100 W. Oglethorpe Ave.
Savannah, GA 31401

The questionnaires can also be emailed to; rosetta.j.brightwell@sas02.usace.army.mil or faxed to; 912-652-5828, ATTN: Rosetta J. Brightwell.. If you have questions regarding the attached questionnaire, or require assistance, please contact Rosetta J. Brightwell at 912-652-5903. Thank you for your assistance.

PAST PERFORMANCE OF RECENT RELEVANT PROJECT EVALUATION QUESTIONNAIRE

Upon completion of this form, please send directly to the U.S. Army Corps of Engineers in the enclosed addressed envelope or fax to 912-652-5903, ATTN: Rosetta J. Brightwell or e-mail to rosetta.j.brightwell@sas02.usace.army.mill **. Do not return this form to our offices. Thank you.**

1. Contractor/Name & Address (City and State):

2. Type of Contract: Fixed Price _____ Cost Reimbursement _____
Other (Specify) _____

3. Title of Project/Contract Number:
_____
_____
_____

4. Description of Work: (Attach additional pages as necessary)

5. Complexity of Work: High _____ Mid _____ Routine _____

6. Location of Work:_____

7. Date of Award: _____

8. Status: Active _____ (provide percent complete)

Complete _____ (provide completion date)

9. Name, address and telephone number of person completing this questionnaire:

10. QUALITY OF CONSTRUCTION (OR DESIGN FOR A DESIGN FIRM):

Evaluate the contractor's performance in complying with contract requirements, quality achieved and overall technical expertise demonstrated.

Outstanding Quality	
Above Average Quality	
Satisfactory Quality	
Marginal Quality	
Unsatisfactory or Experienced Significant Quality Problems	

Remarks: _____

_____

_____

_____

11. TIMELINESS OF PERFORMANCE:

To what extent did the contractor meet the contract schedules and/or individual task order schedules if the contract was an indefinite delivery type contract?

Completed Substantially Ahead of Schedule (Outstanding)	
Completed Ahead of Schedule (Above Average)	
Completed on Schedule or with Minor Delays Under Extenuating Circumstances (Satisfactory)	
Completed Behind Schedule (Marginal)	
Experienced Significant Delays without Justification (Unsatisfactory)	

Remarks: _____

_____

_____

12. CUSTOMER SATISFACTION:

To what extent were the end users satisfied with:

	Quality?	**Cost?**	**Schedule?**
Exceptionally Satisfied (Outstanding)			
Highly Satisfied (Above Average)			
Satisfied (Satisfactory)			
Somewhat Dissatisfied (Marginal)			
Highly Dissatisfied (Unsatisfactory)			

Remarks:
_____

_____

_____

13. SUBCONTRACTOR MANAGEMENT (Design or Construction)

How well did the contractor manage and coordinate subcontractors, suppliers, and the labor force?

Outstanding Management/Coordination	
Above Average Management/Coordination	
Satisfactory Management/Coordination	

Marginal Management/Coordination	
Unsatisfactory Management/Coordination	

Remarks:

_____

_____

_____

14. If given the opportunity, would you work with this contractor again?

Yes _____ No _____ Not Sure _____

Remarks:

_____

_____

_____

_____

_____

15. OTHER REMARKS:

Use the space below to provide other information related to the contractor's performance. This may include the contractor's selection and management of subcontractors, flexibility in dealing with contract challenges, their overall concern for the Government's interest (if applicable), project awards received, etc.

_____

_____

_____

_____

_____

_____

_____

_____

Section 00120 – PART 1
PHASE 1 EVALUATION MANUAL

1. GENERAL

The purpose of this document is to establish a uniform evaluation procedure for Phase 1 of the solicitation based on contractually defined criteria. The Evaluation Team will evaluate each proposal individually using the qualitative/quantitative procedures which follow. Each proposal will be reviewed and rated by each of the evaluators. During this process, discrepancies between evaluations will be discussed and resolved within the team. Following the completion of the individual evaluations, a consensus evaluation will be derived. The results of this consensus evaluation will be documented and presented to the Contracting Officer/Source Selection Authority for determination of which proposals proceed into Phase 2 of the solicitation process.

2. PROPOSAL REQUIREMENTS

2.1 Section 00110, Proposal Submission Requirements and Instructions identifies all the necessary submittal information to be included in the proposals. Proposals which reach the evaluation stage have passed an initial Contracting Division review to assure that they are complete and responsive. All proposals which are provided to the evaluation team will be evaluated and rated.

2.2 Past Performance of Recent Relevant Project Evaluation Questionnaires. Each Offeror has been requested to have questionnaires from previous projects completed and forwarded directly to the Savannah District for use by the evaluation team in past performance evaluation and risk analysis. The Government may contact the points of contact indicated on these questionnaires for additional information and to assure validity of the information received. The Government may contact sources other than those provided by the Offeror for information with respect to past performance. These other sources may include ACASS (Architect-Engineer Contract Administration Support System), CCASS (Construction Contractor Appraisal Support System), telephone interviews, and Government personnel with personal knowledge of the Offeror's performance capability. If more than the required number of questionnaires are received, the evaluation team shall evaluate all questionnaires. If less than the required number of questionnaires are received, the proposal shall receive a rating commensurate with the contractor's performance risk as determined by the evaluation team.

3. INDIVIDUAL PROPOSAL RATING WORKSHEETS

3.1 Worksheets are provided on the following pages that the evaluators will use to review and rate the individual proposals.

3.2 Comments are required to support all ratings.

4. RATING METHODOLOGY

4.1 Proposals will be evaluated in each Evaluation Factor based on the following rating scheme:

RATING	EXPLANATION
Outstanding/Very Low Performance Risk	Based on the Offeror's Phase One Submittal, no doubt exists that the Offeror will successfully perform the required effort.
Above Average/Low Performance Risk	Based on the Offeror's Phase One Submittal, little doubt exists that the Offeror will successfully perform the required effort.
Satisfactory/Moderate Performance Risk	Based on the Offeror's Phase One Submittal, some doubt exists that the Offeror will successfully perform the required effort. Normal contractor emphasis should preclude any problems.
Marginal/High Performance Risk	Based on the Offeror's Phase One Submittal, substantial doubt exists that the Offeror will successfully perform the required effort.
Unsatisfactory/Unacceptable Performance Risk	Based on the Offeror's Phase One Submittal, extreme doubt exists that the Offeror will successfully perform the required effort.

4.2 Yes - No Ratings. Where the specific evaluation sheets indicate a YES – NO Rating these items shall be treated as information items. They are included in the evaluation worksheets to assure a similar focus among the evaluators and to ensure that individual evaluators do not overlook proposal information provided.

4.3 Weighting of Factors. Relative Importance Definitions: For the purpose of this evaluation, the following terms will be used to establish the relative importance of the factors and subfactors:

- **Significantly More Important*:*** The criterion is at least two times greater in value than another criterion.
- **More Important:** The criterion is greater in value than another criterion but less than two times greater.
- **Equal:** The criterion is of the same value or nearly the same as another criterion.

5. EVALUATION FACTORS.

5.1 Factor Relative Weights. The following factors will be evaluated and rated for each proposal:

- **FACTOR 1-1: OFFEROR PAST PERFORMANCE:** This factor is more important than Factor 1-2 and significantly more important than Factors 1-3, and 1-4.
- **FACTOR 1-2: RECENT RELEVANT SPECIALIZED EXPERIENCE:** This factor is significantly more equal in important ance thano Factors 1-3 and 1-4.
- **FACTOR 1-3 TECHNICAL APPROACH NARRATIVE:** This factor is equal in importance to Factors 1-2 and 1-4.

- **FACTOR 1-4: OFFEROR SUSTAINABLE DESIGN EXPERIENCE:** This factor is equal in importance to Factors 1-2 and 1-3.

5.2 FACTOR 1-1: OFFEROR PAST PERFORMANCE ON RECENT RELEVANT PROJECTS. The Government will evaluate the Offeror's past performance of recent projects and the relevancy of those projects to the project in this RFP using the sources available to it including, the example projects identified by the Offeror, Past Performance of Recent Relevant Project Evaluation Questionnaires received, ACASS, and CCASS. Offerors may be provided an opportunity to address any negative recent relevant past performance information about which the Offeror has not previously had an opportunity to respond. The Government will evaluate recent relevant past performance based on the elements listed below:

5.2.1 Quality of Construction. Based on information provided in the questionnaire and other information, the Government will assess the quality of the actual construction undertaken and the standards of workmanship exhibited by the Offeror's team.

5.2.2 Timeliness of Performance. The Government will evaluate all information available with respect to the Offeror completing past projects within the scheduled completion times.

5.2.3 Customer Satisfaction. The Government will evaluate all information available with respect to the Offeror's past customer satisfaction, cooperation with customers, and interaction with customers on past projects.

5.2.4 Subcontractor Management. The Government will evaluate all information available with respect to the Offeror's management of subcontractors on past projects.

5.2.5 Recency and Relevancy. The Government will evaluate all information available with respect to the past project being completed recently and the relevancy of the past project to the project described in this RFP.

5.3 FACTOR 1-2 RECENT RELEVANT SPECILALIZED EXPERIENCE . Provide examples (at least three) of projects for which the offeror has been responsible. The examples should be as similar as possible to this solicitation in project type and scope. Provide references (with contract names and telephone numbers) for all examples cited. Each example shall indicate the general character, scope, location, cost, and date of completion of the project. If the offeror represents the combining of two or more companies for the purpose of this RFP, each company shall list project examples.
Example projects must have been completed not later than three years prior to the date of the solicitation. The experience of individuals will not be credited under this factor but will be evaluated under "Project Key Personnel" in Phase 2.

5.4 FACTOR 1-3 TECHNICAL APPROACH NARRATIVE. Describe in general terms how the offeror will approach the design and construction of these facilities. Technical Approach Narrative shall be limited to a maximum of ten (10) typewritten pages, 12 pitch, and double spaced**.** At a minimum the narrative should address the following:

5.4.1 Does the Offeror demonstrate a suitable understanding of the process to enable it to adequately address and anticipate the risks associated with Design/Build processes?

5.4.2 The roles and responsibilities of the various sub-contractors for both design and construction shall be addressed.

5.4.3 How does the Offeror continue the design phase of the project and incorporate User comments and reviews into the process?

5.4.4 The Offeror's Design Quality Control Program shall be briefly described.

5.4.5 What is the design team's involvement throughout the construction period?

5.4.6 How does the Offeror integrate construction subcontractors into the design process?

5.4.7 What are the Offeror's processes for handling construction and design problems.

5.4.8 Offerors are cautioned that this narrative shall not exceed ten (10) pages and that the Government review staff will review and evaluate only the information contained on the first ten pages in this section.

5.5 FACTOR 1-4 OFFEROR SUSTAINABLE DESIGN EXPERIENCE. Provide examples of at least two projects for which the Offeror has been responsible and which included sustainable features. Specific experience in LEED/SPIRIT application will be given more favorable consideration. Provide references (with contract names and telephone numbers) for all examples cited. Each example shall indicate the general character, scope, location, cost, and date of completion of the project. Each example shall also indicate what sustainable features the project included, a quantification of the results as applicable (i.e. "diverted 25% of construction waste") and the role(s) the Offeror had in the accomplishment of each sustainable goal. If the Offeror represents the combining of design and construction companies for the purpose of this RFP, each of the primary design and construction companies shall both list two project examples. Example projects must have been completed not earlier than three years prior to the date of the solicitation. See sample sheets attached.

6. OVERALL PROPOSAL RATING

6.1 Each member of the Government evaluation team will independently consider all information provided in the Phase 1 proposal. Once these individual analyses are completed, the team will meet and determine a rating for each of the evaluation factors for Phase 1 by consensus decision.

6.2 Following completion of the consensus rating, each proposal will be assigned a single overall adjectival rating. This final overall rating, along with ratings on individual factors, will be provided to the Contracting Officer/Source Selection Authority and used in making the determination of which Offerors will proceed to Phase 2 of the solicitation. In no case will more than five (5) proposals be included in the Phase 2 process.

6.3 No proposals which receive an overall rating of Unsatisfactory will be forwarded to Phase 2 regardless of the total number of proposals received.

6.4 It is the responsibility of the evaluation team to provide and document sufficient strengths, weaknesses, and omissions to support the assigned rating for each factor as well as the overall Phase 1 rating. Comments are required for all ratings.

Offeror: _____

Evaluator:_____

Factor 1-1 Individual Summary and Overall Rating

OFFEROR PAST PERFORMANCE ON RECENT RELEVANT PROJECTS

Item No.	Description	Rating
1.	Were all required Past Performance of Recent Relevant Projects Evaluation Questionnaires Received? If not, how many were received? _____	YES/NO
2.	Do All the Questionnaires Received Reflect Projects Completed or Substantially Completed Within the Last 3 Years? If not, how many of the projects were completed or substantially completed in the last three years? _____	YES/NO
3.	Did the Offeror provide Past Performance on Recent Relevant Projects Information Sheets?	YES/NO
4.	Were all projects on the Past Performance on Recent Relevant Projects Information Sheets completed or substantially completed within the last 3 years? If not, explain with comments below.	YES/NO
5.	Were ACASS or CCASS Ratings available? If Yes, which? _____	YES/NO
6.	Do you have any Personal Experience with the Offeror?	YES/NO
7.	PAST PERFORMANCE ON RECENT RELEVANT PROJECTS	
OVERALL FACTOR 1-1 RATING		

Offeror: _____

Evaluator:_____

Factor 1-1 Summary and Overall Rating
(continued)

- **Strengths.**

- **Weaknesses.**

- **Other.**

Offeror: _____

Evaluator:_____

Factor 1-2 Individual Summary and Overall Rating

RECENT RELEVANT SPECIALIZED EXPERIENCE

Item No.	Description	Rating
1.	Does the Proposal include Recent Relevant Specialized Experience Sheets for the required number of projects for each Key Individual? If not, explain below in weaknesses.	YES – NO
2.	Recent Relevant Specialized Experience	YES-NO
OVERALL FACTOR 1- 2 RATING		

- **Strengths.**

- **Weaknesses.**

- **Other.**

Offeror: _____

Evaluator:_____

Factor 1-3 Individual Summary and Overall Rating

OFFEROR TECHNICAL APPROACH NARRATIVE

Item No.	Description	Rating
1.	Technical Approach Narrative Included in Proposal?	YES – NO
2.	Understanding of the Design/Build Process	YES-NO
OVERALL FACTOR 1-3 RATING		

- **Strengths.**

- **Weaknesses.**

- **Other.**

Evaluator:_____

Factor 1-4 Individual Summary and Overall Rating

OFFEROR SUSTAINABLE DESIGN EXPERIENCE

Item No.	Description	Rating
1.	Does the Proposal include Sustainable Design Experience sheets for the required number of projects? If not, how many projects were sheets provided for? _____	YES – NO
2.	Offeror's Sustainable Design Experience	YES-NO
OVERALL FACTOR 1-4 RATING		

- **Strengths.**

- **Weaknesses.**

- **Other.**

Offeror: _____

Evaluator:_____

Phase 1 Summary and Overall Rating

Item No.	Description	Rating
1.	Factor 1-1 Offeror Past Performance on Recent Relevant Projects	
2.	Factor 1-2 Recent Relevant Specialized Experience	
3.	Factor 1-3 Technical Approach Narrative	
4.	Factor 1-4 Offeror Sustainable Design Experience	
OVERALL PHASE 1 RATING		

Offeror: _____

PHASE 1 SOURCE SELECTION BOARD SUMMARY RATINGS

FACTOR No.	Description	Board Member 1	Board Member 2	Board Member 3	Board Member 4	Board Member 5	CONSENSUS
1-1	Offeror Past Performance on Recent Relevant Projects						
1-2	Recent Relevant Specialized Experience						
1-3	Technical Approach Narrative						
1-4	Offeror Sustainable Design Experience						
OVERALL PHASE 1 RATING							

_____
Board Member 1

_____
Board Member 2

_____
Board Member 3

_____
Board Member 4

_____
Board Member 5

_____
Board Chairperson

Offeror: _____

PHASE 1 CONSENSUS SUMMARY RATING

FACTOR 1-1 OFFEROR PAST PERFORMANCE ON RECENT RELEVANT PROJECTS

STRENGTHS:

WEAKNESSES:

OTHER COMMENTS:

Offeror: _____

PHASE 1 CONSENSUS SUMMARY RATING
(Continued)

FACTOR 1-2 RECENT RELEVANT SPECIALIZED EXPERIENCE

STRENGTHS:

WEAKNESSES:

OTHER COMMENTS:

Offeror: _____

PHASE 1 CONSENSUS SUMMARY RATING
(Continued)

FACTOR 1-3 OFFEROR TECHNICAL APPROACH NARRATIVE

STRENGTHS:

WEAKNESSES:

OTHER COMMENTS:

Offeror: _____

PHASE 1 CONSENSUS SUMMARY RATING
(Continued)

FACTOR 1-4 OFFEROR SUSTAINABLE DESIGN EXPERIENCE

STRENGTHS:

WEAKNESSES:

OTHER COMMENTS:

Section 00600 - Representations & Certifications

CLAUSES INCORPORATED BY FULL TEXT

52.222-38 COMPLIANCE WITH VETERANS' EMPLOYMENT REPORTING REQUIREMENTS (DEC 2001)

By submission of its offer, the offeror represents that, if it is subject to the reporting requirements of 38 U.S.C. 4212(d) (i.e., if it has any contract containing Federal Acquisition Regulation clause 52.222-37, Employment Reports on Special Disabled Veterans, Veterans of the Vietnam Era, and Other Eligible Veterans), it has submitted the most recent VETS-100 Report required by that clause.

(End of provision)

52.203-2 CERTIFICATE OF INDEPENDENT PRICE DETERMINATION (APR 1985)

(a) The offeror certifies that --

(1) The prices in this offer have been arrived at independently, without, for the purpose of restricting competition, any consultation, communication, or agreement with any other offeror or competitor relating to –

(i) Those prices,

(ii) The intention to submit an offer, or

(iii) The methods of factors used to calculate the prices offered:

(2) The prices in this offer have not been and will not be knowingly disclosed by the offeror, directly or indirectly, to any other offeror or competitor before bid opening (in the case of a sealed bid solicitation) or contract award (in the case of a negotiated solicitation) unless otherwise required by law; and

(3) No attempt has been made or will be made by the offeror to induce any other concern to submit or not to submit an offer for the purpose of restricting competition.

(b) Each signature on the offer is considered to be a certification by the signatory that the signatory --

(1) Is the person in the offeror's organization responsible for determining the prices offered in this bid or proposal, and that the signatory has not participated and will not participate in any action contrary to subparagraphs (a)(1) through (a)(3) of this provision; or

(2) (i) Has been authorized, in writing, to act as agent for the following principals in certifying that those principals have not participated, and will not participate in any action contrary to subparagraphs (a)(1) through (a)(3) of this provison _____ (insert full name of person(s) in the offeror's organization responsible for determining the prices offered in this bid or proposal, and the title of his or her position in the offeror's organization);

(ii) As an authorized agent, does certify that the principals named in subdivision (b)(2)(i) above have not participated, and will not participate, in any action contrary to subparagraphs (a)(1) through (a)(3) above; and

(iii) As an agent, has not personally participated, and will not participate, in any action contrary to subparagraphs (a)(1) through (a)(3) of this provision.

(c) If the offeror deletes or modifies subparagraph (a)(2) of this provision, the offeror must furnish with its offer a signed statement setting forth in detail the circumstances of the disclosure.

(End of clause)

52.203-11 CERTIFICATION AND DISCLOSURE REGARDING PAYMENTS TO INFLUENCE CERTAIN FEDERAL TRANSACTIONS (APR 1991)

(a) The definitions and prohibitions contained in the clause, at FAR 52.203-12, Limitation on Payments to Influence Certain Federal Transactions, included in this solicitation, are hereby incorporated by reference in paragraph (b) of this Certification.

(b) The offeror, by signing its offer, hereby certifies to the best of his or her knowledge and belief that on or after December 23, 1989,--

(1) No Federal appropriated funds have been paid or will be paid to any person for influencing or attempting to influence an officer or employee of any agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress on his or her behalf in connection with the awarding of any Federal contract, the making of any Federal grant, the making of any Federal loan, the entering into of any cooperative agreement, and the extension, continuation, renewal, amendment or modification of any Federal contract, grant, loan, or cooperative agreement;

(2) If any funds other than Federal appropriated funds (including profit or fee received under a covered Federal transaction) have been paid, or will be paid to any person for influencing or attempting to influence an officer or employee of any agency, a Member of Congress, an officer or employee of Congress or an employee of a Member of Congress on his or her behalf in connection with this solicitation, the offeror shall complete and submit, with its offer, OMB standard form LLL, Disclosure of Lobbying Activities, to the Contracting Officer; and

(3) He or she will include the language of this certification in all subcontract awards at any tier and require that all recipients of subcontract awards in excess of $100,000 shall certify and disclose accordingly.

(c) Submission of this certification and disclosure is a prerequisite for making or entering into this contract imposed by section 1352, title 31, United States Code. Any person who makes an expenditure prohibited under this provision, shall be subject to a civil penalty of not less than $10,000, and not more than $100,000, for each such failure.

(End of provision)

52.204-5 WOMEN-OWNED BUSINESS (OTHER THAN SMALL BUSINESS) (MAY 1999)

(a) Definition. Women-owned business concern, as used in this provision, means a concern that is at least 51 percent owned by one or more women; or in the case of any publicly owned business, at least 51 percent of its stock is owned by one or more women; and whose management and daily business operations are controlled by one or more women.

(b) Representation. [Complete only if the offeror is a women-owned business concern and has not represented itself as a small business concern in paragraph (b)(1) of FAR 52.219-1, Small Business Program Representations, of this solicitation.] The offeror represents that it ( ) is a women-owned business concern.

(End of provision)

52.204-4003 TAXPAYER IDENTIFICATION

Taxpayer Identification Number (TIN)," as used in this provision, means the number required by the Internal Revenue Service (IRS) to be used by the offeror in reporting income tax and other returns. The TIN may be either a Social Security Number or an Employer Identification Number.

(a) Taxpayer Identification Number (TIN).

___ TIN:._____

___ TIN has been applied for.

___ TIN is not required because:

___ Offeror is a nonresident alien, foreign corporation, or foreign partnership that does not have income effectively connected with the conduct of a trade or business in the United States and does not have an office or place of business or a fiscal paying agent in the United States;

___ Offeror is an agency or instrumentality of a foreign government;

___ Offeror is an agency or instrumentality of the Federal Government.

(b) Type of organization.

___ Sole proprietorship;

___ Partnership;

___ Corporate entity (not tax-exempt);

___ Corporate entity (tax-exempt);

___ Government entity (Federal, State, or local);

___ Foreign government;

___ International organization per 26 CFR 1.6049-4;

___ Other _____

(c) Common parent.

___ Offeror is not owned or controlled by a common parent

___ Name and TIN of common parent:

Name _____

TIN _____

(End of provision)

52.209-5 CERTIFICATION REGARDING DEBARMENT, SUSPENSION, PROPOSED DEBARMENT, AND OTHER RESPONSIBILITY MATTERS (DEC 2001)

(a)(1) The Offeror certifies, to the best of its knowledge and belief, that--

(i) The Offeror and/or any of its Principals--

(A) Are ( ) are not ( ) presently debarred, suspended, proposed for debarment, or declared ineligible for the award of contracts by any Federal agency;

(B) Have ( ) have not ( ), within a three-year period preceding this offer, been convicted of or had a civil judgment rendered against them for: commission of fraud or a criminal offense in connection with obtaining, attempting to obtain, or performing a public (Federal, state, or local) contract or subcontract; violation of Federal or state antitrust statutes relating to the submission of offers; or commission of embezzlement, theft, forgery, bribery, falsification or destruction of records, making false statements, tax evasion, or receiving stolen property; and

(C) Are ( ) are not ( ) presently indicted for, or otherwise criminally or civilly charged by a governmental entity with, commission of any of the offenses enumerated in subdivision (a)(1)(i)(B) of this provision.

(ii) The Offeror has ( ) has not ( ), within a three-year period preceding this offer, had one or more contracts terminated for default by any Federal agency.

(2) "Principals," for the purposes of this certification, means officers; directors; owners; partners; and, persons having primary management or supervisory responsibilities within a business entity (e.g., general manager; plant manager; head of a subsidiary, division, or business segment, and similar positions).

THIS CERTIFICATION CONCERNS A MATTER WITHIN THE JURISDICTION OF AN AGENCY OF THE UNITED STATES AND THE MAKING OF A FALSE, FICTITIOUS, OR FRAUDULENT CERTIFICATION MAY RENDER THE MAKER SUBJECT TO PROSECUTION UNDER SECTION 1001, TITLE 18, UNITED STATES CODE.

(b) The Offeror shall provide immediate written notice to the Contracting Officer if, at any time prior to contract award, the Offeror learns that its certification was erroneous when submitted or has become erroneous by reason of changed circumstances.

(c) A certification that any of the items in paragraph (a) of this provision exists will not necessarily result in withholding of an award under this solicitation. However, the certification will be considered in connection with a determination of the Offeror's responsibility. Failure of the Offeror to furnish a certification or provide such additional information as requested by the Contracting Officer may render the Offeror nonresponsible.

(d) Nothing contained in the foregoing shall be construed to require establishment of a system of records in order to render, in good faith, the certification required by paragraph (a) of this provision. The knowledge and information of an Offeror is not required to exceed that which is normally possessed by a prudent person in the ordinary course of business dealings.

(e) The certification in paragraph (a) of this provision is a material representation of fact upon which reliance was placed when making award. If it is later determined that the Offeror knowingly rendered an erroneous certification, in addition to other remedies available to the Government, the Contracting Officer may terminate the contract resulting

from this solicitation for default.

(End of provision)

52.219-19 SMALL BUSINESS CONCERN REPRESENTATION FOR THE SMALL BUSINESS COMPETITIVENESS DEMONSTRATION PROGRAM (OCT 2000)

(a) Definition.

"Emerging small business" as used in this solicitation, means a small business concern whose size is no greater than 50 percent of the numerical size standard applicable to the North American Industry Classification System (NAICS) code assigned to a contracting opportunity.

(b) [Complete only if the Offeror has represented itself under the provision at 52.219-1 as a small business concern under the size standards of this solicitation.] The Offeror [ ] is, [ ] is not an emerging small business.

(c) (Complete only if the Offeror is a small business or an emerging small business, indicating its size range.)

Offeror's number of employees for the past 12 months (check this column if size standard stated in solicitation is expressed in terms of number of employees) or Offeror's average annual gross revenue for the last 3 fiscal years (check this column if size standard stated in solicitation is expressed in terms of annual receipts). (Check one of the following.)

No. of Employees	Avg. Annual Gross Revenues
____ 50 or fewer	____ $1 million or less
____ 51 - 100	____ $1,000,001 - $2 million
____ 101 - 250	____ $2,000,001 - $3.5 million
____ 251 - 500	____ $3,500,001 - $5 million
____ 501 - 750	____ $5,000,001 - $10 million
____ 751 - 1,000	____ $10,000,001 - $17 million
____ Over 1,000	____ Over $17 million

(End of provision)

52.222-22 PREVIOUS CONTRACTS AND COMPLIANCE REPORTS (FEB 1999)

The offeror represents that --

(a) ( ) It has, ( ) has not participated in a previous contract or subcontract subject to the Equal Opportunity clause of this solicitation;

(b) ( ) It has, ( ) has not, filed all required compliance reports; and

(c) Representations indicating submission of required compliance reports, signed by proposed subcontractors, will be obtained before subcontract awards.

(End of provision)

52.223-4 RECOVERED MATERIAL CERTIFICATION (OCT 1997)

As required by the Resource Conservation and Recovery Act of 1976 (42 U.S.C. 6962(c)(3)(A)(i)), the offeror certifies, by signing this offer, that the percentage of recovered materials to be used in the performance of the contract will be at least the amount required by the applicable contract specifications.

(End of provision)

52.223-13 CERTIFICATION OF TOXIC CHEMICAL RELEASE REPORTING (OCT 2000)

(a) Submission of this certification is a prerequisite for making or entering into this contract imposed by Executive Order 12969, August 8, 1995.

(b) By signing this offer, the offeror certifies that--

(1) As the owner or operator of facilities that will be used in the performance of this contract that are subject to the filing and reporting requirements described in section 313 of the Emergency Planning and Community Right-to-Know Act of 1986 (EPCRA) (42 U.S.C. 11023) and section 6607 of the Pollution Prevention Act of 1990 (PPA) (42 U.S.C. 13106), the offeror will file and continue to file for such facilities for the life of the contract the Toxic Chemical Release Inventory Form (Form R) as described in sections 313(a) and (g) of EPCRA and section 6607 of PPA; or

(2) None of its owned or operated facilities to be used in the performance of this contract is subject to the Form R filing and reporting requirements because each such facility is exempt for at least one of the following reasons: (Check each block that is applicable.)

( ) (i) The facility does not manufacture, process or otherwise use any toxic chemicals listed under section 313(c) of EPCRA, 42 U.S.C. 11023(c);

( ) (ii) The facility does not have 10 or more full-time employees as specified in section 313.(b)(1)(A) of EPCRA 42 U.S.C. 11023(b)(1)(A);

( ) (iii) The facility does not meet the reporting thresholds of toxic chemicals established under section 313(f) of EPCRA, 42 U.S.C. 11023(f) (including the alternate thresholds at 40 CFR 372.27, provided an appropriate certification form has been filed with EPA);

( ) (iv) The facility does not fall within Standard Industrial Classification Code (SIC) major groups 20 through 39 or their corresponding North American Industry Classification System (NAICS) sectors 31 through 33; or

( ) (v) The facility is not located within any State of the United States, the District of Columbia, the Commonwealth of Puerto Rico, Guam, American Samoa, the United States Virgin Islands, the Northern Mariana Islands, or any other territory or possession over which the United States has jurisdiction.

(End of clause)

252.209-7001 DISCLOSURE OF OWNERSHIP OR CONTROL BY THE GOVERNMENT OF A TERRORIST COUNTRY (MAR 1998)

(a) "Definitions."

As used in this provision --

(a) "Government of a terrorist country" includes the state and the government of a terrorist country, as well as any political subdivision, agency, or instrumentality thereof.

(2) "Terrorist country" means a country determined by the Secretary of State, under section 6(j)(1)(A) of the Export Administration Act of 1979 (50 U.S.C. App. 2405(j)(i)(A)), to be a country the government of which has repeatedly provided support for such acts of international terrorism. As of the date of this provision, terrorist countries include: Cuba, Iran, Iraq, Libya, North Korea, Sudan, and Syria.

(3) "Significant interest" means --

(i) Ownership of or beneficial interest in 5 percent or more of the firm's or subsidiary's securities. Beneficial interest includes holding 5 percent or more of any class of the firm's securities in "nominee shares," "street names," or some other method of holding securities that does not disclose the beneficial owner;

(ii) Holding a management position in the firm, such as a director or officer;

(iii) Ability to control or influence the election, appointment, or tenure of directors or officers in the firm;

(iv) Ownership of 10 percent or more of the assets of a firm such as equipment, buildings, real estate, or other tangible assets of the firm; or

(v) Holding 50 percent or more of the indebtness of a firm.

(b) "Prohibition on award."

In accordance with 10 U.S.C. 2327, no contract may be awarded to a firm or a subsidiary of a firm if the government of a terrorist country has a significant interest in the firm or subsidiary or, in the case of a subsidiary, the firm that owns the subsidiary, unless a waiver is granted by the Secretary of Defense.

(c) "Disclosure."

If the government of a terrorist country has a significant interest in the Offeror or a subsidiary of the Offeror, the Offeror shall disclosure such interest in an attachment to its offer. If the Offeror is a subsidiary, it shall also disclose any significant interest the government of a terrorist country has in any firm that owns or controls the subsidiary. The disclosure shall include --

(1) Identification of each government holding a significant interest; and

(2) A description of the significant interest held by each government.

(End of provision)

252.247-7022 REPRESENTATION OF EXTENT OF TRANSPORTATION BY SEA (AUG 1992)

(a) The Offeror shall indicate by checking the appropriate blank in paragraph (b) of this provision whether transportation of supplies by sea is anticipated under the resultant contract. The term supplies is defined in the Transportation of Supplies by Sea clause of this solicitation.

(b) Representation. The Offeror represents that it:

____ (1) Does anticipate that supplies will be transported by sea in the performance of any contract or subcontract resulting from this solicitation.

____ (2) Does not anticipate that supplies will be transported by sea in the performance of any contract or subcontract resulting from this solicitation.

(c) Any contract resulting from this solicitation will include the Transportation of Supplies by Sea clause. If the Offeror represents that it will not use ocean transportation, the resulting contract will also include the Defense FAR Supplement clause at 252.247-7024, Notification of Transportation of Supplies by Sea.

(End of provision)

Section 00700 - Contract Clauses

CLAUSES INCORPORATED BY FULL TEXT

52.202-1 DEFINITIONS (MAY 2001) --ALTERNATE I (MAR 2001)

(a) Agency head or head of the agency means the Secretary (Attorney General, Administrator, Governor, Chairperson, or other chief official, as appropriate) of the agency, unless otherwise indicated, including any deputy or assistant chief official of the executive agency.

(b) Commercial component means any component that is a commercial item.

(c) Component means any item supplied to the Government as part of an end item or of another component, except that for use in 52.225-9, and 52.225-11 see the definitions in 52.225-9(a) and 52.225-11(a).

(d) Contracting Officer means a person with the authority to enter into, administer, and/or terminate contracts and make related determinations and findings. The term includes certain authorized representatives of the Contracting Officer acting within the limits of their authority as delegated by the Contracting Officer.

(e) Nondevelopmental item means--

(1) Any previously developed item of supply used exclusively for governmental purposes by a Federal agency, a State or local government, or a foreign government with which the United States has a mutual defense cooperation agreement;

(2) Any item described in paragraph (f)(1) of this definition that requires only minor modification or modifications of a type customarily available in the commercial marketplace in order to meet the requirements of the procuring department or agency; or

(3) Any item of supply being produced that does not meet the requirements of paragraph (f)(1) or (f)(2) solely because the item is not yet in use.

(f) "Contracting Officer" means a person with the authority to enter into, administer, and/or terminate contracts and make related determinations and findings. The term includes certain authorized representatives of the Contracting Officer acting within the limits of their authority as delegated by the Contracting Officer.

(g) Except as otherwise provided in this contract, the term "subcontracts" includes, but is not limited to, purchase orders and changes and modifications to purchase orders under this contract.

(End of clause)

52.203-3 GRATUITIES (APR 1984)

(a) The right of the Contractor to proceed may be terminated by written notice if, after notice and hearing, the agency head or a designee determines that the Contractor, its agent, or another representative--

(1) Offered or gave a gratuity (e.g., an entertainment or gift) to an officer, official, or employee of the Government; and

(2) Intended, by the gratuity, to obtain a contract or favorable treatment under a contract.

(b) The facts supporting this determination may be reviewed by any court having lawful jurisdiction.

(c) If this contract is terminated under paragraph (a) of this clause, the Government is entitled--

(1) To pursue the same remedies as in a breach of the contract; and

(2) In addition to any other damages provided by law, to exemplary damages of not less than 3 nor more than 10 times the cost incurred by the Contractor in giving gratuities to the person concerned, as determined by the agency head or a designee. (This subparagraph (c)(2) is applicable only if this contract uses money appropriated to the Department of Defense.)

(d) The rights and remedies of the Government provided in this clause shall not be exclusive and are in addition to any other rights and remedies provided by law or under this contract.

(End of clause)

52.203-5 COVENANT AGAINST CONTINGENT FEES (APR 1984)

(a) The Contractor warrants that no person or agency has been employed or retained to solicit or obtain this contract upon an agreement or understanding for a contingent fee, except a bona fide employee or agency. For breach or violation of this warranty, the Government shall have the right to annul this contract without liability or, in its discretion, to deduct from the contract price or consideration, or otherwise recover, the full amount of the contingent fee.

(b) "Bona fide agency," as used in this clause, means an established commercial or selling agency, maintained by a contractor for the purpose of securing business, that neither exerts nor proposes to exert improper influence to solicit or obtain Government contracts nor holds itself out as being able to obtain any Government contract or contracts through improper influence.

"Bona fide employee," as used in this clause, means a person, employed by a contractor and subject to the contractor's supervision and control as to time, place, and manner of performance, who neither exerts nor proposes to exert improper influence to solicit or obtain Government contracts nor holds out as being able to obtain any Government contract or contracts through improper influence.

"Contingent fee," as used in this clause, means any commission, percentage, brokerage, or other fee that is contingent upon the success that a person or concern has in securing a Government contract.

"Improper influence," as used in this clause, means any influence that induces or tends to induce a Government employee or officer to give consideration or to act regarding a Government contract on any basis other than the merits of the matter.

(End of clause)

52.203-6 RESTRICTIONS ON SUBCONTRACTOR SALES TO THE GOVERNMENT (JUL 1995)

(a) Except as provided in (b) of this clause, the Contractor shall not enter into any agreement with an actual or prospective subcontractor, nor otherwise act in any manner, which has or may have the effect of restricting sales by such subcontractors directly to the Government of any item or process (including computer software) made or furnished by the subcontractor under this contract or under any follow-on production contract.

(b) The prohibition in (a) of this clause does not preclude the Contractor from asserting rights that are otherwise authorized by law or regulation.

(c) The Contractor agrees to incorporate the substance of this clause, including this paragraph (c), in all subcontracts under this contract which exceed $100,000.

52.203-7 ANTI-KICKBACK PROCEDURES. (JUL 1995)

(a) Definitions.

"Kickback," as used in this clause, means any money, fee, commission, credit, gift, gratuity, thing of value, or compensation of any kind which is provided, directly or indirectly, to any prime Contractor, prime Contractor employee, subcontractor, or subcontractor employee for the purpose of improperly obtaining or rewarding favorable treatment in connection with a prime contract or in connection with a subcontract relating to a prime contract.

"Person," as used in this clause, means a corporation, partnership, business association of any kind, trust, joint-stock company, or individual.

"Prime contract," as used in this clause, means a contract or contractual action entered into by the United States for the purpose of obtaining supplies, materials, equipment, or services of any kind.

"Prime Contractor," as used in this clause, means a person who has entered into a prime contract with the United States.

"Prime Contractor employee," as used in this clause, means any officer, partner, employee, or agent of a prime Contractor.

"Subcontract," as used in this clause, means a contract or contractual action entered into by a prime Contractor or subcontractor for the purpose of obtaining supplies, materials, equipment, or services of any kind under a prime contract.

"Subcontractor," as used in this clause, (1) means any person, other than the prime Contractor, who offers to furnish or furnishes any supplies, materials, equipment, or services of any kind under a prime contract or a subcontract entered into in connection with such prime contract, and (2) includes any person who offers to furnish or furnishes general supplies to the prime Contractor or a higher tier subcontractor.

"Subcontractor employee," as used in this clause, means any officer, partner, employee, or agent of a subcontractor.

(b) The Anti-Kickback Act of 1986 (41 U.S.C. 51-58) (the Act), prohibits any person from -

(1) Providing or attempting to provide or offering to provide any kickback;

(2) Soliciting, accepting, or attempting to accept any kickback; or

(3) Including, directly or indirectly, the amount of any kickback in the contract price charged by a prime Contractor to the United States or in the contract price charged by a subcontractor to a prime Contractor or higher tier subcontractor.

(c)(1) The Contractor shall have in place and follow reasonable procedures designed to prevent and detect possible violations described in paragraph (b) of this clause in its own operations and direct business relationships.

(2) When the Contractor has reasonable grounds to believe that a violation described in paragraph (b) of this clause

may have occurred, the Contractor shall promptly report in writing the possible violation. Such reports shall be made to the inspector general of the contracting agency, the head of the contracting agency if the agency does not have an inspector general, or the Department of Justice.

(3) The Contractor shall cooperate fully with any Federal agency investigating a possible violation described in paragraph (b) of this clause.

(4) The Contracting Officer may (i) offset the amount of the kickback against any monies owed by the United States under the prime contract and/or (ii) direct that the Prime Contractor withhold, from sums owed a subcontractor under the prime contract, the amount of any kickback. The Contracting Officer may order the monies withheld under subdivision (c)(4)(ii) of this clause be paid over to the Government unless the Government has already offset those monies under subdivision (c)(4)(i) of this clause. In either case, the Prime Contractor shall notify the Contracting Officer when the monies are withheld.

(5) The Contractor agrees to incorporate the substance of this clause, including this subparagraph (c)(5) but excepting subparagraph (c)(1), in all subcontracts under this contract which exceed $100,000.

52.203-8 CANCELLATION, RESCISSION, AND RECOVERY OF FUNDS FOR ILLEGAL OR IMPROPER ACTIVITY (JAN 1997)

(a) If the Government receives information that a contractor or a person has engaged in conduct constituting a violation of subsection (a), (b), (c), or (d) of Section 27 of the Office of Federal Procurement Policy Act (41 U.S.C. 423) (the Act), as amended by section 4304 of the 1996 National Defense Authorization Act for Fiscal Year 1996 (Pub. L. 104-106), the Government may--

(1) Cancel the solicitation, if the contract has not yet been awarded or issued; or

(2) Rescind the contract with respect to which--

(i) The Contractor or someone acting for the Contractor has been convicted for an offense where the conduct constitutes a violation of subsection 27(a) or (b) of the Act for the purpose of either--

(A) Exchanging the information covered by such subsections for anything of value; or

(B) Obtaining or giving anyone a competitive advantage in the award of a Federal agency procurement contract; or

(ii) The head of the contracting activity has determined, based upon a preponderance of the evidence, that the Contractor or someone acting for the Contractor has engaged in conduct constituting an offense punishable under subsections 27(e)(1) of the Act.

(b) If the Government rescinds the contract under paragraph (a) of this clause, the Government is entitled to recover, in addition to any penalty prescribed by law, the amount expended under the contract.

(c) The rights and remedies of the Government specified herein are not exclusive, and are in addition to any other rights and remedies provided by law, regulation, or under this contract.

(End of clause)

52.203-10 PRICE OR FEE ADJUSTMENT FOR ILLEGAL OR IMPROPER ACTIVITY (JAN 1997)

(a) The Government, at its election, may reduce the price of a fixed-price type contract and the total cost and fee under a cost-type contract by the amount of profit or fee determined as set forth in paragraph (b) of this clause if the head of the contracting activity or designee determines that there was a violation of subsection 27 (a), (b), or (c) of the Office of Federal Procurement Policy Act, as amended (41 U.S.C. 423), as implemented in section 3.104 of the Federal Acquisition Regulation.

(b) The price or fee reduction referred to in paragraph (a) of this clause shall be--

(1) For cost-plus-fixed-fee contracts, the amount of the fee specified in the contract at the time of award;

(2) For cost-plus-incentive-fee contracts, the target fee specified in the contract at the time of award, notwithstanding any minimum fee or "fee floor" specified in the contract;

(3) For cost-plus-award-fee contracts--

(i) The base fee established in the contract at the time of contract award;

(ii) If no base fee is specified in the contract, 30 percent of the amount of each award fee otherwise payable to the Contractor for each award fee evaluation period or at each award fee determination point.

(4) For fixed-price-incentive contracts, the Government may--

(i) Reduce the contract target price and contract target profit both by an amount equal to the initial target profit specified in the contract at the time of contract award; or

(ii) If an immediate adjustment to the contract target price and contract target profit would have a significant adverse impact on the incentive price revision relationship under the contract, or adversely affect the contract financing provisions, the Contracting Officer may defer such adjustment until establishment of the total final price of the contract. The total final price established in accordance with the incentive price revision provisions of the contract shall be reduced by an amount equal to the initial target profit specified in the contract at the time of contract award and such reduced price shall be the total final contract price.

(5) For firm-fixed-price contracts, by 10 percent of the initial contract price or a profit amount determined by the Contracting Officer from records or documents in existence prior to the date of the contract award.

(c) The Government may, at its election, reduce a prime contractor's price or fee in accordance with the procedures of paragraph (b) of this clause for violations of the Act by its subcontractors by an amount not to exceed the amount of profit or fee reflected in the subcontract at the time the subcontract was first definitively priced.

(d) In addition to the remedies in paragraphs (a) and (c) of this clause, the Government may terminate this contract for default. The rights and remedies of the Government specified herein are not exclusive, and are in addition to any other rights and remedies provided by law or under this contract.

(End of clause)

52.203-12 LIMITATION ON PAYMENTS TO INFLUENCE CERTAIN FEDERAL TRANSACTIONS (JUN 1997)

(a) Definitions.

"Agency," as used in this clause, means executive agency as defined in 2.101.

"Covered Federal action," as used in this clause, means any of the following Federal actions:

(1) The awarding of any Federal contract.

(2) The making of any Federal grant.

(3) The making of any Federal loan.

(4) The entering into of any cooperative agreement.

(5) The extension, continuation, renewal, amendment, or modification of any Federal contract, grant, loan, or cooperative agreement.

"Indian tribe" and "tribal organization," as used in this clause, have the meaning provided in section 4 of the Indian Self-Determination and Education Assistance Act (25 U.S.C. 450B) and include Alaskan Natives.

"Influencing or attempting to influence," as used in this clause, means making, with the intent to influence, any communication to or appearance before an officer or employee of any agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with any covered Federal action.

"Local government," as used in this clause, means a unit of government in a State and, if chartered, established, or otherwise recognized by a State for the performance of a governmental duty, including a local public authority, a special district, an intrastate district, a council of governments, a sponsor group representative organization, and any other instrumentality of a local government.

"Officer or employee of an agency," as used in this clause, includes the following individuals who are employed by an agency:

(1) An individual who is appointed to a position in the Government under Title 5, United States Code, including a position under a temporary appointment.

(2) A member of the uniformed services, as defined in subsection 101(3),Title 37, United States Code.

(3) A special Government employee, as defined in section 202, Title 18, United States Code.

(4) An individual who is a member of a Federal advisory committee, as defined by the Federal Advisory Committee Act, Title 5, United States Code, appendix 2.

"Person," as used in this clause, means an individual, corporation, company, association, authority, firm, partnership, society, State, and local government, regardless of whether such entity is operated for profit, or not for profit. This term excludes an Indian tribe, tribal organization, or any other Indian organization with respect to expenditures specifically permitted by other Federal law.

"Reasonable compensation," as used in this clause, means, with respect to a regularly employed officer or employee of any person, compensation that is consistent with the normal compensation for such officer or employee for work that is not furnished to, not funded by, or not furnished in cooperation with the Federal Government.

"Reasonable payment," as used in this clause, means, with respect to professional and other technical services, a payment in an amount that is consistent with the amount normally paid for such services in the private sector.

"Recipient," as used in this clause, includes the Contractor and all subcontractors. This term excludes an Indian tribe, tribal organization, or any other Indian organization with respect to expenditures specifically permitted by other Federal law.

"Regularly employed," as used in this clause, means, with respect to an officer or employee of a person requesting or receiving a Federal contract, an officer or employee who is employed by such person for at least 130 working days within 1 year immediately preceding the date of the submission that initiates agency consideration of such person for receipt of such contract. An officer or employee who is employed by such person for less than 130 working days within 1 year immediately preceding the date of the submission that initiates agency consideration of such person shall be considered to be regularly employed as soon as he or she is employed by such person for 130 working days.

"State," as used in this clause, means a State of the United States, the District of Columbia, the Commonwealth of Puerto Rico, a territory or possession of the United States, an agency or instrumentality of a State, and multi-State, regional, or interstate entity having governmental duties and powers.

(b) Prohibitions.

(1) Section 1352 of Title 31, United States Code, among other things, prohibits a recipient of a Federal contract, grant, loan, or cooperative agreement from using appropriated funds to pay any person for influencing or attempting to influence an officer or employee of any agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with any of the following covered Federal actions: the awarding of any Federal contract; the making of any Federal grant; the making of any Federal loan; the entering into of any cooperative agreement; or the modification of any Federal contract, grant, loan, or cooperative agreement.

(2) The Act also requires Contractors to furnish a disclosure if any funds other than Federal appropriated funds (including profit or fee received under a covered Federal transaction) have been paid, or will be paid, to any person for influencing or attempting to influence an officer or employee of any agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with a Federal contract, grant, loan, or cooperative agreement.

(3) The prohibitions of the Act do not apply under the following conditions:

(i) Agency and legislative liaison by own employees.

(A) The prohibition on the use of appropriated funds, in subparagraph (b)(1) of this clause, does not apply in the case of a payment of reasonable compensation made to an officer or employee of a person requesting or receiving a covered Federal action if the payment is for agency and legislative liaison activities not directly related to a covered Federal action.

(B) For purposes of subdivision (b)(3)(i)(A) of this clause, providing any information specifically requested by an agency or Congress is permitted at any time.

(C) The following agency and legislative liaison activities are permitted at any time where they are not related to a specific solicitation for any covered Federal action:

(1) Discussing with an agency the qualities and characteristics (including individual demonstrations) of the person's products or services, conditions or terms of sale, and service capabilities.

(2) Technical discussions and other activities regarding the application or adaptation of the person's products or services for an agency's use.

(D) The following agency and legislative liaison activities are permitted where they are prior to formal solicitation of any covered Federal action--

(1) Providing any information not specifically requested but necessary for an agency to make an informed decision about initiation of a covered Federal action;

(2) Technical discussions regarding the preparation of an unsolicited proposal prior to its official submission; and

(3) Capability presentations by persons seeking awards from an agency pursuant to the provisions of the Small Business Act, as amended by Pub. L. 95-507, and subsequent amendments.

(E) Only those services expressly authorized by subdivision (b)(3)(i)(A) of this clause are permitted under this clause.

(ii) Professional and technical services.

(A) The prohibition on the use of appropriated funds, in subparagraph (b)(1) of this clause, does not apply in the case of--

(1) A payment of reasonable compensation made to an officer or employee of a person requesting or receiving a covered Federal action or an extension, continuation, renewal, amendment, or modification of a covered Federal action, if payment is for professional or technical services rendered directly in the preparation, submission, or negotiation of any bid, proposal, or application for that Federal action or for meeting requirements imposed by or pursuant to law as a condition for receiving that Federal action.

(2) Any reasonable payment to a person, other than an officer or employee of a person requesting or receiving a covered Federal action or an extension, continuation, renewal, amendment, or modification of a covered Federal action if the payment is for professional or technical services rendered directly in the preparation, submission, or negotiation of any bid, proposal, or application for that Federal action or for meeting requirements imposed by or pursuant to law as a condition for receiving that Federal action. Persons other than officers or employees of a person requesting or receiving a covered Federal action include consultants and trade associations.

(B) For purposes of subdivision (b)(3)(ii)(A) of this clause, "professional and technical services" shall be limited to advice and analysis directly applying any professional or technical discipline. For example, drafting of a legal document accompanying a bid or proposal by a lawyer is allowable. Similarly, technical advice provided by an engineer on the performance or operational capability of a piece of equipment rendered directly in the negotiation of a contract is allowable. However, communications with the intent to influence made by a professional (such as a licensed lawyer) or a technical person (such as a licensed accountant) are not allowable under this section unless they provide advice and analysis directly applying their professional or technical expertise and unless the advice or analysis is rendered directly and solely in the preparation, submission or negotiation of a covered Federal action. Thus, for example, communications with the intent to influence made by a lawyer that do not provide legal advice or analysis directly and solely related to the legal aspects of his or her client's proposal, but generally advocate one proposal over another are not allowable under this section because the lawyer is not providing professional legal services. Similarly, communications with the intent to influence made by an engineer providing an engineering analysis prior to the preparation or submission of a bid or proposal are not allowable under this section since the engineer is providing technical services but not directly in the preparation, submission or negotiation of a covered Federal action.

(C) Requirements imposed by or pursuant to law as a condition for receiving a covered Federal award include those required by law or regulation and any other requirements in the actual award documents.

(D) Only those services expressly authorized by subdivisions (b)(3)(ii)(A)(1) and (2) of this clause are permitted under this clause.

(E) The reporting requirements of FAR 3.803(a) shall not apply with respect to payments of reasonable compensation made to regularly employed officers or employees of a person.

(c) Disclosure.

(1) The Contractor who requests or receives from an agency a Federal contract shall file with that agency a disclosure form, OMB standard form LLL, Disclosure of Lobbying Activities, if such person has made or has agreed to make any payment using nonappropriated funds (to include profits from any covered Federal action), which would be prohibited under subparagraph (b)(1) of this clause, if paid for with appropriated funds.

(2) The Contractor shall file a disclosure form at the end of each calendar quarter in which there occurs any event that materially affects the accuracy of the information contained in any disclosure form previously filed by such person under subparagraph (c)(1) of this clause. An event that materially affects the accuracy of the information reported includes--

(i) A cumulative increase of $25,000 or more in the amount paid or expected to be paid for influencing or attempting to influence a covered Federal action; or

(ii) A change in the person(s) or individual(s) influencing or attempting to influence a covered Federal action; or

(iii) A change in the officer(s), employee(s), or Member(s) contacted to influence or attempt to influence a covered Federal action.

(3) The Contractor shall require the submittal of a certification, and if required, a disclosure form by any person who requests or receives any subcontract exceeding $100,000 under the Federal contract.

(4) All subcontractor disclosure forms (but not certifications) shall be forwarded from tier to tier until received by the prime Contractor. The prime Contractor shall submit all disclosures to the Contracting Officer at the end of the calendar quarter in which the disclosure form is submitted by the subcontractor. Each subcontractor certification shall be retained in the subcontract file of the awarding Contractor.

(d) Agreement. The Contractor agrees not to make any payment prohibited by this clause.

(e) Penalties.

(1) Any person who makes an expenditure prohibited under paragraph (a) of this clause or who fails to file or amend the disclosure form to be filed or amended by paragraph (b) of this clause shall be subject to civil penalties as provided for by 31 U.S.C. 1352. An imposition of a civil penalty does not prevent the Government from seeking any other remedy that may be applicable.

(2) Contractors may rely without liability on the representation made by their subcontractors in the certification and disclosure form.

(f) Cost allowability. Nothing in this clause makes allowable or reasonable any costs which would otherwise be unallowable or unreasonable. Conversely, costs made specifically unallowable by the requirements in this clause will not be made allowable under any other provision.

(End of clause)

52.204-4 PRINTED OR COPIED DOUBLE-SIDED ON RECYCLED PAPER (AUG 2000)

(a) Definitions. As used in this clause--

“Postconsumer material” means a material or finished product that has served its intended use and has been discarded for disposal or recovery, having completed its life as a consumer item. Postconsumer material is a part of the broader category of “recovered material.” For paper and paper products, postconsumer material means “postconsumer fiber” defined by the U.S. Environmental Protection Agency (EPA) as--

(1) Paper, paperboard, and fibrous materials from retail stores, office buildings, homes, and so forth, after they have passed through their end-usage as a consumer item, including: used corrugated boxes; old newspapers; old magazines; mixed waste paper; tabulating cards; and used cordage; or

(2) All paper, paperboard, and fibrous materials that enter and are collected from municipal solid waste; but not

(3) Fiber derived from printers' over-runs, converters' scrap, and over-issue publications.

“Printed or copied double-sided” means printing or reproducing a document so that information is on both sides of a sheet of paper.

“Recovered material,” for paper and paper products, is defined by EPA in its Comprehensive Procurement Guideline as “recovered fiber” and means the following materials:

(1) Postconsumer fiber; and

(2) Manufacturing wastes such as--

(i) Dry paper and paperboard waste generated after completion of the papermaking process (that is, those manufacturing operations up to and including the cutting and trimming of the paper machine reel into smaller rolls or rough sheets) including: envelope cuttings, bindery trimmings, and other paper and paperboard waste resulting from printing, cutting, forming, and other converting operations; bag, box, and carton manufacturing wastes; and butt rolls, mill wrappers, and rejected unused stock; and

(ii) Repulped finished paper and paperboard from obsolete inventories of paper and paperboard manufacturers, merchants, wholesalers, dealers, printers, converters, or others.

(b) In accordance with Section 101 of Executive Order 13101 of September 14, 1998, Greening the Government through Waste Prevention, Recycling, and Federal Acquisition, the Contractor is encouraged to submit paper documents, such as offers, letters, or reports, that are printed or copied double-sided on recycled paper that meet minimum content standards specified in Section 505 of Executive Order 13101, when not using electronic commerce methods to submit information or data to the Government.

(c) If the Contractor cannot purchase high-speed copier paper, offset paper, forms bond, computer printout paper, carbonless paper, file folders, white wove envelopes, writing and office paper, book paper, cotton fiber paper, and cover stock meeting the 30 percent postconsumer material standard for use in submitting paper documents to the Government, it should use paper containing no less than 20 percent postconsumer material. This lesser standard should be used only when paper meeting the 30 percent postconsumer material standard is not obtainable at a reasonable price or does not meet reasonable performance standards.

(End of clause)

52.209-6 PROTECTING THE GOVERNMENT'S INTEREST WHEN SUBCONTRACTING WITH CONTRACTORS DEBARRED, SUSPENDED, OR PROPOSED FOR DEBARMENT (JUL 1995)

(a) The Government suspends or debars Contractors to protect the Government's interests. The Contractor shall not

enter into any subcontract in excess of the $25,000 with a Contractor that is debarred, suspended, or proposed for debarment unless there is a compelling reason to do so.

(b) The Contractor shall require each proposed first-tier subcontractor, whose subcontract will exceed $25,000, to disclose to the Contractor, in writing, whether as of the time of award of the subcontract, the subcontractor, or its principles, is or is not debarred, suspended, or proposed for debarment by the Federal Government.

(c) A corporate officer or a designee of the Contractor shall notify the Contracting Officer, in writing, before entering into a subcontract with a party that is debarred, suspended, or proposed for debarment (see FAR 9.404 for information on the List of Parties Excluded from Federal Procurement and Nonprocurement Programs). The notice must include the following:

(1) The name of the subcontractor.

(2) The Contractor's knowledge of the reasons for the subcontractor being on the List of Parties Excluded from Federal Procurement and Nonprocurement Programs.

(3) The compelling reason(s) for doing business with the subcontractor notwithstanding its inclusion on the List of Parties Excluded from Federal Procurement and Nonprocurement Programs.

(4) The systems and procedures the Contractor has established to ensure that it is fully protecting the Government's interests when dealing with such subcontractor in view of the specific basis for the party's debarment, suspension, or proposed debarment.

(End of clause)

52.211-15 DEFENSE PRIORITY AND ALLOCATION REQUIREMENTS (SEP 1990)

This is a rated order certified for national defense use, and the Contractor shall follow all the requirements of the Defense Priorities and Allocations System regulation (15 CFR 700).

(End of clause)

52.215-2 AUDIT AND RECORDS--NEGOTIATION (JUN 1999)

(a) As used in this clause, "records" includes books, documents, accounting procedures and practices, and other data, regardless of type and regardless of whether such items are in written form, in the form of computer data, or in any other form.

(b) Examination of costs. If this is a cost-reimbursement, incentive, time-and-materials, labor-hour, or price redeterminable contract, or any combination of these, the Contractor shall maintain and the Contracting Officer, or an authorized representative of the Contracting Officer, shall have the right to examine and audit all records and other evidence sufficient to reflect properly all costs claimed to have been incurred or anticipated to be incurred directly or indirectly in performance of this contract. This right of examination shall include inspection at all reasonable times of the Contractor's plants, or parts of them, engaged in performing the contract.

(c) Cost or pricing data. If the Contractor has been required to submit cost or pricing data in connection with any pricing action relating to this contract, the Contracting Officer, or an authorized representative of the Contracting Officer, in order to evaluate the accuracy, completeness, and currency of the cost or pricing data, shall have the right to examine and audit all of the Contractor's records, including computations and projections, related to--

(1) The proposal for the contract, subcontract, or modification;

(2) The discussions conducted on the proposal(s), including those related to negotiating;

(3) Pricing of the contract, subcontract, or modification; or

(4) Performance of the contract, subcontract or modification.

(d) Comptroller General--(1) The Comptroller General of the United States, or an authorized representative, shall have access to and the right to examine any of the Contractor's directly pertinent records involving transactions related to this contract or a subcontract hereunder.

(2) This paragraph may not be construed to require the Contractor or subcontractor to create or maintain any record that the Contractor or subcontractor does not maintain in the ordinary course of business or pursuant to a provision of law.

(e) Reports. If the Contractor is required to furnish cost, funding, or performance reports, the Contracting Officer or an authorized representative of the Contracting Officer shall have the right to examine and audit the supporting records and materials, for the purpose of evaluating (1) the effectiveness of the Contractor's policies and procedures to produce data compatible with the objectives of these reports and (2) the data reported.

(f) Availability. The Contractor shall make available at its office at all reasonable times the records, materials, and other evidence described in paragraphs (a), (b), (c), (d), and (e) of this clause, for examination, audit, or reproduction, until 3 years after final payment under this contract or for any shorter period specified in Subpart 4.7, Contractor Records Retention, of the Federal Acquisition Regulation (FAR), or for any longer period required by statute or by other clauses of this contract. In addition--

(1) If this contract is completely or partially terminated, the Contractor shall make available the records relating to the work terminated until 3 years after any resulting final termination settlement; and

(2) The Contractor shall make available records relating to appeals under the Disputes clause or to litigation or the settlement of claims arising under or relating to this contract until such appeals, litigation, or claims are finally resolved.

(g) The Contractor shall insert a clause containing all the terms of this clause, including this paragraph (g), in all subcontracts under this contract that exceed the simplified acquisition threshold, and--

(1) That are cost-reimbursement, incentive, time-and-materials, labor-hour, or price-redeterminable type or any combination of these;

(2) For which cost or pricing data are required; or

(3) That require the subcontractor to furnish reports as discussed in paragraph (e) of this clause.

The clause may be altered only as necessary to identify properly the contracting parties and the Contracting Officer under the Government prime contract.

(End of clause)

52.215-11 PRICE REDUCTION FOR DEFECTIVE COST OR PRICING DATA--MODIFICATIONS (OCT 1997)

(a) This clause shall become operative only for any modification to this contract involving a pricing adjustment expected to exceed the threshold for submission of cost or pricing data at FAR 15.403-4, except that this clause does not apply to any modification if an exception under FAR 15.403-1 applies.

(b) If any price, including profit or fee, negotiated in connection with any modification under this clause, or any cost reimbursable under this contract, was increased by any significant amount because (1) the Contractor or a subcontractor furnished cost or pricing data that were not complete, accurate, and current as certified in its Certificate of Current Cost or Pricing Data, (2) a subcontractor or prospective subcontractor furnished the Contractor cost or pricing data that were not complete, accurate, and current as certified in the Contractor's Certificate of Current Cost or Pricing Data, or (3) any of these parties furnished data of any description that were not accurate, the price or cost shall be reduced accordingly and the contract shall be modified to reflect the reduction. This right to a price reduction is limited to that resulting from defects in data relating to modifications for which this clause becomes operative under paragraph (a) of this clause.

(c) Any reduction in the contract price under paragraph (b) of this clause due to defective data from a prospective subcontractor that was not subsequently awarded the subcontract shall be limited to the amount, plus applicable overhead and profit markup, by which--

(1) The actual subcontract; or

(2) The actual cost to the Contractor, if there was no subcontract, was less than the prospective subcontract cost estimate submitted by the Contractor; provided, that the actual subcontract price was not itself affected by defective cost or pricing data.

(d)(1) If the Contracting Officer determines under paragraph (b) of this clause that a price or cost reduction should be made, the Contractor agrees not to raise the following matters as a defense:

(i) The Contractor or subcontractor was a sole source supplier or otherwise was in a superior bargaining position and thus the price of the contract would not have been modified even if accurate, complete, and current cost or pricing data had been submitted.

(ii) The Contracting Officer should have known that the cost or pricing data in issue were defective even though the Contractor or subcontractor took no affirmative action to bring the character of the data to the attention of the Contracting Officer.

(iii) The contract was based on an agreement about the total cost of the contract and there was no agreement about the cost of each item procured under the contract.

(iv) The Contractor or subcontractor did not submit a Certificate of Current Cost or Pricing Data.

(2)(i) Except as prohibited by subdivision (d)(2)(ii) of this clause, an offset in an amount determined appropriate by the Contracting Officer based upon the facts shall be allowed against the amount of a contract price reduction if--

(A) The Contractor certifies to the Contracting Officer that, to the best of the Contractor's knowledge and belief, the Contractor is entitled to the offset in the amount requested; and

(B) The Contractor proves that the cost or pricing data were available before the “as of” date specified on its Certificate of Current Cost or Pricing Data, and that the data were not submitted before such date.

(ii) An offset shall not be allowed if--

(A) The understated data were known by the Contractor to be understated before the “as of” date specified on its Certificate of Current Cost or Pricing Data; or

(B) The Government proves that the facts demonstrate that the contract price would not have increased in the amount to be offset even if the available data had been submitted before the “as of” date specified on its Certificate of Current Cost or Pricing Data.

(e) If any reduction in the contract price under this clause reduces the price of items for which payment was made prior to the date of the modification reflecting the price reduction, the Contractor shall be liable to and shall pay the United States at the time such overpayment is repaid--

(1) Simple interest on the amount of such overpayment to be computed from the date(s) of overpayment to the Contractor to the date the Government is repaid by the Contractor at the applicable underpayment rate effective for each quarter prescribed by the Secretary of the Treasury under 26 U.S.C. 6621(a)(2); and

A penalty equal to the amount of the overpayment, if the Contractor or subcontractor knowingly submitted cost or pricing data that were incomplete, inaccurate, or noncurrent.

(End of clause)

52.215-13 SUBCONTRACTOR COST OR PRICING DATA--MODIFICATIONS (OCT 1997)

(a) The requirements of paragraphs (b) and (c) of this clause shall--

(1) Become operative only for any modification to this contract involving a pricing adjustment expected to exceed the threshold for submission of cost or pricing data at FAR 15.403-4; and

(2) Be limited to such modifications.

(b) Before awarding any subcontract expected to exceed the threshold for submission of cost or pricing data at FAR 15.403-4, on the date of agreement on price or the date of award, whichever is later; or before pricing any subcontract modification involving a pricing adjustment expected to exceed the threshold for submission of cost or pricing data at FAR 15.403-4, the Contractor shall require the subcontractor to submit cost or pricing data (actually or by specific identification in writing), unless an exception under FAR 15.403-1 applies.

(c) The Contractor shall require the subcontractor to certify in substantially the form prescribed in FAR 15.406-2 that, to the best of its knowledge and belief, the data submitted under paragraph (b) of this clause were accurate, complete, and current as of the date of agreement on the negotiated price of the subcontract or subcontract modification.

The Contractor shall insert the substance of this clause, including this paragraph (d), in each subcontract that exceeds the threshold for submission of cost or pricing data at FAR 15.403-4 on the date of agreement on price or the date of award, whichever is later.

(End of clause)

52.215-21 REQUIREMENTS FOR COST OR PRICING DATA OR INFORMATION OTHER THAN COST OR PRICING DATA--MODIFICATIONS (OCT 1997)

(a) Exceptions from cost or pricing data. (1) In lieu of submitting cost or pricing data for modifications under this contract, for price adjustments expected to exceed the threshold set forth at FAR 15.403-4 on the date of the agreement on price or the date of the award, whichever is later, the Contractor may submit a written request for

exception by submitting the information described in the following subparagraphs. The Contracting Officer may require additional supporting information, but only to the extent necessary to determine whether an exception should be granted, and whether the price is fair and reasonable--

(i) Identification of the law or regulation establishing the price offered. If the price is controlled under law by periodic rulings, reviews, or similar actions of a governmental body, attach a copy of the controlling document, unless it was previously submitted to the contracting office.

(ii) Information on modifications of contracts or subcontracts for commercial items. (A) If--

(1) The original contract or subcontract was granted an exception from cost or pricing data requirements because the price agreed upon was based on adequate price competition or prices set by law or regulation, or was a contract or subcontract for the acquisition of a commercial item; and

(2) The modification (to the contract or subcontract) is not exempted based on one of these exceptions, then the Contractor may provide information to establish that the modification would not change the contract or subcontract from a contract or subcontract for the acquisition of a commercial item to a contract or subcontract for the acquisition of an item other than a commercial item.

(B) For a commercial item exception, the Contractor shall provide, at a minimum, information on prices at which the same item or similar items have previously been sold that is adequate for evaluating the reasonableness of the price of the modification. Such information may include--

(1) For catalog items, a copy of or identification of the catalog and its date, or the appropriate pages for the offered items, or a statement that the catalog is on file in the buying office to which the proposal is being submitted. Provide a copy or describe current discount policies and price lists (published or unpublished), e.g., wholesale, original equipment manufacturer, or reseller. Also explain the basis of each offered price and its relationship to the established catalog price, including how the proposed price relates to the price of recent sales in quantities similar to the proposed quantities.

(2) For market-priced items, the source and date or period of the market quotation or other basis for market price, the base amount, and applicable discounts. In addition, describe the nature of the market.

(3) For items included on an active Federal Supply Service Multiple Award Schedule contract, proof that an exception has been granted for the schedule item.

(2) The Contractor grants the Contracting Officer or an authorized representative the right to examine, at any time before award, books, records, documents, or other directly pertinent records to verify any request for an exception under this clause, and the reasonableness of price. For items priced using catalog or market prices, or law or regulation , access does not extend to cost or profit information or other data relevant solely to the Contractor's determination of the prices to be offered in the catalog or marketplace.

(b) Requirements for cost or pricing data. If the Contractor is not granted an exception from the requirement to submit cost or pricing data, the following applies:

(1) The Contractor shall submit cost or pricing data and supporting attachments in accordance with Table 15-2 of FAR 15.408.

As soon as practicable after agreement on price, but before award (except for unpriced actions), the Contractor shall submit a Certificate of Current Cost or Pricing Data, as prescribed by FAR 15.406-2.

(End of clause)

52.219-1 SMALL BUSINESS PROGRAM REPRESENTATIONS (APR 2002) - ALTERNATE I (APR 2002)

(a)(1) The North American Industry Classification System (NAICS) code for this acquisition is 236220 NAICS code).

(2) The small business size standard is $28.5 Million).

(3) The small business size standard for a concern which submits an offer in its own name, other than on a construction or service contract, but which proposes to furnish a product which it did not itself manufacture, is 500 employees.

(b) Representations. (1) The offeror represents as part of its offer that it ( ) is, ( ) is not a small business concern.

(2) (Complete only if the offeror represented itself as a small business concern in paragraph (b)(1) of this provision.) The offeror represents, for general statistical purposes, that it ( ) is, ( ) is not a small disadvantaged business concern as defined in 13 CFR 124.1002.

(3) (Complete only if the offeror represented itself as a small business concern in paragraph (b)(1) of this provision.) The offeror represents as part of its offer that it ( ) is, ( ) is not a women-owned small business concern.

(4) (Complete only if the offeror represented itself as a small business concern in paragraph (b)(1) of this provision.) The offeror represents as part of its offer that it ( ) is, ( ) is not a veteran-owned small business concern.

(5) (Complete only if the offeror represented itself as a veteran-owned small business concern in paragraph (b)(4) of this provision.) The offeror represents as part of its offer that it ( ) is, ( ) is not a service-disabled veteran-owned small business concern.

(6) [Complete only if the offeror represented itself as a small business concern in paragraph (b)(1) of this provision.] The offeror represents, as part of its offer, that--

(i) It ( ) is, ( ) is not a HUBZone small business concern listed, on the date of this representation, on the List of Qualified HUBZone Small Business Concerns maintained by the Small Business Administration, and no material change in ownership and control, principal office, or HUBZone employee percentage has occurred since it was certified by the Small Business Administration in accordance with 13 CFR part 126; and

(ii) It ( ) is, ( ) is not a joint venture that complies with the requirements of 13 CFR part 126, and the representation in paragraph (b)(6)(i) of this provision is accurate for the HUBZone small business concern or concerns that are participating in the joint venture. (The offeror shall enter the name or names of the HUBZone small business concern or concerns that are participating in the joint venture:_____.) Each HUBZone small business concern participating in the joint venture shall submit a separate signed copy of the HUBZone representation.

(7) (Complete if offeror represented itself as disadvantaged in paragraph (b)(2) of this provision.) The offeror shall check the category in which its ownership falls:

____ Black American.

____ Hispanic American.

____ Native American (American Indians, Eskimos, Aleuts, or Native Hawaiians).

____ Asian-Pacific American (persons with origins from Burma, Thailand, Malaysia, Indonesia, Singapore, Brunei, Japan, China, Taiwan, Laos, Cambodia (Kampuchea), Vietnam, Korea, The Philippines, U.S. Trust Territory of the

Pacific Islands (Republic of Palau), Republic of the Marshall Islands, Federated States of Micronesia, the Commonwealth of the Northern Mariana Islands, Guam, Samoa, Macao, Hong Kong, Fiji, Tonga, Kiribati, Tuvalu, or Nauru).

____ Subcontinent Asian (Asian-Indian) American (persons with origins from India, Pakistan, Bangladesh, Sri Lanka, Bhutan, the Maldives Islands, or Nepal).

____ Individual/concern, other than one of the preceding.

(c) Definitions. As used in this provision--

Service-disabled veteran-owned small business concern--

(1) Means a small business concern--

(i) Not less than 51 percent of which is owned by one or more service-disabled veterans or, in the case of any publicly owned business, not less than 51 percent of the stock of which is owned by one or more service-disabled veterans; and

(ii) The management and daily business operations of which are controlled by one or more service-disabled veterans or, in the case of a veteran with permanent and severe disability, the spouse or permanent caregiver of such veteran.

(2) Service-disabled veteran means a veteran, as defined in 38 U.S.C. 101(2), with a disability that is service-connected, as defined in 38 U.S.C. 101(16).

"Small business concern," means a concern, including its affiliates, that is independently owned and operated, not dominant in the field of operation in which it is bidding on Government contracts, and qualified as a small business under the criteria in 13 CFR Part 121 and the size standard in paragraph (a) of this provision.

Veteran-owned small business concern means a small business concern--

(1) Not less than 51 percent of which is owned by one or more veterans (as defined at 38 U.S.C. 101(2)) or, in the case of any publicly owned business, not less than 51 percent of the stock of which is owned by one or more veterans; and

(2) The management and daily business operations of which are controlled by one or more veterans.

"Women-owned small business concern," means a small business concern --

(1) That is at least 51 percent owned by one or more women or, in the case of any publicly owned business, at least 51 percent of the stock of which is owned by one or more women; or

(2) Whose management and daily business operations are controlled by one or more women.

(d) Notice.

(1) If this solicitation is for supplies and has been set aside, in whole or in part, for small business concerns, then the clause in this solicitation providing notice of the set-aside contains restrictions on the source of the end items to be furnished.

(2) Under 15 U.S.C. 645(d), any person who misrepresents a firm's status as a small, HUBZone small, small disadvantaged, or women-owned small business concern in order to obtain a contract to be awarded under the

preference programs established pursuant to section 8(a), 8(d), 9, or 15 of the Small Business Act or any other provision of Federal law that specifically references section 8(d) for a definition of program eligibility, shall--

(i) Be punished by imposition of fine, imprisonment, or both;

(ii) Be subject to administrative remedies, including suspension and debarment; and

(iii) Be ineligible for participation in programs conducted under the authority of the Act.

(End of provision)

52.219-4 NOTICE OF PRICE EVALUATION PREFERENCE FOR HUBZONE SMALL BUSINESS CONCERNS (JAN 1999)

(a) Definition. HUBZone small business concern, as used in this clause, means a small business concern that appears on the List of Qualified HUBZone Small Business Concerns maintained by the Small Business Administration.

(b) Evaluation preference. (1) Offers will be evaluated by adding a factor of 10 percent to the price of all offers, except--

(i) Offers from HUBZone small business concerns that have not waived the evaluation preference;

(ii) Otherwise successful offers from small business concerns;

(iii) Otherwise successful offers of eligible products under the Trade Agreements Act when the dollar threshold for application of the Act is exceeded (see 25.402 of the Federal Acquisition Regulation (FAR)); and

(iv) Otherwise successful offers where application of the factor would be inconsistent with a Memorandum of Understanding or other international agreement with a foreign government.

(2) The factor of 10 percent shall be applied on a line item basis or to any group of items on which award may be made. Other evaluation factors described in the solicitation shall be applied before application of the factor.

(3) A concern that is both a HUBZone small business concern and a small disadvantaged business concern will receive the benefit of both the HUBZone small business price evaluation preference and the small disadvantaged business price evaluation adjustment (see FAR clause 52.219-23). Each applicable price evaluation preference or adjustment shall be calculated independently against an offeror's base offer.

These individual preference amounts shall be added together to arrive at the total evaluated price for that offer.

(c) Waiver of evaluation preference. A HUBZone small business concern may elect to waive the evaluation preference, in which case the factor will be added to its offer for evaluation purposes. The agreements in paragraph (d) of this clause do not apply if the offeror has waived the evaluation preference.

___ Offeror elects to waive the evaluation preference.

(d) Agreement. A HUBZone small business concern agrees that in the performance of the contract, in the case of a contract for

(1) Services (except construction), at least 50 percent of the cost of personnel for contract performance will be spent for employees of the concern or employees of other HUBZone small business concerns;

(2) Supplies (other than procurement from a nonmanufacturer of such supplies), at least 50 percent of the cost of manufacturing, excluding the cost of materials, will be performed by the concern or other HUBZone small business concerns;

(3) General construction, at least 15 percent of the cost of the contract performance incurred for personnel will be will be spent on the concern's employees or the employees of other HUBZone small business concerns; or

(4) Construction by special trade contractors, at least 25 percent of the cost of the contract performance incurred for personnel will be spent on the concern's employees or the employees of other HUBZone small business concerns.

(e) A HUBZone joint venture agrees that in the performance of the contract, the applicable percentage specified in paragraph (d) of this clause will be performed by the HUBZone small business participant or participants.

(f) A HUBZone small business concern nonmanufacturer agrees to furnish in performing this contract only end items manufactured or produced by HUBZone small business manufacturer concerns. This paragraph does not apply in connection with construction or service contracts.

(End of clause)

52.219-8 UTILIZATION OF SMALL BUSINESS CONCERNS (OCT 2000)

(a) It is the policy of the United States that small business concerns, veteran-owned small business concerns, service-disabled veteran-owned small business concerns, HUBZone small business concerns, small disadvantaged business concerns, and women-owned small business concerns shall have the maximum practicable opportunity to participate in performing contracts let by any Federal agency, including contracts and subcontracts for subsystems, assemblies, components, and related services for major systems. It is further the policy of the United States that its prime contractors establish procedures to ensure the timely payment of amounts due pursuant to the terms of their subcontracts with small business concerns, veteran-owned small business concerns, service-disabled veteran-owned small business concerns, HUBZone small business concerns, small disadvantaged business concerns, and women-owned small business concerns.

(b) The Contractor hereby agrees to carry out this policy in the awarding of subcontracts to the fullest extent consistent with efficient contract performance. The Contractor further agrees to cooperate in any studies or surveys as may be conducted by the United States Small Business Administration or the awarding agency of the United States as may be necessary to determine the extent of the Contractor's compliance with this clause.

Definitions. As used in this contract--

HUBZone small business concern means a small business concern that appears on the List of Qualified HUBZone Small Business Concerns maintained by the Small Business Administration.

Service-disabled veteran-owned small business concern--

(1) Means a small business concern--

(i) Not less than 51 percent of which is owned by one or more service-disabled veterans or, in the case of any publicly owned business, not less than 51 percent of the stock of which is owned by one or more service-disabled veterans; and

(ii) The management and daily business operations of which are controlled by one or more service-disabled veterans or, in the case of a veteran with permanent and severe disability, the spouse or permanent caregiver of such veteran.

(2) Service-disabled veteran means a veteran, as defined in 38 U.S.C. 101(2), with a disability that is service-connected, as defined in 38 U.S.C. 101(16).

Small business concern means a small business as defined pursuant to Section 3 of the Small Business Act and relevant regulations promulgated pursuant thereto.

Small disadvantaged business concern means a small business concern that represents, as part of its offer that--

(1) It has received certification as a small disadvantaged business concern consistent with 13 CFR part 124, subpart B;

(2) No material change in disadvantaged ownership and control has occurred since its certification;

(3) Where the concern is owned by one or more individuals, the net worth of each individual upon whom the certification is based does not exceed $750,000 after taking into account the applicable exclusions set forth at 13 CFR 124.104(c)(2); and

(4) It is identified, on the date of its representation, as a certified small disadvantaged business in the database maintained by the Small Business Administration (PRO-Net).

Veteran-owned small business concern means a small business concern--

(1) Not less than 51 percent of which is owned by one or more veterans (as defined at 38 U.S.C. 101(2)) or, in the case of any publicly owned business, not less than 51 percent of the stock of which is owned by one or more veterans; and

(2) The management and daily business operations of which are controlled by one or more veterans.

Women-owned small business concern means a small business concern--

(1) That is at least 51 percent owned by one or more women, or, in the case of any publicly owned business, at least 51 percent of the stock of which is owned by one or more women; and

(2) Whose management and daily business operations are controlled by one or more women.

(d) Contractors acting in good faith may rely on written representations by their subcontractors regarding their status as a small business concern, a veteran-owned small business concern, a service-disabled veteran-owned small business concern, a HUBZone small business concern, a small disadvantaged business concern, or a women-owned small business concern.

(End of clause)

52.219-9 SMALL BUSINESS SUBCONTRACTING PLAN (JAN 2002)--ALTERNATE II (OCT 2001).

(a) This clause does not apply to small business concerns.

(b) Definitions. As used in this clause--

Commercial item means a product or service that satisfies the definition of commercial item in section 2.101 of the Federal Acquisition Regulation.

Commercial plan means a subcontracting plan (including goals) that covers the offeror's fiscal year and that applies to the entire production of commercial items sold by either the entire company or a portion thereof (e.g., division, plant, or product line).

Individual contract plan means a subcontracting plan that covers the entire contract period (including option periods), applies to a specific contract, and has goals that are based on the offeror's planned subcontracting in support of the specific contract, except that indirect costs incurred for common or joint purposes may be allocated on a prorated basis to the contract.

Master plan means a subcontracting plan that contains all the required elements of an individual contract plan, except goals, and may be incorporated into individual contract plans, provided the master plan has been approved.

Subcontract means any agreement (other than one involving an employer-employee relationship) entered into by a Federal Government prime Contractor or subcontractor calling for supplies or services required for performance of the contract or subcontract.

(c) Proposals submitted in response to this solicitation shall include a subcontracting plan that separately addresses subcontracting with small business, veteran-owner small business, HUBZone small business, small disadvantaged business, and women-owned small business concerns. If the offeror is submitting an individual contract plan, the plan must separately address subcontracting with small business, veteran-owner small business, HUBZone small business, small disadvantaged business, and women-owned small business concerns, with a separate part for the basic contract and separate parts for each option (if any). The plan shall be included in and made a part of the resultant contract. The subcontracting plan shall be negotiated within the time specified by the Contracting Officer. Failure to submit and negotiate a subcontracting plan shall make the offeror ineligible for award of a contract.

(d) The offeror's subcontracting plan shall include the following:

(1) Goals, expressed in terms of percentages of total planned subcontracting dollars, for the use of small business, veteran-owned small business, HUBZone small business, small disadvantaged business, and women-owned small business concerns as subcontractors. The offeror shall include all subcontracts that contribute to contract performance, and may include a proportionate share of products and services that are normally allocated as indirect costs.

(2) A statement of--

(i) Total dollars planned to be subcontracted for an individual contract plan; or the offeror's total projected sales, expressed in dollars, and the total value of projected subcontracts to support the sales for a commercial plan;

(ii) Total dollars planned to be subcontracted to small business concerns;

(iii) Total dollars planned to be subcontracted to veteran-owned small business concerns;

(iv) Total dollars planned to be subcontracted to HUBZone small business concerns;

(v) Total dollars planned to be subcontracted to small disadvantaged business concerns; and

(vi) Total dollars planned to be subcontracted to women-owned small business concerns.

(3) A description of the principal types of supplies and services to be subcontracted, and an identification of the types planned for subcontracting to--

(i) Small business concerns;

(ii) Veteran-owned small business concerns;

(iii) HUBZone small business concerns;

(iv) Small disadvantaged business concerns; and

(v) Women-owned small business concerns.

(4) A description of the method used to develop the subcontracting goals in paragraph (d)(1) of this clause.

(5) A description of the method used to identify potential sources for solicitation purposes (e.g., existing company source lists, the Procurement Marketing and Access Network (PRO-Net) of the Small Business Administration (SBA), veterans service organizations, the National Minority Purchasing Council Vendor Information Service, the Research and Information Division of the Minority Business Development Agency in the Department of Commerce, or small, HUBZone, small disadvantaged, and women-owned small business trade associations). A firm may rely on the information contained in PRO-Net as an accurate representation of a concern's size and ownership characteristics for the purposes of maintaining a small, veteran-owned small, HUBZone small, small disadvantaged, and women-owned small business source list. Use of PRO-Net as its source list does not relieve a firm of its responsibilities (e.g., outreach, assistance, counseling, or publicizing subcontracting opportunities) in this clause.

(6) A statement as to whether or not the offeror in included indirect costs in establishing subcontracting goals, and a description of the method used to determine the proportionate share of indirect costs to be incurred with—

(i) Small business concerns;

(ii) Veteran-owned small business concerns;

(iii) HUBZone small business concerns;

(iv) Small disadvantaged business concerns; and

(v) Women-owned small business concerns.

(7) The name of the individual employed by the offeror who will administer the offeror's subcontracting program, and a description of the duties of the individual.

(8) A description of the efforts the offeror will make to assure that small business, veteran-owned small business, HUBZone small business, small disadvantaged business and women-owned small business concerns have an equitable opportunity to compete for subcontracts.

(9) Assurances that the offeror will include the clause of this contract entitled ``Utilization of Small Business Concerns'' in all subcontracts that offer further subcontracting opportunities, and that the offeror will require all subcontractors (except small business concerns) that receive subcontracts in excess of $500,000 ($1,000,000 for construction of any public facility) to adopt a subcontracting plan that complies with the requirements of this clause.

(10) Assurances that the offeror will--

(i) Cooperate in any studies or surveys as may be required;

(ii) Submit periodic reports so that the Government can determine the extent of compliance by the offeror with the subcontracting plan;

(iii) Submit Standard Form (SF) 294, Subcontracting Report for Individual Contracts, and/or SF 295, Summary Subcontract Report, in accordance with paragraph (j) of this clause. The reports shall provide information on subcontract awards to small business concerns, veteran-owned small business concerns, service-disabled veteran-owned small business concerns, small disadvantaged business concerns, women-owned small business concerns, and Historically Black Colleges and Universities and Minority Institutions. Reporting shall be in accordance with the instructions on the forms or as provided in agency regulations.

(iv) Ensure that its subcontractors agree to submit SF 294 and SF 295.

(11) A description of the types of records that will be maintained concerning procedures that have been adopted to comply with the requirements and goals in the plan, including establishing source lists; and a description of the offeror's efforts to locate small business, veteran-owned small business, HUBZone small business, small disadvantaged business, and women-owned small business concerns and award subcontracts to them. The records shall include at least the following (on a plant-wide or company-wide basis, unless otherwise indicated)

(i) Source lists (e.g., PRO-Net), guides, and other data that identify small business, veteran-owner small business, HUBZone small business, small disadvantaged business, and women-owned small business concerns.

(ii) Organizations contacted in an attempt to locate sources that are small business, veteran-owned small business, HUBZone small business, small disadvantaged business, or women-owned small business concerns.

(iii) Records on each subcontract solicitation resulting in an award of more than $100,000, indicating--

(A) Whether small business concerns were solicited and, if not, why not;

(B) Whether veteran-owned small business concerns were solicited and, if not, why not;

(C) Whether HUBZone small business concerns were solicited and, if not, why not;

(D) Whether small disadvantaged business concerns were solicited and, if not, why not;

(E) Whether women-owned small business concerns were solicited and, if not, why not; and

(F) If applicable, the reason award was not made to a small business concern.

(iv) Records of any outreach efforts to contact--

(A) Trade associations;

(B) Business development organizations;

(C) Conferences and trade fairs to locate small, HUBZone small, small disadvantaged, and women-owned small business sources; and

(D) Veterans service organizations.

(v) Records of internal guidance and encouragement provided to buyers through--

(A) Workshops, seminars, training, etc.; and

(B) Monitoring performance to evaluate compliance with the program's requirements.

(vi) On a contract-by-contract basis, records to support award data submitted by the offeror to the Government, including the name, address, and business size of each subcontractor. Contractors having commercial plans need not comply with this requirement.

(e) In order to effectively implement this plan to the extent consistent with efficient contract performance, the Contractor shall perform the following functions:

(1) Assist small business, veteran-owner small business, HUBZone small business, small disadvantaged business, and women-owned small business concerns by arranging solicitations, time for the preparation of bids, quantities, specifications, and delivery schedules so as to facilitate the participation by such concerns. Where the Contractor's lists of potential small business, veteran-owner small business, HUBZone small business, small disadvantaged business, and women-owned small business subcontractors are excessively long, reasonable effort shall be made to give all such small business concerns an opportunity to compete over a period of time.

(2) Provide adequate and timely consideration of the potentialities of small business, veteran-owner small business, HUBZone small business, small disadvantaged business, and women-owned small business concerns in all ``make-or-buy'' decisions.

(3) Counsel and discuss subcontracting opportunities with representatives of small business, veteran-owner small business, HUBZone small business, small disadvantaged business, and women-owned small business firms.

(4) Provide notice to subcontractors concerning penalties and remedies for misrepresentations of business status as small, veteran-owner small business, HUBZone small, small disadvantaged, or women-owned small business for the purpose of obtaining a subcontract that is to be included as part or all of a goal contained in the Contractor's subcontracting plan.

(f) A master plan on a plant or division-wide basis that contains all the elements required by paragraph (d) of this clause, except goals, may be incorporated by reference as a part of the subcontracting plan required of the offeror by this clause; provided--
(1) the master plan has been approved, (2) the offeror ensures that the master plan is updated as necessary and provides copies of the approved master plan, including evidence of its approval, to the Contracting Officer, and (3) goals and any deviations from the master plan deemed necessary by the Contracting Officer to satisfy the requirements of this contract are set forth in the individual subcontracting plan.

(g) A commercial plan is the preferred type of subcontracting plan for contractors furnishing commercial items. The commercial plan shall relate to the offeror's planned subcontracting generally, for both commercial and Government business, rather than solely to the Government contract. Commercial plans are also preferred for subcontractors that provide commercial items under a prime contract, whether or not the prime contractor is supplying a commercial item.

(h) Prior compliance of the offeror with other such subcontracting plans under previous contracts will be considered by the Contracting Officer in determining the responsibility of the offeror for award of the contract.

(i) The failure of the Contractor or subcontractor to comply in good faith with (1) the clause of this contract entitled "Utilization Of Small Business Concerns," or (2) an approved plan required by this clause, shall be a material breach of the contract.

(j) The Contractor shall submit the following reports:

(1) Standard Form 294, Subcontracting Report for Individual Contracts. This report shall be submitted to the Contracting Officer semiannually and at contract completion. The report covers subcontract award data related to this contract. This report is not required for commercial plans.

(2) Standard Form 295, Summary Subcontract Report. This report encompasses all of the contracts with the awarding agency. It must be submitted semi-annually for contracts with the Department of Defense and annually for contracts with civilian agencies. If the reporting activity is covered by a commercial plan, the reporting activity must report annually all subcontract awards under that plan. All reports submitted at the close of each fiscal year (both individual and commercial plans) shall include a breakout, in the Contractor's format, of subcontract awards, in whole dollars, to small disadvantaged business concerns by North American Industry Classification System (NAICS) Industry Subsector. For a commercial plan, the Contractor may obtain from each of its subcontractors a predominant NAICS Industry Subsector and report all awards to that subcontractor under its predominant NAICS Industry Subsector.

(End of clause)

52.219-16 LIQUIDATED DAMAGES-SUBCONTRACTING PLAN (JAN 1999)

(a) Failure to make a good faith effort to comply with the subcontracting plan, as used in this clause, means a willful or intentional failure to perform in accordance with the requirements of the subcontracting plan approved under the clause in this contract entitled "Small Business Subcontracting Plan," or willful or intentional action to frustrate the plan.

(b) Performance shall be measured by applying the percentage goals to the total actual subcontracting dollars or, if a commercial plan is involved, to the pro rata share of actual subcontracting dollars attributable to Government contracts covered by the commercial plan. If, at contract completion or, in the case of a commercial plan, at the close of the fiscal year for which the plan is applicable, the Contractor has failed to meet its subcontracting goals and the Contracting Officer decides in accordance with paragraph (c) of this clause that the Contractor failed to make a good faith effort to comply with its subcontracting plan, established in accordance with the clause in this contract entitled “Small Business Subcontracting Plan,” the Contractor shall pay the Government liquidated damages in an amount stated. The amount of probable damages attributable to the Contractor's failure to comply shall be an amount equal to the actual dollar amount by which the Contractor failed to achieve each subcontract goal.

(c) Before the Contracting Officer makes a final decision that the Contractor has failed to make such good faith effort, the Contracting Officer shall give the Contractor written notice specifying the failure and permitting the Contractor to demonstrate what good faith efforts have been made and to discuss the matter. Failure to respond to the notice may be taken as an admission that no valid explanation exists. If, after consideration of all the pertinent data, the Contracting Officer finds that the Contractor failed to make a good faith effort to comply with the subcontracting plan, the Contracting Officer shall issue a final decision to that effect and require that the Contractor pay the Government liquidated damages as provided in paragraph (b) of this clause.

(d) With respect to commercial plans, the Contracting Officer who approved the plan will perform the functions of the Contracting Officer under this clause on behalf of all agencies with contracts covered by the commercial plan.

(e) The Contractor shall have the right of appeal, under the clause in this contract entitled Disputes, from any final decision of the Contracting Officer.

(f) Liquidated damages shall be in addition to any other remedies that the Government may have.

(End of clause)

52.222-3 CONVICT LABOR (AUG 1996)

The Contractor agrees not to employ in the performance of this contract any person undergoing a sentence of imprisonment which has been imposed by any court of a State, the District of Columbia, the Commonwealth of Puerto

Rico, the Virgin Islands, Guam, American Samoa, the Commonwealth of the Northern Mariana Islands, or the Trust Territory of the Pacific Islands. This limitation, however, shall not prohibit the employment by the Contractor in the performance of this contract of persons on parole or probation to work at paid employment during the term of their sentence or persons who have been pardoned or who have served their terms. Nor shall it prohibit the employment by the Contractor in the performance of this contract of persons confined for violation of the laws of any of the States, the District of Columbia, the Commonwealth of Puerto Rico, the Virgin Islands, Guam, American Samoa, the Commonwealth of the Northern Mariana Islands, or the Trust Territory of the Pacific Islands who are authorized to work at paid employment in the community under the laws of such jurisdiction, if--

(a)(1) The worker is paid or is in an approved work training program on a voluntary basis;

(2) Representatives of local union central bodies or similar labor union organizations have been consulted;

(3) Such paid employment will not result in the displacement of employed workers, or be applied in skills, crafts, or trades in which there is a surplus of available gainful labor in the locality, or impair existing contracts for services; and

(4) The rates of pay and other conditions of employment will not be less than those paid or provided for work of a similar nature in the locality in which the work is being performed; and

(b) The Attorney General of the United States has certified that the work-release laws or regulations of the jurisdiction involved are in conformity with the requirements of Executive Order 11755, as amended by Executive Orders 12608 and 12943.

(End of clause)

52.222-4 CONTRACT WORK HOURS AND SAFETY STANDARDS ACT - OVERTIME COMPENSATION. (SEP 2000)

(a) Overtime requirements. No Contractor or subcontractor employing laborers or mechanics (see Federal Acquisition Regulation 22.300) shall require or permit them to work over 40 hours in any workweek unless they are paid at least 1 and 1/2 times the basic rate of pay for each hour worked over 40 hours.

(b) Violation; liability for unpaid wages; liquidated damages. The responsible Contractor and subcontractor are liable for unpaid wages if they violate the terms in paragraph (a) of this clause. In addition, the Contractor and subcontractor are liable for liquidated damages payable to the Government. The Contracting Officer will assess liquidated damages at the rate of $10 per affected employee for each calendar day on which the employer required or permitted the employee to work in excess of the standard workweek of 40 hours without paying overtime wages required by the Contract Work Hours and Safety Standards Act.

(c) Withholding for unpaid wages and liquidated damages. The Contracting Officer will withhold from payments due under the contract sufficient funds required to satisfy any Contractor or subcontractor liabilities for unpaid wages and liquidated damages. If amounts withheld under the contract are insufficient to satisfy Contractor or subcontractor liabilities, the Contracting Officer will withhold payments from other Federal or Federally assisted contracts held by the same Contractor that are subject to the Contract Work Hours and Safety Standards Act.

(d) Payrolls and basic records.

(1) The Contractor and its subcontractors shall maintain payrolls and basic payroll records for all laborers and mechanics working on the contract during the contract and shall make them available to the Government until 3 years after contract completion. The records shall contain the name and address of each employee, social security number, labor classifications, hourly rates of wages paid, daily and weekly number of hours worked, deductions made, and

actual wages paid. The records need not duplicate those required for construction work by Department of Labor regulations at 29 CFR 5.5(a)(3) implementing the Davis-Bacon Act.

(2) The Contractor and its subcontractors shall allow authorized representatives of the Contracting Officer or the Department of Labor to inspect, copy, or transcribe records maintained under paragraph (d)(1) of this clause. The Contractor or subcontractor also shall allow authorized representatives of the Contracting Officer or Department of Labor to interview employees in the workplace during working hours.

(e) Subcontracts. The Contractor shall insert the provisions set forth in paragraphs (a) through (d) of this clause in subcontracts exceeding $100,000 and require subcontractors to include these provisions in any lower tier subcontracts. The Contractor shall be responsible for compliance by any subcontractor or lower-tier subcontractor with the provisions set forth in paragraphs (a) through (d) of this clause.

(End of clause)

52.222-6 DAVIS-BACON ACT (FEB 1995)

(a) All laborers and mechanics employed or working upon the site of the work will be paid unconditionally and not less often than once a week, and without subsequent deduction or rebate on any account (except such payroll deductions as are permitted by regulations issued by the Secretary of Labor under the Copeland Act (29 CFR Part 3), the full amount of wages and bona fide fringe benefits (or cash equivalents thereof) due at time of payment computed at rates not less than those contained in the wage determination of the Secretary of Labor which is attached hereto and made a part hereof, regardless of any contractual relationship which may be alleged to exist between the Contractor and such laborers and mechanics. Contributions made or costs reasonably anticipated for bona fide fringe benefits under section 1(b)(2) of the Davis-Bacon Act on behalf of laborers or mechanics are considered wages paid to such laborers or mechanics, subject to the provisions of paragraph (d) of this clause; also, regular contributions made or costs incurred for more than a weekly period (but not less often than quarterly) under plans, funds, or programs which cover the particular weekly period, are deemed to be constructively made or incurred during such period. Such laborers and mechanics shall be paid not less than the appropriate wage rate and fringe benefits in the wage determination for the classification of work actually performed, without regard to skill, except as provided in the clause entitled Apprentices and Trainees. Laborers or mechanics performing work in more than one classification may be compensated at the rate specified for each classification for the time actually worked therein; provided, That the employer's payroll records accurately set forth the time spent in each classification in which work is performed. The wage determination (including any additional classifications and wage rates conformed under paragraph (b) of this clause) and the Davis-Bacon poster (WH-1321) shall be posted at all times by the Contractor and its subcontractors at the site of the work in a prominent and accessible place where it can be easily seen by the workers.

(b)(1) The Contracting Officer shall require that any class of laborers or mechanics which is not listed in the wage determination and which is to be employed under the contract shall be classified in conformance with the wage determination. The Contracting Officer shall approve an additional classification and wage rate and fringe benefits therefor only when all the following criteria have been met:

(i) The work to be performed by the classification requested is not performed by a classification in the wage determination.

(ii) The classification is utilized in the area by the construction industry.

(iii) The proposed wage rate, including any bona fide fringe benefits, bears a reasonable relationship to the wage rates contained in the wage determination.

(2) If the Contractor and the laborers and mechanics to be employed in the classification (if known), or their representatives, and the Contracting Officer agree on the classification and wage rate (including the amount designated for fringe benefits, where appropriate), a report of the action taken shall be sent by the Contracting Officer to the Administrator of the Wage and Hour Division, Employment Standards Administration, U.S. Department of Labor, Washington, DC 20210. The Administrator or an authorized representative will approve, modify, or disapprove every additional classification action within 30 days of receipt and so advise the Contracting Officer or will notify the Contracting Officer within the 30-day period that additional time is necessary.

(3) In the event the Contractor, the laborers or mechanics to be employed in the classification, or their representatives, and the Contracting Officer do not agree on the proposed classification and wage rate (including the amount designated for fringe benefits, where appropriate), the Contracting Officer shall refer the questions, including the views of all interested parties and the recommendation of the Contracting Officer, to the Administrator of the Wage and Hour Division for determination. The Administrator, or an authorized representative, will issue a determination within 30 days of receipt and so advise the Contracting Officer or will notify the Contracting Officer within the 30-day period that additional time is necessary.

(4) The wage rate (including fringe benefits, where appropriate) determined pursuant to subparagraphs (b)(2) and (b)(3) of this clause shall be paid to all workers performing work in the classification under this contract from the first day on which work is performed in the classification.

(c) Whenever the minimum wage rate prescribed in the contract for a class of laborers or mechanics includes a fringe benefit which is not expressed as an hourly rate, the Contractor shall either pay the benefit as stated in the wage determination or shall pay another bona fide fringe benefit or an hourly cash equivalent thereof.

(d) If the Contractor does not make payments to a trustee or other third person, the Contractor may consider as part of the wages of any laborer or mechanic the amount of any costs reasonably anticipated in providing bona fide fringe benefits under a plan or program; provided, That the Secretary of Labor has found, upon the written request of the Contractor, that the applicable standards of the Davis-Bacon Act have been met. The Secretary of Labor may require the Contractor to set aside in a separate account assets for the meeting of obligations under the plan or program.

(End of clause)

52.222-7 WITHHOLDING OF FUNDS (FEB 1988)

The Contracting Officer shall, upon his or her own action or upon written request of an authorized representative of the Department of Labor, withhold or cause to be withheld from the Contractor under this contract or any other Federal contract with the same Prime Contractor, or any other Federally assisted contract subject to Davis-Bacon prevailing wage requirements, which is held by the same Prime Contractor, so much of the accrued payments or advances as may be considered necessary to pay laborers and mechanics, including apprentices, trainees, and helpers, employed by the Contractor or any subcontractor the full amount of wages required by the contract. In the event of failure to pay any laborer or mechanic, including any apprentice, trainee, or helper, employed or working on the site of the work, all or part of the wages required by the contract, the Contracting Officer may, after written notice to the Contractor, take such action as may be necessary to cause the suspension of any further payment, advance, or guarantee of funds until such violations have ceased.

(End of clause)

52.222-8 PAYROLLS AND BASIC RECORDS (FEB 1988)

(a) Payrolls and basic records relating thereto shall be maintained by the Contractor during the course of the work and preserved for a period of 3 years thereafter for all laborers and mechanics working at the site of the work. Such records shall contain the name, address, and social security number of each such worker, his or her correct classification, hourly rates of wages paid (including rates of contributions or costs anticipated for bona fide fringe benefits or cash equivalents thereof of the types described in section 1(b)(2)(B) of the Davis-Bacon Act), daily and weekly number of hours worked, deductions made, and actual wages paid. Whenever the Secretary of Labor has found, under paragraph (d) of the clause entitled Davis-Bacon Act, that the wages of any laborer or mechanic include the amount of any costs reasonably anticipated in providing benefits under a plan or program described in section 1(b)(2)(B) of the Davis-Bacon Act, the Contractor shall maintain records which show that the commitment to provide such benefits is enforceable, that the plan or program is financially responsible, and that the plan or program has been communicated in writing to the laborers or mechanics affected, and records which show the costs anticipated or the actual cost incurred in providing such benefits. Contractors employing apprentices or trainees under approved programs shall maintain written evidence of the registration of apprenticeship programs and certification of trainee programs, the registration of the apprentices and trainees, and the ratios and wage rates prescribed in the applicable programs.

(b)(1) The Contractor shall submit weekly for each week in which any contract work is performed a copy of all payrolls to the Contracting Officer. The payrolls submitted shall set out accurately and completely all of the information required to be maintained under paragraph (a) of this clause. This information may be submitted in any form desired. Optional Form WH-347 (Federal Stock Number 029-005-00014-1) is available for this purpose and may be purchased from the Superintendent of Documents, U.S. Government Printing Office, Washington, DC 20402. The Prime Contractor is responsible for the submission of copies of payrolls by all subcontractors.

(2) Each payroll submitted shall be accompanied by a "Statement of Compliance," signed by the Contractor or subcontractor or his or her agent who pays or supervises the payment of the persons employed under the contract and shall certify--

(i) That the payroll for the payroll period contains the information required to be maintained under paragraph (a) of this clause and that such information is correct and complete;

(ii) That each laborer or mechanic (including each helper, apprentice, and trainee) employed on the contract during the payroll period has been paid the full weekly wages earned, without rebate, either directly or indirectly, and that no deductions have been made either directly or indirectly from the full wages earned, other than permissible deductions as set forth in the Regulations, 29 CFR Part 3; and

(iii) That each laborer or mechanic has been paid not less than the applicable wage rates and fringe benefits or cash equivalents for the classification of work performed, as specified in the applicable wage determination incorporated into the contract.

(3) The weekly submission of a properly executed certification set forth on the reverse side of Optional Form WH-347 shall satisfy the requirement for submission of the "Statement of Compliance" required by subparagraph (b)(2) of this clause.

(4) The falsification of any of the certifications in this clause may subject the Contractor or subcontractor to civil or criminal prosecution under Section 1001 of Title 18 and Section 3729 of Title 31 of the United States Code.

(c) The Contractor or subcontractor shall make the records required under paragraph (a) of this clause available for inspection, copying, or transcription by the Contracting Officer or authorized representatives of the Contracting Officer or the Department of Labor. The Contractor or subcontractor shall permit the Contracting Officer or representatives of the Contracting Officer or the Department of Labor to interview employees during working hours on the job. If the Contractor or subcontractor fails to submit required records or to make them available, the Contracting Officer may, after written notice to the Contractor, take such action as may be necessary to cause the suspension of any further payment. Furthermore, failure to submit the required records upon request or to make such

records available may be grounds for debarment action pursuant to 29 CFR 5.12.

(End of clause)

52.222-9 APPRENTICES AND TRAINEES (FEB 1988)

(a) Apprentices. Apprentices will be permitted to work at less than the predetermined rate for the work they performed when they are employed pursuant to and individually registered in a bona fide apprenticeship program registered with the U.S. Department of Labor, Employment and Training Administration, Bureau of Apprenticeship and Training, or with a State Apprenticeship Agency recognized by the Bureau, or if a person is employed in his or her first 90 days of probationary employment as an apprentice in such an apprenticeship program, who is not individually registered in the program, but who has been certified by the Bureau of Apprenticeship and Training or a State Apprenticeship Agency (where appropriate) to be eligible for probationary employment as an apprentice. The allowable ratio of apprentices to journeymen on the job site in any craft classification shall not be greater than the ratio permitted to the Contractor as to the entire work force under the registered program. Any worker listed on a payroll at an apprentice wage rate, who is not registered or otherwise employed as stated in this paragraph, shall be paid not less than the applicable wage determination for the classification of work actually performed. In addition, any apprentice performing work on the job site in excess of the ratio permitted under the registered program shall be paid not less than the applicable wage rate on the wage determination for the work actually performed. Where a contractor is performing construction on a project in a locality other than that in which its program is registered, the ratios and wage rates (expressed in percentages of the journeyman's hourly rate) specified in the Contractor's or subcontractor's registered program shall be observed. Every apprentice must be paid at not less than the rate specified in the registered program for the apprentice's level of progress, expressed as a percentage of the journeyman hourly rate specified in the applicable wage determination. Apprentices shall be paid fringe benefits in accordance with the provisions of the apprenticeship program. If the apprenticeship program does not specify fringe benefits, apprentices must be paid the full amount of fringe benefits listed on the wage determination for the applicable classification. If the Administrator determines that a different practice prevails for the applicable apprentice classification, fringes shall be paid in accordance with that determination. In the event the Bureau of Apprenticeship and Training, or a State Apprenticeship Agency recognized by the Bureau, withdraws approval of an apprenticeship program, the Contractor will no longer be permitted to utilize apprentices at less than the applicable predetermined rate for the work performed until an acceptable program is approved.

(b) Trainees. Except as provided in 29 CFR 5.16, trainees will not be permitted to work at less than the predetermined rate for the work performed unless they are employed pursuant to and individually registered in a program which has received prior approval, evidenced by formal certification by the U.S. Department of Labor, Employment and Training Administration. The ratio of trainees to journeymen on the job site shall not be greater than permitted under the plan approved by the Employment and Training Administration. Every trainee must be paid at not less than the rate specified in the approved program for the trainee's level of progress, expressed as a percentage of the journeyman hourly rate specified in the applicable wage determination. Trainees shall be paid fringe benefits in accordance with the provisions of the trainee program. If the trainee program does not mention fringe benefits, trainees shall be paid the full amount of fringe benefits listed in the wage determination unless the Administrator of the Wage and Hour Division determines that there is an apprenticeship program associated with the corresponding journeyman wage rate in the wage determination which provides for less than full fringe benefits for apprentices. Any employee listed on the payroll at a trainee rate who is not registered and participating in a training plan approved by the Employment and Training Administration shall be paid not less than the applicable wage rate in the wage determination for the classification of work actually performed. In addition, any trainee performing work on the job site in excess of the ratio permitted under the registered program shall be paid not less than the applicable wage rate in the wage determination for the work actually performed. In the event the Employment and Training Administration withdraws approval of a training program, the Contractor will no longer be permitted to utilize trainees at less than the applicable predetermined rate for the work performed until an acceptable program is approved.

(c) Equal employment opportunity. The utilization of apprentices, trainees, and journeymen under this clause shall be in conformity with the equal employment opportunity requirements of Executive Order 11246, as amended, and 29 CFR Part 30.

(End of clause)

52.222-10 COMPLIANCE WITH COPELAND ACT REQUIREMENTS (FEB 1988)

The Contractor shall comply with the requirements of 29 CFR Part 3, which are hereby incorporated by reference in this contract.

(End of clause)

52.222-11 SUBCONTRACTS (LABOR STANDARDS (FEB 1988)

(a) The Contractor or subcontractor shall insert in any subcontracts the clauses entitled Davis-Bacon Act, Contract Work Hours and Safety Standards Act-Overtime Compensation, Apprentices and Trainees, Payrolls and Basic Records, Compliance with Copeland Act Requirements, Withholding of Funds, Subcontracts (Labor Standards), Contract Termination-Debarment, Disputes Concerning Labor Standards, Compliance with Davis-Bacon and Related Act Regulations, and Certification of Eligibility, and such other clauses as the Contracting Officer may, by appropriate instructions, require, and also a clause requiring subcontractors to include these clauses in any lower tier subcontracts. The Prime Contractor shall be responsible for compliance by any subcontractor or lower tier subcontractor with all the contract clauses cited in this paragraph.

(b)(1) Within 14 days after award of the contract, the Contractor shall deliver to the Contracting Officer a completed Statement and Acknowledgment Form (SF 1413) for each subcontract, including the subcontractor's signed and dated acknowledgment that the clauses set forth in paragraph (a) of this clause have been included in the subcontract.

(2) Within 14 days after the award of any subsequently awarded subcontract the Contractor shall deliver to the Contracting Officer an updated completed SF 1413 for such additional subcontract.

(End of clause)

52.222-12 CONTRACT TERMINATION--DEBARMENT (FEB 1988)

A breach of the contract clauses entitled Davis-Bacon Act, Contract Work Hours and Safety Standards Act--Overtime Compensation, Apprentices and Trainees, Payrolls and Basic Records, Compliance with Copeland Act Requirements, Subcontracts (Labor Standards), Compliance with Davis-Bacon and Related Act Regulations, or Certification of Eligibility may be grounds for termination of the contract, and for debarment as a Contractor and subcontractor as provided in 29 CFR 5.12.

(End of clause)

52.222-13 COMPLIANCE WITH DAVIS-BACON AND RELATED ACT REGULATIONS (FEB 1988)

All rulings and interpretations of the Davis-Bacon and Related Acts contained in 29 CFR Parts 1, 3, and 5 are hereby incorporated by reference in this contract.

(End of clause)

52.222-14 DISPUTES CONCERNING LABOR STANDARDS (FEB 1988)

The United States Department of Labor has set forth in 29 CFR Parts 5, 6, and 7 procedures for resolving disputes concerning labor standards requirements. Such disputes shall be resolved in accordance with those procedures and not the Disputes clause of this contract. Disputes within the meaning of this clause include disputes between the Contractor (or any of its subcontractors) and the contracting agency, the U.S. Department of Labor, or the employees or their representatives.

(End of clause)

52.222-15 CERTIFICATION OF ELIGIBILITY (FEB 1988)

(a) By entering into this contract, the Contractor certifies that neither it (nor he or she) nor any person or firm who has an interest in the Contractor's firm is a person or firm ineligible to be awarded Government contracts by virtue of section 3(a) of the Davis-Bacon Act or 29 CFR 5.12(a)(1).

(b) No part of this contract shall be subcontracted to any person or firm ineligible for award of a Government contract by virtue of section 3(a) of the Davis-Bacon Act or 29 CFR 5.12(a)(1).

(c) The penalty for making false statements is prescribed in the U.S. Criminal Code, 18 U.S.C. 1001.

(End of clause)

52.222-21 PROHIBITION OF SEGREGATED FACILITIES (FEB 1999)

(a) Segregated facilities, as used in this clause, means any waiting rooms, work areas, rest rooms and wash rooms, restaurants and other eating areas, time clocks, locker rooms and other storage or dressing areas, parking lots, drinking fountains, recreation or entertainment areas, transportation, and housing facilities provided for employees, that are segregated by explicit directive or are in fact segregated on the basis of race, color, religion, sex, or national origin because of written or oral policies or employee custom. The term does not include separate or single-user rest rooms or necessary dressing or sleeping areas provided to assure privacy between the sexes.

(b) The Contractor agrees that it does not and will not maintain or provide for its employees any segregated facilities at any of its establishments, and that it does not and will not permit its employees to perform their services at any location under its control where segregated facilities are maintained. The Contractor agrees that a breach of this clause is a violation of the Equal Opportunity clause in this contract.

(c) The Contractor shall include this clause in every subcontract and purchase order that is subject to the Equal Opportunity clause of this contract.

(End of clause)

52.222-26 EQUAL OPPORTUNITY (APR 2002)

(a) Definition. United States, as used in this clause, means the 50 States, the District of Columbia, Puerto Rico, the Northern Mariana Islands, American Samoa, Guam, the U.S. Virgin Islands, and Wake Island.

(b) If, during any 12-month period (including the 12 months preceding the award of this contract), the Contractor has been or is awarded nonexempt Federal contracts and/or subcontracts that have an aggregate value in excess of $10,000, the Contractor shall comply with paragraphs (b)(1) through (b)(11) of this clause, except for work performed outside the United States by employees who were not recruited within the United States. Upon request, the Contractor shall provide information necessary to determine the applicability of this clause.

(1) The Contractor shall not discriminate against any employee or applicant for employment because of race, color, religion, sex, or national origin. However, it shall not be a violation of this clause for the Contractor to extend a publicly announced preference in employment to Indians living on or near an Indian reservation, in connection with employment opportunities on or near an Indian reservation, as permitted by 41 CFR 60-1.5.

(2) The Contractor shall take affirmative action to ensure that applicants are employed, and that employees are treated during employment, without regard to their race, color, religion, sex, or national origin. This shall include, but not be limited to, (i) employment, (ii) upgrading, (iii) demotion, (iv) transfer, (v) recruitment or recruitment advertising, (vi) layoff or termination, (vii) rates of pay or other forms of compensation, and (viii) selection for training, including apprenticeship.

(3) The Contractor shall post in conspicuous places available to employees and applicants for employment the notices to be provided by the Contracting Officer that explain this clause.

(4) The Contractor shall, in all solicitations or advertisements for employees placed by or on behalf of the Contractor, state that all qualified applicants will receive consideration for employment without regard to race, color, religion, sex, or national origin.

(5) The Contractor shall send, to each labor union or representative of workers with which it has a collective bargaining agreement or other contract or understanding, the notice to be provided by the Contracting Officer advising the labor union or workers' representative of the Contractor's commitments under this clause, and post copies of the notice in conspicuous places available to employees and applicants for employment.

(6) The Contractor shall comply with Executive Order 11246, as amended, and the rules, regulations, and orders of the Secretary of Labor.

(7) The Contractor shall furnish to the contracting agency all information required by Executive Order 11246, as amended, and by the rules, regulations, and orders of the Secretary of Labor. The Contractor shall also file Standard Form 100 (EEO-1), or any successor form, as prescribed in 41 CFR part 60-1. Unless the Contractor has filed within the 12 months preceding the date of contract award, the Contractor shall, within 30 days after contract award, apply to either the regional Office of Federal Contract Compliance Programs (OFCCP) or the local office of the Equal Employment Opportunity Commission for the necessary forms.

(8) The Contractor shall permit access to its premises, during normal business hours, by the contracting agency or the OFCCP for the purpose of conducting on-site compliance evaluations and complaint investigations. The Contractor shall permit the Government to inspect and copy any books, accounts, records (including computerized records), and other material that may be relevant to the matter under investigation and pertinent to compliance with Executive Order 11246, as amended, and rules and regulations that implement the Executive Order.

(9) If the OFCCP determines that the Contractor is not in compliance with this clause or any rule, regulation, or order of the Secretary of Labor, this contract may be canceled, terminated, or suspended in whole or in part and the Contractor may be declared ineligible for further Government contracts, under the procedures authorized in Executive Order 11246, as amended. In addition, sanctions may be imposed and remedies invoked against the Contractor as provided in Executive Order 11246, as amended; in the rules, regulations, and orders of the Secretary of Labor; or as otherwise provided by law.

(10) The Contractor shall include the terms and conditions of subparagraphs (b)(1) through (11) of this clause in every subcontract or purchase order that is not exempted by the rules, regulations, or orders of the Secretary of Labor issued under Executive Order 11246, as amended, so that these terms and conditions will be binding upon each subcontractor or vendor.

(11) The Contractor shall take such action with respect to any subcontract or purchase order as the contracting officer may direct as a means of enforcing these terms and conditions, including sanctions for noncompliance; provided, that if the Contractor becomes involved in, or is threatened with, litigation with a subcontractor or vendor as a result of any direction, the Contractor may request the United States to enter into the litigation to protect the interests of the United States.

(c) Notwithstanding any other clause in this contract, disputes relative to this clause will be governed by the procedures in 41 CFR 60-1.1.

(End of clause)

52.222-27 AFFIRMATIVE ACTION COMPLIANCE REQUIREMENTS FOR CONSTRUCTION (FEB 1999)

(a) Definitions. "Covered area," as used in this clause, means the geographical area described in the solicitation for this contract.

"Deputy Assistant Secretary," as used in this clause, means Deputy Assistant Secretary for Federal Contract Compliance, U.S. Department of Labor, or a designee.

"Employer's identification number," as used in this clause, means the Federal Social Security number used on the employer's quarterly federal tax return, U.S. Treasury Department Form 941.

"Minority," as used in this clause, means--

(1) American Indian or Alaskan Native (all persons having origins in any of the original peoples of North America and maintaining identifiable tribal affiliations through membership and participation or community identification).

(2) Asian and Pacific Islander (all persons having origins in any of the original peoples of the Far East, Southeast Asia, the Indian Subcontinent, or the Pacific Islands);

(3) Black (all persons having origins in any of the black African racial groups not of Hispanic origin); and

(4) Hispanic (all persons of Mexican, Puerto Rican, Cuban, Central or South American, or other Spanish culture or origin, regardless of race).

(b) If the Contractor, or a subcontractor at any tier, subcontracts a portion of the work involving any construction trade, each such subcontract in excess of $10,000 shall include this clause and the Notice containing the goals for minority and female participation stated in the solicitation for this contract.

(c) If the Contractor is participating in a Hometown Plan (41 CFR 60-4) approved by the U.S. Department of Labor in a covered area, either individually or through an association, its affirmative action obligations on all work in the plan area (including goals) shall comply with the plan for those trades that have unions participating in the plan. Contractors must be able to demonstrate participation in, and compliance with, the provisions of the plan. Each Contractor or subcontractor participating in an approved plan is also required to comply with its obligations under the Equal Opportunity clause, and to make a good faith effort to achieve each goal under the plan in each trade in which it has employees. The overall good-faith performance by other Contractors or subcontractors toward a goal in an approved plan does not excuse any Contractor's or subcontractor's failure to make good-faith efforts to achieve the plan's goals.

(d) The Contractor shall implement the affirmative action procedures in subparagraphs (g)(1) through (16) of this clause. The goals stated in the solicitation for this contract are expressed as percentages of the total hours of employment and training of minority and female utilization that the Contractor should reasonably be able to achieve in each construction trade in which it has employees in the covered area. If the Contractor performs construction work in a geographical area located outside of the covered area, it shall apply the goals established for the geographical area where that work is actually performed. The Contractor is expected to make substantially uniform progress toward its goals in each craft.

(e) Neither the terms and conditions of any collective bargaining agreement, nor the failure by a union with which the Contractor has a collective bargaining agreement, to refer minorities or women shall excuse the Contractor's obligations under this clause, Executive Order 11246, as amended, or the regulations thereunder.

(f) In order for the nonworking training hours of apprentices and trainees to be counted in meeting the goals, apprentices and trainees must be employed by the Contractor during the training period, and the Contractor must have made a commitment to employ the apprentices and trainees at the completion of their training, subject to the availability of employment opportunities. Trainees must be trained pursuant to training programs approved by the U.S. Department of Labor.

(g) The Contractor shall take affirmative action to ensure equal employment opportunity. The evaluation of the Contractor's compliance with this clause shall be based upon its effort to achieve maximum results from its actions. The Contractor shall document these efforts fully and implement affirmative action steps at least as extensive as the following:

(1) Ensure a working environment free of harassment, intimidation, and coercion at all sites and in all facilities where the Contractor's employees are assigned to work. The Contractor, if possible, will assign two or more women to each construction project. The Contractor shall ensure that foremen, superintendents, and other onsite supervisory personnel are aware of and carry out the Contractor's obligation to maintain such a working environment, with specific attention to minority or female individuals working at these sites or facilities.

(2) Establish and maintain a current list of sources for minority and female recruitment. Provide written notification to minority and female recruitment sources and community organizations when the Contractor or its unions have employment opportunities available, and maintain a record of the organizations' responses.

(3) Establish and maintain a current file of the names, addresses, and telephone numbers of each minority and female off-the-street applicant, referrals of minorities or females from unions, recruitment sources, or community organizations, and the action taken with respect to each individual. If an individual was sent to the union hiring hall for referral and not referred back to the Contractor by the union or, if referred back, not employed by the Contractor, this shall be documented in the file, along with whatever additional actions the Contractor may have taken.

(4) Immediately notify the Deputy Assistant Secretary when the union or unions with which the Contractor has a collective bargaining agreement has not referred back to the Contractor a minority or woman sent by the Contractor, or when the Contractor has other information that the union referral process has impeded the Contractor's efforts to

meet its obligations.

(5) Develop on-the-job training opportunities and/or participate in training programs for the area that expressly include minorities and women, including upgrading programs and apprenticeship and trainee programs relevant to the Contractor's employment needs, especially those programs funded or approved by the Department of Labor. The Contractor shall provide notice of these programs to the sources compiled under subparagraph (g)(2) of this clause.

(6) Disseminate the Contractor's equal employment policy by--

(i) Providing notice of the policy to unions and to training, recruitment, and outreach programs, and requesting their cooperation in assisting the Contractor in meeting its contract obligations;

(ii) Including the policy in any policy manual and in collective bargaining agreements;

(iii) Publicizing the policy in the company newspaper, annual report, etc.;

(iv) Reviewing the policy with all management personnel and with all minority and female employees at least once a year; and

(v) Posting the policy on bulletin boards accessible to employees at each location where construction work is performed.

(7) Review, at least annually, the Contractor's equal employment policy and affirmative action obligations with all employees having responsibility for hiring, assignment, layoff, termination, or other employment decisions. Conduct review of this policy with all on-site supervisory personnel before initiating construction work at a job site. A written record shall be made and maintained identifying the time and place of these meetings, persons attending, subject matter discussed, and disposition of the subject matter.

(8) Disseminate the Contractor's equal employment policy externally by including it in any advertising in the news media, specifically including minority and female news media. Provide written notification to, and discuss this policy with, other Contractors and subcontractors with which the Contractor does or anticipates doing business.

(9) Direct recruitment efforts, both oral and written, to minority, female, and community organizations, to schools with minority and female students, and to minority and female recruitment and training organizations serving the Contractor's recruitment area and employment needs. Not later than 1 month before the date for acceptance of applications for apprenticeship or training by any recruitment source, send written notification to organizations such as the above, describing the openings, screening procedures, and tests to be used in the selection process.

(10) Encourage present minority and female employees to recruit minority persons and women. Where reasonable, provide after-school, summer, and vacation employment to minority and female youth both on the site and in other areas of the Contractor's workforce.

(11) Validate all tests and other selection requirements where required under 41 CFR 60-3.

(12) Conduct, at least annually, an inventory and evaluation at least of all minority and female personnel for promotional opportunities. Encourage these employees to seek or to prepare for, through appropriate training, etc., opportunities for promotion.

(13) Ensure that seniority practices, job classifications, work assignments, and other personnel practices do not have a discriminatory effect by continually monitoring all personnel and employment-related activities to ensure that the Contractor's obligations under this contract are being carried out.

(14) Ensure that all facilities and company activities are nonsegregated except that separate or single-user rest rooms and necessary dressing or sleeping areas shall be provided to assure privacy between the sexes.

(15) Maintain a record of solicitations for subcontracts for minority and female construction contractors and suppliers, including circulation of solicitations to minority and female contractor associations and other business associations.

(16) Conduct a review, at least annually, of all supervisors' adherence to and performance under the Contractor's equal employment policy and affirmative action obligations.

(h) The Contractor is encouraged to participate in voluntary associations that may assist in fulfilling one or more of the affirmative action obligations contained in subparagraphs (g)(1) through (16) of this clause. The efforts of a contractor association, joint contractor-union, contractor-community, or similar group of which the contractor is a member and participant may be asserted as fulfilling one or more of its obligations under subparagraphs (g)(1) through (16) of this clause, provided the Contractor--

(1) Actively participates in the group;

(2) Makes every effort to ensure that the group has a positive impact on the employment of minorities and women in the industry;

(3) Ensures that concrete benefits of the program are reflected in the Contractor's minority and female workforce participation;

(4) Makes a good-faith effort to meet its individual goals and timetables; and

(5) Can provide access to documentation that demonstrates the effectiveness of actions taken on behalf of the Contractor. The obligation to comply is the Contractor's, and failure of such a group to fulfill an obligation shall not be a defense for the Contractor's noncompliance.

(i) A single goal for minorities and a separate single goal for women shall be established. The Contractor is required to provide equal employment opportunity and to take affirmative action for all minority groups, both male and female, and all women, both minority and nonminority. Consequently, the Contractor may be in violation of Executive Order 11246, as amended, if a particular group is employed in a substantially disparate manner.

(j) The Contractor shall not use goals or affirmative action standards to discriminate against any person because of race, color, religion, sex, or national origin.

(k) The Contractor shall not enter into any subcontract with any person or firm debarred from Government contracts under Executive Order 11246, as amended.

(l) The Contractor shall carry out such sanctions and penalties for violation of this clause and of the Equal Opportunity clause, including suspension, termination, and cancellation of existing subcontracts, as may be imposed or ordered under Executive Order 11246, as amended, and its implementing regulations, by the OFCCP. Any failure to carry out these sanctions and penalties as ordered shall be a violation of this clause and Executive Order 11246, as amended.

(m) The Contractor in fulfilling its obligations under this clause shall implement affirmative action procedures at least as extensive as those prescribed in paragraph (g) of this clause, so as to achieve maximum results from its efforts to ensure equal employment opportunity. If the Contractor fails to comply with the requirements of Executive Order 11246, as amended, the implementing regulations, or this clause, the Deputy Assistant Secretary shall take action as prescribed in 41 CFR 60-4.8.

(n) The Contractor shall designate a responsible official to--

(1) Monitor all employment-related activity to ensure that the Contractor's equal employment policy is being carried out;

(2) Submit reports as may be required by the Government; and

(3) Keep records that shall at least include for each employee the name, address, telephone number, construction trade, union affiliation (if any), employee identification number, social security number, race, sex, status (e.g., mechanic, apprentice, trainee, helper, or laborer), dates of changes in status, hours worked per week in the indicated trade, rate of pay, and locations at which the work was performed. Records shall be maintained in an easily understandable and retrievable form; however, to the degree that existing records satisfy this requirement, separate records are not required to be maintained.

Nothing contained herein shall be construed as a limitation upon the application of other laws that establish different standards of compliance or upon the requirements for the hiring of local or other area residents (e.g., those under the Public Works Employment Act of 1977 and the Community Development Block Grant Program).

(End of clause)

52.222-35 EQUAL OPPORTUNITY FOR SPECIAL DISABLED VETERANS, VETERANS OF THE VIETNAM ERA, AND OTHER ELIGIBLE VETERANS (DEC 2001)

(a) Definitions. As used in this clause--

All employment openings means all positions except executive and top management, those positions that will be filled from within the Contractor's organization, and positions lasting 3 days or less. This term includes full-time employment, temporary employment of more than 3 days duration, and part-time employment.

Executive and top management means any employee--

(1) Whose primary duty consists of the management of the enterprise in which the individual is employed or of a customarily recognized department or subdivision thereof;

(2) Who customarily and regularly directs the work of two or more other employees;

(3) Who has the authority to hire or fire other employees or whose suggestions and recommendations as to the hiring or firing and as to the advancement and promotion or any other change of status of other employees will be given particular weight;

(4) Who customarily and regularly exercises discretionary powers; and

(5) Who does not devote more than 20 percent or, in the case of an employee of a retail or service establishment, who does not devote more than 40 percent of total hours of work in the work week to activities that are not directly and closely related to the performance of the work described in paragraphs (1) through (4) of this definition. This paragraph (5) does not apply in the case of an employee who is in sole charge of an establishment or a physically separated branch establishment, or who owns at least a 20 percent interest in the enterprise in which the individual is employed.

Other eligible veteran means any other veteran who served on active duty during a war or in a campaign or expedition for which a campaign badge has been authorized.

Positions that will be filled from within the Contractor's organization means employment openings for which the Contractor will give no consideration to persons outside the Contractor's organization (including any affiliates, subsidiaries, and parent companies) and includes any openings the Contractor proposes to fill from regularly established “recall” lists. The exception does not apply to a particular opening once an employer decides to consider applicants outside of its organization.

Qualified special disabled veteran means a special disabled veteran who satisfies the requisite skill, experience, education, and other job-related requirements of the employment position such veteran holds or desires, and who, with or without reasonable accommodation, can perform the essential functions of such position.

Special disabled veteran means--

(1) A veteran who is entitled to compensation (or who but for the receipt of military retired pay would be entitled to compensation) under laws administered by the Department of Veterans Affairs for a disability--

(i) Rated at 30 percent or more; or

(ii) Rated at 10 or 20 percent in the case of a veteran who has been determined under 38 U.S.C. 3106 to have a serious employment handicap (i.e., a significant impairment of the veteran's ability to prepare for, obtain, or retain employment consistent with the veteran's abilities, aptitudes, and interests); or

(2) A person who was discharged or released from active duty because of a service-connected disability.

Veteran of the Vietnam era means a person who--

(1) Served on active duty for a period of more than 180 days and was discharged or released from active duty with other than a dishonorable discharge, if any part of such active duty occurred--

(i) In the Republic of Vietnam between February 28, 1961, and May 7, 1975; or

(ii) Between August 5, 1964, and May 7, 1975, in all other cases; or

(2) Was discharged or released from active duty for a service-connected disability if any part of the active duty was performed--

(i) In the Republic of Vietnam between February 28, 1961, and May 7, 1975; or

(ii) Between August 5, 1964, and May 7, 1975, in all other cases.
(b) General. (1) The Contractor shall not discriminate against the individual because the individual is a special disabled veteran, a veteran of the Vietnam era, or other eligible veteran, regarding any position for which the employee or applicant for employment is qualified. The Contractor shall take affirmative action to employ, advance in employment, and otherwise treat qualified special disabled veterans, veterans of the Vietnam era, and other eligible veterans without discrimination based upon their disability or veterans' status in all employment practices such as--

(i) Recruitment, advertising, and job application procedures;

(ii) Hiring, upgrading, promotion, award of tenure, demotion, transfer, layoff, termination, right of return from layoff and rehiring;

(iii) Rate of pay or any other form of compensation and changes in compensation;

(iv) Job assignments, job classifications, organizational structures, position descriptions, lines of progression, and seniority lists;

(v) Leaves of absence, sick leave, or any other leave;

(vi) Fringe benefits available by virtue of employment, whether or not administered by the Contractor;

(vii) Selection and financial support for training, including apprenticeship, and on-the-job training under 38 U.S.C. 3687, professional meetings, conferences, and other related activities, and selection for leaves of absence to pursue training;

(viii) Activities sponsored by the Contractor including social or recreational programs; and

(ix) Any other term, condition, or privilege of employment.

(2) The Contractor shall comply with the rules, regulations, and relevant orders of the Secretary of Labor issued under the Vietnam Era Veterans' Readjustment Assistance Act of 1972 (the Act), as amended (38 U.S.C. 4211 and 4212).

(c) Listing openings. (1) The Contractor shall immediately list all employment openings that exist at the time of the execution of this contract and those which occur during the performance of this contract, including those not generated by this contract, and including those occurring at an establishment of the Contractor other than the one where the contract is being performed, but excluding those of independently operated corporate affiliates, at an appropriate local public employment service office of the State wherein the opening occurs. Listing employment openings with the U.S. Department of Labor's America's Job Bank shall satisfy the requirement to list jobs with the local employment service office.

(2) The Contractor shall make the listing of employment openings with the local employment service office at least concurrently with using any other recruitment source or effort and shall involve the normal obligations of placing a bona fide job order, including accepting referrals of veterans and nonveterans. This listing of employment openings does not require hiring any particular job applicant or hiring from any particular group of job applicants and is not intended to relieve the Contractor from any requirements of Executive orders or regulations concerning nondiscrimination in employment.

(3) Whenever the Contractor becomes contractually bound to the listing terms of this clause, it shall advise the State public employment agency in each State where it has establishments of the name and location of each hiring location in the State. As long as the Contractor is contractually bound to these terms and has so advised the State agency, it need not advise the State agency of subsequent contracts. The Contractor may advise the State agency when it is no longer bound by this contract clause.

(d) Applicability. This clause does not apply to the listing of employment openings that occur and are filled outside the 50 States, the District of Columbia, the Commonwealth of Puerto Rico, the Commonwealth of the Northern Mariana Islands, American Samoa, Guam, the Virgin Islands of the United States, and Wake Island.

(e) Postings. (1) The Contractor shall post employment notices in conspicuous places that are available to employees and applicants for employment.

(2) The employment notices shall--

(i) State the rights of applicants and employees as well as the Contractor's obligation under the law to take affirmative action to employ and advance in employment qualified employees and applicants who are special disabled veterans, veterans of the Vietnam era, and other eligible veterans; and

(ii) Be in a form prescribed by the Deputy Assistant Secretary for Federal Contract Compliance Programs, Department of Labor (Deputy Assistant Secretary of Labor), and provided by or through the Contracting Officer.

(3) The Contractor shall ensure that applicants or employees who are special disabled veterans are informed of the contents of the notice (e.g., the Contractor may have the notice read to a visually disabled veteran, or may lower the posted notice so that it can be read by a person in a wheelchair).

(4) The Contractor shall notify each labor union or representative of workers with which it has a collective bargaining agreement, or other contract understanding, that the Contractor is bound by the terms of the Act and is committed to take affirmative action to employ, and advance in employment, qualified special disabled veterans, veterans of the Vietnam era, and other eligible veterans.

(f) Noncompliance. If the Contractor does not comply with the requirements of this clause, the Government may take appropriate actions under the rules, regulations, and relevant orders of the Secretary of Labor issued pursuant to the Act.

(g) Subcontracts. The Contractor shall insert the terms of this clause in all subcontracts or purchase orders of $25,000 or more unless exempted by rules, regulations, or orders of the Secretary of Labor. The Contractor shall act as specified by the Deputy Assistant Secretary of Labor to enforce the terms, including action for noncompliance.

(End of clause)

52.222-36 AFFIRMATIVE ACTION FOR WORKERS WITH DISABILITIES (JUN 1998)

(a) General. (1) Regarding any position for which the employee or applicant for employment is qualified, the Contractor shall not discriminate against any employee or applicant because of physical or mental disability. The Contractor agrees to take affirmative action to employ, advance in employment, and otherwise treat qualified individuals with disabilities without discrimination based upon their physical or mental disability in all employment practices such as--

(i) Recruitment, advertising, and job application procedures;

(ii) Hiring, upgrading, promotion, award of tenure, demotion, transfer, layoff, termination, right of return from layoff, and rehiring;

(iii) Rates of pay or any other form of compensation and changes in compensation;

(iv) Job assignments, job classifications, organizational structures, position descriptions, lines of progression, and seniority lists;

(v) Leaves of absence, sick leave, or any other leave;

(vi) Fringe benefits available by virtue of employment, whether or not administered by the Contractor;

(vii) Selection and financial support for training, including apprenticeships, professional meetings, conferences, and other related activities, and selection for leaves of absence to pursue training;

(viii) Activities sponsored by the Contractor, including social or recreational programs; and

(ix) Any other term, condition, or privilege of employment.

(2) The Contractor agrees to comply with the rules, regulations, and relevant orders of the Secretary of Labor (Secretary) issued under the Rehabilitation Act of 1973 (29 U.S.C. 793) (the Act), as amended.

(b) Postings. (1) The Contractor agrees to post employment notices stating--

(i) The Contractor's obligation under the law to take affirmative action to employ and advance in employment qualified individuals with disabilities; and

(ii) The rights of applicants and employees.

(2) These notices shall be posted in conspicuous places that are available to employees and applicants for employment. The Contractor shall ensure that applicants and employees with disabilities are informed of the contents of the notice (e.g., the Contractor may have the notice read to a visually disabled individual, or may lower the posted notice so that it might be read by a person in a wheelchair). The notices shall be in a form prescribed by the Deputy Assistant Secretary for Federal Contract Compliance of the U.S. Department of Labor (Deputy Assistant Secretary) and shall be provided by or through the Contracting Officer.

(3) The Contractor shall notify each labor union or representative of workers with which it has a collective bargaining agreement or other contract understanding, that the Contractor is bound by the terms of Section 503 of the Act and is committed to take affirmative action to employ, and advance in employment, qualified individuals with physical or mental disabilities.

(c) Noncompliance. If the Contractor does not comply with the requirements of this clause, appropriate actions may be taken under the rules, regulations, and relevant orders of the Secretary issued pursuant to the Act.

(d) Subcontracts. The Contractor shall include the terms of this clause in every subcontract or purchase order in excess of $10,000 unless exempted by rules, regulations, or orders of the Secretary. The Contractor shall act as specified by the Deputy Assistant Secretary to enforce the terms, including action for noncompliance.

(End of clause)

52.222-37 EMPLOYMENT REPORTS ON SPECIAL DISABLED VETERANS, VETERANS OF THE VIETNAM ERA, AND OTHER ELIGIBLE VETERANS (DEC 2001)

(a) Unless the Contractor is a State or local government agency, the Contractor shall report at least annually, as required by the Secretary of Labor, on--

(1) The number of disabled veterans and the number of veterans of the Vietnam era in the workforce of the contractor by job category and hiring location; and

(2) The total number of new employees hired during the period covered by the report, and of that total, the number of disabled veterans, and the number of veterans of the Vietnam era.

(b) The above items shall be reported by completing the form entitled "Federal Contractor Veterans' Employment Report VETS-100."

(c) Reports shall be submitted no later than September 30 of each year beginning September 30, 1988.

(d) The employment activity report required by paragraph (a)(2) of this clause shall reflect total hires during the most recent 12-month period as of the ending date selected for the employment profile report required by paragraph (a)(1) of this clause. Contractors may select an ending date: (1) As of the end of any pay period during the period January through March 1st of the year the report is due, or (2) as of December 31, if the contractor has previous written

approval from the Equal Employment Opportunity Commission to do so for purposes of submitting the Employer Information Report EEO-1 (Standard Form 100).

(e) The count of veterans reported according to paragraph (a) of this clause shall be based on voluntary disclosure. Each Contractor subject to the reporting requirements at 38 U.S.C. 4212 shall invite all disabled veterans and veterans of the Vietnam era who wish to benefit under the affirmative action program at 38 U.S.C. 4212 to identify themselves to the Contractor. The invitation shall state that the information is voluntarily provided; that the information will be kept confidential; that disclosure or refusal to provide the information will not subject the applicant or employee to any adverse treatment; and that the information will be used only in accordance with the regulations promulgated under 38 U.S.C. 4212.

(f) Subcontracts. The Contractor shall include the terms of this clause in every subcontract or purchase order of $10,000 or more unless exempted by rules, regulations, or orders of the Secretary.

(End of clause)

52.222-41 SERVICE CONTRACT ACT OF 1965, AS AMENDED (MAY 1989)

(a) Definitions. "Act," as used in this clause, means the Service Contract Act of 1965, as amended (41 U.S.C. 351, et seq.).

"Contractor," as used in this clause or in any subcontract, shall be deemed to refer to the subcontractor, except in the term "Government Prime Contractor."

"Service employee," as used in this clause, means any person engaged in the performance of this contract other than any person employed in a bona fide executive, administrative, or professional capacity, as these terms are defined in Part 541 of Title 29, Code of Federal Regulations, as revised. It includes all such persons regardless of any contractual relationship that may be alleged to exist between a Contractor or subcontractor and such persons.

(b) Applicability. This contract is subject to the following provisions and to all other applicable provisions of the Act and regulations of the Secretary of Labor (29 CFR Part 4). This clause does not apply to contracts or subcontracts administratively exempted by the Secretary of Labor or exempted by 41 U.S.C. 356, as interpreted in Subpart C of 29 CFR Part 4.

(c) Compensation. (1) Each service employee employed in the performance of this contract by the Contractor or any subcontractor shall be paid not less than the minimum monetary wages and shall be furnished fringe benefits in accordance with the wages and fringe benefits determined by the Secretary of Labor, or authorized representative, as specified in any wage determination attached to this contract.

(2)(i) If a wage determination is attached to this con- tract, the Contractor shall classify any class of service employee which is not listed therein and which is to be employed under the contract (i.e., the work to be performed is not performed by any classification listed in the wage determination) so as to provide a reasonable relationship (i.e., appropriate level of skill comparison) between such unlisted classifications and the classifications listed in the wage determination. Such conformed class of employees shall be paid the monetary wages and furnished the fringe benefits as are determined pursuant to the procedures in this paragraph (c).

(ii) This conforming procedure shall be initiated by the Contractor prior to the performance of contract work by the unlisted class of employee. The Contractor shall submit Standard Form (SF) 1444, Request For Authorization of Additional Classification and Rate, to the Contracting Officer no later than 30 days after the unlisted class of employee performs any contract work. The Contracting Officer shall review the proposed classification and rate and promptly submit the completed SF 1444 (which must include information regarding the agreement or disagreement of

the employees' authorized representatives or the employees themselves together with the agency recommendation), and all pertinent informa-tion to the Wage and Hour Division, Employment Standards Administration, U.S. Department of Labor. The Wage and Hour Division will approve, modify, or disapprove the action or render a final determination in the event of disagreement within 30 days of receipt or will notify the Contracting Officer within 30 days of receipt that additional time is necessary.

(iii) The final determination of the conformance action by the Wage and Hour Division shall be transmitted to the Contracting Officer who shall promptly notify the Contractor of the action taken. Each affected employee shall be furnished by the Contractor with a written copy of such determination or it shall be posted as a part of the wage determination.

(iv)(A) The process of establishing wage and fringe benefit rates that bear a reasonable relationship to those listed in a wage determination cannot be reduced to any single formula. The approach used may vary from wage determination to wage determination depending on the circumstances. Standard wage and salary administration practices which rank various job classifications by pay grade pursuant to point schemes or other job factors may, for example, be relied upon. Guidance may also be obtained from the way different jobs are rated under Federal pay systems (Federal Wage Board Pay System and the General Schedule) or from other wage determina- tions issued in the same locality. Basic to the establishment of any conformable wage rate(s) is the concept that a pay relationship should be maintained between job classifications based on the skill required and the duties performed.

(B) In the case of a contract modification, an exercise of an option, or extension of an existing contract, or in any other case where a Contractor succeeds a contract under which the classification in question was previously conformed pursuant to paragraph (c) of this clause, a new conformed wage rate and fringe benefits may be assigned to the conformed classification by indexing (i.e., adjusting) the previous conformed rate and fringe benefits by an amount equal to the average (mean) percentage increase (or decrease, where appropriate) between the wages and fringe benefits specified for all classifications to be used on the contract which are listed in the current wage determination, and those specified for the corresponding classifications in the previously applicable wage determination. Where conforming actions are accomplished in accordance with this paragraph prior to the performance of contract work by the unlisted class of employees, the Contractor shall advise the Contracting Officer of the action taken but the other procedures in subdivision (c)(2)(ii) of this clause need not be followed.

(C) No employee engaged in performing work on this contract shall in any event be paid less than the currently applicable minimum wage specified under section 6(a)(1) of the Fair Labor Standards Act of 1938, as amended.

(v) The wage rate and fringe benefits finally determined under this subparagraph (c)(2) of this clause shall be paid to all employees performing in the classification from the first day on which contract work is performed by them in the classification. Failure to pay the unlisted employees the compensation agreed upon by the interested parties and/or finally determined by the Wage and Hour Division retroactive to the date such class of employees commenced contract work shall be a violation of the Act and this contract.

(vi) Upon discovery of failure to comply with subparagraph (c)(2) of this clause, the Wage and Hour Division shall make a final determination of conformed classification, wage rate, and/or fringe benefits which shall be retroactive to the date such class or classes of employees commenced contract work.

(3) Adjustment of Compensation. If the term of this contract is more than 1 year, the minimum monetary wages and fringe benefits required to be paid or fur- nished thereunder to service employees under this contract shall be subject to adjustment after 1 year and not less often than once every 2 years, under wage determinations issued by the Wage and Hour Division.

(d) Obligation to Furnish Fringe Benefits. The Contractor or subcontractor may discharge the obligation to furnish fringe benefits specified in the attachment or determined under subparagraph (c)(2) of this clause by furnishing equivalent combinations of bona fide fringe benefits, or by making equivalent or differential cash payments, only in accordance with Subpart D of 29 CFR Part 4.

(e) Minimum Wage. In the absence of a minimum wage attachment for this contract, neither the Contractor nor any subcontractor under this contract shall pay any person performing work under this contract (regardless of whether the person is a service employee) less than the minimum wage specified by section 6(a)(1) of the Fair Labor Standards Act of 1938. Nothing in this clause shall relieve the Contractor or any subcontractor of any other obligation under law or contract for payment of a higher wage to any employee.

(f) Successor Contracts. If this contract succeeds a contract subject to the Act under which substantially the same services were furnished in the same locality and service employees were paid wages and fringe benefits provided for in a collective bargaining agreement, in the absence of the minimum wage attachment for this contract setting forth such collectively bargained wage rates and fringe benefits, neither the Contractor nor any subcontractor under this contract shall pay any service employee performing any of the contract work (regardless of whether or not such employee was employed under the predecessor contract), less than the wages and fringe benefits provided for in such collective bargaining agreement, to which such employee would have been entitled if employed under the predecessor contract, including accrued wages and fringe benefits and any prospective increases in wages and fringe benefits provided for under such agreement. No Contractor or subcontractor under this contract may be relieved of the foregoing obligation unless the limitations of 29 CFR 4.1b(b) apply or unless the Secretary of Labor or the Secretary's authorized representative finds, after a hearing as provided in 29 CFR 4.10 that the wages and/or fringe benefits provided for in such agreement are substantially at variance with those which prevail for services of a character similar in the locality, or determines, as provided in 29 CFR 4.11, that the collective bargaining agreement applicable to service employees employed under the predecessor contract was not entered into as a result of arm's length negotiations. Where it is found in accordance with the review procedures provided in 29 CFR 4.10 and/or 4.11 and Parts 6 and 8 that some or all of the wages and/or fringe benefits contained in a predecessor Contractor's collective bargaining agreement are substantially at variance with those which prevail for services of a character similar in the locality, and/or that the collective bargaining agreement applicable to service employees employed under the predecessor contract was not entered into as a result of arm's length negotiations, the Department will issue a new or revised wage determination setting forth the applicable wage rates and fringe benefits. Such determination shall be made part of the contract or subcontract, in accordance with the decision of the Administrator, the Administrative Law Judge, or the Board of Service Contract Appeals, as the case may be, irrespective of whether such issuance occurs prior to or after the award of a contract or subcontract (53 Comp. Gen. 401 (1973)). In the case of a wage determination issued solely as a result of a finding of substantial variance, such determination shall be effective as of the date of the final administrative decision.

(g) Notification to Employees. The Contractor and any subcontractor under this contract shall notify each service employee commencing work on this contract of the minimum monetary wage and any fringe benefits required to be paid pursuant to this contract, or shall post the wage determination attached to this contract. The poster provided by the Department of Labor (Publication WH 1313) shall be posted in a prominent and accessible place at the worksite. Failure to comply with this requirement is a violation of section 2(a)(4) of the Act and of this contract.

(h) Safe and Sanitary Working Conditions. The Contractor or subcontractor shall not permit any part of the services called for by this contract to be performed in buildings or surroundings or under working conditions provided by or under the control or supervision of the Contractor or subcontractor which are unsanitary, hazardous, or dangerous to the health or safety of the service employees. The Contractor or subcontractor shall comply with the safety and health standards applied under 29 CFR Part 1925.

(i) Records. (1) The Contractor and each subcontractor performing work subject to the Act shall make and maintain for 3 years from the completion of the work, and make them available for inspection and transcription by authorized representatives of the Wage and Hour Division, Employment Standards Administration, a record of the following:

(i) For each employee subject to the Act--

(A) Name and address and social security number;

(B) Correct work classification or classifications, rate or rates of monetary wages paid and fringe benefits provided, rate or rates of payments in lieu of fringe benefits, and total daily and weekly compensation;

(C) Daily and weekly hours worked by each employee; and

(D) Any deductions, rebates, or refunds from the total daily or weekly compensation of each employee.

(ii) For those classes of service employees not included in any wage determination attached to this contract, wage rates or fringe benefits determined by the interested parties or by the Administrator or authorized representative under the terms of paragraph (c) of this clause. A copy of the report required by subdivision (c)(2)(ii) of this clause will fulfill this requirement.

(iii) Any list of the predecessor Contractor's employees which had been furnished to the Contractor as prescribed by paragraph (n) of this clause.

(2) The Contractor shall also make available a copy of this contract for inspection or transcription by authorized representatives of the Wage and Hour Division.

(3) Failure to make and maintain or to make available these records for inspection and transcription shall be a violation of the regulations and this contract, and in the case of failure to produce these records, the Contracting Officer, upon direction of the Department of Labor and notification to the Contractor, shall take action to cause suspension of any further payment or advance of funds until the violation ceases.

(4) The Contractor shall permit authorized representatives of the Wage and Hour Division to conduct interviews with employees at the worksite during normal working hours.

(j) Pay Periods. The Contractor shall unconditionally pay to each employee subject to the Act all wages due free and clear and without subsequent deduction (except as otherwise provided by law or regulations, 29 CFR Part 4), rebate, or kickback on any account. These payments shall be made no later than one pay period following the end of the regular pay period in which the wages were earned or accrued. A pay period under this Act may not be of any duration longer than semi-monthly.

(k) Withholding of Payments and Termination of Contract. The Contracting Officer shall withhold or cause to be withheld from the Government Prime Contractor under this or any other Government contract with the Prime Contractor such sums as an appropriate official of the Department of Labor requests or such sums as the Contracting Officer decides may be necessary to pay underpaid employees employed by the Contractor or subcontractor. In the event of failure to pay any employees subject to the Act all or part of the wages or fringe benefits due under the Act, the Contracting Officer may, after authorization or by direction of the Department of Labor and written notification to the Contractor, take action to cause suspension of any further payment or advance of funds until such violations have ceased. Additionally, any failure to comply with the requirements of this clause may be grounds for termination of the right to proceed with the contract work. In such event, the Government may enter into other contracts or arrangements for completion of the work, charging the Contractor in default with any additional cost.

(l) Subcontracts. The Contractor agrees to insert this clause in all subcontracts subject to the Act.

(m) Collective Bargaining Agreements Applicable to Service Employees. If wages to be paid or fringe benefits to be furnished any service employees employed by the Government Prime Contractor or any subcontractor under the contract are provided for in a collective bargaining agreement which is or will be effective during any period in which the contract is being performed, the Government Prime Contractor shall report such fact to the Contracting Officer, together with full information as to the application and accrual of such wages and fringe benefits, including any prospective increases, to service employees engaged in work on the contract, and a copy of the collective bargaining agreement. Such report shall be made upon commencing performance of the contract, in the case of collective bargaining agreements effective at such time, and in the case of such agreements or provisions or amendments

thereof effective at a later time during the period of contract performance such agreements shall be reported promptly after negotiation thereof.

(n) Seniority List. Not less than 10 days prior to completion of any contract being performed at a Federal facility where service employees may be retained in the performance of the succeeding contract and subject to a wage determination which contains vacation or other benefit provisions based upon length of service with a Contractor (predecessor) or successor (29 CFR 4.173), the incumbent Prime Contractor shall furnish the Contracting Officer a certified list of the names of all service employees on the Contractor's or subcontractor's payroll during the last month of contract performance. Such list shall also contain anniversary dates of employment on the contract either with the current or predecessor Contractors of each such service employee. The Contracting Officer shall turn over such list to the successor Contractor at the commencement of the succeeding contract.

(o) Rulings and Interpretations. Rulings and interpretations of the Act are contained in Regulations, 29 CFR Part 4.

(p) Contractor's Certification. (1) By entering into this contract, the Contractor (and officials thereof) certifies that neither it (nor he or she) nor any person or firm who has a substantial interest in the Contractor's firm is a person or firm ineligible to be awarded Government contracts by virtue of the sanctions imposed under section 5 of the Act.

(2) No part of this contract shall be subcontracted to any person or firm ineligible for award of a Government contract under section 5 of the Act.

(3) The penalty for making false statements is prescribed in the U.S. Criminal Code, 18 U.S.C. 1001.

(q) Variations, Tolerances, and Exemptions Involving Employment. Notwithstanding any of the provisions in paragraphs (b) through (o) of this clause, the following employees may be employed in accordance with the following variations, tolerances, and exemptions, which the Secretary of Labor, pursuant to section 4(b) of the Act prior to its amendment by Pub. L. 92-473, found to be necessary and proper in the public interest or to avoid serious impairment of the conduct of Government business:

(1) Apprentices, student-learners, and workers whose earning capacity is impaired by age, physical or mental deficiency, or injury may be employed at wages lower than the minimum wages otherwise required by section 2(a)(1) or 2(b)(1) of the Act without diminishing any fringe benefits or cash payments in lieu thereof required under section 2(a)(2) of the Act, in accordance with the conditions and procedures prescribed for the employment of apprentices, student-learners, handicapped persons, and handicapped clients of sheltered workshops under section 14 of the Fair Labor Standards Act of 1938, in the regulations issued by the Administrator (29 CFR Parts 520, 521, 524, and 525).

(2) The Administrator will issue certificates under the Act for the employment of apprentices, student-learners, handicapped persons, or handicapped clients of sheltered workshops not subject to the Fair Labor Standards Act of 1938, or subject to different minimum rates of pay under the two acts, authorizing appropriate rates of minimum wages (but without changing requirements concerning fringe benefits or supplementary cash payments in lieu thereof), applying procedures prescribed by the applicable regulations issued under the Fair Labor Standards Act of 1938 (29 CFR Parts 520, 521, 524, and 525).

(3) The Administrator will also withdraw, annul, or cancel such certificates in accordance with the regulations in 29 CFR Parts 525 and 528.

(r) Apprentices. Apprentices will be permitted to work at less than the predetermined rate for the work they perform when they are employed and individually registered in a bona fide apprenticeship program registered with a State Apprenticeship Agency which is recognized by the U.S. Department of Labor, or if no such recognized agency exists in a State, under a program registered with the Bureau of Apprenticeship and Training, Employment and Training Administration, U.S. Department of Labor. Any employee who is not registered as an apprentice in an approved program shall be paid the wage rate and fringe benefits contained in the applicable wage determination for the journeyman classification of work actually performed. The wage rates paid apprentices shall not be less than the

wage rate for their level of progress set forth in the registered program, expressed as the appropriate percentage of the journeyman's rate contained in the applicable wage determination. The allowable ratio of apprentices to journeymen employed on the contract work in any craft classification shall not be greater than the ratio permitted to the Contractor as to his entire work force under the registered program.

(s) Tips. An employee engaged in an occupation in which the employee customarily and regularly receives more than $30 a month in tips may have the amount of these tips credited by the employer against the minimum wage required by section 2(a)(1) or section 2(b)(1) of the Act, in accordance with section 3(m) of the Fair Labor Standards Act and Regulations, 29 CFR Part 531. However, the amount of credit shall not exceed $1.34 per hour beginning January 1, 1981. To use this provision--

(1) The employer must inform tipped employees about this tip credit allowance before the credit is utilized;

(2) The employees must be allowed to retain all tips (individually or through a pooling arrangement and regardless of whether the employer elects to take a credit for tips received);

(3) The employer must be able to show by records that the employee receives at least the applicable Service Contract Act minimum wage through the combination of direct wages and tip credit; and

(4) The use of such tip credit must have been permitted under any predecessor collective bargaining agreement applicable by virtue of section 4(c) of the Act.

Disputes Concerning Labor Standards. The U.S. Department of Labor has set forth in 29 CFR Parts 4, 6, and 8 procedures for resolving disputes concerning labor standards requirements. Such disputes shall be resolved in accordance with those procedures and not the Disputes clause of this contract. Disputes within the meaning of this clause include disputes between the Contractor (or any of its subcontractors) and the contracting agency, the U.S. Department of Labor, or the employees or their representatives.

(End of clause)

52.222-42 STATEMENT OF EQUIVALENT RATES FOR FEDERAL HIRES (MAY 1989)

In compliance with the Service Contract Act of 1965, as amended, and the regulations of the Secretary of Labor (29 CFR Part 4), this clause identifies the classes of service employees expected to be employed under the contract and states the wages and fringe benefits payable to each if they were employed by the contracting agency subject to the provisions of 5 U.S.C. 5341 or 5332.

THIS STATEMENT IS FOR INFORMATION ONLY: IT IS NOT A WAGE DETERMINATION

Employee Class	Monetary Wage-Fringe Benefits
General Clerk IV	$10.91
Secretary V	$16.74
Civil Engineer Techician	$15.12
Engineering Technician	$ 9.72

(End of clause)

52.222-44 FAIR LABOR STANDARDS ACT AND SERVICE CONTRACT ACT--PRICE ADJUSTMENT (FEB 2002)

(a) This clause applies to both contracts subject to area prevailing wage determinations and contracts subject to Contractor collective bargaining agreements.

(b) The Contractor warrants that the prices in this contract do not include any allowance for any contingency to cover increased costs for which adjustment is provided under this clause.

(c) The contract price or contract unit price labor rates will be adjusted to reflect increases or decreases by the Contractor in wages and fringe benefits to the extent that these increases or decreases are made to comply with--

(1) An increased or decreased wage determination applied to this contract by operation of law; or

(2) An amendment to the Fair Labor Standards Act of 1938 that is enacted subsequent to award of this contract, affects the minimum wage, and becomes applicable to this contract under law.

(d) Any such adjustment will be limited to increases or decreases in wages and fringe benefits as described in paragraph (c) of this clause, and to the accompanying increases or decreases in social security and unemployment taxes and workers' compensation insurance; it shall not otherwise include any amount for general and administrative costs, overhead, or profit.

(e) The Contractor shall notify the Contracting Officer of any increase claimed under this clause within 30 days after the effective date of the wage change, unless this period is extended by the Contracting Officer in writing. The Contractor shall promptly notify the Contracting Officer of any decrease under this clause, but nothing in the clause shall preclude the Government from asserting a claim within the period permitted by law. The notice shall contain a statement of the amount claimed and any relevant supporting data that the Contracting Officer may reasonably require. Upon agreement of the parties, the contract price or contract unit price labor rates shall be modified in writing. The Contractor shall continue performance pending agreement on or determination of any such adjustment and its effective date.

(f) The Contracting Officer or an authorized representative shall, until the expiration of 3 years after final payment under the contract, have access to and the right to examine any directly pertinent books, documents, papers, and records of the Contractor.

(End of clause)

52.223-5 POLLUTION PREVENTION AND RIGHT-TO-KNOW INFORMATION (APR 1998)

(a) Executive Order 12856 of August 3, 1993, requires Federal facilities to comply with the provisions of the Emergency Planning and Community Right-to-Know Act of 1986 (EPCRA)(42 U.S.C. 11001-11050) and the Pollution Prevention Act of 1990 (PPA)(42 U.S.C. 13101-13109).

(b) The Contractor shall provide all information needed by the Federal facility to comply with the emergency planning reporting requirements of Section 302 of EPCRA; the emergency notice requirements of Section 304 of EPCRA; the list of Material Safety Data Sheets required by Section 311 of EPCRA; the emergency and hazardous chemical inventory forms of Section 312 of EPCRA; the toxic chemical release inventory of Section 313 of EPCRA, which includes the reduction and recycling information required by Section 6607 of PPA; and the toxic chemical reduction goals requirements of Section 3-302 of Executive Order 12856.

(End of clause)

52.223-6 DRUG-FREE WORKPLACE (MAY 2001)

(a) Definitions. As used in this clause --

"Controlled substance" means a controlled substance in schedules I through V of section 202 of the Controlled Substances Act (21 U.S.C. 812) and as further defined in regulation at 21 CFR 1308.11 - 1308.15.

"Conviction" means a finding of guilt (including a plea of nolo contendere) or imposition of sentence, or both, by any judicial body charged with the responsibility to deter- mine violations of the Federal or State criminal drug statutes.

"Criminal drug statute" means a Federal or non-Federal criminal statute involving the manufacture, distribution, dispensing, possession, or use of any controlled substance.

"Drug-free workplace" means the site(s) for the performance of work done by the Contractor in connection with a specific contract at which employees of the Contractor are prohibited from engaging in the unlawful manufacture, distribution, dispensing, possession, or use of a controlled substance.

"Employee" means an employee of a Contractor directly engaged in the performance of work under a Government contract. "Directly engaged" is defined to include all direct cost employees and any other Contractor employee who has other than a minimal impact or involvement in contract performance.

"Individual" means an offeror/contractor that has no more than one employee including the offeror/contractor.

(b) The Contractor, if other than an individual, shall-- within 30 days after award (unless a longer period is agreed to in writing for contracts of 30 days or more performance duration), or as soon as possible for contracts of less than 30 days performance duration--

(1) Publish a statement notifying its employees that the unlawful manufacture, distribution, dispensing, possession, or use of a controlled substance is prohibited in the Contractor's workplace and specifying the actions that will be taken against employees for violations of such prohibition;

(2) Establish an ongoing drug-free awareness program to inform such employees about--

(i) The dangers of drug abuse in the workplace;

(ii) The Contractor's policy of maintaining a drug-free workplace;

(iii) Any available drug counseling, rehabilitation, and employee assistance programs; and

(iv) The penalties that may be imposed upon employees for drug abuse violations occurring in the workplace;

(3) Provide all employees engaged in performance of the contract with a copy of the statement required by subparagraph (b)(1) of this clause;

(4) Notify such employees in writing in the statement required by subparagraph (b)(1) of this clause that, as a condition of continued employment on this contract, the employee will--

(i) Abide by the terms of the statement; and

(ii) Notify the employer in writing of the employee's conviction under a criminal drug statute for a violation occurring in the workplace no later than 5 days after such conviction.

(5) Notify the Contracting Officer in writing within 10 days after receiving notice under subdivision (b)(4)(ii) of this

clause, from an employee or otherwise receiving actual notice of such conviction. The notice shall include the position title of the employee;

(6) Within 30 days after receiving notice under subdivision (b)(4)(ii) of this clause of a conviction, take one of the following actions with respect to any employee who is convicted of a drug abuse violation occurring in the workplace:

(i) Taking appropriate personnel action against such employee, up to and including termination; or

(ii) Require such employee to satisfactorily participate in a drug abuse assistance or rehabilitation program approved for such purposes by a Federal, State, or local health, law enforcement, or other appropriate agency; and

(7) Make a good faith effort to maintain a drug-free workplace through implementation of subparagraphs (b)(1) though (b)(6) of this clause.

(c) The Contractor, if an individual, agrees by award of the contract or acceptance of a purchase order, not to engage in the unlawful manufacture, distribution, dispensing, possession, or use of a controlled substance while performing this contract.

(d) In addition to other remedies available to the Government, the Contractor's failure to comply with the requirements of paragraph (b) or (c) of this clause may, pursuant to FAR 23.506, render the Contractor subject to suspension of contract payments, termination of the contract for default, and suspension or debarment.

(End of clause)

52.223-14 TOXIC CHEMICAL RELEASE REPORTING (OCT 2000)

(a) Unless otherwise exempt, the Contractor, as owner or operator of a facility used in the performance of this contract, shall file by July 1 for the prior calendar year an annual Toxic Chemical Release Inventory Form (Form R) as described in sections 313(a) and (g) of the Emergency Planning and Community Right-to-Know Act of 1986 (EPCRA) (42 U.S.C. 11023(a) and (g)), and section 6607 of the Pollution Prevention Act of 1990 (PPA) (42 U.S.C. 13106). The Contractor shall file, for each facility subject to the Form R filing and reporting requirements, the annual Form R throughout the life of the contract.

(b) A Contractor owned or operated facility used in the performance of this contract is exempt from the requirement to file an annual Form R if--

(1) The facility does not manufacture, process, or otherwise use any toxic chemicals listed under section 313(c) of EPCRA, 42 U.S.C. 11023(c);

(2) The facility does not have 10 or more full-time employees as specified in section 313(b)(1)(A) of EPCRA, 42 U.S.C. 11023(b)(1)(A);

(3) The facility does not meet the reporting thresholds of toxic chemicals established under of EPCRA, 42 U.S.C. 11023(f) (including the alternate thresholds at 40 CFR 372.27, provided an appropriate certification form has been filed with EPA);

(4) The facility does not fall within Standard Industrial Classification Code (SIC) major groups 20 through 39 or their corresponding North American Industry Classification System (NAICS) sectors 31 through 33; or

(5) The facility is not located within any State of the United States, the District of Columbia, the Commonwealth of Puerto Rico, Guam, American Samoa, the United States Virgin Islands, the Northern Mariana Islands, or any other territory or possession over which the United States has jurisdiction.

(c) If the Contractor has certified to an exemption in accordance with one or more of the criteria in paragraph (b) of this clause, and after award of the contract circumstances change so that any of its owned or operated facilities used in the performance of this contract is no longer exempt--

(1) The Contractor shall notify the Contracting Officer; and

(2) The Contractor, as owner or operator of a facility used in the performance of this contract that is no longer exempt, shall (i) submit a Toxic Chemical Release Inventory Form (Form R) on or before July 1 for the prior calendar year during which the facility becomes eligible; and (ii) continue to file the annual Form R for the life of the contract for such facility.

(d) The Contracting Officer may terminate this contract or take other action as appropriate, if the Contractor fails to comply accurately and fully with the EPCRA and PPA toxic chemical release filing and reporting requirements.

(e) Except for acquisitions of commercial items, as defined in FAR Part 2, the Contractor shall--

(1) For competitive subcontracts expected to exceed $100,000 (including all options), include a solicitation provision substantially the same as the provision at FAR 52.223-13, Certification of Toxic Chemical Release Reporting; and

(2) Include in any resultant subcontract exceeding $100,000 (including all options), the substance of this clause, except this paragraph (e).

(End of clause)

52.225-11 BUY AMERICAN ACT--CONSTRUCTION MATERIALS UNDER TRADE AGREEMENTS (JUL 2002)

(a) Definitions. As used in this clause--

Component means an article, material, or supply incorporated directly into a construction material.

Construction material means an article, material, or supply brought to the construction site by the Contractor or subcontractor for incorporation into the building or work. The term also includes an item brought to the site preassembled from articles, materials, or supplies. However, emergency life safety systems, such as emergency lighting, fire alarm, and audio evacuation systems, that are discrete systems incorporated into a public building or work and that are produced as complete systems, are evaluated as a single and distinct construction material regardless of when or how the individual parts or components of those systems are delivered to the construction site. Materials purchased directly by the Government are supplies, not construction material.

Cost of components means--

(1) For components purchased by the Contractor, the acquisition cost, including transportation costs to the place of incorporation into the construction material (whether or not such costs are paid to a domestic firm), and any applicable duty (whether or not a duty-free entry certificate is issued); or

(2) For components manufactured by the Contractor, all costs associated with the manufacture of the component, including transportation costs as described in paragraph (1) of this definition, plus allocable overhead costs, but excluding profit. Cost of components does not include any costs associated with the manufacture of the end product.

Designated country means any of the following countries: Aruba, Austria, Bangladesh, Belgium, Benin, Bhutan, Botswana, Burkina Faso, Burundi, Canada, Cape Verde, Central African Republic, Chad, Comoros, Denmark.

Djibouti, Equatorial Guinea, Finland, France, Gambia, Germany, Greece, Guinea, Guinea-Bissau, Haiti, Hong Kong, Ireland, Israel, Italy, Japan.

Kiribati, Korea, Republic of, Lesotho, Liechtenstein, Luxembourg, Malawi, Maldives, Mali, Mozambique, Nepal, Netherlands, Niger, Norway, Portugal, Rwanda.

Sao Tome and Principe, Sierra Leone, Singapore, Somalia, Spain, Sweden, Switzerland, Tanzania U.R., Togo, Tuvalu, Uganda, United Kingdom, Vanuatu, Western Samoa, Yemen.

Designated country construction material means a construction material that--

(1) Is wholly the growth, product, or manufacture of a designated country; or

(2) In the case of a construction material that consists in whole or in part of materials from another country, has been substantially transformed in a designated country into a new and different construction material distinct from the materials from which it was transformed.

Domestic construction material means--

(1) An unmanufactured construction material mined or produced in the United States; or

(2) A construction material manufactured in the United States, if the cost of its components mined, produced, or manufactured in the United States exceeds 50 percent of the cost of all its components. Components of foreign origin of the same class or kind for which nonavailability determinations have been made are treated as domestic.

Foreign construction material means a construction material other than a domestic construction material.

North American Free Trade Agreement country means Canada or Mexico.

North American Free Trade Agreement country construction material means a construction material that--

(1) Is wholly the growth, product, or manufacture of a North American Free Trade Agreement (NAFTA) country; or

(2) In the case of a construction material that consists in whole or in part of materials from another country, has been substantially transformed in a NAFTA country into a new and different construction material distinct from the materials from which it was transformed.

United States means the 50 States and the District of Columbia, U.S. territories and possessions, Puerto Rico, the Northern Mariana Islands, and any other place subject to U.S. jurisdiction, but does not include leased bases.

(b) Construction materials. (1) This clause implements the Buy American Act (41 U.S.C. 10a-10d) and the Balance of Payments Program by providing a preference for domestic construction material. In addition, the Contracting Officer has determined that the Trade Agreements Act and the North American Free Trade Agreement (NAFTA) apply to this acquisition. Therefore, the Buy American Act restrictions are waived for designated country and NAFTA country construction materials.

(2) The Contractor shall use only domestic, designated country, or NAFTA country construction material in performing this contract, except as provided in paragraphs (b)(3) and (b)(4) of this clause.

(3) The requirement in paragraph (b)(2) of this clause does not apply to the construction materials or components listed by the Government as follows: none.

(4) The Contracting Officer may add other foreign construction material to the list in paragraph (b)(3) of this clause if the Government determines that--

(i) The cost of domestic construction material would be unreasonable. The cost of a particular domestic construction material subject to the restrictions of the Buy American Act is unreasonable when the cost of such material exceeds the cost of foreign material by more than 6 percent;

(ii) The application of the restriction of the Buy American Act to a particular construction material would be impracticable or inconsistent with the public interest; or

(iii) The construction material is not mined, produced, or manufactured in the United States in sufficient and reasonably available commercial quantities of a satisfactory quality.

(c) Request for determination of inapplicability of the Buy American Act.

(1)(i) Any Contractor request to use foreign construction material in accordance with paragraph (b)(4) of this clause shall include adequate information for Government evaluation of the request, including--

(A) A description of the foreign and domestic construction materials;

(B) Unit of measure;

(C) Quantity;

(D) Price;

(E) Time of delivery or availability;

(F) Location of the construction project;

(G) Name and address of the proposed supplier; and

(H) A detailed justification of the reason for use of foreign construction materials cited in accordance with paragraph (b)(3) of this clause.

(ii) A request based on unreasonable cost shall include a reasonable survey of the market and a completed price comparison table in the format in paragraph (d) of this clause.

(iii) The price of construction material shall include all delivery costs to the construction site and any applicable duty (whether or not a duty-free certificate may be issued).

(iv) Any Contractor request for a determination submitted after contract award shall explain why the Contractor could not reasonably foresee the need for such determination and could not have requested the determination before contract award. If the Contractor does not submit a satisfactory explanation, the Contracting Officer need not make a determination.

(2) If the Government determines after contract award that an exception to the Buy American Act applies and the Contracting Officer and the Contractor negotiate adequate consideration, the Contracting Officer will modify the contract to allow use of the foreign construction material. However, when the basis for the exception is the

unreasonable price of a domestic construction material, adequate consideration is not less than the differential established in paragraph (b)(4)(i) of this clause.

(3) Unless the Government determines that an exception to the Buy American Act applies, use of foreign construction material is noncompliant with the Buy American Act.

(d) Data. To permit evaluation of requests under paragraph (c) of this clause based on unreasonable cost, the Contractor shall include the following information and any applicable supporting data based on the survey of suppliers:

Foreign and Domestic Construction Materials Price Comparison

Construction material description	Unit of measure	Quantity	Price (dollars) \1\
Item 1:			
Foreign construction material....	.....	.....	.....
Domestic construction material...	.....	.....	.....
Item 2:			
Foreign construction material....	.....	.....	.....
Domestic construction material...	.....	.....	.....

\1\ Include all delivery costs to the construction site and any applicable duty (whether or not a duty-free entry certificate is issued).
List name, address, telephone number, and contact for suppliers surveyed. Attach copy of response; if oral, attach summary.
Include other applicable supporting information.

(End of clause)

52.225-13 RESTRICTIONS ON CERTAIN FOREIGN PURCHASES (JUL 2000)

(a) The Contractor shall not acquire, for use in the performance of this contract, any supplies or services originating from sources within, or that were located in or transported from or through, countries whose products are banned from importation into the United States under regulations of the Office of Foreign Assets Control, Department of the Treasury. Those countries are Cuba, Iran, Iraq, Libya, North Korea, Sudan, the territory of Afghanistan controlled by the Taliban, and Serbia (excluding the territory of Kosovo).

(b) The Contractor shall not acquire for use in the performance of this contract any supplies or services from entities controlled by the government of Iraq.

(c) The Contractor shall insert this clause, including this paragraph (c), in all subcontracts.

(End of clause)

52.226-1 UTILIZATION OF INDIAN ORGANIZATIONS AND INDIAN-OWNED ECONOMIC ENTERPRISES (JUN 2000)

(a) Definitions. As used in this clause:

"Indian" means any person who is a member of any Indian tribe, band, group, pueblo or community that is recognized by the Federal Government as eligible for services from the Bureau of Indian Affairs (BIA) in accordance with 25 U.S.C. 1452(c) and any ``Native" as defined in the Alaska Native Claims Settlement Act (43 U.S.C. 1601).

"Indian organization" means the governing body of any Indian tribe or entity established or recognized by the governing body of an Indian tribe for the purposes of 25 U.S.C., chapter 17.

"Indian-owned economic enterprise" means any Indian-owned (as determined by the Secretary of the Interior) commercial, industrial, or business activity established or organized for the purpose of profit, provided that Indian ownership constitutea not less than 51 percent of the enterprise.

"Indian tribe" means any Indian tribe, band, group, pueblo or community, including native villages and native groups (including corporations organized by Kenai, Juneau, Sitka, and Kodiak) as defined in the Alaska Native Claims Settlement Act, that is recognized by the Federal Government as eligible for services from BIA in accordance with 25 U.S.C. 1542(c).

"Interested party" means a prime contractor or an actual or prospective offeror whose direct economic interest would be affected by the award of a subcontract or by the failure to award a subcontract.

(b) The Contractor shall use its best efforts to give Indian organizations and Indian-owned economic enterprises (25 U.S.C. 1544) the maximum practicable opportunity to participate in the subcontracts it awards to the fullest extent consistent with efficient performance of its contract.

(1) The Contracting Officer and the Contractor, acting in good faith, may rely on the representation of an Indian organization or Indian-owned economic enterprise as to its eligibility, unless an interested party challenges its status or the Contracting Officer has independent reason to question that status. In the event of a challenge to the representation of a subcontractor, the Contracting Officer will refer the matter to the U.S. Department of the Interior, Bureau of Indian Affairs (BIA), Attn: Chief, Division of Contracting and Grants Administration, 1849 C Street, NW., MS 2626-MIB, Washington, DC 20240-4000.

The BIA will determine the eligibility and notify the Contracting Officer. No incentive payment will be made within 50 working days of subcontract award or while a challenge is pending. If a subcontractor is determined to be an ineligible participant, no incentive payment will be made under the Indian Incentive Program.

(2) The Contractor may request an adjustment under the Indian Incentive Program to the following:

(i) The estimated cost of a cost-type contract.

(ii) The target cost of a cost-plus-incentive-fee prime contract.

(iii) The target cost and ceiling price of a fixed-price incentive prime contract.

(iv) The price of a firm-fixed-price prime contract.

(3) The amount of the adjustment to the prime contract is 5 percent of the estimated cost, target cost, or firm-fixed-price included in the subcontract initially awarded to the Indian organization or Indian-owned economic enterprise.

(4) The Contractor has the burden of proving the amount claimed and must assert its request for an adjustment prior to completion of contract performance.

(c) The Contracting Officer, subject to the terms and conditions of the contract and the availability of funds, will authorize an incentive payment of 5 percent of the amount paid to the subcontractor. The Contracting Officer will seek funding in accordance with agency procedures.

(End of clause)

52.227-1 AUTHORIZATION AND CONSENT (JUL 1995)

(a) The Government authorizes and consents to all use and manufacture, in performing this contract or any subcontract at any tier, of any invention described in and covered by a United States patent (1) embodied in the structure or composition of any article the delivery of which is accepted by the Government under this contract or (2) used in machinery, tools, or methods whose use necessarily results from compliance by the Contractor or a subcontractor with (i) specifications or written provisions forming a part of this contract or (ii) specific written instructions given by the Contracting Officer directing the manner of performance. The entire liability to the Government for infringement of a patent of the United States shall be determined solely by the provisions of the indemnity clause, if any, included in this contract or any subcontract hereunder (including any lower-tier subcontract), and the Government assumes liability for all other infringement to the extent of the authorization and consent hereinabove granted.

(b) The Contractor agrees to include, and require inclusion of, this clause, suitably modified to identify the parties, in all subcontracts at any tier for supplies or services (including construction, architect-engineer services, and materials, supplies, models, samples, and design or testing services expected to exceed the simplified acquisition threshold (however, omission of this clause from any subcontract, including those at or below the simplified acquisition threshold, does not affect this authorization and consent.)

(End of clause)

52.227-2 NOTICE AND ASSISTANCE REGARDING PATENT AND COPYRIGHT INFRINGEMENT (AUG 1996)

(a) The Contractor shall report to the Contracting Officer, promptly and in reasonable written detail, each notice or claim of patent or copyright infringement based on the performance of this contract of which the Contractor has knowledge.

(b) In the event of any claim or suit against the Government on account of any alleged patent or copyright infringement arising out of the performance of this contract or out of the use of any supplies furnished or work or services performed under this contract, the Contractor shall furnish to the Government, when requested by the Contracting Officer, all evidence and information in possession of the Contractor pertaining to such suit or claim. Such evidence and information shall be furnished at the expense of the Government except where the Contractor has agreed to indemnify the Government.

53 The Contractor agrees to include, and require inclusion of, this clause in all subcontracts at any tier for supplies or services (including construction and architect-engineer subcontracts and those for material, supplies, models, samples, or design or testing services) expected to exceed the simplified acquisition threshold at (FAR) 2.101.to exceed the dollar amount set forth in 13.000 of the Federal Acquisition Regulation (FAR).

(End of clause)

52.227-4 PATENT INDEMNITY--CONSTRUCTION CONTRACTS (APR 1984)

Except as otherwise provided, the Contractor agrees to indemnify the Government and its officers, agents, and employees against liability, including costs and expenses, for infringement upon any United States patent (except a patent issued upon an application that is now or may hereafter be withheld from issue pursuant to a Secrecy Order under 35 U.S.C. 181) arising out of performing this contract or out of the use or disposal by or for the account of the Government of supplies furnished or work performed under this contract.

(End of clause)

52.228-1 BID GUARANTEE (SEP 1996)

(a) Failure to furnish a bid guarantee in the proper form and amount, by the time set for opening of bids, may be cause for rejection of the bid.

(b) The bidder shall furnish a bid guarantee in the form of a firm commitment, e.g., bid bond supported by good and sufficient surety or sureties acceptable to the Government, postal money order, certified check, cashier's check, irrevocable letter of credit, or, under Treasury Department regulations, certain bonds or notes of the United States. The Contracting Officer will return bid guarantees, other than bid bonds, (1) to unsuccessful bidders as soon as practicable after the opening of bids, and (2) to the successful bidder upon execution of contractual documents and bonds (including any necessary coinsurance or reinsurance agreements), as required by the bid as accepted.-

(c) The amount of the bid guarantee shall be 20 percent of the bid price or $3 Million, whichever is less.-

(d) If the successful bidder, upon acceptance of its bid by the Government within the period specified for acceptance, fails to execute all contractual documents or furnish executed bond(s) within 10 days after receipt of the forms by the bidder, the Contracting Officer may terminate the contract for default.-

(e) In the event the contract is terminated for default, the bidder is liable for any cost of acquiring the work that exceeds the amount of its bid, and the bid guarantee is available to offset the difference.

(End of clause)

52.228-2 ADDITIONAL BOND SECURITY (OCT 1997)

The Contractor shall promptly furnish additional security required to protect the Government and persons supplying labor or materials under this contract if--

(a) Any surety upon any bond, or issuing financial institution for other security, furnished with this contract becomes unacceptable to the Government.

(b) Any surety fails to furnish reports on its financial condition as required by the Government;

(c) The contract price is increased so that the penal sum of any bond becomes inadequate in the opinion of the Contracting Officer; or

(d) An irrevocable letter of credit (ILC) used as security will expire before the end of the period of required security. If

the Contractor does not furnish an acceptable extension or replacement ILC, or other acceptable substitute, at least 30 days before an ILC's scheduled expiration, the Contracting officer has the right to immediately draw on the ILC.

(End of clause)

52.228-5 INSURANCE--WORK ON A GOVERNMENT INSTALLATION (JAN 1997)

(a) The Contractor shall, at its own expense, provide and maintain during the entire performance of this contract, at least the kinds and minimum amounts of insurance required in the Schedule or elsewhere in the contract.

(b) Before commencing work under this contract, the Contractor shall notify the Contracting Officer in writing that the required insurance has been obtained. The policies evidencing required insurance shall contain an endorsement to the effect that any cancellation or any material change adversely affecting the Government's interest shall not be effective (1) for such period as the laws of the State in which this contract is to be performed prescribe, or (2) until 30 days after the insurer or the Contractor gives written notice to the Contracting Officer, whichever period is longer.

(c) The Contractor shall insert the substance of this clause, including this paragraph (c), in subcontracts under this contract that require work on a Government installation and shall require subcontractors to provide and maintain the insurance required in the Schedule or elsewhere in the contract. The Contractor shall maintain a copy of all subcontractors' proofs of required insurance, and shall make copies available to the Contracting Officer upon request.

(End of clause)

52.228-11 PLEDGES OF ASSETS (FEB 1992)

(a) Offerors shall obtain from each person acting as an individual surety on a bid guarantee, a performance bond, or a payment bond--

(1) Pledge of assets; and

(2) Standard Form 28, Affidavit of Individual Surety.

(b) Pledges of assets from each person acting as an individual surety shall be in the form of--

(1) Evidence of an escrow account containing cash, certificates of deposit, commercial or Government securities, or other assets described in FAR 28.203-2 (except see 28.203-2(b)(2) with respect to Government securities held in book entry form) and/or;

(2) A recorded lien on real estate. The offeror will be required to provide--

(i) Evidence of title in the form of a certificate of title prepared by a title insurance company approved by the United States Department of Justice. This title evidence must show fee simple title vested in the surety along with any concurrent owners; whether any real estate taxes are due and payable; and any recorded encumbrances against the property, including the lien filed in favor of the Government as required by FAR 28.203-3(d);

(ii) Evidence of the amount due under any encumbrance shown in the evidence of title;

(iii) A copy of the current real estate tax assessment of the property or a current appraisal dated no earlier than 6 months prior to the date of the bond, prepared by a professional appraiser who certifies that the appraisal has been

conducted in accordance with the generally accepted appraisal standards as reflected in the Uniform Standards of Professional Appraisal Practice, as promulgated by the Appraisal Foundation.

(End of clause)

52.228-12 PROSPECTIVE SUBCONTRACTOR REQUESTS FOR BONDS. (OCT 1995)

In accordance with Section 806(a)(3) of Pub. L. 102-190, as amended by Sections 2091 and 8105 of Pub. L. 103-355, upon the request of a prospective subcontractor or supplier offering to furnish labor or material for the performance of this contract for which a payment bond has been furnished to the Government pursuant to the Miller Act, the Contractor shall promptly provide a copy of such payment bond to the requester.

(End of clause)

52.228-14 IRREVOCABLE LETTER OF CREDIT (DEC 1999)

(a) “Irrevocable letter of credit” (ILC), as used in this clause, means a written commitment by a federally insured financial institution to pay all or part of a stated amount of money, until the expiration date of the letter, upon presentation by the Government (the beneficiary) of a written demand therefor. Neither the financial institution nor the offeror/Contractor can revoke or condition the letter of credit.

(b) If the offeror intends to use an ILC in lieu of a bid bond, or to secure other types of bonds such as performance and payment bonds, the letter of credit and letter of confirmation formats in paragraphs (e) and (f) of this clause shall be used.

(c) The letter of credit shall be irrevocable, shall require presentation of no document other than a written demand and the ILC (including confirming letter, if any), shall be issued/confirmed by an acceptable federally insured financial institution as provided in paragraph (d) of this clause, and--

(1) If used as a bid guarantee, the ILC shall expire no earlier than 60 days after the close of the bid acceptance period;

(2) If used as an alternative to corporate or individual sureties as security for a performance or payment bond, the offeror/Contractor may submit an ILC with an initial expiration date estimated to cover the entire period for which financial security is required or may submit an ILC with an initial expiration date that is a minimum period of one year from the date of issuance. The ILC shall provide that, unless the issuer provides the beneficiary written notice of non-renewal at least 60 days in advance of the current expiration date, the ILC is automatically extended without amendment for one year from the expiration date, or any future expiration date, until the period of required coverage is completed and the Contracting Officer provides the financial institution with a written statement waiving the right to payment. The period of required coverage shall be:

(i) For contracts subject to the Miller Act, the later of--

(A) One year following the expected date of final payment;

(B) For performance bonds only, until completion of any warranty period; or

(C) For payment bonds only, until resolution of all claims filed against the payment bond during the one-year period following final payment.

(ii) For contracts not subject to the Miller Act, the later of--

(A) 90 days following final payment; or

(B) For performance bonds only, until completion of any warranty period.

(d) Only federally insured financial institutions rated investment grade or higher shall issue or confirm the ILC. The offeror/Contractor shall provide the Contracting Officer a credit rating that indicates the financial institution has the required rating(s) as of the date of issuance of the ILC. Unless the financial institution issuing the ILC had letter of credit business of less than $25 million in the past year, ILCs over $5 million must be confirmed by another acceptable financial institution that had letter of credit business of less than $25 million in the past year.

(e) The following format shall be used by the issuing financial institution to create an ILC:

_____

[Issuing Financial Institution's Letterhead or Name and Address]

Issue Date _____

IRREVOCABLE LETTER OF CREDIT NO. _____

Account party's name _____

Account party's address _____

For Solicitation No. _____(for reference only)

TO: [U.S. Government agency]

[U.S. Government agency's address]

1. We hereby establish this irrevocable and transferable Letter of Credit in your favor for one or more drawings up to United States $_____. This Letter of Credit is payable at [issuing financial institution's and, if any, confirming financial institution's] office at [issuing financial institution's address and, if any, confirming financial institution's address] and expires with our close of business on _____, or any automatically extended expiration date.

2. We hereby undertake to honor your or the transferee's sight draft(s) drawn on the issuing or, if any, the confirming financial institution, for all or any part of this credit if presented with this Letter of Credit and confirmation, if any, at the office specified in paragraph 1 of this Letter of Credit on or before the expiration date or any automatically extended expiration date.

3. [This paragraph is omitted if used as a bid guarantee, and subsequent paragraphs are renumbered.] It is a condition of this Letter of Credit that it is deemed to be automatically extended without amendment for one year from the expiration date hereof, or any future expiration date, unless at least 60 days prior to any expiration date, we notify you or the transferee by registered mail, or other receipted means of delivery, that we elect not to consider this Letter of Credit renewed for any such additional period. At the time we notify you, we also agree to notify the account party (and confirming financial institution, if any) by the same means of delivery.

4. This Letter of Credit is transferable. Transfers and assignments of proceeds are to be effected without charge to either the beneficiary or the transferee/assignee of proceeds. Such transfer or assignment shall be only at the written direction of the Government (the beneficiary) in a form satisfactory to the issuing financial institution and the confirming financial institution, if any.

5. This Letter of Credit is subject to the Uniform Customs and Practice (UCP) for Documentary Credits, 1993 Revision, International Chamber of Commerce Publication No. 500, and to the extent not inconsistent therewith, to the laws of _____ [state of confirming financial institution, if any, otherwise state of issuing financial institution].

6. If this credit expires during an interruption of business of this financial institution as described in Article 17 of the UCP, the financial institution specifically agrees to effect payment if this credit is drawn against within 30 days after the resumption of our business.

Sincerely,

_____

[Issuing financial institution]

(f) The following format shall be used by the financial institution to confirm an ILC:

_____
[Confirming Financial Institution's Letterhead or Name and Address]

(Date) _____

Our Letter of Credit Advice Number _____

Beneficiary: _____ [U.S. Government agency]

Issuing Financial Institution: _____

Issuing Financial Institution's LC No.: _____

Gentlemen:

1. We hereby confirm the above indicated Letter of Credit, the original of which is attached, issued by _____ [name of issuing financial institution] for drawings of up to United States dollars _____/U.S. $_____ and expiring with our close of business on _____ [the expiration date], or any automatically extended expiration date.

2. Draft(s) drawn under the Letter of Credit and this Confirmation are payable at our office located at _____.

3. We hereby undertake to honor sight draft(s) drawn under and presented with the Letter of Credit and this Confirmation at our offices as specified herein.

4. [This paragraph is omitted if used as a bid guarantee, and subsequent paragraphs are renumbered.] It is a condition of this confirmation that it be deemed automatically extended without amendment for one year from the expiration date hereof, or any automatically extended expiration date, unless:

(a) At least 60 days prior to any such expiration date, we shall notify the Contracting Officer, or the transferee and the issuing financial institution, by registered mail or other receipted means of delivery, that we elect not to consider this confirmation extended for any such additional period; or

(b) The issuing financial institution shall have exercised its right to notify you or the transferee, the account party, and ourselves, of its election not to extend the expiration date of the Letter of Credit.

5. This confirmation is subject to the Uniform Customs and Practice (UCP) for Documentary Credits, 1993 Revision, International Chamber of Commerce Publication No. 500, and to the extent not inconsistent therewith, to the laws of _____ [state of confirming financial institution].

6. If this confirmation expires during an interruption of business of this financial institution as described in Article 17 of the UCP, we specifically agree to effect payment if this credit is drawn against within 30 days after the resumption of our business.

Sincerely,

_____

[Confirming financial institution]

(g) The following format shall be used by the Contracting Officer for a sight draft to draw on the Letter of Credit:

SIGHT DRAFT

_____

[City, State]

(Date) _____

[Name and address of financial institution]

Pay to the order of _____ [Beneficiary Agency] _____ the sum of United States $_____. This draft is drawn under Irrevocable Letter of Credit No. _____.

_____

[Beneficiary Agency]

By: _____

(End of clause)

52.228-15 PERFORMANCE AND PAYMENT BONDS--CONSTRUCTION (JUL 2000)-

(a) Definitions. As used in this clause--

Original contract price means the award price of the contract; or, for requirements contracts, the price payable for the estimated total quantity; or, for indefinite-quantity contracts, the price payable for the specified minimum quantity. Original contract price does not include the price of any options, except those options exercised at the time of contract award.

(b) Amount of required bonds. Unless the resulting contract price is $100,000 or less, the successful offeror shall furnish performance and payment bonds to the Contracting Officer as follows:

(1) Performance bonds (Standard Form 25). The penal amount of performance bonds at the time of contract award shall be 100 percent of the original contract price.

(2) Payment Bonds (Standard Form 25-A). The penal amount of payment bonds at the time of contract award shall be 100 percent of the original contract price.

(3) Additional bond protection. (i) The Government may require additional performance and payment bond protection if the contract price is increased. The increase in protection generally will equal 100 percent of the increase in contract price.

(ii) The Government may secure the additional protection by directing the Contractor to increase the penal amount of the existing bond or to obtain an additional bond.

(c) Furnishing executed bonds. The Contractor shall furnish all executed bonds, including any necessary reinsurance agreements, to the Contracting Officer, within the time period specified in the Bid Guarantee provision of the solicitation, or otherwise specified by the Contracting Officer, but in any event, before starting work.

(d) Surety or other security for bonds. The bonds shall be in the form of firm commitment, supported by corporate sureties whose names appear on the list contained in Treasury Department Circular 570, individual sureties, or by other acceptable security such as postal money order, certified check, cashier's check, irrevocable letter of credit, or, in accordance with Treasury Department regulations, certain bonds or notes of the United States. Treasury Circular 570 is published in the Federal Register or may be obtained from the U.S. Department of Treasury, Financial Management Service, Surety Bond Branch, 401 14th Street, NW, 2nd Floor, West Wing, Washington, DC 20227.

(e) Notice of subcontractor waiver of protection (40 U.S.C. 270b(c). Any waiver of the right to sue on the payment bond is void unless it is in writing, signed by the person whose right is waived, and executed after such person has first furnished labor or material for use in the performance of the contract.

(End of clause)

52.229-2 NORTH CAROLINA STATE AND LOCAL SALES AND USE TAX (APR 1984)

(a) "Materials," as used in this clause, means building materials, supplies, fixtures, and equipment that become a part of or are annexed to any building or structure erected, altered, or repaired under this contract.

(b) If this is a fixed-price contract, the contract price includes North Carolina State and local sales and use taxes to be paid on materials, notwithstanding any other provision of this contract. If this is a cost-reimbursement contract, any North Carolina State and local sales and use taxes paid by the Contractor on materials shall constitute an allowable cost under this contract.

(c) At the time specified in paragraph (d) below, the Contractor shall furnish the Contracting Officer certified statements setting forth the cost of the materials purchased from each vendor and the amount of North Carolina State and local sales and use taxes paid. In the event the Contractor makes several purchases from the same vendor, the certified statement shall indicate the invoice numbers, the inclusive dates of the invoices, the total amount of the invoices, and the North Carolina State and local sales and use taxes paid. The statement shall also include the cost of any tangible personal property withdrawn from the Contractor's warehouse stock and the amount of North Carolina State and local sales or use tax paid on this property by the Contractor. Any local sales or use taxes included in the Contractor's statements must be shown separately from the State sales or use taxes. The Contractor shall furnish any additional information the Commissioner of Revenue of the State of North Carolina may require to substantiate a refund claim for sales or use taxes. The Contractor shall also obtain and furnish to the Contracting Officer similar certified statements by its subcontractors.

(d) If this contract is completed before the next October 1, the certified statements to be furnished pursuant to paragraph (c) above shall be submitted within 60 days after completion. If this contract is not completed before the next October 1, the certified statements shall be submitted on or before November 30 of each year and shall cover taxes paid during the 12-month period that ended the preceding September 30.

(e) The certified statements to be furnished pursuant to paragraph (c) above shall be in the following form: I hereby certify that during the period . . . . to . . . .[insert dates], ... [insert name of Contractor or subcontractor] paid North Carolina State and local sales and use taxes aggregating $ . . . . (State) and $ . . . . (local), with respect to building materials, supplies, fixtures, and equipment that have become a part of or annexed to a building or structure erected, altered, or repaired by . . . . [insert name of Contractor or subcontractor] for the United States of America, and that the vendors from whom the property was purchased, the dates and numbers of the invoices covering the purchases, the total amount of the invoices of each vendor, the North Carolina State and local sales and use taxes paid on the property (shown separately), and the cost of property withdrawn from warehouse stock and North Carolina State and local sales or use taxes paid on this property are as set forth in the attachments.

(End of clause)

52.229-3 FEDERAL, STATE, AND LOCAL TAXES (JAN 1991)

(a) "Contract date," as used in this clause, means the date set for bid opening or, if this is a negotiated contract or a modification, the effective date of this contract or modification.

"All applicable Federal, State, and local taxes and duties," as used in this clause, means all taxes and duties, in effect on the contract date, that the taxing authority is imposing and collecting on the transactions or property covered by this contract.

"After-imposed Federal tax," as used in this clause, means any new or increased Federal excise tax or duty, or tax that was exempted or excluded on the contract date but whose exemption was later revoked or reduced during the contract period, on the transactions or property covered by this contract that the Contractor is required to pay or bear as the result of legislative, judicial, or administrative action taking effect after the contract date. It does not include social security tax or other employment taxes.
"After-relieved Federal tax," as used in this clause, means any amount of Federal excise tax or duty, except social security or other employment taxes, that would otherwise have been payable on the transactions or property covered by this contract, but which the Contractor is not required to pay or bear, or for which the Contractor obtains a refund or drawback, as the result of legislative, judicial, or administrative action taking effect after the contract date.

(b) The contract price includes all applicable Federal, State, and local taxes and duties.

(c) The contract price shall be increased by the amount of any after-imposed Federal tax, provided the Contractor warrants in writing that no amount for such newly imposed Federal excise tax or duty or rate increase was included in the contract price, as a contingency reserve or otherwise.

(d) The contract price shall be decreased by the amount of any after-relieved Federal tax.

(e) The contract price shall be decreased by the amount of any Federal excise tax or duty, except social security or other employment taxes, that the Contractor is required to pay or bear, or does not obtain a refund of, through the Contractor's fault, negligence, or failure to follow instructions of the Contracting Officer.

(f) No adjustment shall be made in the contract price under this clause unless the amount of the adjustment exceeds $250.

(g) The Contractor shall promptly notify the Contracting Officer of all matters relating to any Federal excise tax or duty that reasonably may be expected to result in either an increase or decrease in the contract price and shall take appropriate action as the Contracting Officer directs.

(h) The Government shall, without liability, furnish evidence appropriate to establish exemption from any Federal, State, or local tax when the Contractor requests such evidence and a reasonable basis exists to sustain the exemption.

(End of clause)

52.229-5 TAXES--CONTRACTS PERFORMED IN U.S. POSSESSIONS OR PUERTO RICO (APR 1984)

The term "local taxes," as used in the Federal, State, and local taxes clause of this contract, includes taxes imposed by a possession of the United States or by Puerto Rico.

(End of clause)

52.232-5 PAYMENTS UNDER FIXED-PRICE CONSTRUCTION CONTRACTS (SEP 2002)

(a) Payment of price. The Government shall pay the Contractor the contract price as provided in this contract.

(b) Progress payments. The Government shall make progress payments monthly as the work proceeds, or at more frequent intervals as determined by the Contracting Officer, on estimates of work accomplished which meets the standards of quality established under the contract, as approved by the Contracting Officer.

(1) The Contractor's request for progress payments shall include the following substantiation:

(i) An itemization of the amounts requested, related to the various elements of work required by the contract covered by the payment requested.

(ii) A listing of the amount included for work performed by each subcontractor under the contract.

(iii) A listing of the total amount of each subcontract under the contract.

(iv) A listing of the amounts previously paid to each such subcontractor under the contract.

(v) Additional supporting data in a form and detail required by the Contracting Officer.

(2) In the preparation of estimates, the Contracting Officer may authorize material delivered on the site and preparatory work done to be taken into consideration. Material delivered to the Contractor at locations other than the site also may be taken into consideration if--

(i) Consideration is specifically authorized by this contract; and

(ii) The Contractor furnishes satisfactory evidence that it has acquired title to such material and that the material will be used to perform this contract.

(c) Contractor certification. Along with each request for progress payments, the Contractor shall furnish the following certification, or payment shall not be made: (However, if the Contractor elects to delete paragraph (c)(4) from the certification, the certification is still acceptable.)

I hereby certify, to the best of my knowledge and belief, that--

(1) The amounts requested are only for performance in accordance with the specifications, terms, and conditions of the contract;

(2) All payments due to subcontractors and suppliers from previous payments received under the contract have been made, and timely payments will be made from the proceeds of the payment covered by this certification, in accordance with subcontract agreements and the requirements of chapter 39 of Title 31, United States Code;

(3) This request for progress payments does not include any amounts which the prime contractor intends to withhold or retain from a subcontractor or supplier in accordance with the terms and conditions of the subcontract; and

(4) This certification is not to be construed as final acceptance of a subcontractor's performance.

_____

(Name)

_____

(Title)

_____

(Date)

(d) Refund of unearned amounts. If the Contractor, after making a certified request for progress payments, discovers that a portion or all of such request constitutes a payment for performance by the Contractor that fails to conform to the specifications, terms, and conditions of this contract (hereinafter referred to as the "unearned amount"), the Contractor shall--

(1) Notify the Contracting Officer of such performance deficiency; and

(2) Be obligated to pay the Government an amount (computed by the Contracting Officer in the manner provided in paragraph (j) of this clause) equal to interest on the unearned amount from the 8th day after the date of receipt of the unearned amount until--

(i) The date the Contractor notifies the Contracting Officer that the performance deficiency has been corrected; or

(ii) The date the Contractor reduces the amount of any subsequent certified request for progress payments by an amount equal to the unearned amount.

(e) Retainage. If the Contracting Officer finds that satisfactory progress was achieved during any period for which a progress payment is to be made, the Contracting Officer shall authorize payment to be made in full. However, if satisfactory progress has not been made, the Contracting Officer may retain a maximum of 10 percent of the amount of the payment until satisfactory progress is achieved. When the work is substantially complete, the Contracting Officer may retain from previously withheld funds and future progress payments that amount the Contracting Officer considers adequate for protection of the Government and shall release to the Contractor all the remaining withheld funds. Also, on completion and acceptance of each separate building, public work, or other division of the contract, for which the price is stated separately in the contract, payment shall be made for the completed work without retention of a percentage.

(f) Title, liability, and reservation of rights. All material and work covered by progress payments made shall, at the

time of payment, become the sole property of the Government, but this shall not be construed as--

(1) Relieving the Contractor from the sole responsibility for all material and work upon which payments have been made or the restoration of any damaged work; or

(2) Waiving the right of the Government to require the fulfillment of all of the terms of the contract.

(g) Reimbursement for bond premiums. In making these progress payments, the Government shall, upon request, reimburse the Contractor for the amount of premiums paid for performance and payment bonds (including coinsurance and reinsurance agreements, when applicable) after the Contractor has furnished evidence of full payment to the surety. The retainage provisions in paragraph (e) of this clause shall not apply to that portion of progress payments attributable to bond premiums.

(h) Final payment. The Government shall pay the amount due the Contractor under this contract after--

(1) Completion and acceptance of all work;

(2) Presentation of a properly executed voucher; and

(3) Presentation of release of all claims against
the Government arising by virtue of this contract, other than claims, in stated amounts, that the Contractor has specifically excepted from the operation of the release. A release may also be required of the assignee if the Contractor's claim to amounts payable under this contract has been assigned under the Assignment of Claims Act of 1940 (31 U.S.C. 3727 and 41 U.S.C. 15).

(i) Limitation because of undefinitized work. Notwithstanding any provision of this contract, progress payments shall not exceed 80 percent on work accomplished on undefinitized contract actions. A "contract action" is any action resulting in a contract, as defined in FAR Subpart 2.1, including contract modifications for additional supplies or services, but not including contract modifications that are within the scope and under the terms of the contract, such as contract modifications issued pursuant to the Changes clause, or funding and other administrative changes.

(j) Interest computation on unearned amounts. In accordance with 31 U.S.C. 3903(c)(1), the amount payable under subparagraph (d)(2) of this clause shall be--

(1) Computed at the rate of average bond equivalent rates of 91-day Treasury bills auctioned at the most recent auction of such bills prior to the date the Contractor receives the unearned amount; and

(2) Deducted from the next available payment to the Contractor.

(End of clause)

52.232-10 PAYMENTS UNDER FIXED-PRICE ARCHITECT-ENGINEER CONTRACTS (AUG 1987)

(a) Estimates shall be made monthly of the amount and value of the work and services performed by the Contractor under this contract which meet the standards of quality established under this contract. The estimates shall be prepared by the Contractor and accompanied by any supporting data required by the Contracting Officer.

(b) Upon approval of the estimate by the Contracting Officer, payment upon properly executed vouchers shall be made to the Contractor, as soon as practicable, of 90 percent of the approved amount, less all previous payments; provided, that payment may be made in full during any months in which the Contracting Officer determines that performance has been satisfactory. Also, whenever the Contracting Officer determines that the work is substantially

complete and that the amount retained is in excess of the amount adequate for the protection of the Government, the Contracting Officer may release the excess amount to the Contractor.

(c) Upon satisfactory completion by the Contractor and acceptance by the Contracting Officer of the work done by the Contractor under the "Statement of Architect-Engineer Services", the Contractor will be paid the unpaid balance of any money due for work under the statement, including retained percentages relating to this portion of the work. Upon satisfactory completion and final acceptance of the construction work, the Contractor shall be paid any unpaid balance of money due under this contract.

(d) Before final payment under the contract, or before settlement upon termination of the contract, and as a condition precedent thereto, the Contractor shall execute and deliver to the Contracting Officer a release of all claims against the Government arising under or by virtue of this contract, other than any claims that are specifically excepted by the Contractor from the operation of the release in amounts stated in the release.

(e) Notwithstanding any other provision in this contract, and specifically paragraph (b) of this clause, progress payments shall not exceed 80 percent on work accomplished on undefinitized contract actions. A "contract action" is any action resulting in a contract, as defined in FAR Subpart 2.1, including contract modifications for additional supplies or services, but not including contract modifications that are within the scope and under the terms of the contract, such as contract modifications issued pursuant to the Changes clause, or funding and other administrative changes.

(End of clause)

52.232-17 INTEREST (JUNE 1996)

(a) Except as otherwise provided in this contract under a Price Reduction for Defective Cost or Pricing Data clause or a Cost Accounting Standards clause, all amounts that become payable by the Contractor to the Government under this contract (net of any applicable tax credit under the Internal Revenue Code (26 U.S.C. 1481)) shall bear simple interest from the date due until paid unless paid within 30 days of becoming due. The interest rate shall be the interest rate established by the Secretary of the Treasury as provided in Section 12 of the Contract Disputes Act of 1978 (Public Law 95-563), which is applicable to the period in which the amount becomes due, as provided in paragraph (b) of this clause, and then at the rate applicable for each six-month period as fixed by the Secretary until the amount is paid. reproduce, prepare derivative works, distribute copies to the public, and (b) Amounts shall be due at the earliest of the following dates:

(1) The date fixed under this contract.

(2) The date of the first written demand for payment consistent with this contract, including any demand resulting from a default termination.

(3) The date the Government transmits to the Contractor a proposed supplemental agreement to confirm completed negotiations establishing the amount of debt.

(4) If this contract provides for revision of prices, the date of written notice to the Contractor stating the amount of refund payable in connection with a pricing proposal or a negotiated pricing agreement not confirmed by contract modification.

(c) The interest charge made under this clause may be reduced under the procedures prescribed in 32.614-2 of the Federal Acquisition Regulation in effect on the date of this contract.

(End of clause)

52.232-23 ASSIGNMENT OF CLAIMS (JAN 1986)

(a) The Contractor, under the Assignment of Claims Act, as amended, 31 U.S.C. 3727, 41 U.S.C. 15 (hereafter referred to as "the Act"), may assign its rights to be paid amounts due or to become due as a result of the performance of this contract to a bank, trust company, or other financing institution, including any Federal lending agency. The assignee under such an assignment may thereafter further assign or reassign its right under the original assignment to any type of financing institution described in the preceding sentence.

(b) Any assignment or reassignment authorized under the Act and this clause shall cover all unpaid amounts payable under this contract, and shall not be made to more than one party, except that an assignment or reassignment may be made to one party as agent or trustee for two or more parties participating in the financing of this contract.

(c) The Contractor shall not furnish or disclose to any assignee under this contract any classified document (including this contract) or information related to work under this contract until the Contracting Officer authorizes such action in writing.

(End of clause)

52.232-27 PROMPT PAYMENT FOR CONSTRUCTION CONTRACTS (FEB 2002)

Notwithstanding any other payment terms in this contract, the Government will make invoice payments under the terms and conditions specified in this clause. The Government considers payment as being made on the day a check is dated or the date of an electronic funds transfer. Definitions of pertinent terms are set forth in sections 2.101, 32.001, and 32.902 of the Federal Acquisition Regulation. All days referred to in this clause are calendar days, unless otherwise specified. (However, see paragraph (a)(3) concerning payments due on Saturdays, Sundays, and legal holidays.)

(a) Invoice payments--(1) Types of invoice payments. For purposes of this clause, there are several types of invoice payments that may occur under this contract, as follows:

(i) Progress payments, if provided for elsewhere in this contract, based on Contracting Officer approval of the estimated amount and value of work or services performed, including payments for reaching milestones in any project.

(A) The due date for making such payments is 14 days after the designated billing office receives a proper payment request. If the designated billing office fails to annotate the payment request with the actual date of receipt at the time of receipt, the payment due date is the 14th day after the date of the Contractor's payment request, provided the designated billing office receives a proper payment request and there is no disagreement over quantity, quality, or Contractor compliance with contract requirements.

(B) The due date for payment of any amounts retained by the Contracting Officer in accordance with the clause at 52.232-5, Payments Under Fixed-Price Construction Contracts, is as specified in the contract or, if not specified, 30 days after approval by the Contracting Officer for release to the Contractor.

(ii) Final payments based on completion and acceptance of all work and presentation of release of all claims against the Government arising by virtue of the contract, and payments for partial deliveries that have been accepted by the Government (e.g., each separate building, public work, or other division of the contract for which the price is stated separately in the contract).

(A) The due date for making such payments is the later of the following two events:

(1) The 30th day after the designated billing office receives a proper invoice from the Contractor.

(2) The 30th day after Government acceptance of the work or services completed by the Contractor. For a final invoice when the payment amount is subject to contract settlement actions (e.g., release of claims), acceptance is deemed to occur on the effective date of the contract settlement.

(B) If the designated billing office fails to annotate the invoice with the date of actual receipt at the time of receipt, the invoice payment due date is the 30th day after the date of the Contractor's invoice, provided the designated billing office receives a proper invoice and there is no disagreement over quantity, quality, or Contractor compliance with contract requirements.

(2) Contractor's invoice. The Contractor shall prepare and submit invoices to the designated billing office specified in the contract. A proper invoice must include the items listed in paragraphs (a)(2)(i) through (a)(2)(xi) of this clause. If the invoice does not comply with these requirements, the designated billing office must return it within 7 days after receipt, with the reasons why it is not a proper invoice. When computing any interest penalty owed the Contractor, the Government will take into account if the Government notifies the Contractor of an improper invoice in an untimely manner.

(i) Name and address of the Contractor.

(ii) Invoice date and invoice number. (The Contractor should date invoices as close as possible to the date of mailing or transmission.)

(iii) Contract number or other authorization for work or services performed (including order number and contract line item number).

(iv) Description of work or services performed.

(v) Delivery and payment terms (e.g., discount for prompt payment terms).

(vi) Name and address of Contractor official to whom payment is to be sent (must be the same as that in the contract or in a proper notice of assignment).

(vii) Name (where practicable), title, phone number, and mailing address of person to notify in the event of a defective invoice.

(viii) For payments described in paragraph (a)(1)(i) of this clause, substantiation of the amounts requested and certification in accordance with the requirements of the clause at 52.232-5, Payments Under Fixed-Price Construction Contracts.

(ix) Taxpayer Identification Number (TIN). The Contractor shall include its TIN on the invoice only if required elsewhere in this contract.

(x) Electronic funds transfer (EFT) banking information.

(A) The Contractor shall include EFT banking information on the invoice only if required elsewhere in this contract.

(B) If EFT banking information is not required to be on the invoice, in order for the invoice to be a proper invoice, the Contractor shall have submitted correct EFT banking information in accordance with the applicable solicitation provision (e.g., 52.232-38, Submission of Electronic Funds Transfer Information with Offer), contract clause (e.g.,

52.232-33, Payment by Electronic Funds Transfer--Central Contractor Registration, or 52.232-34, Payment by Electronic Funds Transfer--Other Than Central Contractor Registration), or applicable agency procedures.

(C) EFT banking information is not required if the Government waived the requirement to pay by EFT.

(xi) Any other information or documentation required by the contract.

(3) Interest penalty. The designated payment office will pay an interest penalty automatically, without request from the Contractor, if payment is not made by the due date and the conditions listed in paragraphs (a)(3)(i) through (a)(3)(iii) of this clause are met, if applicable. However, when the due date falls on a Saturday, Sunday, or legal holiday, the designated payment office may make payment on the following working day without incurring a late payment interest penalty.

(i) The designated billing office received a proper invoice.

(ii) The Government processed a receiving report or other Government documentation authorizing payment and there was no disagreement over quantity, quality, Contractor compliance with any contract term or condition, or requested progress payment amount.

(iii) In the case of a final invoice for any balance of funds due the Contractor for work or services performed, the amount was not subject to further contract settlement actions between the Government and the Contractor.

(4) Computing penalty amount. The Government will compute the interest penalty in accordance with the Office of Management and Budget prompt payment regulations at 5 CFR part 1315.

(i) For the sole purpose of computing an interest penalty that might be due the Contractor for payments described in paragraph (a)(1)(ii) of this clause, Government acceptance or approval is deemed to occur constructively on the 7th day after the Contractor has completed the work or services in accordance with the terms and conditions of the contract. If actual acceptance or approval occurs within the constructive acceptance or approval period, the Government will base the determination of an interest penalty on the actual date of acceptance or approval. Constructive acceptance or constructive approval requirements do not apply if there is a disagreement over quantity, quality, or Contractor compliance with a contract provision. These requirements also do not compel Government officials to accept work or services, approve Contractor estimates, perform contract administration functions, or make payment prior to fulfilling their responsibilities.

(ii) The prompt payment regulations at 5 CFR 1315.10(c) do not require the Government to pay interest penalties if payment delays are due to disagreement between the Government and the Contractor over the payment amount or other issues involving contract compliance, or on amounts temporarily withheld or retained in accordance with the terms of the contract. The Government and the Contractor shall resolve claims involving disputes, and any interest that may be payable in accordance with the clause at FAR 52.233-1, Disputes.

(5) Discounts for prompt payment. The designated payment office will pay an interest penalty automatically, without request from the Contractor, if the Government takes a discount for prompt payment improperly. The Government will calculate the interest penalty in accordance with the prompt payment regulations at 5 CFR part 1315.

(6) Additional interest penalty. (i) The designated payment office will pay a penalty amount, calculated in accordance with the prompt payment regulations at 5 CFR part 1315 in addition to the interest penalty amount only if--

(A) The Government owes an interest penalty of $1 or more;

(B) The designated payment office does not pay the interest penalty within 10 days after the date the invoice amount is paid; and

(C) The Contractor makes a written demand to the designated payment office for additional penalty payment, in accordance with paragraph (a)(6)(ii) of this clause, postmarked not later than 40 days after the date the invoice amount is paid.

(ii)(A) The Contractor shall support written demands for additional penalty payments with the following data. The Government will not request any additional data. The Contractor shall--

(1) Specifically assert that late payment interest is due under a specific invoice, and request payment of all overdue late payment interest penalty and such additional penalty as may be required;

(2) Attach a copy of the invoice on which the unpaid late payment interest was due; and

(3) State that payment of the principal has been received, including the date of receipt.

(B) If there is no postmark or the postmark is illegible--

(1) The designated payment office that receives the demand will annotate it with the date of receipt provided the demand is received on or before the 40th day after payment was made; or

(2) If the designated payment office fails to make the required annotation, the Government will determine the demand's validity based on the date the Contractor has placed on the demand, provided such date is no later than the 40th day after payment was made.

(b) Contract financing payments. If this contract provides for contract financing, the Government will make contract financing payments in accordance with the applicable contract financing clause.

(c) Subcontract clause requirements. The Contractor shall include in each subcontract for property or services (including a material supplier) for the purpose of performing this contract the following:

(1) Prompt payment for subcontractors. A payment clause that obligates the Contractor to pay the subcontractor for satisfactory performance under its subcontract not later than 7 days from receipt of payment out of such amounts as are paid to the Contractor under this contract.

(2) Interest for subcontractors. An interest penalty clause that obligates the Contractor to pay to the subcontractor an interest penalty for each payment not made in accordance with the payment clause--

(i) For the period beginning on the day after the required payment date and ending on the date on which payment of the amount due is made; and

(ii) Computed at the rate of interest established by the Secretary of the Treasury, and published in the Federal Register, for interest payments under section 12 of the Contract Disputes Act of 1978 (41 U.S.C. 611) in effect at the time the Contractor accrues the obligation to pay an interest penalty.

(3) Subcontractor clause flowdown. A clause requiring each subcontractor to use:

(i) Include a payment clause and an interest penalty clause conforming to the standards set forth in paragraphs (c)(1) and (c)(2) of this clause in each of its subcontracts; and

(ii) Require each of its subcontractors to include such clauses in their subcontracts with each lower-tier subcontractor or supplier.

(d) Subcontract clause interpretation. The clauses required by paragraph (c) of this clause shall not be construed to impair the right of the Contractor or a subcontractor at any tier to negotiate, and to include in their subcontract, provisions that--

(1) Retainage permitted. Permit the Contractor or a subcontractor to retain (without cause) a specified percentage of each progress payment otherwise due to a subcontractor for satisfactory performance under the subcontract without incurring any obligation to pay a late payment interest penalty, in accordance with terms and conditions agreed to by the parties to the subcontract, giving such recognition as the parties deem appropriate to the ability of a subcontractor to furnish a performance bond and a payment bond;

(2) Withholding permitted. Permit the Contractor or subcontractor to make a determination that part or all of the subcontractor's request for payment may be withheld in accordance with the subcontract agreement; and

(3) Withholding requirements. Permit such withholding without incurring any obligation to pay a late payment penalty if--

(i) A notice conforming to the standards of paragraph (g) of this clause previously has been furnished to the subcontractor; and

(ii) The Contractor furnishes to the Contracting Officer a copy of any notice issued by a Contractor pursuant to paragraph (d)(3)(i) of this clause.

(e) Subcontractor withholding procedures. If a Contractor, after making a request for payment to the Government but before making a payment to a subcontractor for the subcontractor's performance covered by the payment request, discovers that all or a portion of the payment otherwise due such subcontractor is subject to withholding from the subcontractor in accordance with the subcontract agreement, then the Contractor shall--

(1) Subcontractor notice. Furnish to the subcontractor a notice conforming to the standards of paragraph (g) of this clause as soon as practicable upon ascertaining the cause giving rise to a withholding, but prior to the due date for subcontractor payment;

(2) Contracting Officer notice. Furnish to the Contracting Officer, as soon as practicable, a copy of the notice furnished to the subcontractor pursuant to paragraph (e)(1) of this clause;

(3) Subcontractor progress payment reduction. Reduce the subcontractor's progress payment by an amount not to exceed the amount specified in the notice of withholding furnished under paragraph (e)(1) of this clause;

(4) Subsequent subcontractor payment. Pay the subcontractor as soon as practicable after the correction of the identified subcontract performance deficiency, and--

(i) Make such payment within--

(A) Seven days after correction of the identified subcontract performance deficiency (unless the funds therefor must be recovered from the Government because of a reduction under paragraph
(e)(5)(i)) of this clause; or

(B) Seven days after the Contractor recovers such funds from the Government; or

(ii) Incur an obligation to pay a late payment interest penalty computed at the rate of interest established by the Secretary of the Treasury, and published in the Federal Register, for interest payments under section 12 of the Contracts Disputes Act of 1978 (41 U.S.C. 611) in effect at the time the Contractor accrues the obligation to pay an interest penalty;

(5) Notice to Contracting Officer. Notify the Contracting Officer upon--

(i) Reduction of the amount of any subsequent certified application for payment; or

(ii) Payment to the subcontractor of any withheld amounts of a progress payment, specifying--

(A) The amounts withheld under paragraph (e)(1) of this clause; and

(B) The dates that such withholding began and ended; and

(6) Interest to Government. Be obligated to pay to the Government an amount equal to interest on the withheld payments (computed in the manner provided in 31 U.S.C. 3903(c)(1)), from the 8th day after receipt of the withheld amounts from the Government until--

(i) The day the identified subcontractor performance deficiency is corrected; or

(ii) The date that any subsequent payment is reduced under paragraph (e)(5)(i) of this clause.

(f) Third-party deficiency reports--(1) Withholding from subcontractor. If a Contractor, after making payment to a first-tier subcontractor, receives from a supplier or subcontractor of the first-tier subcontractor (hereafter referred to as a “second-tier subcontractor”) a written notice in accordance with section 2 of the Act of August 24, 1935 (40 U.S.C. 270b, Miller Act), asserting a deficiency in such first-tier subcontractor's performance under the contract for which the Contractor may be ultimately liable, and the Contractor determines that all or a portion of future payments otherwise due such first-tier subcontractor is subject to withholding in accordance with the subcontract agreement, the Contractor may, without incurring an obligation to pay an interest penalty under paragraph (e)(6) of this clause--

(i) Furnish to the first-tier subcontractor a notice conforming to the standards of paragraph (g) of this clause as soon as practicable upon making such determination; and

(ii) Withhold from the first-tier subcontractor's next available progress payment or payments an amount not to exceed the amount specified in the notice of withholding furnished under paragraph (f)(1)(i) of this clause.

(2) Subsequent payment or interest charge. As soon as practicable, but not later than 7 days after receipt of satisfactory written notification that the identified subcontract performance deficiency has been corrected, the Contractor shall--

(i) Pay the amount withheld under paragraph (f)(1)(ii) of this clause to such first-tier subcontractor; or

(ii) Incur an obligation to pay a late payment interest penalty to such first-tier subcontractor computed at the rate of interest established by the Secretary of the Treasury, and published in the Federal Register, for interest payments under section 12 of the Contracts DisputesAct of 1978 (41 U.S.C. 611) in effect at the time the Contractor accrues the obligation to pay an interest penalty.

(g) Written notice of subcontractor withholding. The Contractor shall issue a written notice of any withholding to a subcontractor (with a copy furnished to the Contracting Officer), specifying--

(1) The amount to be withheld;

(2) The specific causes for the withholding under the terms of the subcontract; and

(3) The remedial actions to be taken by the subcontractor in order to receive payment of the amounts withheld.

(h) Subcontractor payment entitlement. The Contractor may not request payment from the Government of any amount withheld or retained in accordance with paragraph (d) of this clause until such time as the Contractor has determined and certified to the Contracting Officer that the subcontractor is entitled to the payment of such amount.

(i) Prime-subcontractor disputes. A dispute between the Contractor and subcontractor relating to the amount or entitlement of a subcontractor to a payment or a late payment interest penalty under a clause included in the subcontract pursuant to paragraph (c) of this clause does not constitute a dispute to which the Government is a party. The Government may not be interpleaded in any judicial or administrative proceeding involving such a dispute.

(j) Preservation of prime-subcontractor rights. Except as provided in paragraph (i) of this clause, this clause shall not limit or impair any contractual, administrative, or judicial remedies otherwise available to the Contractor or a subcontractor in the event of a dispute involving late payment or nonpayment by the Contractor or deficient subcontract performance or nonperformance by a subcontractor.

(k) Non-recourse for prime contractor interest penalty. The Contractor's obligation to pay an interest penalty to a subcontractor pursuant to the clauses included in a subcontract under paragraph (c) of this clause shall not be construed to be an obligation of the Government for such interest penalty. A cost-reimbursement claim may not include any amount for reimbursement of such interest penalty.

(l) Overpayments. If the Contractor becomes aware of a duplicate payment or that the Government has otherwise overpaid on an invoice payment, the Contractor shall immediately notify the Contracting Officer and request instructions for disposition of the overpayment.

(End of clause)

52.232-33 PAYMENT BY ELECTRONIC FUNDS TRANSFER—CENTRAL CONTRACTOR REGISTRATION (MAY 1999)

(a) Method of payment. (1) All payments by the Government under this contract shall be made by electronic funds transfer (EFT), except as provided in paragraph (a)(2) of this clause. As used in this clause, the term “EFT” refers to the funds transfer and may also include the payment information transfer.

(2) In the event the Government is unable to release one or more payments by EFT, the Contractor agrees to either--

(i) Accept payment by check or some other mutually agreeable method of payment; or

(ii) Request the Government to extend the payment due date until such time as the Government can make payment by EFT (but see paragraph (d) of this clause).

(b) Contractor's EFT information. The Government shall make payment to the Contractor using the EFT information contained in the Central Contractor Registration (CCR) database. In the event that the EFT information changes, the Contractor shall be responsible for providing the updated information to the CCR database.

(c) Mechanisms for EFT payment. The Government may make payment by EFT through either the Automated Clearing House (ACH) network, subject to the rules of the National Automated Clearing House Association, or the Fedwire Transfer System. The rules governing Federal payments through the ACH are contained in 31 CFR part 210.

(d) Suspension of payment. If the Contractor's EFT information in the CCR database is incorrect, then the Government need not make payment to the Contractor under this contract until correct EFT information is entered into the CCR database; and any invoice or contract financing request shall be deemed not to be a proper invoice for

the purpose of prompt payment under this contract. The prompt payment terms of the contract regarding notice of an improper invoice and delays in accrual of interest penalties apply.

(e) Contractor EFT arrangements. If the Contractor has identified multiple payment receiving points (i.e., more than one remittance address and/or EFT information set) in the CCR database, and the Contractor has not notified the Government of the payment receiving point applicable to this contract, the Government shall make payment to the first payment receiving point (EFT information set or remittance address as applicable) listed in the CCR database.

(f) Liability for uncompleted or erroneous transfers. (1) If an uncompleted or erroneous transfer occurs because the Government used the Contractor's EFT information incorrectly, the Government remains responsible for--

(i) Making a correct payment;

(ii) Paying any prompt payment penalty due; and

(iii) Recovering any erroneously directed funds.

(2) If an uncompleted or erroneous transfer occurs because the Contractor's EFT information was incorrect, or was revised within 30 days of Government release of the EFT payment transaction instruction to the Federal Reserve System, and--

(i) If the funds are no longer under the control of the payment office, the Government is deemed to have made payment and the Contractor is responsible for recovery of any erroneously directed funds; or

(ii) If the funds remain under the control of the payment office, the Government shall not make payment, and the provisions of paragraph (d) of this clause shall apply.

(g) EFT and prompt payment. A payment shall be deemed to have been made in a timely manner in accordance with the prompt payment terms of this contract if, in the EFT payment transaction instruction released to the Federal Reserve System, the date specified for settlement of the payment is on or before the prompt payment due date, provided the specified payment date is a valid date under the rules of the Federal Reserve System.

(h) EFT and assignment of claims. If the Contractor assigns the proceeds of this contract as provided for in the assignment of claims terms of this contract, the Contractor shall require as a condition of any such assignment, that the assignee shall register in the CCR database and shall be paid by EFT in accordance with the terms of this clause. In all respects, the requirements of this clause shall apply to the assignee as if it were the Contractor. EFT information that shows the ultimate recipient of the transfer to be other than the Contractor, in the absence of a proper assignment of claims acceptable to the Government, is incorrect EFT information within the meaning of paragraph (d) of this clause.

(i) Liability for change of EFT information by financial agent. The Government is not liable for errors resulting from changes to EFT information made by the Contractor's financial agent.

(j) Payment information. The payment or disbursing office shall forward to the Contractor available payment information that is suitable for transmission as of the date of release of the EFT instruction to the Federal Reserve System. The Government may request the Contractor to designate a desired format and method(s) for delivery of payment information from a list of formats and methods the payment office is capable of executing. However, the Government does not guarantee that any particular format or method of delivery is available at any particular payment office and retains the latitude to use the format and delivery method most convenient to the Government. If the Government makes payment by check in accordance with paragraph (a) of this clause, the Government shall mail the payment information to the remittance address contained in the CCR database.

(End of Clause)

52.233-1 DISPUTES. (JUL 2002)

(a) This contract is subject to the Contract Disputes Act of 1978, as amended (41 U.S.C. 601-613).

(b) Except as provided in the Act, all disputes arising under or relating to this contract shall be resolved under this clause.

(c) Claim, as used in this clause, means a written demand or written assertion by one of the contracting parties seeking, as a matter of right, the payment of money in a sum certain, the adjustment or interpretation of contract terms, or other relief arising under or relating to this contract. However, a written demand or written assertion by the Contractor seeking the payment of money exceeding $100,000 is not a claim under the Act until certified. A voucher, invoice, or other routine request for payment that is not in dispute when submitted is not a claim under the Act. The submission may be converted to a claim under the Act, by complying with the submission and certification requirements of this clause, if it is disputed either as to liability or amount or is not acted upon in a reasonable time.

(d)(1) A claim by the Contractor shall be made in writing and, unless otherwise stated in this contract, submitted within 6 years after accrual of the claim to the Contracting Officer for a written decision. A claim by the Government against the Contractor shall be subject to a written decision by the Contracting Officer.

(2)(i) The contractors shall provide the certification specified in subparagraph (d)(2)(iii) of this clause when submitting any claim -

(A) Exceeding $100,000; or

(B) Regardless of the amount claimed, when using -

(1) Arbitration conducted pursuant to 5 U.S.C. 575-580; or

(2) Any other alternative means of dispute resolution (ADR) technique that the agency elects to handle in accordance with the Administrative Dispute Resolution Act (ADRA).

(ii) The certification requirement does not apply to issues in controversy that have not been submitted as all or part of a claim.

(iii) The certification shall state as follows: "I certify that the claim is made in good faith; that the supporting data are accurate and complete to the best of my knowledge and belief; that the amount requested accurately reflects the contract adjustment for which the Contractor believes the Government is liable; and that I am duly authorized to certify the claim on behalf of the Contractor.

(3) The certification may be executed by any person duly authorized to bind the Contractor with respect to the claim.

(e) For Contractor claims of $100,000 or less, the Contracting Officer must, if requested in writing by the Contractor, render a decision within 60 days of the request. For Contractor-certified claims over $100,000, the Contracting Officer must, within 60 days, decide the claim or notify the Contractor of the date by which the decision will be made.

(f) The Contracting Officer's decision shall be final unless the Contractor appeals or files a suit as provided in the Act.

(g) If the claim by the Contractor is submitted to the Contracting Officer or a claim by the Government is presented to the Contractor, the parties, by mutual consent, may agree to use alternative disput resolution (ADR). If the

Contractor refuses an offer for ADR, the Contractor shall inform the Contracting Officer, in writing, of the Contractor's specific reasons for rejecting the request.

(h) The Government shall pay interest on the amount found due and unpaid from (1) the date the Contracting Officer receives the claim (certified, if required); or (2) the date that payment otherwise would be due, if that date is later, until the date of payment. With regard to claims having defective certifications, as defined in (FAR) 48 CFR 33.201, interest shall be paid from the date that the Contracting Officer initially receives the claim. Simple interest on claims shall be paid at the rate, fixed by the Secretary of the Treasury as provided in the Act, which is applicable to the period during which the Contracting Officer receives the claim and then at the rate applicable for each 6-month period as fixed by the Treasury Secretary during the pendency of the claim.

(i) The Contractor shall proceed diligently with performance of this contract, pending final resolution of any request for relief, claim, appeal, or action arising under the contract, and comply with any decision of the Contracting Officer.

(End of clause)

52.233-3 PROTEST AFTER AWARD (AUG. 1996)

(a) Upon receipt of a notice of protest (as defined in FAR 33.101) or a determination that a protest is likely (see FAR 33.102(d)), the Contracting Officer may, by written order to the Contractor, direct the Contractor to stop performance of the work called for by this contract. The order shall be specifically identified as a stop-work order issued under this clause. Upon receipt of the order, the Contractor shall immediately comply with its terms and take all reasonable steps to minimize the incurrence of costs allocable to the work covered by the order during the period of work stoppage. Upon receipt of the final decision in the protest, the Contracting Officer shall either--

(1) Cancel the stop-work order; or

(2) Terminate the work covered by the order as provided in the Default, or the Termination for Convenience of the Government, clause of this contract.

(b) If a stop-work order issued under this clause is canceled either before or after a final decision in the protest, the Contractor shall resume work. The Contracting Officer shall make an equitable adjustment in the delivery schedule or contract price, or both, and the contract shall be modified, in writing, accordingly, if--

(1) The stop-work order results in an increase in the time required for, or in the Contractor's cost properly allocable to, the performance of any part of this contract; and

(2) The Contractor asserts its right to an adjustment within 30 days after the end of the period of work stoppage; provided, that if the Contracting Officer decides the facts justify the action, the Contracting Officer may receive and act upon a proposal at any time before final payment under this contract.

(c) If a stop-work order is not canceled and the work covered by the order is terminated for the convenience of the Government, the Contracting Officer shall allow reasonable costs resulting from the stop-work order in arriving at the termination settlement.

(d) If a stop-work order is not canceled and the work covered by the order is terminated for default, the Contracting Officer shall allow, by equitable adjustment or otherwise, reasonable costs resulting from the stop-work order.

(e) The Government's rights to terminate this contract at any time are not affected by action taken under this clause.

(f) If, as the result of the Contractor's intentional or negligent misstatement, misrepresentation, or miscertification, a

protest related to this contract is sustained, and the Government pays costs, as provided in FAR 33.102(b)(2) or 33.104(h)(1), the Government may require the Contractor to reimburse the Government the amount of such costs. In addition to any other remedy available, and pursuant to the requirements of Subpart 32.6, the Government may collect this debt by offsetting the amount against any payment due the Contractor under any contract between the Contractor and the Government.

(End of clause)

52.236-2 DIFFERING SITE CONDITIONS (APR 1984)

As prescribed in 36.502, insert the following clause in solicitations and contracts when a fixed-price construction contract or a fixed-price dismantling, demolition, or removal of improvements contract is contemplated and the contract amount is expected to exceed the small purchase limitation. The Contracting Officer may insert the clause in solicitations and contracts when a fixed-price construction or a fixed-price contract for dismantling, demolition, or removal of improvements is contemplated and the contract amount is expected to be within the small purchase limitation.

(a) The Contractor shall promptly, and before the conditions are disturbed, give a written notice to the Contracting Officer of

(1) subsurface or latent physical conditions at the site which differ materially from those indicated in this contract, or

(2) unknown physical conditions at the site, of an unusual nature, which differ materially from those ordinarily encountered and generally recognized as inhering in work of the character provided for in the contract.

(b) The Contracting Officer shall investigate the site conditions promptly after receiving the notice. If the conditions do materially so differ and cause an increase or decrease in the Contractor's cost of, or the time required for, performing any part of the work under this contract, whether or not changed as a result of the conditions, an equitable adjustment shall be made under this clause and the contract modified in writing accordingly.

(c) No request by the Contractor for an equitable adjustment to the contract under this clause shall be allowed, unless the Contractor has given the written notice required; provided, that the time prescribed in (a) above for giving written notice may be extended by the Contracting Officer.

(d) No request by the Contractor for an equitable adjustment to the contract for differing site conditions shall be allowed if made after final payment under this contract.

(End of clause)

52.236-3 SITE INVESTIGATION AND CONDITIONS AFFECTING THE WORK (APR 1984)

(a) The Contractor acknowledges that it has taken steps reasonably necessary to ascertain the nature and location of the work, and that it has investigated and satisfied itself as to the general and local conditions which can affect the work or its cost, including but not limited to

(1) conditions bearing upon transportation, disposal, handling, and storage of materials;

(2) the availability of labor, water, electric power, and roads;

(3) uncertainties of weather, river stages, tides, or similar physical conditions at the site;

(4) the conformation and conditions of the ground; and (5) the character of equipment and facilities needed preliminary to and during work performance. The Contractor also acknowledges that it has satisfied itself as to the character, quality, and quantity of surface and subsurface materials or obstacles to be encountered insofar as this information is reasonably ascertainable from an inspection of the site, including all exploratory work done by the Government, as well as from the drawings and specifications made a part of this contract. Any failure of the Contractor to take the actions described and acknowledged in this paragraph will not relieve the Contractor from responsibility for estimating properly the difficulty and cost of successfully performing the work, or for proceeding to successfully perform the work without additional expense to the Government.

(b) The Government assumes no responsibility for any conclusions or interpretations made by the Contractor based on the information made available by the Government. Nor does the Government assume responsibility for any understanding reached or representation made concerning conditions which can affect the work by any of its officers or agents before the execution of this contract, unless that understanding or representation is expressly stated in this contract.

(End of clause)

52.236-5 MATERIAL AND WORKMANSHIP (APR 1984)

(a) All equipment, material, and articles incorporated into the work covered by this contract shall be new and of the most suitable grade for the purpose intended, unless otherwise specifically provided in this contract. References in the specifications to equipment, material, articles, or patented processes by trade name, make, or catalog number, shall be regarded as establishing a standard of quality and shall not be construed as limiting competition. The Contractor may, at its option, use any equipment, material, article, or process that, in the judgment of the Contracting Officer, is equal to that named in the specifications, unless otherwise specifically provided in this contract.

(b) The Contractor shall obtain the Contracting Officer's approval of the machinery and mechanical and other equipment to be incorporated into the work. When requesting approval, the Contractor shall furnish to the Contracting Officer the name of the manufacturer, the model number, and other information concerning the performance, capacity, nature, and rating of the machinery and mechanical and other equipment. When required by this contract or by the Contracting Officer, the Contractor shall also obtain the Contracting Officer's approval of the material or articles which the Contractor contemplates incorporating into the work. When requesting approval, the Contractor shall provide full information concerning the material or articles. When directed to do so, the Contractor shall submit samples for approval at the Contractor's expense, with all shipping charges prepaid. Machinery, equipment, material, and articles that do not have the required approval shall be installed or used at the risk of subsequent rejection.

(c) All work under this contract shall be performed in a skillful and workmanlike manner. The Contracting Officer may require, in writing, that the Contractor remove from the work any employee the Contracting Officer deems incompetent, careless, or otherwise objectionable.

(End of clause)

52.236-6 SUPERINTENDENCE BY THE CONTRACTOR (APR 1984)

At all times during performance of this contract and until the work is completed and accepted, the Contractor shall directly superintend the work or assign and have on the worksite a competent superintendent who is satisfactory to

the Contracting Officer and has authority to act for the Contractor.

(End of clause)

52.236-7 PERMITS AND RESPONSIBILITIES (NOV 1991)

The Contractor shall, without additional expense to the Government, be responsible for obtaining any necessary licenses and permits, and for complying with any Federal, State, and municipal laws, codes, and regulations applicable to the performance of the work. The Contractor shall also be responsible for all damages to persons or property that occur as a result of the Contractor's fault or negligence. The Contractor shall also be responsible for all materials delivered and work performed until completion and acceptance of the entire work, except for any completed unit of work which may have been accepted under the contract.

(End of clause)

52.236-8 OTHER CONTRACTS (APR 1984)

The Government may undertake or award other contracts for additional work at or near the site of the work under this contract. The Contractor shall fully cooperate with the other contractors and with Government employees and shall carefully adapt scheduling and performing the work under this contract to accommodate the additional work, heeding any direction that may be provided by the Contracting Officer. The Contractor shall not commit or permit any act that will interfere with the performance of work by any other contractor or by Government employees.

(End of clause)

52.236-9 PROTECTION OF EXISTING VEGETATION, STRUCTURES, EQUIPMENT, UTILITIES, AND IMPROVEMENTS (APR 1984)

(a) The Contractor shall preserve and protect all structures, equipment, and vegetation (such as trees, shrubs, and grass) on or adjacent to the work site, which are not to be removed and which do not unreasonably interfere with the work required under this contract. The Contractor shall only remove trees when specifically authorized to do so, and shall avoid damaging vegetation that will remain in place. If any limbs or branches of trees are broken during contract performance, or by the careless operation of equipment, or by workmen, the Contractor shall trim those limbs or branches with a clean cut and paint the cut with a tree-pruning compound as directed by the Contracting Officer.

(b) The Contractor shall protect from damage all existing improvements and utilities

(1) at or near the work site, and

(2) on adjacent property of a third party, the locations of which are made known to or should be known by the Contractor. The Contractor shall repair any damage to those facilities, including those that are the property of a third party, resulting from failure to comply with the requirements of this contract or failure to exercise reasonable care in performing the work. If the Contractor fails or refuses to repair the damage promptly, the Contracting Officer may have the necessary work performed and charge the cost to the Contractor.

(End of clause)

52.236-10 OPERATIONS AND STORAGE AREAS (APR 1984)

(a) The Contractor shall confine all operations (including storage of materials) on Government premises to areas authorized or approved by the Contracting Officer. The Contractor shall hold and save the Government, its officers and agents, free and harmless from liability of any nature occasioned by the Contractor's performance.

(b) Temporary buildings (e.g., storage sheds, shops, offices) and utilities may be erected by the Contractor only with the approval of the Contracting Officer and shall be built with labor and materials furnished by the Contractor without expense to the Government. The temporary buildings and utilities shall remain the property of the Contractor and shall be removed by the Contractor at its expense upon completion of the work. With the written consent of the Contracting Officer, the buildings and utilities may be abandoned and need not be removed.

(c) The Contractor shall, under regulations prescribed by the Contracting Officer, use only established roadways, or use temporary roadways constructed by the Contractor when and as authorized by the Contracting Officer. When materials are transported in prosecuting the work, vehicles shall not be loaded beyond the loading capacity recommended by the manufacturer of the vehicle or prescribed by any Federal, State, or local law or regulation. When it is necessary to cross curbs or sidewalks, the Contractor shall protect them from damage. The Contractor shall repair or pay for the repair of any damaged curbs, sidewalks, or roads.

(End of clause)

52.236-11 USE AND POSSESSION PRIOR TO COMPLETION (APR 1984)

(a) The Government shall have the right to take possession of or use any completed or partially completed part of the work. Before taking possession of or using any work, the Contracting Officer shall furnish the Contractor a list of items of work remaining to be performed or corrected on those portions of the work that the Government intends to take possession of or use. However, failure of the Contracting Officer to list any item of work shall not relieve the Contractor of responsibility for complying with the terms of the contract. The Government's possession or use shall not be deemed an acceptance of any work under the contract.

(b) While the Government has such possession or use, the Contractor shall be relieved of the responsibility for the loss of or damage to the work resulting from the Government's possession or use, notwithstanding the terms of the clause in this contract entitled "Permits and Responsibilities." If prior possession or use by the Government delays the progress of the work or causes additional expense to the Contractor, an equitable adjustment shall be made in the contract price or the time of completion, and the contract shall be modified in writing accordingly.

(End of clause)

52.236-12 CLEANING UP (APR 1984)

The Contractor shall at all times keep the work area, including storage areas, free from accumulations of waste materials. Before completing the work, the Contractor shall remove from the work and premises any rubbish, tools, scaffolding, equipment, and materials that are not the property of the Government. Upon completing the work, the Contractor shall leave the work area in a clean, neat, and orderly condition satisfactory to the Contracting Officer.

(End of clause)

52.236-13 ACCIDENT PREVENTION (NOV 1991) – ALTERNATE I (NOV 1991)

(a) The Contractor shall provide and maintain work environments and procedures which will

(1) safeguard the public and Government personnel, property, materials, supplies, and equipment exposed to Contractor operations and activities;

(2) avoid interruptions of Government operations and delays in project completion dates; and

(3) control costs in the performance of this contract.

(b) For these purposes on contracts for construction or dismantling, demolition, or removal of improvements, the Contractor shall-

(1) Provide appropriate safety barricades, signs, and signal lights;

(2) Comply with the standards issued by the Secretary of Labor at 29 CFR Part 1926 and 29 CFR Part 1910; and

(3) Ensure that any additional measures the Contracting Officer determines to be reasonably necessary for the purposes are taken.

(c) If this contract is for construction or dismantling, demolition or removal of improvements with any Department of Defense agency or component, the Contractor shall comply with all pertinent provisions of the latest version of U.S. Army Corps of Engineers Safety and Health Requirements Manual, EM 385-1-1, in effect on the date of the solicitation.

(d) Whenever the Contracting Officer becomes aware of any noncompliance with these requirements or any condition which poses a serious or imminent danger to the health or safety of the public or Government personnel, the Contracting Officer shall notify the Contractor orally, with written confirmation, and request immediate initiation of corrective action. This notice, when delivered to the Contractor or the Contractor's representative at the work site, shall be deemed sufficient notice of the noncompliance and that corrective action is required. After receiving the notice, the Contractor shall immediately take corrective action. If the Contractor fails or refuses to promptly take corrective action, the Contracting Officer may issue an order stopping all or part of the work until satisfactory corrective action has been taken. The Contractor shall not be entitled to any equitable adjustment of the contract price or extension of the performance schedule on any stop work order issued under this clause.

(e) The Contractor shall insert this clause, including this paragraph (e), with appropriate changes in the designation of the parties, in subcontracts.

(f) Before commencing the work, the Contractor shall-

(1) Submit a written proposed plan for implementing this clause. The plan shall include an analysis of the significant hazards to life, limb, and property inherent in contract work performance and a plan for controlling these hazards; and

(2) Meet with representatives of the Contracting Officer to discuss and develop a mutual understanding relative to administration of the overall safety program.

(End of clause)

52.236-15 SCHEDULES FOR CONSTRUCTION CONTRACTS (APR 1984)

(a) The Contractor shall, within five days after the work commences on the contract or another period of time determined by the Contracting Officer, prepare and submit to the Contracting Officer for approval three copies of a practicable schedule showing the order in which the Contractor proposes to perform the work, and the dates on which the Contractor contemplates starting and completing the several salient features of the work (including acquiring materials, plant, and equipment). The schedule shall be in the form of a progress chart of suitable scale to indicate appropriately the percentage of work scheduled for completion by any given date during the period. If the Contractor fails to submit a schedule within the time prescribed, the Contracting Officer may withhold approval of progress payments until the Contractor submits the required schedule.

(b) The Contractor shall enter the actual progress on the chart as directed by the Contracting Officer, and upon doing so shall immediately deliver three copies of the annotated schedule to the Contracting Officer. If, in the opinion of the Contracting Officer, the Contractor falls behind the approved schedule, the Contractor shall take steps necessary to improve its progress, including those that may be required by the Contracting Officer, without additional cost to the Government. In this circumstance, the Contracting Officer may require the Contractor to increase the number of shifts, overtime operations, days of work, and/or the amount of construction plant, and to submit for approval any supplementary schedule or schedules in chart form as the Contracting Officer deems necessary to demonstrate how the approved rate of progress will be regained.

(c) Failure of the Contractor to comply with the requirements of the Contracting Officer under this clause shall be grounds for a determination by the Contracting Officer that the Contractor is not prosecuting the work with sufficient diligence to ensure completion within the time specified in the contract. Upon making this determination, the Contracting Officer may terminate the Contractor's right to proceed with the work, or any separable part of it, in accordance with the default terms of this contract.

(End of clause)

52.236-17 LAYOUT OF WORK (APR 1984)

The Contractor shall lay out its work from Government established base lines and bench marks indicated on the drawings, and shall be responsible for all measurements in connection with the layout. The Contractor shall furnish, at its own expense, all stakes, templates, platforms, equipment, tools, materials, and labor required to lay out any part of the work. The Contractor shall be responsible for executing the work to the lines and grades that may be established or indicated by the Contracting Officer. The Contractor shall also be responsible for maintaining and preserving all stakes and other marks established by the Contracting Officer until authorized to remove them. If such marks are destroyed by the Contractor or through its negligence before their removal is authorized, the Contracting Officer may replace them and deduct the expense of the replacement from any amounts due or to become due to the Contractor.

(End of clause)

52.236-21 SPECIFICATIONS AND DRAWINGS FOR CONSTRUCTION (FEB 1997)

(a) The Contractor shall keep on the work site a copy of the drawings and specifications and shall at all times give the Contracting Officer access thereto. Anything mentioned in the specifications and not shown on the drawings, or shown on the drawings and not mentioned in the specifications, shall be of like effect as if shown or mentioned in both. In case of difference between drawings and specifications, the specifications shall govern. In case of discrepancy in the figures, in the drawings, or in the specifications, the matter shall be promptly submitted to the

Contracting Officer, who shall promptly make a determination in writing. Any adjustment by the Contractor without such a determination shall be at its own risk and expense. The Contracting Officer shall furnish from time to time such detailed drawings and other information as considered necessary, unless otherwise provided.

(b) Wherever in the specifications or upon the drawings the words "directed", "required", "ordered", "designated", "prescribed", or words of like import are used, it shall be understood that the "direction", "requirement", "order", "designation", or "prescription", of the Contracting Officer is intended and similarly the words "approved", "acceptable", "satisfactory", or words of like import shall mean "approved by," or "acceptable to", or "satisfactory to" the Contracting Officer, unless otherwise expressly stated.

(c) Where "as shown," as indicated", "as detailed", or words of similar import are used, it shall be understood that the reference is made to the drawings accompanying this contract unless stated otherwise. The word "provided" as used herein shall be understood to mean "provide complete in place," that is "furnished and installed".

(d) Shop drawings means drawings, submitted to the Government by the Contractor, subcontractor, or any lower tier subcontractor pursuant to a construction contract, showing in detail (1) the proposed fabrication and assembly of structural elements, and (2) the installation (i.e., fit, and attachment details) of materials or equipment. It includes drawings, diagrams, layouts, schematics, descriptive literature, illustrations, schedules, performance and test data, and similar materials furnished by the contractor to explain in detail specific portions of the work required by the contract. The Government may duplicate, use, and disclose in any manner and for any purpose shop drawings delivered under this contract.

(e) If this contract requires shop drawings, the Contractor shall coordinate all such drawings, and review them for accuracy, completeness, and compliance with contract requirements and shall indicate its approval thereon as evidence of such coordination and review. Shop drawings submitted to the Contracting Officer without evidence of the Contractor's approval may be returned for resubmission. The Contracting Officer will indicate an approval or disapproval of the shop drawings and if not approved as submitted shall indicate the Government's reasons therefor. Any work done before such approval shall be at the Contractor's risk. Approval by the Contracting Officer shall not relieve the Contractor from responsibility for any errors or omissions in such drawings, nor from responsibility for complying with the requirements of this contract, except with respect to variations described and approved in accordance with (f) below.

(f) If shop drawings show variations from the contract requirements, the Contractor shall describe such variations in writing, separate from the drawings, at the time of submission. If the Contracting Officer approves any such variation, the Contracting Officer shall issue an appropriate contract modification, except that, if the variation is minor or does not involve a change in price or in time of performance, a modification need not be issued.

(g) The Contractor shall submit to the Contracting Officer for approval four copies (unless otherwise indicated) of all shop drawings as called for under the various headings of these specifications. Three sets (unless otherwise indicated) of all shop drawings, will be retained by the Contracting Officer and one set will be returned to the Contractor.

(End of clause)

52.236-22 DESIGN WITHIN FUNDING LIMITATIONS (APR 1984)

(a) The Contractor shall accomplish the design services required under this contract so as to permit the award of a contract, using standard Federal Acquisition Regulation procedures for the construction of the facilities designed at a price that does not exceed the estimated construction contract price as set forth in paragraph (c) below. When bids or proposals for the construction contract are received that exceed the estimated price, the contractor shall perform such redesign and other services as are necessary to permit contract award within the funding limitation. These

additional services shall be performed at no increase in the price of this contract. However, the Contractor shall not be required to perform such additional services at no cost to the Government if the unfavorable bids or proposals are the result of conditions beyond its reasonable control.

(b) The Contractor will promptly advise the Contracting Officer if it finds that the project being designed will exceed or is likely to exceed the funding limitations and it is unable to design a usable facility within these limitations. Upon receipt of such information, the Contracting Officer will review the Contractor's revised estimate of construction cost. The Government may, if it determines that the estimated construction contract price set forth in this contract is so low that award of a construction contract not in excess of such estimate is improbable, authorize a change in scope or materials as required to reduce the estimated construction cost to an amount within the estimated construction contract price set forth in paragraph (c) below, or the Government may adjust such estimated construction contract price. When bids or proposals are not solicited or are unreasonably delayed, the Government shall prepare an estimate of constructing the design submitted and such estimate shall be used in lieu of bids or proposals to determine compliance with the funding limitation.

(c) The estimated construction contract price for the project described in this contract is $

(End of clause)

52.236-24 WORK OVERSIGHT IN ARCHITECT-ENGINEER CONTRACTS (APR 1984)

The extent and character of the work to be done by the Contractor shall be subject to the general oversight, supervision, direction, control, and approval of the Contracting Officer.

(End of clause)

52.236-25 REQUIREMENTS FOR REGISTRATION OF DESIGNERS (APR 1984)

The design of architectural, structural, mechanical, electrical, civil, or other engineering features of the work shall be accomplished or reviewed and approved by architects or engineers registered to practice in the particular professional field involved in a State or possession of the United States, in Puerto Rico, or in the District of Columbia.

(End of clause)

52.236-26 PRECONSTRUCTION CONFERENCE (FEB 1995)

If the Contracting Officer decides to conduct a preconstruction conference, the successful offeror will be notified and will be required to attend. The Contracting Officer's notification will include specific details regarding the date, time, and location of the conference, any need for attendance by subcontractors, and information regarding the items to be discussed.

(End of clause)

52.239-4001 Year 2000 Compliance

The contractor shall ensure products provided under this contract, to include hardware, software, firmware, and middleware, whether acting alone or combined as a system, are Year 2000 compliant as defined as follows: Year 2000 compliant means with respect to information technology, that the information technology accurately processes date/time data (including, but not limited to, calculating, comparing, and sequencing) from, into, and between the twentieth and twenty-first centuries, and the years 1999 and 2000 and leap year calculations, to the extent that other information, used in combination with the information technology being acquired, properly exchanges date/time data with it.

52.239-4005 Year 2000 Compliance - Construction Contracts

a. In accordance with FAR 39.106, the contractor shall ensure that with respect to any design, construction, goods, or services under this contract as well as any subsequent task/delivery orders issued under this contract (if applicable), all information technology contained therein shall be Year 2000 compliant. Specifically:

The contractor shall:

(1) Perform, maintain, and provide an inventory of all major components to include structures, equipment, items, parts, and furnishings under this contract and each task/delivery order which may be affected by the Y2K compliance requirement.

(2) Indicate whether each component is currently Year 2000 compliant or requires an upgrade for compliance prior to government acceptance.

(End of Clause)

52.242-13 BANKRUPTCY (JUL 1995)

In the event the Contractor enters into proceedings relating to bankruptcy, whether voluntary or involuntary, the Contractor agrees to furnish, by certified mail or electronic commerce method authorized by the contract, written notification of the bankruptcy to the Contracting Officer responsible for administering the contract. This notification shall be furnished within five days of the initiation of the proceedings relating to bankruptcy filing. This notification shall include the date on which the bankruptcy petition was filed, the identity of the court in which the bankruptcy petition was filed, and a listing of Government contract numbers and contracting offices for all Government contracts against which final payment has not been made. This obligation remains in effect until final payment under this contract.

(End of clause)

52.242-14 SUSPENSION OF WORK (APR 1984)

(a) The Contracting Officer may order the Contractor, in writing, to suspend, delay, or interrupt all or any part of the

work of this contract for the period of time that the Contracting Officer determines appropriate for the convenience of the Government.

(b) If the performance of all or any part of the work is, for an unreasonable period of time, suspended, delayed, or interrupted (1) by an act of the Contracting Officer in the administration of this contract, or (2) by the Contracting Officer's failure to act within the time specified in this contract (or within a reasonable time if not specified), an adjustment shall be made for any increase in the cost of performance of this contract (excluding profit) necessarily caused by the unreasonable suspension, delay, or interruption, and the contract modified in writing accordingly. However, no adjustment shall be made under this clause for any suspension, delay, or interruption to the extent that performance would have been so suspended, delayed, or interrupted by any other cause, including the fault or negligence of the Contractor, or for which an equitable adjustment is provided for or excluded under any other term or condition of this contract. (c) A claim under this clause shall not be allowed (1) for any costs incurred more than 20 days before the Contractor shall have notified the Contracting Officer in writing of the act or failure to act involved (but this requirement shall not apply as to a claim resulting from a suspension order), and (2) unless the claim, in an amount stated, is asserted in writing as soon as practicable after the termination of the suspension, delay, or interruption, but not later than the date of final payment under the contract.

(End of clause)

52.243-1 CHANGES--FIXED-PRICE (AUG 1987) - ALTERNATE III (APR 1984)

(a) The Contracting Officer may at any time, by written order, and without notice to the sureties, if any, make changes within the general scope of this contract in the services to be performed.

(b) If any such change causes an increase or decrease in the cost of, or the time required for, performance of any part of the work under this contract, whether or not changed by the order, the Contracting Officer shall make an equitable adjustment in the contract price, the delivery schedule, or both, and shall modify the contract.

(c) The Contractor must assert its right to an adjustment under this clause within 30 days from the date of receipt of the written order. However, if the Contracting Officer decides that the facts justify it, the Contracting Officer may receive and act upon a proposal submitted before final payment of the contract.

(d) If the Contractor's proposal includes the cost of property made obsolete or excess by the change, the Contracting Officer shall have the right to prescribe the manner of the disposition of the property.

(e) Failure to agree to any adjustment shall be a dispute under the Disputes clause. However, nothing in this clause shall excuse the Contractor from proceeding with the contract as changed.

(f) No services for which an additional cost or fee will be charged by the Contractor shall be furnished without the prior written authorization of the Contracting Officer.

(End of clause)

52.243-4 CHANGES (AUG 1987)

(a) The Contracting Officer may, at any time, without notice to the sureties, if any, by written order designated or indicated to be a change order, make changes in the work within the general scope of the contract, including changes--

(1) In the specifications (including drawings and designs);

(2) In the method or manner of performance of the work;

(3) In the Government-furnished facilities, equipment, materials, services, or site; or

(4) Directing acceleration in the performance of the work.

(b) Any other written or oral order (which, as used in this paragraph (b), includes direction, instruction, interpretation, or determination) from the Contracting Officer that causes a change shall be treated as a change order under this clause; provided, that the Contractor gives the Contracting Officer written notice stating

(1) the date, circumstances, and source of the order and

(2) that the Contractor regards the order as a change order.

(c) Except as provided in this clause, no order, statement, or conduct of the Contracting Officer shall be treated as a change under this clause or entitle the Contractor to an equitable adjustment.

(d) If any change under this clause causes an increase or decrease in the Contractor's cost of, or the time required for, the performance of any part of the work under this contract, whether or not changed by any such order, the Contracting Officer shall make an equitable adjustment and modify the contract in writing. However, except for an adjustment based on defective specifications, no adjustment for any change under paragraph (b) of this clause shall be made for any costs incurred more than 20 days before the Contractor gives written notice as required. In the case of defective specifications for which the Government is responsible, the equitable adjustment shall include any increased cost reasonably incurred by the Contractor in attempting to comply with the defective specifications.

(e) The Contractor must assert its right to an adjustment under this clause within 30 days after

(1) receipt of a written change order under paragraph (a) of this clause or (2) the furnishing of a written notice under paragraph (b) of this clause, by submitting to the Contracting Officer a written statement describing the general nature and amount of the proposal, unless this period is extended by the Government. The statement of proposal for adjustment may be included in the notice under paragraph (b) above.

(f) No proposal by the Contractor for an equitable adjustment shall be allowed if asserted after final payment under this contract.

(End of clause)

52.244-5 COMPETITION IN SUBCONTRACTING (DEC 1996)

(a) The Contractor shall select subcontractors (including suppliers) on a competitive basis to the maximum practical extent consistent with the objectives and requirements of the contract.

(b) If the Contractor is an approved mentor under the Department of Defense Pilot Mentor-Protege Program (Pub. L. 101–510, section 831 as amended), the Contractor may award subcontracts under this contract on a noncompetitive basis to its proteges.

(End of clause)

52.244-6 SUBCONTRACTS FOR COMMERCIAL ITEMS (MAY 2002)

(a) Definitions.

"Commercial item", has the meaning contained in the clause at 52.202-1, Definitions.

"Subcontract", includes a transfer of commercial items between divisions, subsidiaries, or affiliates of the Contractor or subcontractor at any tier.

(b) To the maximum extent practicable, the Contractor shall incorporate, and require its subcontractors at all tiers to incorporate, commercial items or nondevelopmental items as components of items to be supplied under this contract.

(c) (1) The Contractor shall insert the following clauses in subcontracts for commercial items:

(i) 52.219-8, Utilization of Small Business Concerns (OCT 2000) (15 U.S.C. 637(d)(2) and (3)), in all subcontracts that offer further subcontracting opportunities. If the subcontract (except subcontracts to small business concerns) exceeds $500,000 ($1,000,000 for construction of any public facility), the subcontractor must include 52.219-8 in lower tier subcontracts that offer subcontracting opportunities.

(ii) 52.222-26, Equal Opportunity (Apr 2002) (E.O. 11246).

(iii) 52.222-35, Equal Opportunity for Special Disabled Veterans, Veterans of the Vietnam Era and Other Eligible Veterans (DEC 2001) (38 U.S.C. 4212(a)).

(iv) 52.222-36, Affirmative Action for Workers with Disabilities (JUN 1998) (29 U.S.C. 793).

(v) 52.247-64, Preference for Privately Owned U.S.-Flag Commercial Vessels (JUN 2000) (46 U.S.C. Appx 1241) (flowdown not required for subcontracts awarded beginning May 1, 1996).

(2) While not required, the Contractor may flow down to subcontracts for commercial items a minimal number of additional clauses necessary to satisfy its contractual obligations.

(d) The Contractor shall include the terms of this clause, including this paragraph (d), in subcontracts awarded under this contract.

(End of clause)

52.249-2 TERMINATION FOR CONVENIENCE OF THE GOVERNMENT (FIXED-PRICE) (SEP 1996) - ALTERNATE I (SEP 1996)

(a) The Government may terminate performance of work under this contract in whole or, from time to time, in part if the Contracting Officer determines that a termination is in the Government's interest. The Contracting Officer shall terminate by delivering to the Contractor a Notice of Termination specifying the extent of termination and the effective date.

(b) After receipt of a Notice of Termination, and except as directed by the Contracting Officer, the Contractor shall immediately proceed with the following obligations, regardless of any delay in determining or adjusting any amounts due under this clause:

(1) Stop work as specified in the notice.

(2) Place no further subcontracts or orders (referred to as subcontracts in this clause) for materials, services, or facilities, except as necessary to complete the continued portion of the contract.

(3) Terminate all subcontracts to the extent they relate to the work terminated.

(4) Assign to the Government, as directed by the Contracting Officer, all right, title, and interest of the Contractor under the subcontracts terminated, in which case the Government shall have the right to settle or to pay any termination settlement proposal arising out of those terminations.

(5) With approval or ratification to the extent required by the Contracting Officer, settle all outstanding liabilities and termination settlement proposals arising from the termination of subcontracts; the approval or ratification will be final for purposes of this clause.

(6) As directed by the Contracting Officer, transfer title and deliver to the Government (i) the fabricated or unfabricated parts, work in process, completed work, supplies, and other material produced or acquired for the work terminated, and (ii) the completed or partially completed plans, drawings, information, and other property that, if the contract had been completed, would be required to be furnished to the Government.

(7) Complete performance of the work not terminated.

(8) Take any action that may be necessary, or that the Contracting Officer may direct, for the protection and preservation of the property related to this contract that is in the possession of the Contractor and in which the Government has or may acquire an interest.

(9) Use its best efforts to sell, as directed or authorized by the Contracting Officer, any property of the types referred to in subparagraph (b)(6) of this clause; provided, however, that the Contractor (i) is not required to extend credit to any purchaser and (ii) may acquire the property under the conditions prescribed by, and at prices approved by, the Contracting Officer. The proceeds of any transfer or disposition will be applied to reduce any payments to be made by the Government under this contract, credited to the price or cost of the work, or paid in any other manner directed by the Contracting Officer.

(c) The Contractor shall submit complete termination inventory schedules no later than 120 days from the effective date of termination, unless extended in writing by the Contracting Officer upon written request of the Contractor within this 120-day period.

(d) After expiration of the plant clearance period as defined in Subpart 45.6 of the Federal Acquisition Regulation, the Contractor may submit to the Contracting Officer a list, certified as to quantity and quality, of termination inventory not previously disposed of, excluding items authorized for disposition by the Contracting Officer. The Contractor may request the Government to remove those items or enter into an agreement for their storage. Within 15 days, the Government will accept title to those items and remove them or enter into a storage agreement. The Contracting Officer may verify the list upon removal of the items, or if stored, within 45 days from submission of the list, and shall correct the list, as necessary, before final settlement.

(e) After termination, the Contractor shall submit a final termination settlement proposal to the Contracting Officer in the form and with the certification prescribed by the Contracting Officer. The Contractor shall submit the proposal promptly, but no later than 1 year from the effective date of termination, unless extended in writing by the Contracting Officer upon written request of the Contractor within this 1-year period. However, if the Contracting Officer determines that the facts justify it, a termination settlement proposal may be received and acted on after 1 year or any extension. If the Contractor fails to submit the proposal within the time allowed, the Contracting Officer may determine, on the basis of information available, the amount, if any, due the Contractor because of the termination and shall pay the amount determined.

(f) Subject to paragraph (e) of this clause, the Contractor and the Contracting Officer may agree upon the whole or any part of the amount to be paid or remaining to be paid because of the termination. The amount may include a reasonable allowance for profit on work done. However, the agreed amount, whether under this paragraph (g) or paragraph (g) of this clause, exclusive of costs shown in subparagraph (g)(3) of this clause, may not exceed the total contract price as reduced by (1) the amount of payments previously made and (2) the contract price of work not terminated. The contract shall be modified, and the Contractor paid the agreed amount. Paragraph (g) of this clause shall not limit, restrict, or affect the amount that may be agreed upon to be paid under this paragraph.

(g) If the Contractor and Contracting Officer fail to agree on the whole amount to be paid the Contractor because of the termination of work, the Contracting Officer shall pay the Contractor the amounts determined as follows, but without duplication of any amounts agreed upon under paragraph (f) of this clause:

(1) For contract work performed before the effective date of termination, the total (without duplication of any items) of--

(i) The cost of this work;

(ii) The cost of settling and paying termination settlement proposals under terminated subcontracts that are properly chargeable to the terminated portion of the contract if not included in subdivision (g)(1)(i) of this clause; and

(iii) A sum, as profit on subdivision (g)(1)(i) of this clause, determined by the Contracting Officer under 49.202 of the Federal Acquisition Regulation, in effect on the date of this contract, to be fair and reasonable; however, if it appears that the Contractor would have sustained a loss on the entire contract had it been completed, the Contracting Officer shall allow no profit under this subdivision (iii) and shall reduce the settlement to reflect the indicated rate of loss.

(2) The reasonable costs of settlement of the work terminated, including--

(i) Accounting, legal, clerical, and other expenses reasonably necessary for the preparation of termination settlement proposals and supporting data;

(ii) The termination and settlement of subcontracts (excluding the amounts of such settlements); and

(iii) Storage, transportation, and other costs incurred, reasonably necessary for the preservation, protection, or disposition of the termination inventory.

(h) Except for normal spoilage, and except to the extent that the Government expressly assumed the risk of loss, the Contracting Officer shall exclude from the amounts payable to the Contractor under paragraph (g) of this clause, the fair value, as determined by the Contracting Officer, of property that is destroyed, lost, stolen, or damaged so as to become undeliverable to the Government or to a buyer.

(i) The cost principles and procedures of Part 31 of the Federal Acquisition Regulation, in effect on the date of this contract, shall govern all costs claimed, agreed to, or determined under this clause.

(j) The Contractor shall have the right of appeal, under the Disputes clause, from any determination made by the Contracting Officer under paragraph (e), (g), or (l) of this clause, except that if the Contractor failed to submit the termination settlement proposal or request for equitable adjustment within the time provided in paragraph (e) or (l), respectively, and failed to request a time extension, there is no right of appeal.

(k) In arriving at the amount due the Contractor under this clause, there shall be deducted--

(1) All unliquidated advance or other payments to the Contractor under the terminated portion of this contract;

(2) Any claim which the Government has against the Contractor under this contract; and

(3) The agreed price for, or the proceeds of sale of, materials, supplies, or other things acquired by the Contractor or sold under the provisions of this clause and not recovered by or credited to the Government.

(l) If the termination is partial, the Contractor may file a proposal with the Contracting Officer for an equitable adjustment of the price(s) of the continued portion of the contract. The Contracting Officer shall make any equitable adjustment agreed upon. Any proposal by the Contractor for an equitable adjustment under this clause shall be requested within 90 days from the effective date of termination unless extended in writing by the Contracting Officer.

(m)(1) The Government may, under the terms and conditions it prescribes, make partial payments and payments against costs incurred by the Contractor for the terminated portion of the contract, if the Contracting Officer believes the total of these payments will not exceed the amount to which the Contractor will be entitled.

(2) If the total payments exceed the amount finally determined to be due, the Contractor shall repay the excess to the Government upon demand, together with interest computed at the rate established by the Secretary of the Treasury under 50 U.S.C. App. 1215(b)(2). Interest shall be computed for the period from the date the excess payment is received by the Contractor to the date the excess is repaid. Interest shall not be charged on any excess payment due to a reduction in the Contractor's termination settlement proposal because of retention or other disposition of termination inventory until 10 days after the date of the retention or disposition, or a later date determined by the Contracting Officer because of the circumstances.

(n) Unless otherwise provided in this contract or by statute, the Contractor shall maintain all records and documents relating to the terminated portion of this contract for 3 years after final settlement. This includes all books and other evidence bearing on the Contractor's costs and expenses under this contract. The Contractor shall make these records and documents available to the Government, at the Contractor's office, at all reasonable times, without any direct charge. If approved by the Contracting Officer, photographs, microphotographs, or other authentic reproductions may be maintained instead of original records and documents.

(End of clause)

52.249-7 TERMINATION (FIXED-PRICE ARCHITECT-ENGINEER) (APR 1984)

(a) The Government may terminate this contract in whole or, from time to time, in part, for the Government's convenience or because of the failure of the Contractor to fulfill the contract obligations. The Contracting Officer shall terminate by delivering to the Contractor a Notice of Termination specifying the nature, extent, and effective date of the termination. Upon receipt of the notice, the Contractor shall (1) immediately discontinue all services affected (unless the notice directs otherwise), and (2) deliver to the Contracting Officer all data, drawings, specifications, reports, estimates, summaries, and other information and materials accumulated in performing this contract, whether completed or in process.

(b) If the termination is for the convenience of the Government, the Contracting Officer shall make an equitable adjustment in the contract price but shall allow no anticipated profit on unperformed services.

(c) If the termination is for failure of the Contractor to fulfill the contract obligations, the Government may complete the work by contract or otherwise and the Contractor shall be liable for any additional cost incurred by the Government.

(d) If, after termination for failure to fulfill contract obligations, it is determined that the Contractor had not failed, the rights and obligations of the parties shall be the same as if the termination had been issued for the convenience of the Government.

54 The rights and remedies of the Government provided in this clause are in addition to any other rights and remedies provided by law or under this contract.

(End of clause)

52.249-10 DEFAULT (FIXED-PRICE CONSTRUCTION) (APR 1984)

(a) If the Contractor refuses or fails to prosecute the work or any separable part, with the diligence that will insure its completion within the time specified in this contract including any extension, or fails to complete the work within this time, the Government may, by written notice to the Contractor, terminate the right to proceed with the work (or the separable part of the work) that has been delayed. In this event, the Government may take over the work and complete it by contract or otherwise, and may take possession of and use any materials, appliances, and plant on the work site necessary for completing the work. The Contractor and its sureties shall be liable for any damage to the Government resulting from the Contractor's refusal or failure to complete the work within the specified time, whether or not the Contractor's right to proceed with the work is terminated. This liability includes any increased costs incurred by the Government in completing the work.

(b) The Contractor's right to proceed shall not be terminated nor the Contractor charged with damages under this clause, if--

(1) The delay in completing the work arises from unforeseeable causes beyond the control and without the fault or negligence of the Contractor. Examples of such causes include

(i) acts of God or of the public enemy,

(ii) acts of the Government in either its sovereign or contractual capacity,

(iii) acts of another Contractor in the performance of a contract with the Government,

(iv) fires,

(v) floods,

(vi) epidemics,

(vii) quarantine restrictions,

(viii) strikes,

(ix) freight embargoes,

(x) unusually severe weather, or delays of subcontractors or suppliers at any tier arising from unforeseeable causes beyond the control and without the fault or negligence of both the Contractor and the subcontractors or suppliers; and

(2) The Contractor, within 10 days from the beginning of any delay (unless extended by the Contracting Officer), notifies the Contracting Officer in writing of the causes of delay. The Contracting Officer shall ascertain the facts and the extent of delay. If, in the judgment of the Contracting Officer, the findings of fact warrant such action, the time for completing the work shall be extended. The findings of the Contracting Officer shall be final and conclusive on the parties, but subject to appeal under the Disputes clause.

(c) If, after termination of the Contractor's right to proceed, it is determined that the Contractor was not in default, or that the delay was excusable, the rights and obligations of the parties will be the same as if the termination had been issued for the convenience of the Government.

The rights and remedies of the Government in this clause are in addition to any other rights and remedies provided by law or under this contract.

(End of clause)

52.253-1 COMPUTER GENERATED FORMS (JAN 1991)

(a) Any data required to be submitted on a Standard or Optional Form prescribed by the Federal Acquisition Regulation (FAR) may be submitted on a computer generated version of the form, provided there is no change to the name, content, or sequence of the data elements on the form, and provided the form carries the Standard or Optional Form number and edition date.

(b) Unless prohibited by agency regulations, any data required to be submitted on an agency unique form prescribed by an agency supplement to the FAR may be submitted on a computer generated version of the form provided there is no change to the name, content, or sequence of the data elements on the form and provided the form carries the agency form number and edition date.

(c) If the Contractor submits a computer generated version of a form that is different than the required form, then the rights and obligations of the parties will be determined based on the content of the required form.

(End of clause)

252.201-7000 CONTRACTING OFFICER'S REPRESENTATIVE (DEC 1991)

(a) "Definition. Contracting officer's representative" means an individual designated in accordance with subsection 201.602-2 of the Defense Federal Acquisition Regulation Supplement and authorized in writing by the contracting officer to perform specific technical or administrative functions.

(b) If the Contracting Officer designates a contracting officer's representative (COR), the Contractor will receive a copy of the written designation. It will specify the extent of the COR's authority to act on behalf of the contracting officer. The COR is not authorized to make any commitments or changes that will affect price, quality, quantity, delivery, or any other term or condition of the contract.

(End of clause)

252.203-7001 PROHIBITION ON PERSONS CONVICTED OF FRAUD OR OTHER DEFENSE-CONTRACT-RELATED FELONIES (MAR 1999)

(a) Definitions. As used in this clause—

(1) “Arising out of a contract with the DoD” means any act in connection with—

(i) Attempting to obtain;

(ii) Obtaining, or

(iii) Performing a contract or first-tier subcontract of any agency, department, or component of the Department of Defense (DoD).

(2) "Conviction of fraud or any other felony" means any conviction for fraud or a felony in violation of state or Federal criminal statutes, whether entered on a verdict or plea, including a plea of *nolo contendere*, for which sentence has been imposed.

(3) "Date of conviction" means the date judgment was entered against the individual.

(b) Any individual who is convicted after September 29, 1988, of fraud or any other felony arising out of a contract with the DoD is prohibited from serving--

(1) In a management or supervisory capacity on any DoD contract or first-tier subcontract;

(2) On the board of directors of any DoD contractor or first-tier subcontractor;

(3) As a consultant, agent, or representative for any DoD contractor or first-tier subcontractor; or

(4) In any other capacity with the authority to influence, advise, or control the decisions of any DoD contractor or subcontractor with regard to any DoD contract or first-tier subcontract.

(c) Unless waived, the prohibition in paragraph (b) of this clause applies for not less than 5 years from the date of conviction.

(d) 10 U.S.C. 2408 provides that a defense contractor or first-tier subcontractor shall be subject to a criminal penalty of not more than $500,000 if convicted of knowingly—

(1) Employing a person under a prohibition specified in paragraph (b) of this clause; or

(2) Allowing such a person to serve on the board of directors of the contractor or first-tier subcontractor.

(e) In addition to the criminal penalties contained in 10 U.S.C. 2408, the Government may consider other available remedies, such as—

(1) Suspension or debarment;

(2) Cancellation of the contract at no cost to the Government; or

(3) Termination of the contract for default.

(f) The Contractor may submit written requests for waiver of the prohibition in paragraph (b) of this clause to the Contracting Officer. Requests shall clearly identify—

(1) The person involved;

(2) The nature of the conviction and resultant sentence or punishment imposed;

(3) The reasons for the requested waiver; and

(4) An explanation of why a waiver is in the interest of national security.

(g) The Contractor agrees to include the substance of this clause, appropriately modified to reflect the identity and relationship of the parties, in all first-tier subcontracts exceeding the simplified acquisition threshold in Part 2 of the Federal Acquisition Regulation, except those for commercial items or components.

(h) Pursuant to 10 U.S.C. 2408(c), defense contractors and subcontractors may obtain information as to whether a particular person has been convicted of fraud or any other felony arising out of a contract with the DoD by contacting The Office of Justice Programs, The Denial of Federal Benefits Office, U.S. Department of Justice, telephone (202) 616-3507.

(End of clause)

252.203-7002 DISPLAY OF DOD HOTLINE POSTER (DEC 1991)

(a) The Contractor shall display prominently in common work areas within business segments performing work under Department of Defense (DoD) contracts, DoD Hotline Posters prepared by the DoD Office of the Inspector General.

(b) DoD Hotline Posters may be obtained from the DoD Inspector General, ATTN: Defense Hotline, 400 Army Navy Drive, Washington, DC 22202-2884.

(c) The Contractor need not comply with paragraph (a) of this clause if it has established a mechanism, such as a hotline, by which employees may report suspected instances of improper conduct, and instructions that encourage employees to make such reports.

(End of clause)

252.204-7000 DISCLOSURE OF INFORMATION (DEC 1991)

(a) The Contractor shall not release to anyone outside the Contractor's organization any unclassified information, regardless of medium (e.g., film, tape, document), pertaining to any part of this contract or any program related to this contract, unless--

(1) The Contracting Officer has given prior written approval; or

(2) The information is otherwise in the public domain before the date of release.

(b) Requests for approval shall identify the specific information to be released, the medium to be used, and the purpose for the release. The Contractor shall submit its request to the Contracting Officer at least 45 days before the proposed date for release.

(c) The Contractor agrees to include a similar requirement in each subcontract under this contract. Subcontractors shall submit requests for authorization to release through the prime contractor to the Contracting Officer.

(End of clause)

252.204-7003 CONTROL OF GOVERNMENT PERSONNEL WORK PRODUCT (APR 1992)

The Contractor's procedures for protecting against unauthorized disclosure of information shall not require Department of Defense employees or members of the Armed Forces to relinquish control of their work products, whether classified or not, to the contractor.

(End of clause)

252.204-7004 REQUIRED CENTRAL CONTRACTOR REGISTRATION (NOV 2001)

(a) Definitions.

As used in this clause--

(1) Central Contractor Registration (CCR) database means the primary DoD repository for contractor information required for the conduct of business with DoD.

(2) Data Universal Numbering System (DUNS) number means the 9-digit number assigned by Dun and Bradstreet Information Services to identify unique business entities.

(3) Data Universal Numbering System +4 (DUNS+4) number means the DUNS number assigned by Dun and Bradstreet plus a 4-digit suffix that may be assigned by a parent (controlling) business concern. This 4-digit suffix may be assigned at the discretion of the parent business concern for such purposes as identifying subunits or affiliates of the parent business concern.

(4) Registered in the CCR database means that all mandatory information, including the DUNS number or the DUNS+4 number, if applicable, and the corresponding Commercial and Government Entity (CAGE) code, is in the CCR database; the DUNS number and the CAGE code have been validated; and all edits have been successfully completed.

(b)(1) By submission of an offer, the offeror acknowledges the requirement that a prospective awardee must be registered in the CCR database prior to award, during performance, and through final payment of any contract resulting from this solicitation, except for awards to foreign vendors for work to be performed outside the United States.

(2) The offeror shall provide its DUNS or, if applicable, its DUNS+4 number with its offer, which will be used by the Contracting Officer to verify that the offeror is registered in the CCR database.

(3) Lack of registration in the CCR database will make an offeror ineligible for award.

(4) DoD has established a goal of registering an applicant in the CCR database within 48 hours after receipt of a complete and accurate application via the Internet. However, registration of an applicant submitting an application through a method other than the Internet may take up to 30 days. Therefore, offerors that are not registered should consider applying for registration immediately upon receipt of this solicitation.

(c) The Contractor is responsible for the accuracy and completeness of the data within the CCR, and for any liability resulting from the Government's reliance on inaccurate or incomplete data. To remain registered in the CCR database after the initial registration, the Contractor is required to confirm on an annual basis that its information in the CCR database is accurate and complete.

(d) Offerors and contractors may obtain information on registration and annual confirmation requirements by calling 1-888-227-2423, or via the Internet at http://www.ccr.gov.

(End of clause)

252.205-7000 PROVISION OF INFORMATION TO COOPERATIVE AGREEMENT HOLDERS (DEC 1991)

(a) Definition.

"Cooperative agreement holder" means a State or local government; a private, nonprofit organization; a tribal organization (as defined in section 4(c) of the Indian Self-Determination and Education Assistance Act (Pub. L. 93-268; 25 U.S.C. 450 (c))); or an economic enterprise (as defined in section 3(e) of the Indian Financing Act of 1974 (Pub. L. 93-362; 25 U.S.C. 1452(e))) whether such economic enterprise is organized for profit or nonprofit purposes; which has an agreement with the Defense Logistics Agency to furnish procurement technical assistance to business entities.

(b) The Contractor shall provide cooperative agreement holders, upon their request, with a list of those appropriate employees or offices responsible for entering into subcontracts under defense contracts. The list shall include the business address, telephone number, and area of responsibility of each employee or office.

(c) The Contractor need not provide the listing to a particular cooperative agreement holder more frequently than once a year.

(End of clause)

252.209-7000 ACQUISITION FROM SUBCONTRACTORS SUBJECT TO ONSITE INSPECTION UNDER THE INTERMEDIATE-RANGE NUCLEAR FORCES (INF) TREATY (NOV 1995)

(a) The Contractor shall not deny consideration for a subcontract award under this contract to a potential subcontractor subject to on-site inspection under the INF Treaty, or a similar treaty, solely or in part because of the actual or potential presence of Soviet inspectors at the subcontractor's facility, unless the decision is approved by the Contracting Officer.

(b) The Contractor shall incorporate this clause, including this paragraph (b), in all solicitations and contracts exceeding the simplified acquisition threshold in part 13 of the Federal Acquisition Regulation, except those for commercial items.

(End of clause)

252.209-7004 SUBCONTRACTING WITH FIRMS THAT ARE OWNED OR CONTROLLED BY THE GOVERNMENT OF A TERRORIST COUNTRY (MAR 1998)

(a) Unless the Government determines that there is a compelling reason to do so, the Contractor shall not enter into any subcontract in excess of $25,000 with a firm, or subsidiary of a firm, that is identified, on the List of Parties Excluded from Federal Procurement and Nonprocurement Programs, as being ineligible for the award of Defense contracts or subcontracts because it is owned or controlled by the government of a terrorist country.

(b) A corporate officer or a designee of the Contractor shall notify the Contracting Officer, in writing, before entering into a subcontract with a party that is identified, on the List of Parties Excluded from Federal Procurement and Nonprocurement Programs, as being ineligible for the award of Defense contracts or subcontracts because it is owned or controlled by the government of a terrorist country. The notice must include the name of the proposed

subcontractor notwithstanding its inclusion on the List of Parties Excluded From Federal Procurement and Nonprocurement Programs.

(End of clause)

252.215-7000 PRICING ADJUSTMENTS (DEC 1991)

The term "pricing adjustment," as used in paragraph (a) of the clauses entitled "Price Reduction for Defective Cost or Pricing Data - Modifications," "Subcontractor Cost or Pricing Data," and "Subcontractor Cost or Pricing Data - Modifications," means the aggregate increases and/or decreases in cost plus applicable profits.

(End of clause)

252.219-7003 SMALL, SMALL DISADVANTAGED AND WOMEN-OWNED SMALL BUSINESS SUBCONTRACTING PLAN (DOD CONTRACTS) (APR. 1996)

This clause supplements the Federal Acquisition Regulation 52.219-9, Small, Small Disadvantaged and Women-Owned Small Business Subcontracting Plan, clause of this contract.

(a) *Definitions. Historically black colleges and universities,* as used in this clause, means institutions determined by the Secretary of Education to meet the requirements of 34 CFR 608.2. The term also means any nonprofit research institution that was an integral part of such a college or university before November 14, 1986.

Minority institutions, as used in this clause, means institutions meeting the requirements of section 1046(3) of the Higher Education Act of 1965 (20 U.S.C. 1135d-5(3)). The term also includes Hispanic-serving institutions as defined in section 316(b)(1) of such Act (20 U.S.C. 1059c(b)(1)).

(b) Except for company or division-wide commercial items subcontracting plans, the term *small disadvantaged business,* when used in the FAR 52.219-9 clause, includes historically black colleges and universities and minority institutions, in addition to small disadvantaged business concerns.

(c) Work under the contract or its subcontracts shall be credited toward meeting the small disadvantaged business concern goal required by paragraph (d) of the FAR 52.219-9 clause when:

(1) It is performed on Indian lands or in joint venture with an Indian tribe or a tribally-owned corporation, and

(2) It meets the requirements of 10 U.S.C. 2323a.

(d) Subcontracts awarded to workshops approved by the Committee for Purchase from People Who are Blind or Severely Disabled (41 U.S.C. 46-48), may be counted toward the Contractor's small business subcontracting goal.

(e) A mentor firm, under the Pilot Mentor-Protege Program established under Section 831 of Pub. L. 101-510, as amended, may count toward its small disadvantaged business goal, subcontracts awarded--

(f) The master plan approval referred to in paragraph (f) of the FAR 52.219-9 clause is approval by the Contractor's cognizant contract administration activity.

(g) In those subcontracting plans which specifically identify small, small disadvantaged, and women-owned small businesses, the Contractor shall notify the Administrative Contracting Officer of any substitutions of firms that are

not small, small disadvantaged, or women-owned small businesses for the firms listed in the subcontracting plan. Notifications shall be in writing and shall occur within a reasonable period of time after award of the subcontract. Contractor-specified formats shall be acceptable.

(End of clause)

252.223-7001 HAZARD WARNING LABELS (DEC 1991)

(a) "Hazardous material," as used in this clause, is defined in the Hazardous Material Identification and Material Safety Data clause of this contract.

(b) The Contractor shall label the item package (unit container) of any hazardous material to be delivered under this contract in accordance with the Hazard Communication Standard (29 CFR 1910.1200 et seq). The Standard requires that the hazard warning label conform to the requirements of the standard unless the material is otherwise subject to the labeling requirements of one of the following statutes:

(1) Federal Insecticide, Fungicide and Rodenticide Act;

(2) Federal Food, Drug and Cosmetics Act;

(3) Consumer Product Safety Act;

(4) Federal Hazardous Substances Act; or

(5) Federal Alcohol Administration Act.

(c) The Offeror shall list which hazardous material listed in the Hazardous Material Identification and Material Safety Data clause of this contract will be labeled in accordance with one of the Acts in paragraphs (b)(1) through (5) of this clause instead of the Hazard Communication Standard. Any hazardous material not listed will be interpreted to mean that a label is required in accordance with the Hazard Communication Standard.

MATERIAL (If None, Insert "None.")	ACT
_____	_____
_____	_____

(d) The apparently successful Offeror agrees to submit, before award, a copy of the hazard warning label for all hazardous materials not listed in paragraph (c) of this clause. The Offeror shall submit the label with the Material Safety Data Sheet being furnished under the Hazardous Material Identification and Material Safety Data clause of this contract.

(e) The Contractor shall also comply with MIL-STD-129, Marking for Shipment and Storage (including revisions adopted during the term of this contract).

(End of clause)

252.223-7006 PROHIBITION ON STORAGE AND DISPOSAL OF TOXIC AND HAZARDOUS MATERIALS (APR 1993)

(a) "Definitions".

As used in this clause --

(1) "Storage" means a non-transitory, semi-permanent or permanent holding, placement, or leaving of material. It does not include a temporary accumulation of a limited quantity of a material used in or a waste generated or resulting from authorized activities, such as servicing, maintenance, or repair of Department of Defense (DoD) items, equipment, or facilities.

(2) "Toxic or hazardous materials" means:

(i) Materials referred to in section 101(14) of the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) of 1980 (42 U.S.C. 9601(14)) and materials designated under section 102 of CERCLA (42 U.S.C. 9602) (40 CFR part 302);

(ii) Materials that are of an explosive, flammable, or pyrotechnic nature; or

(iii) Materials otherwise identified by the Secretary of Defense as specified in DoD regulations.

(b) In accordance with 10 U.S.C. 2692, the Contractor is prohibited from storing or disposing of non-DoD-owned toxic or hazardous materials on a DoD installation, except to the extent authorized by a statutory exception to 10 U.S.C. 2692 or as authorized by the Secretary of Defense or his designee.

(End of clause)

252.225-7012 PREFERENCE FOR CERTAIN DOMESTIC COMMODITIES (APR 2002)

(a) Definitions. As used in this clause--

(1) Component means any item supplied to the Government as part of an end product or of another component.

(2) End product means supplies delivered under a line item of this contract.

(b) The Contractor shall deliver under this contract only such of the following items, either as end products or components, that have been grown, reprocessed, reused, or produced in the United States, its possessions, or Puerto Rico:

(1) Food.

(2) Clothing.

(3) Tents, tarpaulins, or covers.

(4) Cotton and other natural fiber products.

(5) Woven silk or woven silk blends.

(6) Spun silk yarn for cartridge cloth.

(7) Synthetic fabric, and coated synthetic fabric, including all textile fibers and yarns that are for use in such fabrics.

(8) Canvas products.

(9) Wool (whether in the form of fiber or yarn or contained in fabrics, materials, or manufactured articles).

(10) Any item of individual equipment (Federal Supply Class 8465) manufactured from or containing fibers, yarns, fabrics, or materials listed in this paragraph (b).

(c) This clause does not apply--

(1) To items listed in section 25.104(a) of the Federal Acquisition Regulation (FAR), or other items for which the Government has determined that a satisfactory quality and sufficient quantity cannot be acquired as and when needed at U.S. market prices;

(2) To end products incidentally incorporating cotton, other natural fibers, or wool, for which the estimated value of the cotton, other natural fibers, or wool--

(i) Is not more than 10 percent of the total price of the end product; and (ii) Does not exceed the simplified acquisition threshold in FAR part 2;

(3) To foods that have been manufactured or processed in the United States, its possessions, or Puerto Rico, regardless of where the foods (and any component if applicable) were grown or produced;

(4) To chemical warfare protective clothing produced in the countries listed in subsection 225.872-1 of the Defense FAR Supplement; or

(5) To fibers and yarns that are for use in synthetic fabric or coated synthetic fabric (but does apply to the synthetic or coated synthetic fabric itself), if--

(i) The fabric is to be used as a component of an end product that is not a textile product. Examples of textile products, made in whole or in part of fabric, include--

(A) Draperies, floor coverings, furnishings, and bedding (Federal Supply Group 72, Household and Commercial Furnishings and Appliances);

(B) Items made in whole or in part of fabric in Federal Supply Group 83, Textile/leather/furs/apparel/findings/ tents/flags, or Federal Supply Group 84, Clothing, Individual Equipment and Insignia;

(C) Upholstered seats (whether for household, office, or other use); and

(D) Parachutes (Federal Supply Class 1670); or

(ii) The fibers and yarns are para-aramid fibers and yarns manufactured in the Netherlands.

(End of clause)

252.225-7031 SECONDARY ARAB BOYCOTT OF ISRAEL (JUN 1992)

(a) Definitions. As used in this clause--

(1) "Foreign person" means any person other than a United States person as defined in Section 16(2) of the Export Administration Act of 1979 (50 U.S.C. App. Sec 2415).

(2) "United States person" is defined in Section 16(2) of the Export Administration Act of 1979 and means any United States resident or national (other than an individual resident outside the United States and employed by other than a

United States person), any domestic concern (including any permanent domestic establishment of any foreign concern), and any foreign subsidiary or affiliate (including any permanent foreign establishment) of any domestic concern which is controlled in fact by such domestic concerns, as determined under regulations of the President.

(b) Certification. By submitting this offer, the Offeror, if a foreign person, company or entity, certifies that it--

(1) Does not comply with the Secondary Arab Boycott of Israel; and

(2) Is not taking or knowingly agreeing to take any action, with respect to the Secondary Boycott of Israel by Arab countries, which 50 U.S.C. App. Sec 2407(a) prohibits a United States person from taking.

(End of clause)

252.226-7001 UTILIZATION OF INDIAN ORGANIZATIONS AND INDIAN-OWNED ECONOMIC ENTERPRISES-DOD CONTRACTS (SEP 2001)

(a) Definitions. As used in this clause--

“Indian” means any person who is a member of any Indian tribe, band, group, pueblo, or community that is recognized by the Federal Government as eligible for services from the Bureau of Indian Affairs (BIA) in accordance with 25 U.S.C. 1452(c) and any “Native” as defined in the Alaska Native Claims Settlement Act (43 U.S.C. 1601).

“Indian organization” means the governing body of any Indian tribe or entity established or recognized by the governing body of an Indian tribe for the purposes of 25 U.S.C. Chapter 17.

“Indian-owned economic enterprise” means any Indian-owned (as determined by the Secretary of the Interior) commercial, industrial, or business activity established or organized for the purpose of profit, provided that Indian ownership constitutes not less than 51 percent of the enterprise.

“Indian tribe” means any Indian tribe, band, group, pueblo, or community, including native villages and native groups (including corporations organized by Kenai, Juneau, Sitka, and Kodiak) as defined in the Alaska Native Claims Settlement Act, that is recognized by the Federal Government as eligible for services from BIA in accordance with 25 U.S.C. 1452 (c).

“Interested party” means a contractor or an actual or prospective offeror whose direct economic interest would be affected by the award of a subcontract or by the failure to award a subcontract.

(b) The Contract shall use its best efforts to give Indian organizations and Indian-owned economic enterprises the maximum practicable opportunity to participate in the subcontracts it awards, to the fullest extent consistent with efficient performance of the contract.

(c) The Contracting Officer and the Contractor, acting in good faith, may rely on the representation of an Indian organization or Indian-owned economic enterprise as to its eligibility, unless and interested party challenges its status or the Contracting Officer has independent reason to question that status.

(d) In the event of a challenge to the representation of a subcontractor, the Contracting Officer will refer the matter to the U.S. Department of the Interior, Bureau of Indian Affairs, Attn: Chief, Division of Contracting and Grants Administration, 1849 C Street NW, MS-2626-MIB, Washington, DC 20240-4000. The BIA will determine the eligibility and will notify the Contracting Officer. No incentive payment will be made--

(1) Within 59 working days of subcontract award;

(2) While a challenge is pending; or

(3) If a subcontractor is determined to be an ineligible participant.

(e)(1) The Contractor, on its own behalf or on behalf of a subcontractor at any tier, may request an adjustment under the Indian Incentive Program to the following:

(i) The estimated cost of cost-type contract.

(ii) The target cost of a cost-plus-incentive-fee contract.

(iii) The target cost and ceiling price of a fixed-price incentive contract.

(iv) The price of a firm-fixed-price contract.

(2) The amount of the adjustment that may be made to the contract is 5 percent of the estimated cost, target cost, or firm-fixed price included in the subcontract initially awarded to the Indian organization or Indian-owned economic enterprise.

(3) The Contractor has the burden of proving the amount claimed and must assert its request for an adjustment prior to completion of contract performance.

(4) The Contracting Officer, subject to the terms and conditions of the contract and the availability of funds, will authorize an incentive payment of 5 percent of the amount paid to the subcontractor.

(5) If the Contractor requests and receives an adjustment on behalf of a subcontractor, the Contractor is obligated to pay the subcontractor the adjustment.

(f) The Contractor shall insert the substance of this clause, including this paragraph (f), in all subcontracts that--

(1) Are for other than commercial items; and

(2) Are expected to exceed the simplified acquisition threshold in Part 2 of the Federal Acquisition Regulation.

(End of clause)

252.227-7022 GOVERNMENT RIGHTS (UNLIMITED) (MAR 1979)

The Government shall have unlimited rights, in all drawings, designs, specifications, notes and other works developed in the performance of this contract, including the right to use same on any other Government design or construction without additional compensation to the Contractor. The Contractor hereby grants to the Government a paid-up license throughout the world to all such works to which he may assert or establish any claim under design patent or copyright laws. The Contractor for a period of three (3) years after completion of the project agrees to furnish the original or copies of all such works on the request of the Contracting Officer.

(End of clause)

252.227-7033 RIGHTS IN SHOP DRAWINGS (APR 1966)

(a) Shop drawings for construction means drawings, submitted to the Government by the Construction Contractor, subcontractor or any lower-tier subcontractor pursuant to a construction contract, showing in detail (i) the proposed fabrication and assembly of structural elements and (ii) the installation (i.e., form, fit, and attachment details) of materials or equipment. The Government may duplicate, use, and disclose in any manner and for any purpose shop drawings delivered under this contract.

(b) This clause, including this paragraph (b), shall be included in all subcontracts hereunder at any tier.

252.236-7000 MODIFICATION PROPOSALS - PRICE BREAKDOWN. (DEC 1991)

(a) The Contractor shall furnish a price breakdown, itemized as required and within the time specified by the Contracting Officer, with any proposal for a contract modification.

(b) The price breakdown --

(1) Must include sufficient detail to permit an analysis of profit, and of all costs for --

(i) Material;

(ii) Labor;

(iii) Equipment;

(iv) Subcontracts; and

(v) Overhead; and

(2) Must cover all work involved in the modification, whether the work was deleted, added, or changed.

(c) The Contractor shall provide similar price breakdowns to support any amounts claimed for subcontracts.

(d) The Contractor's proposal shall include a justification for any time extension proposed.

252.242-7000 POSTAWARD CONFERENCE (DEC 1991)

The Contractor agrees to attend any postaward conference convened by the contracting activity or contract administration office in accordance with Federal Acquisition Regulation subpart 42.5.

(End of clause)

252.242-7004 MATERIAL MANAGEMENT AND ACCOUNTING SYSTEM (SEP 1996)

(a) Definitions. As used in this clause--

(1) Material management and accounting system means the Contractor's system or systems for planning, controlling, and accounting for the acquisition, use, issuing, and disposition of material. Material management and accounting systems may be manual or automated. They may be stand-alone systems or they may be integrated with planning, engineering, estimating, purchasing, inventory, accounting, or other systems.

(2) Valid time-phased requirements means material which is--

Needed to fulfill the production plan, including reasonable quantities for scrap, shrinkage, yield, etc.; and

(ii) Charged/billed to contracts or other cost objectives in a manner consistent with the need to fulfill the production plan.

(3) Contractor means a business unit as defined in section 31.001 of the Federal Acquisition Regulation (FAR).

(b) General. The Contractor agrees to--

(1) Maintain a material management and accounting system (MMAS) that--

(i) Reasonably forecasts material requirements;

(ii) Ensures that costs of purchased and fabricated material charged or allocated to a contract are based on valid time-phased requirements; and

(iii) Maintains a consistent, equitable, and unbiased logic for costing of material transactions.

(2) Assess its MMAS and take reasonable action to comply with the MMAS standards in paragraph (f) of this clause.

(c) Applicability. Paragraphs (d) and (e) of this clause apply only if the Contractor--

(1) Is a large business; and

(2) Received, in its fiscal year preceding award of this contract, Department of Defense prime contracts or subcontracts, and their modifications totaling--

(i) $70 million or more; or

(ii) $30 million or more (but less than $70 million), and is notified in writing by the Contracting Officer that paragraphs (d) and (e) apply.

(d) Disclosure, demonstration, and maintenance requirements. (1) The Contractor shall--

Disclose its MMAS to the Administrative Contracting Officer in writing; and

(ii) If requested by the Administrative Contracting Officer, demonstrate that the MMAS conforms to the standards in paragraph (f) of this clause.

(2) An MMAS disclosure is adequate when the Contractor has provided the Administrative Contracting Officer with documentation which--

(i) Accurately describes those policies, procedures, and practices that the Contractor currently uses in its MMAS; and

(ii) Provides sufficient detail for the Government to reasonably make an informed judgment regarding the adequacy of the MMAS.

(3) An MMAS demonstration is adequate when the Contractor has provided the Administrative Contracting Officer--

(i) Sufficient evidence to demonstrate the degree of compliance of its MMAS with the standards at paragraph (f) of this clause; and

(ii) Identification of any significant deficiencies, the estimated cost impact of the deficiency, and a comprehensive corrective action plan.

(4) The Contractor shall disclose significant changes in its MMAS to the Administrative Contracting Officer within 30 days of implementation.

(5) If the contractor desires the Government to protect such information as privileged or confidential, the Contractor shall--

(i) Notify the Government representative to whom the information is submitted, i.e., the ACO, or the auditor; and

(ii) Ensure an appropriate legend is on the face of the document(s) at the time of submission.

(e) Deficiencies. (1) If the Contractor receives a report which identifies deficiencies in its MMAS, the Contractor agrees to respond as follows--

(i) If the Contractor agrees with the report findings and recommendations, the Contractor shall--

(A) Within 30 days, state its agreement in writing; and

(B) Within 60 days, correct the deficiencies or submit a corrective action plan.

(ii) If the Contractor disagrees with the report findings and recommendations, the Contractor shall, within 30 days, state its rationale for each area of disagreement.

(2) The Administrative Contracting Officer shall evaluate the Contractor's response and notify the Contractor of the--

(i) Determination concerning remaining deficiencies;

(ii) Adequacy of any proposed or completed corrective action plan; and

(iii) Need for any new or revised corrective action plan.

(f) MMAS standards. MMAS systems shall have adequate internal accounting and administrative controls to ensure system and data integrity, and comply with the following:

(1) Have an adequate system description including policies, procedures, and operating instructions which comply with the Federal Acquisition Regulation and Defense FAR Supplement;

(2) Ensure that costs of purchased and fabricated material charged or allocated to a contract are based on valid time-phased requirements as impacted by minimum/economic order quantity restrictions--

(i) A 98 percent bill of material accuracy and a 95 percent master production schedule accuracy are desirable as a goal in order to ensure that requirements are both valid and appropriately time-phased.

(ii) If systems have accuracy levels below these, the Contractor shall demonstrate that--

(A) There is no material harm to the Government due to lower accuracy levels; and

(B) The cost to meet the accuracy goals is excessive in relation to the impact on the Government;

(3) Provide a mechanism to identify, report, and resolve system control weaknesses and manual override. Systems should identify operational exceptions such as excess/residual inventory as soon as known;

(4) Provide audit trails and maintain records (manual and those in machine readable form) necessary to evaluate system logic and to verify through transaction testing that the system is operating as desired;

(5) Establish and maintain adequate levels of record accuracy, and include reconciliation of recorded inventory quantities to physical inventory by part number on a periodic basis. A 95 percent accuracy level is desirable. If systems have an accuracy level below 95 percent, the Contractor shall demonstrate that--

(i) There is no material harm to the Government due to lower accuracy levels; and

(ii) The cost to meet the accuracy goal is excessive in relation to the impact on the Government;

(6) Provide detailed descriptions of circumstances which will result in manual or system generated transfers of parts;

(7) Maintain a consistent, equitable, and unbiased logic for costing of material transactions--

(i) The Contractor shall maintain and disclose written policies describing the transfer methodology and the loan/pay-back technique.

(ii) The costing methodology may be standard or actual cost, or any of the inventory costing methods in 48 CFR 9904.411-50(b). Consistency shall be maintained across all contract and customer types, and from accounting period to accounting period for initial charging and transfer charging.

(iii) The system should transfer parts and associated costs within the same billing period. In the few instances where this may not be appropriate, the Contractor may accomplish the material transaction using a loan/pay-back technique. The “loan/pay-back technique” means that the physical part is moved temporarily from the contract, but the cost of the part remains on the contract. The procedures for the loan/pay-back technique must be approved by the Administrative Contracting Officer. When the technique is used, the Contractor shall have controls to ensure--

(A) Parts are paid back expeditiously;

(B) Procedures and controls are in place to correct any overbilling that might occur;

(C) Monthly, at a minimum, identification of the borrowing contract and the date the part was borrowed; and

(D) The cost of the replacement part is charged to the borrowing contract;

(8) Where allocations from common inventory accounts are used, have controls (in addition to those in paragraphs (b)(2) and (7) of this clause) to ensure that--

(i) Reallocations and any credit due are processed no less frequently than the routine billing cycle;

(ii) Inventories retained for requirements which are not under contract are not allocated to contracts; and

(iii) Algorithms are maintained based on valid and current data;

(9) Notwithstanding FAR 45.505-3(f)(1)(ii), have adequate controls to ensure that physically commingled inventories that may include material for which costs are charged or allocated to fixed-price, cost-reimbursement, and commercial contracts do not compromise requirements of any of the standards in paragraphs (f)(1) through (8) of this clause.

Government furnished material shall not be--

(i) Physically commingled with other material; or

(ii) Used on commercial work; and

(10) Be subjected to periodic internal audits to ensure compliance with established policies and procedures.

(End of clause)

252.243-7001 PRICING OF CONTRACT MODIFICATIONS (DEC 1991)

When costs are a factor in any price adjustment under this contract, the contract cost principles and procedures in FAR part 31 and DFARS part 231, in effect on the date of this contract, apply.

252.243-7002 REQUESTS FOR EQUITABLE ADJUSTMENT (MAR 1998)

(a) The amount of any request for equitable adjustment to contract terms shall accurately reflect the contract adjustment for which the Contractor believes the Government is liable. The request shall include only costs for performing the change, and shall not include any costs that already have been reimbursed or that have been separately claimed. All indirect costs included in the request shall be properly allocable to the change in accordance with applicable acquisition regulations.

(b) In accordance with 10 U.S.C. 2410(a), any request for equitable adjustment to contract terms that exceeds the simplified acquisition threshold shall bear, at the time of submission, the following certificate executed by an individual authorized to certify the request on behalf of the Contractor:

I certify that the request is made in good faith, and that the supporting data are accurate and complete to the best of my knowledge and belief.

(Official's Name)

(Title)

(c) The certification in paragraph (b) of this clause requires full disclosure of all relevant facts, including--

(1) Cost or pricing data if required in accordance with subsection 15.403-4 of the Federal Acquisition Regulation (FAR); and

(2) Information other than cost or pricing data, in accordance with subsection 15.403-3 of the FAR, including actual cost data and data to support any estimated costs, even if cost or pricing data are not required.

(d) The certification requirement in paragraph (b) of this clause does not apply to----

(1) Requests for routine contract payments; for example, requests for payment for accepted supplies and services, routine vouchers under a cost-reimbursement type contract, or progress payment invoices; or

(2) Final adjustment under an incentive provision of the contract.

252.244-7000 SUBCONTRACTS FOR COMMERCIAL ITEMS AND COMMERCIAL COMPONENTS (DOD) (MAR 2000)

In addition to the clauses listed in paragraph (c) of the Subcontracts for Commercial Items and Commercial Components clause of this contract (Federal Acquisition Regulation 52.244-6), the Contractor shall include the terms of the following clauses, if applicable, in subcontracts for commercial items or commercial components, awarded at any tier under this contract:

252.225-7014 Preference for Domestic Specialty Metals, Alternate I (10 U.S.C. 2241 note).

252.247-7023 Transportation of Supplies by Sea (10 U.S.C. 2631).

252.247-7024 Notification of Transportation of Supplies by Sea (10 U.S.C. 2631).

(End of clause)

252.247-7023 TRANSPORTATION OF SUPPLIES BY SEA (MAY 2002)

(a) Definitions. As used in this clause --

(1) "Components" means articles, materials, and supplies incorporated directly into end products at any level of manufacture, fabrication, or assembly by the Contractor or any subcontractor.

(2) "Department of Defense" (DoD) means the Army, Navy, Air Force, Marine Corps, and defense agencies.

(3) "Foreign flag vessel" means any vessel that is not a U.S.-flag vessel.

(4) "Ocean transportation" means any transportation aboard a ship, vessel, boat, barge, or ferry through international waters.

(5) "Subcontractor" means a supplier, materialman, distributor, or vendor at any level below the prime contractor whose contractual obligation to perform results from, or is conditioned upon, award of the prime contract and who is performing any part of the work or other requirement of the prime contract.

(6) "Supplies" means all property, except land and interests in land, that is clearly identifiable for eventual use by or owned by the DoD at the time of transportation by sea.

(i) An item is clearly identifiable for eventual use by the DoD if, for example, the contract documentation contains a reference to a DoD contract number or a military destination.

(ii) "Supplies" includes (but is not limited to) public works; buildings and facilities; ships; floating equipment and vessels of every character, type, and description, with parts, subassemblies, accessories, and equipment; machine tools; material; equipment; stores of all kinds; end items; construction materials; and components of the foregoing.

(7) "U.S.-flag vessel" means a vessel of the United States or belonging to the United States, including any vessel registered or having national status under the laws of the United States.

(b)(1) The Contractor shall use U.S.-flag vessels when transporting any supplies by sea under this contract.

(2) A subcontractor transporting supplies by sea under this contract shall use U.S.-flag vessels if--

(i) This contract is a construction contract; or

(ii) The supplies being transported are--

(A) Noncommercial items; or

(B) Commercial items that--

(1) The Contractor is reselling or distributing to the Government without adding value (generally, the Contractor does not add value to items that it contracts for f.o.b. destination shipment);

(2) Are shipped in direct support of U.S. military contingency operations, exercises, or forces deployed in humanitarian or peacekeeping operations; or

(3) Are commissary or exchange cargoes transported outside of the Defense Transportation System in accordance with 10 U.S.C. 2643.

(c) The Contractor and its subcontractors may request that the Contracting Officer authorize shipment in foreign-flag vessels, or designate available U.S.-flag vessels, if the Contractor or a subcontractor believes that --

(1) U.S.-flag vessels are not available for timely shipment;

(2) The freight charges are inordinately excessive or unreasonable; or

(3) Freight charges are higher than charges to private persons for transportation of like goods.

(d) The Contractor must submit any request for use of other than U.S.-flag vessels in writing to the Contracting Officer at least 45 days prior to the sailing date necessary to meet its delivery schedules. The Contracting Officer will process requests submitted after such date(s) as expeditiously as possible, but the Contracting Officer's failure to grant approvals to meet the shipper's sailing date will not of itself constitute a compensable delay under this or any other clause of this contract. Requests shall contain at a minimum --

(1) Type, weight, and cube of cargo;

(2) Required shipping date;

(3) Special handling and discharge requirements;

(4) Loading and discharge points;

(5) Name of shipper and consignee;

(6) Prime contract number; and

(7) A documented description of efforts made to secure U.S.-flag vessels, including points of contact (with names and telephone numbers) with at least two U.S.-flag carriers contacted. Copies of telephone notes, telegraphic and facsimile message or letters will be sufficient for this purpose.

(e) The Contractor shall, within 30 days after each shipment covered by this clause, provide the Contracting Officer and the Maritime Administration, Office of Cargo Preference, U.S. Department of Transportation, 400 Seventh Street

SW., Washington, DC 20590, one copy of the rated on board vessel operating carrier's ocean bill of lading, which shall contain the following information:

(1) Prime contract number;

(2) Name of vessel;

(3) Vessel flag of registry;

(4) Date of loading;

(5) Port of loading;

(6) Port of final discharge;

(7) Description of commodity;

(8) Gross weight in pounds and cubic feet if available;

(9) Total ocean freight in U.S. dollars; and

(10) Name of the steamship company.

(f) The Contractor shall provide with its final invoice under this contract a representation that to the best of its knowledge and belief--

(1) No ocean transportation was used in the performance of this contract;

(2) Ocean transportation was used and only U.S.-flag vessels were used for all ocean shipments under the contract;

(3) Ocean transportation was used, and the Contractor had the written consent of the Contracting Officer for all non-U.S.-flag ocean transportation; or

(4) Ocean transportation was used and some or all of the shipments were made on non-U.S.-flag vessels without the written consent of the Contracting Officer. The Contractor shall describe these shipments in the following format:

ITEM DESCRIPTION	CONTRACT LINE ITEMS	QUANTITY

TOTAL_____

(g) If the final invoice does not include the required representation, the Government will reject and return it to the Contractor as an improper invoice for the purposes of the Prompt Payment clause of this contract. In the event there has been unauthorized use of non-U.S.-flag vessels in the performance of this contract, the Contracting Officer is entitled to equitably adjust the contract, based on the unauthorized use.

(h) In the award of subcontracts for the types of supplies described in paragraph (b)(2) of this clause, the Contractor shall flow down the requirements of this clause as follows:

(1) The Contractor shall insert the substance of this clause, including this paragraph (h), in subcontracts that exceed the simplified acquisition threshold in part 2 of the Federal Acquisition Regulation.

(2) The Contractor shall insert the substance of paragraphs (a) through (e) of this clause, and this paragraph (h), in subcontracts that are at or below the simplified acquisition threshold in part 2 of the Federal Acquisition Regulation.

(End of clause)

252.247-7024 NOTIFICATION OF TRANSPORTATION OF SUPPLIES BY SEA (MAR 2000)

(a) The Contractor has indicated by the response to the solicitation provision, Representation of Extent of Transportation by Sea, that it did not anticipate transporting by sea any supplies. If, however, after the award of this contract, the Contractor learns that supplies, as defined in the Transportation of Supplies by Sea clause of this contract, will be transported by sea, the Contractor --

(1) Shall notify the Contracting Officer of that fact; and

(2) Hereby agrees to comply with all the terms and conditions of the Transportation of Supplies by Sea clause of this contract.

(b) The Contractor shall include this clause; including this paragraph (b), revised as necessary to reflect the relationship of the contracting parties--

(1) In all subcontracts under this contract, if this contract is a construction contract; or

(2) If this contract is not a construction contract, in all subcontracts under this contract that are for--

(i) Noncommercial items; or

(ii) Commercial items that--

(A) The Contractor is reselling or distributing to the Government without adding value (generally, the Contractor does not add value to items that it subcontracts for f.o.b. destination shipment);

(B) Are shipped in direct support of U.S. military contingency operations, exercises, or forces deployed in humanitarian or peacekeeping operations; or

(C) Are commissary or exchange cargoes transported outside of the Defense Transportation System in accordance with 10 U.S.C. 2643.

(End of clause)

Section 00800 - Special Contract Requirements

CLAUSES INCORPORATED BY FULL TEXT

52.211-10 COMMENCEMENT, PROSECUTION, AND COMPLETION OF WORK (APR 1984)

The Contractor shall be required to (a) commence work under this contract within 5 calendar days after the date the Contractor receives the notice to proceed, (b) prosecute the work diligently, and (c) complete the entire work ready for use not later than 540 calendar days. * The time stated for completion shall include final cleanup of the premises.

(End of clause)

52.211-12 LIQUIDATED DAMAGES--CONSTRUCTION (SEP 2000)

(a) If the Contractor fails to complete the work within the time specified in the contract, the Contractor shall pay liquidated damages to the Government in the amount of $797.37 for each calendar day of delay until the work is completed or accepted.

(b) If the Government terminates the Contractor's right to proceed, liquidated damages will continue to accrue until the work is completed. These liquidated damages are in addition to excess costs of repurchase under the Termination clause.

(End of clause)

52.211-13 TIME EXTENSIONS (SEP 2000)

Time extensions for contract changes will depend upon the extent, if any, by which the changes cause delay in the completion of the various elements of construction. The change order granting the time extension may provide that the contract completion date will be extended only for those specific elements related to the changed work and that the remaining contract completion dates for all other portions of the work will not be altered. The change order also may provide an equitable readjustment of liquidated damages under the new completion schedule.

(End of clause)

52.217-7 OPTION FOR INCREASED QUANTITY--SEPARATELY PRICED LINE ITEM (MAR 1989)

The Government may require the delivery of the numbered line item, identified in the Schedule as an option item, in the quantity and at the price stated in the Schedule. The Contracting Officer may exercise the option by written notice to the Contractor within _____. Delivery of added items shall continue at the same rate that like items are called for under the contract, unless the parties otherwise agree.

(End of clause)

52.219-4002 REPORTING REQUIREMENTS--SUBCONTRACTING PLAN (CESAD-CT JUL 1993)

(a) Retainage will be withheld from progress payments in an amount sufficient to protect the Government's ability to assess Liquidated Damages in accordance with FAR clause 52.219-0016 for failure to submit timely SF 294 and SF 295 Reports. The amount of retainage will be determined in accordance with the following formula:

(b) Total dollar amount proposed for subcontracting to small business multiplied by percentage of actual progress on the contract, up to a maximum of 10% of the given progress payment, shall be withheld from the next progress payment due after a contractor fails to submit a required report. If one or more reports have been submitted before such failure, formula for determining the amount of retainage will be adjusted by deducting any amounts reported as subcontracted to small business from the total dollar amount proposed to be subcontracted and the difference multiplied by the percent of actual progress, up to a maximum of 10% of the given progress payment.

(End of clause)

52.223-9 ESTIMATE OF PERCENTAGE OF RECOVERED MATERIAL CONTENT FOR EPA-DESIGNATED PRODUCTS (AUG 2000)

(a) Definitions. As used in this clause--

Postconsumer material means a material or finished product that has served its intended use and has been discarded for disposal or recovery, having completed its life as a consumer item. Postconsumer material is a part of the broader category of “recovered material.”

Recovered material means waste materials and by-products recovered or diverted from solid waste, but the term does not include those materials and by-products generated from, and commonly reused within, an original manufacturing process.

(b) The Contractor, on completion of this contract, shall--

(1) Estimate the percentage of the total recovered material used in contract performance, including, if applicable, the percentage of postconsumer material content; and

(2) Submit this estimate to _____ [Contracting Officer complete in accordance with agency procedures].

(End of clause)

52.223-4002 U.S. ARMY CORPS OF ENGINEERS SAFETY AND HEALTH REQUIREMENTS MANUAL, EM 385-1-1

This paragraph applies to contracts and purchase orders that require the contractor to comply with EM 385-1-1 (e.g., contracts that include the Accident Prevention clause at FAR 52.236-13 and/or other safety provisions). EM 385-1-1 and its changes are available at http://www.hq.usace.army.mil. (At the HQ homepage, select Safety and Occupational Health.) The Contractor shall be responsible for complying with the current edition and all changes posted on the web through the date that is 10 calendar days prior to the date offers are due. If the solicitation is amended to extend the time set for receipt of offers, the 10 calendar days rule stated above shall be applied against the amended date. (For example, if offers are due on 10 April, all changes posted on or before 31 March shall apply to the contract. If the time for receipt of offers is extended from 10 April to 20 April, all changes posted on or before 10 April shall apply to the contract.)

52.228-4001 RECOMMENDED INSURANCE COVERAGE – MAY 2000

The Design-Build Contractor's attention is invited to the contract requirements concerning "RESPONSIBILITY OF THE CONTRACTOR FOR DESIGN' and 'WARRANTY OF CONSTURCTION WORK". These requirements vest in the Contractor complete responsibility for the professional quality, technical accuracy, and coordination of all design, drawings, specifications and other work or materials furnished by his in-house or consultant forces. The Design-Build Contractor must correct and revise any errors or deficiencies in his work, notwithstanding any review, approval, acceptance or payment by the Government. The Contractor must correct and change any work resulting from his defective design at no additional cost to the Government. The requirements further stipulate that the Design-Build Contractor shall be liable to the Government for the damages to the Government caused by negligent performance. Though it is not am mandatory requirement, this is to recommend that the Design-Build Contractor investigate and obtain appropriate insurance coverage for such liability protection.

(End of Clause)

52.228-4002 REQUIRED INSURANCE (FEB 1987 SAS) (Ref. FAR 28.307)

(a) The Contractor shall procure and maintain during the entire period of his performance under this contract the following minimum insurance:

Comprehensive and Employer's Liability Insurance in the amount required by the State law in which the work is to be performed under this contract.

Comprehensive General Liability Insurance in an amount not less than $500,000 per accident.

Automobile Liability Insurance: $200,000 per person and $500,000 per accident for bodily injury liability and $20,000 property damage liability.

(b) Prior to the commencement of work hereunder, the Contractor shall furnish to the Contracting Officer a certificate or written statement of the above-required insurance. The policies evidencing required insurance shall contain an endorsement to the effect that cancellation, or any material change in the policies adversely affecting the interests of the Government in such insurance, shall not be effective for such period as may be prescribed by the laws of the State in which this contract is to be performed and in no event less than 30 days after written notice thereof to the Contracting Officer.

(c) The Contractor agrees to insert the substance of this clause, including this subparagraph (c), in all subcontracts hereunder.

(End of clause)

52.231-5000 EQUIPMENT OWNERSHIP AND OPERATING EXPENSE SCHEDULE
MAR 1995)--EFARS

(a) This clause does not apply to terminations. See 52.249-5000, Basis for Settlement of Proposals and FAR Part 49.

(b) Allowable cost for construction and marine plant and equipment in sound workable condition owned or controlled and furnished by a contractor or subcontractor at any tier shall be based on actual cost data for each piece of equipment or groups of similar serial and series for which the Government can determine both ownership and operating costs from the contractor's accounting records. When both ownership and operating costs cannot be determined for any piece of equipment or groups of similar serial or series equipment from the contractor's accounting records, costs for that equipment shall be based upon the applicable provisions of EP 1110-1-8, Construction Equipment Ownership and Operating Expense Schedule, Region III. Working conditions shall be considered to be average for determining equipment rates using the schedule unless specified otherwise by the contracting officer. For equipment not included in the schedule, rates for comparable pieces of equipment may be used or a rate may be

developed using the formula provided in the schedule. For forward pricing, the schedule in effect at the time of negotiations shall apply. For retroactive pricing, the schedule in effect at the time the work was performed shall apply.

(c) Equipment rental costs are allowable, subject to the provisions of FAR 31.105(d)(ii) and FAR 31.205-36. Rates for equipment rented from an organization under common control, lease-purchase arrangements, and sale-leaseback arrangements, will be determined using the schedule, except that actual rates will be used for equipment leased from an organization under common control that has an established practice of leasing the same or similar equipment to unaffiliated lessees.

(d) When actual equipment costs are proposed and the total amount of the pricing action exceeds the small purchase threshold, the contracting officer shall request the contractor to submit either certified cost or pricing data, or partial/limited data, as appropriate. The data shall be submitted on Standard Form 1411, Contract Pricing Proposal Cover Sheet.

(End of clause)

52.232-4007 ACCOUNTING AND APPROPRIATION DATA (APR 1989 CESAS-RM)

SEE SAF Section 00100

(End of clause)

52.232-4008 DESIGNATED BILLING OFFICE (APR 1989 CESAS-RM)

Invoices will be mailed to:
U.S. Army Corps of Engineers
P.O. Box 77069
Ft. Bragg, NC

(End of Clause)

52.232-4009 DESIGNATED PAYMENT OFFICE (AUG 1998 CESAS-RM-F)

Payment will be made by:

U.S. Army Corps of Engineers Finance Center
ATTN: CEFC-AO-P
5720 Integrity Drive
Millington, TN 38054-5005

(End of clause)

52.232-5000 PAYMENT FOR MATERIALS DELIVERED OFF-SITE (MAR 1995)--EFARS

(a) Pursuant to FAR clause 52.232-5, Payments Under Fixed Priced Construction Contracts, materials delivered to the contractor at locations other than the site of the work may be taken into consideration in making payments if included in payment estimates and if all the conditions of the General Provisions are fulfilled. Payment for items delivered to locations other than the work site will be limited to: (1) materials required by the technical provisions; or (3) materials that have been fabricated to the point where they are identifiable to an item of work required under this contract.

(b) Such payment will be made only after receipt of paid or receipted invoices or invoices with canceled check showing title to the items in the prime contractor and including the value of material and labor incorporated into the item. In addition to petroleum products, payment for materials delivered off-site is limited to the following items: None.
(End of clause)

52.236-1 PERFORMANCE OF WORK BY THE CONTRACTOR (APR 1984)

The Contractor shall perform on the site, and with its own organization, work equivalent to at least 20 percent of the total amount of work to be performed under the contract. This percentage may be reduced by a supplemental agreement to this contract if, during performing the work, the Contractor requests a reduction and the Contracting Officer determines that the reduction would be to the advantage of the Government.

(End of clause)

52.236-14 AVAILABILITY AND USE OF UTILITY SERVICES (APR 1984)

(a) The Government shall make all reasonably required amounts of utilities available to the Contractor from existing outlets and supplies, as specified in the contract. Unless otherwise provided in the contract, the amount of each utility service consumed shall be charged to or paid for by the Contractor at prevailing rates charged to the Government or, where the utility is produced by the Government, at reasonable rates determined by the Contracting Officer. The Contractor shall carefully conserve any utilities furnished without charge.

(b) The Contractor, at its expense and in a workmanlike manner satisfactory to the Contracting Officer, shall install and maintain all necessary temporary connections and distribution lines, and all meters required to measure the amount of each utility used for the purpose of determining charges. Before final acceptance of the work by the Government, the Contractor shall remove all the temporary connections, distribution lines, meters, and associated paraphernalia.

(End of clause)

52.236-4001 DESIGN-BUILD CONTRACT-ORDER OF PRECEDENCE – AUG 1997

(a) The contract includes the standard contract clauses and schedules current at the time of award. It also entails: (1) the solicitation in its entirety, including all drawings, cuts and illustrations, and any amendments during proposal evaluation and selection, and (2) the successful Offeror's accepted proposal. The contract constitutes and defines the entire agreement between the Contractor and the Government. No documentation shall be omitted which in any ways bears upon the terms of that agreement.

(b) In the event of conflict or inconsistency between any of the provisions of the various portions of this contract, precedence shall be given in the following order:

(1) Betterments: Any portions of the Offeror's proposal which both meet and exceed the provisions of the solicitation

(2) The provisions of the solicitation. (see also Contract Clause: SPECIFICATIONS AND DRAWINGS FOR CONSTRUCTION.)

(3) All other provisions of the accepted proposal.

(4)Any design products, including but not limited to plans, specifications, engineering studies and analyses, shop drawings, equipment installation drawings, etc. These are “deliverables” under the contract and are not part of the contract itself. Design products must conform to all provisions of the contract, in the order of precedence herein.

(End of Clause)

52.236-4003 RESPONSIBILITY OF THE CONTRACTOR FOR DESIGN – FEB 2000

(i) The Contractor shall be responsible for the professional quality, technical accuracy, and the coordination of all designs, drawings, specifications, and other non-construction services furnished by the Contractor under this contract. The Contractor shall, without additional compensation, correct or revise any errors or deficiency in its designs, drawings, specifications, and other non-construction services and perform any necessary rework or modifications, including any damage to real or personal property, resulting from the design error or omission.

(ii) Neither the Government’s review, approval or acceptance of, nor payment for, the services required under this contract shall be construed to operate as a waiver of any rights under this contract or of any cause of action arising out of the performance of this contract. The Contractor shall be and remain liable to the Government in accordance wit applicable law for all damages to the Government caused by the Contractor’s negligent performance of any of these services furnished under this contract.

(iii) The rights and remedies of the Government provided for under this contract are in addition to any other rights and remedies provided by law

(iv) If the Contractor is comprised of more than one legal entity shall be jointly and severally liable thereunder.

(End of Clause)

52.236-4004 SEQUENCE OF DESIGN-CONSTRUCTION – AUG 1997

(a) After receipt of the Contract Notice to Proceed (NTP) the Contractor shall initiate design, comply with all design submission requirements as covered under Division 01 General Requirements, and obtain Government review of each submission. No construction may be started, <with the exception of….clearing, etc…> until the Government reviews the Final Design submission and determines it satisfactory for purposes of beginning construction. The Contracting Officer will notify the Contractor when the design is cleared for construction. The Government will not grant any time extension for any design resubmittal required when, in the opinion of the Contracting Officer, the initial submission failed to meet the minimum quality requirements as set forth in the Contract.

(b) If the Government allows the Contractor to proceed with limited construction based on pending minor revisions to the reviewed Final Design submission, no payment will be made for any in-place construction related to the pending revisions until they are completed, resubmitted and are satisfactory to the Government.

(c) No payment will be made for any in-place construction until all required submittals have been made, reviewed and are satisfactory to the Government.

(End of Clause)

52.236-4005 SEQUENCE OF DESIGN- CONSTRUCTION (FAST TRACK) – AUG 1997

(a) After receipt of the Contract Notice to Proceed (NTP) the Contractor shall initiate design, comply with all design submissions requirements as covered under Division 01 General Requirements, and obtain Government review of each submission. The contractor may begin construction on portions of the work for which the Government has reviewed the final design submission and has determined satisfactory for purposes of beginning construction. The Contracting Officer will notify the Contractor when the design is cleared for construction. The Government will not grant any time extension for any design resubmittal required when, in the opinion of the Contracting Officer, the initial submission failed to meet the minimum quality requirements as set forth in the Contract.

(b) If the Government allows the Contractor to proceed with the construction based on pending minor revisions to the reviewed Final Design submission, no payment will be made for any in-place construction related to the pending revisions until they are completed, resubmitted and are satisfactory to the Government.

(c) No payment will be made for any in-place construction until all required submittals have been made, reviewed and are satisfactory to the Government.

(End of Clause)

52.236-4006 CONSTRUCTOR'S ROLE DURING DESIGN – JUN 1998

The Contractor's construction management key personnel shall be actively involved during the design process to effectively integrate the design and construction requirements of this contract. In addition to the typical required construction activities, the constructor's involvement includes, but is not limited to actions such as: integrating the design schedule into the Master Schedule to maximize the effectiveness of fast-tracking design and construction (within the limits allowed in the contract), ensuring constructability and economy of the design, integrating the shop drawing and installation drawing process into the design, executing the material and equipment acquisition programs to meet critical schedules, effectively interfacing the construction QC program with the design QC program, and maintaining and providing the design team with accurate, up-to-date redline and as-built documentation. The Contractor shall require and manage the active involvement of key trade subcontractors in the above activities.

(End of Clause)

52.236-4007 TRAINING – FEB 2000

The Contractor shall provide operational and maintenance training for all systems furnished under this contract for the operating and maintenance personnel. The system manufacturer shall conduct the training, where feasible. All operation and maintenance manuals shall be submitted and approved prior to conducting the training, where feasible. All operation and maintenance manuals shall be submitted and approved prior to conducting the training and shall be used during training. The Contractor shall video tape the training session on VHS tapes and provide the tapes to the Government.

(End of Clause)

52.236-4008 DESIGN CONFERENCES – AUG 1997

(a) Pre-Work: As part of the Pre-Work Conference conducted after contract award, key representatives of the Government and the Contractor will review the design submission and procedures specified herein, discuss the preliminary design schedule and provisions for phase completion of the D-B documents with construction activities (fast tracking), as appropriate, meet with Corps of Engineers Design Review personnel and key Using Agency points of contract and any other appropriate pre-design discussion items.

(b) Design Charette: After award of the contract, the Contractor shall visit the site and conduct extensive interviews, and problem solving discussions with the individual users, base personnel, Corps of Engineers personnel to acquire all necessary site information, review user options, and discuss user needs. The Contractor shall document all discussions. The design shall be finalized as direct result of these meetings.

(c) Design Review Conferences: Review conferences will be held on base for each design submittal. The Contractor will bring the personnel that developed the design submittal to the review conference. The conferences will take place the week after the review is complete.

(End of Clause)

52.236-4013 CONTRACTOR-PREPARED NETWORK ANALYSIS SYSTEM
(January 2002 SAS) (Ref. DFARS 236.273)

The progress chart to be prepared by the contractor pursuant to FAR 52.236-15, Schedules for Construction Contracts, shall utilize the Critical Path Method (CPM) of network calculation. (See Attachment 1 to Section 00800).

52.236-4015 PRECONSTRUCTION CONFERENCE (OCT 1988 SAS) (Ref. FAR 36.305)

(a) A preconstruction conference will be arranged by the Area/Resident Engineer after award of contract and before commencement of work. The Area/Resident Engineer will notify the Contractor of the time and date set for the meeting. At this conference, the Contractor shall be oriented with respect to Government procedures and line of authority, contractual, administrative, and construction matters.

(b) The Contractor shall bring to this conference, in completed form, a Certificate of Insurance, plus the following items in either completed or draft form:

Accident Prevention Plan (5 copies)
(use format shown in Attachment 1 to SECTION 00800)
Quality Control Plan (5 copies)
Letter Appointing Superintendent
Transmittal Register
Power of Attorney and Certified Copy of Resolution
Network Analysis System, when applicable
List of Subcontractors

(c) A letter of record will be written documenting all items discussed at the conference, and a copy will be furnished by the Area/Resident Engineer

to all in attendance.
(End of clause)

52.236-4016 VIDEO TAPING OPERATING AND MAINTENANCE INSTRUCTIONS (MAR 1987 SASCD-SQ)

For all of the operating and maintenance instructions which are required in the contract specifications, the Contractor shall video tape these instructions as they are presented to the Government representatives. These tapes shall provide clear and understandable detailed instructions for all items required by the contract specifications. The tapes shall be prepared by an experienced video director/cameraman using good quality half-inch VHS color tape with correct sound equipment, lighting, and backdrop. The sound and picture quality shall be high and subject to approval by the Contracting Officer. The tapes are intended as followup training for other Government representatives at a later date. They must be suitable for this purpose. The Contractor shall be responsible for the contents of the instructions and shall verify that they are correct prior to taping. The Contractor may submit individual equipment manufacturer's instructional tape(s), provided they meet the above qualifications and cover the actual equipment that is installed. The tape(s) shall be for specific equipment identified by contents and contract name and number. The Contractor shall submit one copy of the tape(s) to the Contracting Officer for review and approval. Unacceptable tapes are to be corrected by the Contractor as indicated by the Contracting Officer at no additional cost to the Government.
(End of clause)

52.236-4017 SUBMITTAL OF MODIFICATION COST ESTIMATE PROPOSALS (MAR 1992 SAS)
(Ref. DFARS 52.236-7000)

When submittals of Cost Estimate Proposals are required for additions or deletions to work under this contract by modification, the Contractor shall use DA Form 5418-R titled "Cost Estimate Analysis" (see Attachment 1 to SECTION 00800). A separate assemblage will be prepared for submittal by each trade affected by the proposed work.
(End of clause)

52.244-4001 KEY PERSONNEL, SUBCONTRACTORS AND OUTSIDE ASSOCIATES OR CONSULTANTS – AUG 1997

In connection with the services covered by this contract, any in-house personnel, subcontractors, and outside associates or consultants will be limited to the individuals or firms that were specifically identified and agreed to during negotiations. The contractor shall obtain the Contracting Officer’s written consent before making any substitution for these designated in-house personnel, subcontractors, associates, or consultants.

(End of Clause)

52.246-12 INSPECTION OF CONSTRUCTION (AUG 1996)

(a) Definition. "Work" includes, but is not limited to, materials, workmanship, and manufacture and fabrication of components.

(b) The Contractor shall maintain an adequate inspection system and perform such inspections as will ensure that the work performed under the contract conforms to contract requirements. The Contractor shall maintain complete inspection records and make them available to the Government. All work shall be conducted under the general direction of the Contracting Officer and is subject to Government inspection and test at all places and at all reasonable times before acceptance to ensure strict compliance with the terms of the contract.

(c) Government inspections and tests are for the sole benefit of the Government and do not--

(1) Relieve the Contractor of responsibility for providing adequate quality control measures;

(2) Relieve the Contractor of responsibility for damage to or loss of the material before acceptance;

(3) Constitute or imply acceptance; or

(4) Affect the continuing rights of the Government after acceptance of the completed work under paragraph (i) of this section.

(d) The presence or absence of a Government inspector does not relieve the Contractor from any contract requirement, nor is the inspector authorized to change any term or condition of the specification without the Contracting Officer's written authorization.

(e) The Contractor shall promptly furnish, at no increase in contract price, all facilities, labor, and material reasonably needed for performing such safe and convenient inspections and tests as may be required by the Contracting Officer. The Government may charge to the Contractor any additional cost of inspection or test when work is not ready at the time specified by the Contractor for inspection or test, or when prior rejection makes reinspection or retest necessary. The Government shall perform all inspections and tests in a manner that will not unnecessarily delay the work. Special, full size, and performance tests shall be performed as described in the contract.

(f) The Contractor shall, without charge, replace or correct work found by the Government not to conform to contract requirements, unless in the public interest the Government consents to accept the work with an appropriate adjustment in contract price. The Contractor shall promptly segregate and remove rejected material from the premises.

(g) If the Contractor does not promptly replace or correct rejected work, the Government may (1) by contract or otherwise, replace or correct the work and charge the cost to the Contractor or (2) terminate for default the Contractor's right to proceed.

(h) If, before acceptance of the entire work, the Government decides to examine already completed work by removing it or tearing it out, the Contractor, on request, shall promptly furnish all necessary facilities, labor, and material. If the work is found to be defective or nonconforming in any material respect due to the fault of the Contractor or its subcontractors, the Contractor shall defray the expenses of the examination and of satisfactory reconstruction. However, if the work is found to meet contract requirements, the Contracting Officer shall make an equitable adjustment for the additional services involved in the examination and reconstruction, including, if completion of the work was thereby delayed, an extension of time.

(i) Unless otherwise specified in the contract, the Government shall accept, as promptly as practicable after completion and inspection, all work required by the contract or that portion of the work the Contracting Officer

determines can be accepted separately. Acceptance shall be final and conclusive except for latent defects, fraud, gross mistakes amounting to fraud, or the Government's rights under any warranty or guarantee.

(End of clause)

52.246-4001 WARRANTY OF CONSTRUCTION WORK – AUG 1997

(a) In addition to any other warranties in this contract, the Contractor warrants, except as provided in paragraph (1) of this clause, that work performed under this contract conforms to the contract requirements and is free of any defect in equipment, material, or workmanship performed by the Contractor or any subcontractor or supplier at any tier.

(b) This warranty shall contain for a period of year from the date of final acceptance of the work. If the Government takes possession of any part of the work before final acceptance, this warranty shall continue for a period of 1 year from the date the Government takes possession.

(c) The Contractor shall remedy at the Contractor's expense any failure to conform, or any defect. In addition, the Contractor shall remedy at the Contractor's expense any damage to Government-owned or controlled real or personal property, when that damage is the result of –

(1) The Contractor's failure to conform to contract requirements; or

(2) Any defect of equipment, material, or workmanship.

(d) The Contractor shall restore any work damaged in fulfilling the terms and conditions of this clause. The Contractor's warranty with respect to work repaired or replaced will run for 1 year from the date of repair or replacement.

(e) The Contracting Officer shall notify the Contractor, in writing, within a reasonable time after the discovery of any failure, defect, or damage.

(f) If the Contractor fails to remedy any failure, defect, or damage within a reasonable time after receipt of notice, the Government shall have the right to replace, repair, or otherwise remedy the failure, defect, or damage at the Contractor's expense.

(g) With respect to all warranties, express or implied, from subcontractors, manufacturers, or suppliers for work performed and materials furnished under this contract, the Contractor shall –

(1) Obtain all warranties that would be given in normal commercial practice:

(2) Require all warranties to be executed, in writing for the benefit of the Government, if directed by the Contracting Officer; and

(3)Enforce warranties for the benefit of the Government, if directed by the Contracting Officer.

(h) In the event the Contractor's warranty under paragraph (b) of this clause has expired, the Government may bring suit at its expense to enforce a subcontractor's, manufacturer's or supplier's warranty.

(i) Unless a defect is caused by the negligence of the Contractor or subcontractor or supplier at any tier, the Contractor shall not be liable for the repair of any defects of material furnished by the Government nor for the repair of any damage that results from any defect in Government-furnished material or design.

(j) This warranty shall not limit the Government's rights under the Inspection and Acceptance clause of this contract with respect to latent defects, gross mistakes, or fraud.

(End of Clause)

52.248-4003 VALUE ENGINEERING AFTER AWARD

55 In reference to Contract Clause 52.248-3, "Value Engineering – Construction", the Government may refuse to entertain a "Value Engineering Change Proposal" (VECP) for those "performance oriented" aspects of the Solicitation documents which were addressed in the Contractor's accepted contract proposal and which were evaluated in competition with other offerors for award of this contract.

56 The Government may consider a VECP for those "prescriptive" aspects of the Solicitation documents, not addressed in the Contractor's accepted contract proposal or addressed but evaluated only for minimum conformance with the Solicitation requirements.

57 For purposes of this clause, the term "performance oriented" refers to those aspects of the design criteria or other contract requirements which allow the Offeror or Contractor certain latitude, choice of and flexibility to propose in its accepted contract offer a choice of design, technical approach, design solution, construction approach or other approach to fulfil the contract requirements. Such requirements generally tend to be expressed in terms of functions to be performed, performance required or essential physical characteristics, without dictating a specific process or specific design solution for achieving the desired result.

58 In contrast, for purposes of this clause, the term "prescriptive" refers to those aspects of the design criteria or other Solicitation requirements wherein the Government expressed the design solution or other requirements in terms of specific materials, approaches, systems and/or processes to be used. Prescriptive aspects typically allow the Offerors little or no freedom in the choice of design approach, materials, fabrication techniques, methods of installation or other approach to fulfill the contract requirements.

(End of Clause)

52.249-4001 TIME EXTENSIONS FOR UNUSUALLY SEVERE WEATHER (APR 1991 OCE)
(Ref. FAR 52.249-10)

(a) This provision specifies the procedure for the determination of time extensions for unusually severe weather in accordance with the contract clause entitled DEFAULT (FIXED-PRICE CONSTRUCTION). In order for the Contracting Officer to award a time extension under this clause, the following conditions must be satisfied:

(1) The weather experienced at the project site during the contract period must be found to be unusually severe, that is, more severe than the adverse weather anticipated for the project location during any given month.

(2) The unusually severe weather must actually cause a delay to the completion of the project. The delay must be beyond the control and without the fault or negligence of the Contractor.

(b) The following schedule of monthly anticipated adverse weather delays is based on National Oceanic and Atmospheric Administration (NOAA) or similar data for the project location and will constitute the base line for

monthly weather time evaluations. The Contractor's progress schedule must reflect these anticipated adverse weather delays in all weather dependent activities.

MONTHLY ANTICIPATED ADVERSE WEATHER DELAY
WORKDAYS BASED ON 5-DAY WORK WEEK

JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
10	9	6	4	4	6	8	7	4	4	5	9

(c) Upon acknowledgment of the Notice to Proceed and continuing through-out the contract, the Contractor will record on the daily Contractor Quality Control report the occurrence of adverse weather and resultant impact to normally scheduled work. Actual adverse weather delay days must prevent work on critical activities for 50 percent or more of the Contractor's scheduled workday. The number of actual adverse weather delay days shall include days impacted by actual adverse weather (even if adverse weather occurred in previous month), be calculated chronologically from the first to the last day in each month, and be recorded as full days. If the number of actual adverse weather delay days exceeds the number of days anticipated in paragraph (b) above, the Contracting Officer will convert any qualifying delays to calendar days, giving full consideration for equivalent fair weather workdays, and issue a modification in accordance with the contract clause entitled DEFAULT (FIXED PRICE CONSTRUCTION).
(End of clause)

52.249-5000 BASIS FOR SETTLEMENT OF PROPOSALS - EFARS

Actual costs will be used to determine equipment costs for a settlement proposal submitted on the total cost basis under FAR 49.206-2(b). In evaluating a terminations settlement proposal using the total cost basis, the following principles will be applied to determine allowable equipment costs:
Actual costs for each piece of equipment, or groups of similar serial or series equipment, need not be available in the contractor's accounting records to determine total actual equipment costs. If equipment costs have been allocated to a contract using predetermined rates , those charges will be adjusted to actual costs.

(3) Recorded job costs adjusted for unallowable expenses will be used to determine equipment operating expenses.

(4) Ownership costs (depreciation) will be determined using the contractor's depreciation schedule (subject to the provisions of FAR 31.205-11).

(5) License, taxes, storage and insurance costs are normally recovered as an indirect expense and unless the contractor charges these costs directly to contracts, they will be recovered through the indirect expense rate.
(End of Clause)

ATTACHMENT 1 TO SECTION 00800

LIST OF ATTACHMENTS

1. Contract Drawings:

   File No. 442-23-01, Sheets 1 through 25

2. Rates of Wages:

3. Formats:

   Project Sign

   Project Sign Erection Detail

   Corps of Engineers Logo

   Accident Prevention Plan (Ref. FAR 52.236-13 and EM 385-1-1)

   Construction Quality Control Report

   Small and Disadvantaged Business Subcontracting Plan

   Weekly Temporary Electrical Inspection

4. Minimum Standard for Temporary Electrical Service (Ref. FAR 52.236-14)

5. Forms:

   SAS Form 9 - Activity Hazard Analysis

   SAD Form 1666a-R - Safety Checklist for Crawler, Truck & Wheel Mounted Cranes

   SAD Form 1666b-R - Safety Checklist for Portal, Tower, and Pillar Cranes

   SAD Form 1666c-R - Safety Checklist for Rigging

   SAD Form 1666d-R - Safety Checklist for Motor Vehicles, Trailers and Trucks

   SAD Form 1666e-R - Safety Checklist for Crawler Tractors and Dozers

   SAD Form 1666f-R - Safety Checklist for Scrapers, Motor Graders, and Other Mobile Equipment

   SAD Form 1666g-R - Safety Checklist for Material Hoists

   SAD Form 1666h-R - Safety Checklist for Earth Drilling Equipment

   ENG Form 4025 - Transmittal of Shop Drawings, Equipment Data, Material Samples, or Manufacturer's Certificates of Compliance

   DA Form 5418-R - Cost Estimate Analysis

   DD Form 1354 - Transfer and Acceptance of Military Real Property

   Standard Form LLL-A - Disclosure of Lobbying Activities

   FB Form 1605 - Directorate of Engineering and Housing Excavation Permits

Landfill Permit Application

Real Property Inventory

-- - --

General Decision Number NC020032

General Decision Number **NC020032**
Superseded General Decision No. NC010032
State: **North Carolina**
Construction Type:
BUILDING
County(ies):
CUMBERLAND
BUILDING CONSTRUCTION PROJECTS (does not include residential construction consisting of single family homes and apartments up to and including 4 stories).

Modification Number	Publication Date
0	03/01/2002

COUNTY(ies):
CUMBERLAND
SUNC1027A 10/24/1994

	Rates	Fringes
BRICKLAYERS/BLOCKLAYERS	12.50	
CARPENTERS (Including drywall hanging, acoustical tile installation and batt insulation	9.08	
CEMENT MASONS/CONCRETE FINISHERS	8.43	
ELECTRICIANS	9.71	
GLAZIERS	8.77	
HVAC MECHANIC (HVAC pipe only)	9.26	
INSULATORS (pipe)	10.42	.63
IRONWORKERS, STRUCTURAL	10.76	
LABORERS:		
Unskilled	6.23	
PAINTERS (Brush)	7.90	.04
PLUMBERS	10.28	
ROOFERS	6.75	
SHEET METAL WORKERS (Including HVAC Duct Work)	9.36	
SOFT FLOOR LAYERS/CARPET LAYERS	12.00	
TRUCK DRIVERS	7.10	

WELDERS - receive rate prescribed for craft performing operation to which welding is incidential.

Unlisted classifications needed for work not included within the scope of the classifications listed may be added after award only as provided in the labor standards contract clauses (29 CFR 5.5(a)(1)(v)).

In the listing above, the "SU" designation means that rates listed under that identifier do not reflect collectively bargained wage and fringe benefit rates. Other designations indicate unions whose rates have been determined to be prevailing.

WAGE DETERMINATION APPEALS PROCESS

1.) Has there been an initial decision in the matter? This can be:
* an existing published wage determination

* a survey underlying a wage determination
* a Wage and Hour Division letter setting forth a position on a wage determination matter
* a conformance (additional classification and rate) ruling

On survey related matters, initial contact, including requests for summaries of surveys, should be with the Wage and Hour Regional Office for the area in which the survey was conducted because those Regional Offices have responsibility for the Davis-Bacon survey program. If the response from this initial contact is not satisfactory, then the process described in 2.) and 3.) should be followed.

With regard to any other matter not yet ripe for the formal process described here, initial contact should be with the Branch of Construction Wage Determinations. Write to:

Branch of Construction Wage Determinations
Wage and Hour Division
U. S. Department of Labor
200 Constitution Avenue, N. W.
Washington, D. C. 20210

2.) If the answer to the question in 1.) is yes, then an interested party (those affected by the action) can request review and reconsideration from the Wage and Hour Administrator (See 29 CFR Part 1.8 and 29 CFR Part 7). Write to:

Wage and Hour Administrator
U.S. Department of Labor
200 Constitution Avenue, N. W.
Washington, D. C. 20210

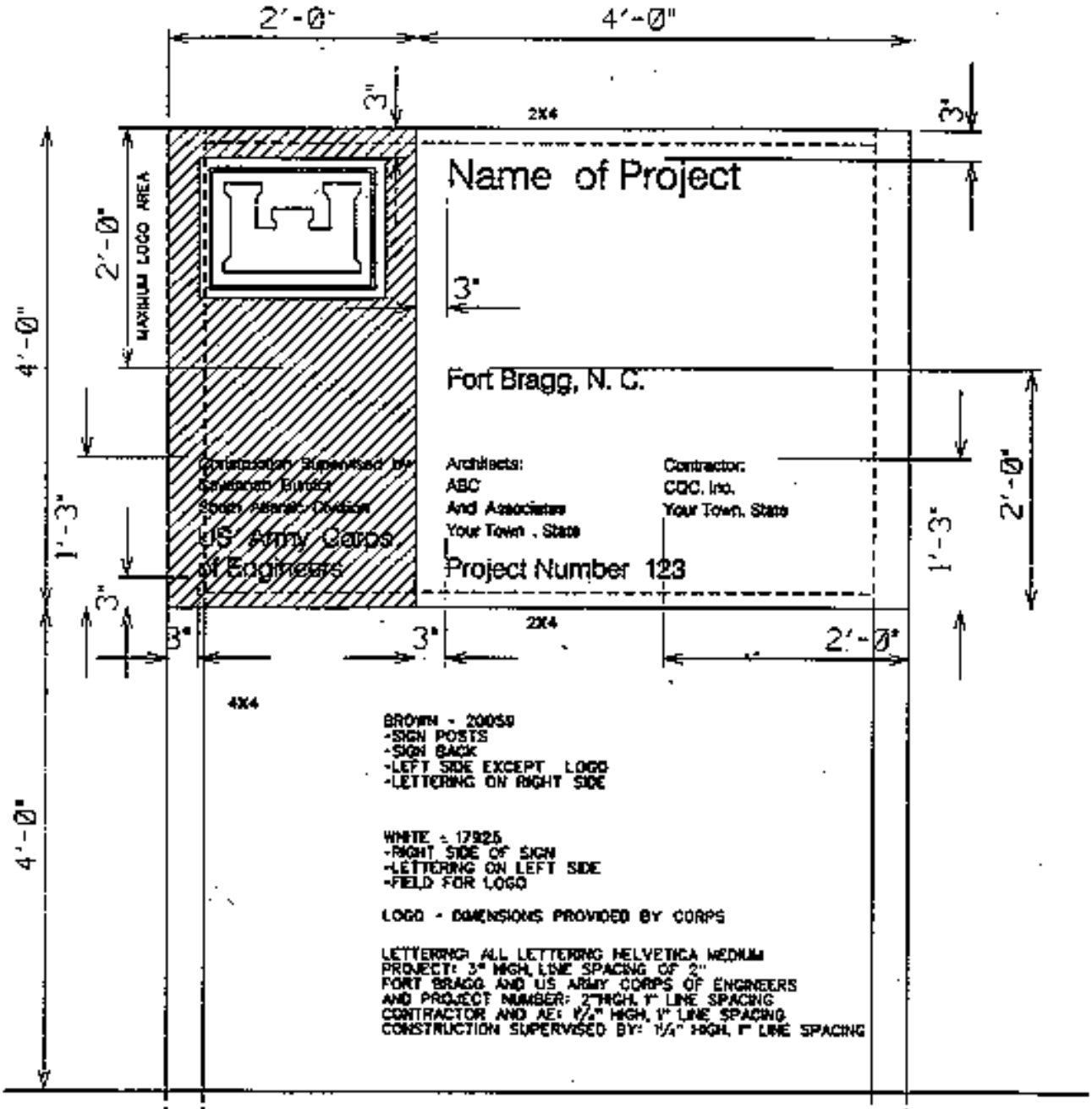
The request should be accompanied by a full statement of the interested party's position and by any information (wage payment data, project description, area practice material, etc.) that the requestor considers relevant to the issue.

3.) If the decision of the Administrator is not favorable, an interested party may appeal directly to the Administrative Review Board (formerly the Wage Appeals Board). Write to:

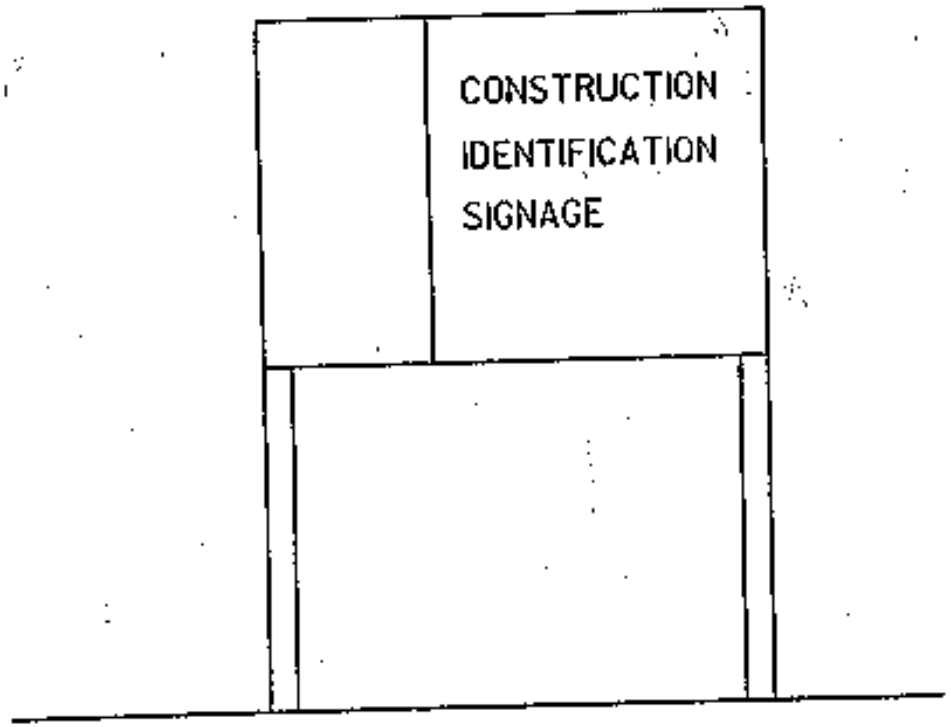
Administrative Review Board
U. S. Department of Labor
200 Constitution Avenue, N. W.
Washington, D. C. 20210

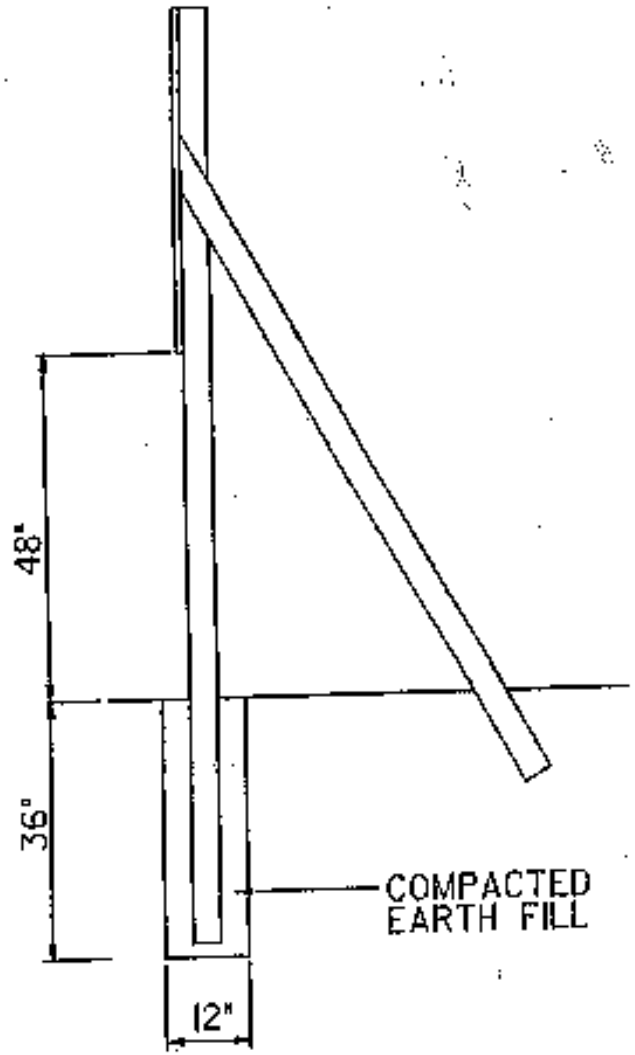
4.) All decisions by the Administrative Review Board are final.

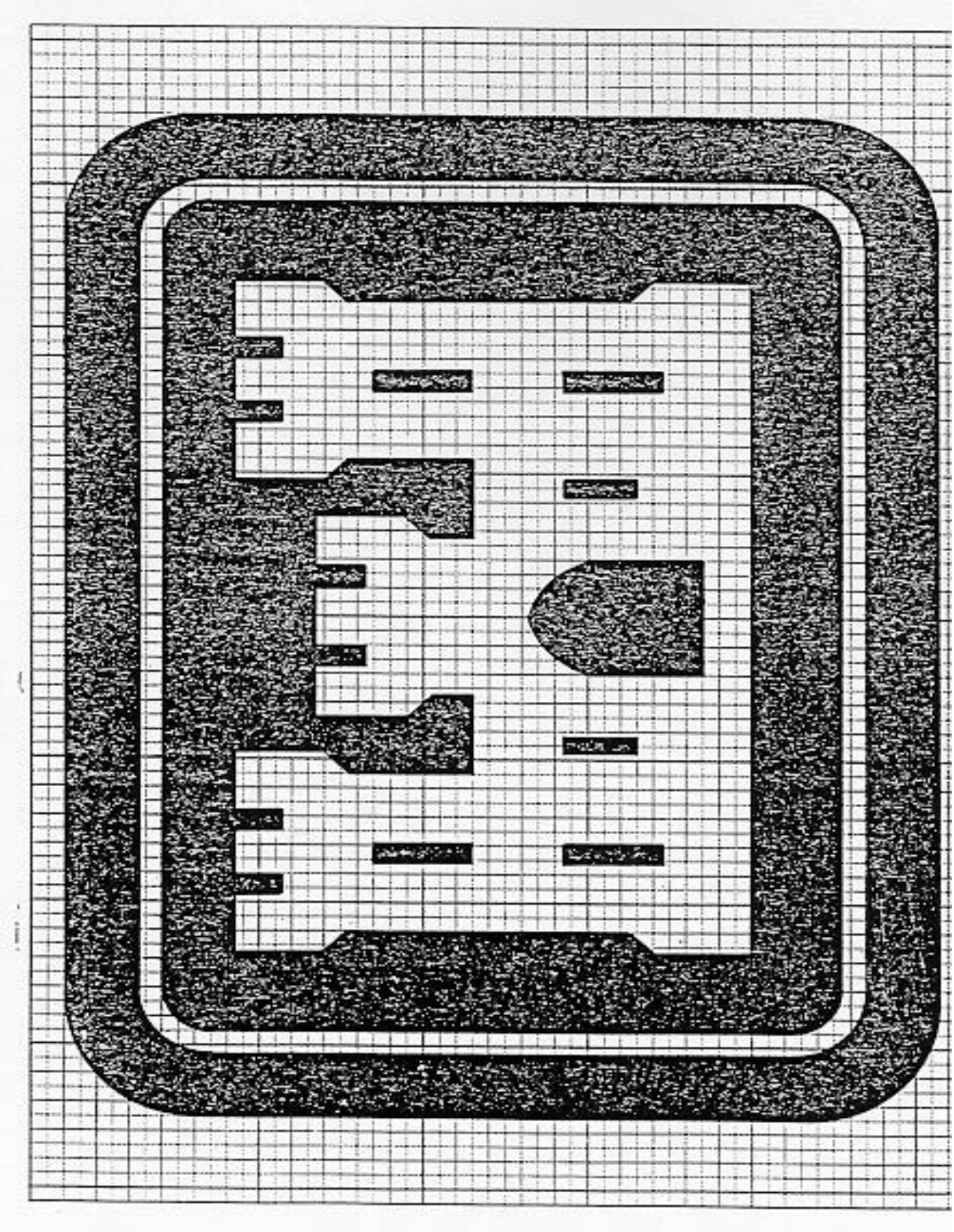
END OF GENERAL DECISION



PROJECT SIGN FOR SAVANNAH MANAGED DESIGNS


CONSTRUCTION
IDENTIFICATION
SIGNAGE


48"
36"
12"
COMPACTED
EARTH FILL



CORPS OF ENGINEERS LOGO
HALF SIZE

Last revised 9 May 97

FORMAT
(Ref. FAR 52.236-13 and EM 385-1-1 dated 3 Sep 96)
ACCIDENT PREVENTION PLAN

MINIMUM BASIC OUTLINE FOR ACCIDENT PREVENTION PLAN

An accident prevention plan is, in essence, a safety and health policy and program document. The following areas are typically addressed in an accident prevention plan, but a plan shall be job specific and shall also address any unusual or unique aspects of the project or activity for which it is written. The accident prevention plan shall interface with the employer's overall safety and health program. Any portions of the overall safety and health program that are referenced in the accident prevention plan shall be included as appropriate.

1. SIGNATURE SHEET. Title, signature, and phone number of the following:

a. Plan preparer (corporate safety staff person, QC);

b. Plan approval, e.g., owner, company president, regional vice president (HTRW activities require approval of a Certified Industrial Hygienist (or qualified Industrial Hygiene personnel for in-house USACE activities; a Certified Safety Professional (or qualified USACE safety personnel for in-house work) may approve the plan for operations involving UST removal where contaminants are known to be petroleum, oils, or lubricants);

c. Plan concurrence (provide concurrence of other applicable corporate and project personnel (contractor)), e.g., Corporate Chief of Operations, Corporate Chief of Safety, Corporate Industrial Hygienist, project manager or superintendent, project safety professional, project QC. The plan will be developed by qualified personnel (plan preparer) and will be signed by a competent person (plan concurrence) and a representative of the prime contractor's project management team (plan approval).

2. BACKGROUND INFORMATION. List the following:

a. Contractor;

b. Contract number;

c. Project name;

d. Brief project description, description of work to be performed, and location (map);

e. Contractor accident experience (provide information such as EMR, OSHA 200 Forms, corporate safety trend analyses);

f. Listing of phases of work and hazardous activities requiring activity hazards analyses.

3. STATEMENT OF SAFETY AND HEALTH POLICY. (In addition to the corporate policy statement, a copy of the corporate safety program may provide a

significant portion of the information required by the accident prevention plan.)

4. RESPONSIBILITIES AND LINES OF AUTHORITIES.

a. Identification and accountability of personnel responsible for safety - at both corporate and project level (contracts specifically requiring safety or industrial hygiene personnel should include a copy of their resume - the District Safety and Occupational Health Office will review the qualifications for acceptance). For items in EM 385-1-1 which require the use of a competent person or a qualified person, the contractor is to maintain documentation demonstrating the competence or qualification of that individual.

b. Lines of authority

5. SUBCONTRACTORS AND SUPPLIERS. Provide the following:

a. Identification of subcontractors and suppliers (if known);

b. Means for controlling and coordinating subcontractors and suppliers;

c. Safety responsibilities of subcontractors and suppliers.

6. TRAINING.

a. List subjects to be discussed with employees in safety indoctrination.

b. List mandatory training and certifications which are applicable to this project (e. g., explosive actuated tools, confined space entry, crane operator, diver, vehicle operator, HAZWOPER training and certification, personal protective equipment) and any requirements for periodic retraining/recertification.

c. Identify requirements for emergency response training.

d. Outline requirements (who attends, when given, who will conduct etc.) for supervisory and employee safety meetings.

e. Identify location at the project site where the records will be maintained.

7. SAFETY AND HEALTH INSPECTIONS. Provide details on:

a. Who will conduct safety inspections (e.g., project manager, safety professional, QC, supervisors, employees, etc.), when inspections will be conducted, how the inspections will be recorded, deficiency tracking system, follow-up procedures, etc;

b. Any external inspections/certifications which may be required (e.g., Coast Guard).

8. SAFETY AND HEALTH EXPECTATIONS, INCENTIVE PROGRAMS, AND COMPLIANCE.

a. The company's written safety program goals, objectives, and accident experience goals for this contract should be provided.

b. A brief description of the company's safety incentive programs (if any) should be provided.

c. Policies and procedures regarding noncompliance with safety requirements (to include disciplinary actions for violation of safety requirements) should be identified.

d. Provide written company procedures for holding managers and supervisors accountable for safety.

9. ACCIDENT REPORTING. The contractor shall identify who shall complete the following, how, and when:

a. Exposure data (man-hours worked);

b. Accident investigations, reports and logs;

c. Immediate notification of major accidents.

10. MEDICAL SUPPORT. Outline on-site medical support and off-site medical arrangements.

11. PERSONAL PROTECTIVE EQUIPMENT. Outline procedures (who, when, how) for conducting hazard assessments and written certifications for use of personal protective equipment.

12. PLANS (PROGRAMS, PROCEDURES) REQUIRED BY THE SAFETY MANUAL (as applicable).

a. Hazard communication program (01.B.04);

b. Emergency response plans:
- procedures and tests (01.E.01)
- spill plans (01.E.01, 06.A.02)
- fire fighting plan (01.E.01, 19.A.04)
- posting of emergency telephone numbers (01.E.04)
- wildfire prevention plan (09.K.01)
- man overboard/abandon ship (19.A.04)

c. Layout plans (04.A.01);

d. Respiratory protection plan (05.E.01);

e. Health hazard control program (06.A.02);

f. Lead abatement plan (06.B.05 & specifications);

g. Asbestos abatement plan (06.B.05 & specifications);

h. Abrasive blasting (06.H.01);

i. Confined space (06.1);

j. Hazardous energy control plan (12.A.07);

k. Critical lift procedures (16.C.17);

l. Contingency plan for severe weather (19.A.03);

m. Access and haul road plan (22.1.10);

n. Demolition plan (engineering and asbestos surveys) (23.A.01);

o. Emergency rescue (tunneling) (26.A.05);

p. Underground construction fire prevention and protection plan (26.D.01);

q. Compressed air plan (26.1.01);

r. Formwork and shoring erection and removal plans (27.B.02);

s. Lift slab plans (27.D.01);

t. SHP and SSHP (for HTRW work an SSHP must be submitted and shall contain all information required by the accident prevention plan - two documents are not required (28.B.01);

u. Blasting plan (29.A.01);

v. Diving plan (30.A.13);

w. Plan for prevention of alcohol and drug abuse (Defense Federal Acquisition Regulation Supplement Subpart 252.223-7004, Drug-Free Work Force).

13. The Contractor shall provide information on how they will meet the requirements of major sections of EM 385-1-1 in the accident prevention plan. Particular attention shall be paid to excavations, scaffolding, medical and first aid requirements, sanitation, personal protective equipment, fire prevention, machinery and mechanized equipment, electrical safety, public safety requirements, and chemical, physical agent, and biological occupational exposure prevention requirements. Detailed site-specific hazards and controls shall be provided in the activity hazard analysis for each phase of the operation. Site-specific hazards are those hazards which would be reasonably be anticipated to occur on the construction site of concern and will be identified through analysis of the activities to be performed. The controls are measures which will be implemented by the contractor to eliminate or reduce each hazard to an acceptable level.

F O R M A T

CONTRACTOR'S NAME
(Address)

CONSTRUCTION QUALITY CONTROL REPORT

Date: _____ Report No. _____

Contract No.: _____

Description and Location of Work: _____

WEATHER: (Clear)(P. Cloudy)(Cloudy); Temperature:___Min,___Max;
Rainfall ___Inches

Contractor/Subcontractors and Area of Responsibility
a._____
b._____
c._____
d._____
e._____
f._____
g._____
h._____

1. Work Performed Today:

(Indicate location and description of work performed. Refer to work performed by prime and/or subcontractors by letter in table above.)

_____

2. Results of Control Activities:

(Indicate whether: P-Preparatory, I-Initial, or F-Followup and include satisfactory work completed or deficiencies with action to be taken.)

_____

3. Test Required by Plans and/or Specifications Performed and Results of Tests:

_____

4. Monitoring of Materials and Equipment:

---

5. Offsite Surveillance Activities:

---

6. Job Safety:

(Daily comment required.)

---

7. Remarks:

a. (Cover any conflicts in plans, specifications or instructions.)

b. (Action taken in review of submittal.)

c. (Verbal instructions received.)

_____
Inspector

CONTRACTOR'S VERIFICATION:

The above report is complete and correct and all material and equipment used and work performed during this reporting period are in compliance with the contract plans and specifications except as noted above.

_____
Contractor's Approved
Authorized Representative

SAMPLE

SMALL AND DISADVANTAGED BUSINESS SUBCONTRACTING PLAN

BETTER BUILDERS, INC.

DATE: February 11, 2003

SOLICITATION NO. DACA21-0X-X-XXXX

TITLE: Barracks Complex, Fort Swampy, Georgia

Type of Work: Design and Construction

In accordance with applicable contract clauses of the solicitation noted above, Better Builders, Inc. submits the following Small Business Subcontracting Plan (includes small, veteran-owned small business, service-disabled veteran-owned small business, HUBZone small business, small disadvantaged business, and women-owned small business concerns).

It is company policy to follow all public laws including P.L. 99-661, Section 1207, P.L. 100-180, Section 806, P.L. 105-135 and P.L. 106-50. We have informed all purchasers to follow these laws in hiring subcontractors and buying materials.

1. The following goals (expressed in terms of percentages of the total dollars available for subcontract/purchase order award) would be applicable to a contract awarded under the cited solicitation. You must also provide the dollar amounts for each of the goals listed below.

    a. Total Proposed Contract Amount: $26,961,000

    b. Total amount available for Subcontract award: $18,300,000

    c. Large Business: $7,832,400 – 42.8%

    d. Total amount to be subcontracted to all small business: $10,467,600 - 57.2%

    e. Small Disadvantaged Business: $1,628,700 – 8.9%

    f. Women-Owned Small Business: $1,482,300 – 8.1%

    g. Service-Disabled Veteran-Owned Small Business: $549,000 - 3%

    h. HUBZone Small Business: $549,000 – 3%

i. There are no options in this solicitation. ***(NOTE: If there are options in the solicitation you must provide the same information as listed in paragraph 1 a-h for each option year/period.)***

j. Indirect and overhead costs have not been included in the goals specified in this section for amounts available for subcontract/purchase order award.

k. Consideration was given to HCBU/MI's but no opportunities were found to be included in the small disadvantaged business goals.

NOTE: While Savannah District does not have a specific goal for subcontracting with Veteran-Owned small business, it must be addressed in any subcontracting plan. However, FAR 52.219-9 requires a goal in your subcontracting plan for Veteran-Owned small business concerns.

2. The following principal products and/or services will be subcontracted under this contract, and the distribution among all small business concerns are as follows:

Large Business - Earthwork
Small Business - Windows and Storm Doors, Recreation, Site Utilities Plumbing
Veteran Owned Small Business – Materials, Equipment
Service Disabled Veteran Owned Small Business – Asphalt, Electrical, Doors
HUBZone Small Business - Window Treatment, HVAC, Concrete
Small Disadvantaged Business - Vinyl Siding, Insulation, Gutters
Women Owned Small Business – Carpentry, Ceramic Tile, Fencing

NOTE: Company names should be provided for each product and/or service listed.

The following method was used in developing our subcontracting goals: (1) all areas of potential subcontract work were determined to be available for subcontract award to all types of small business concerns, and (2) will be actively recruited for participation through the many sources described hereinafter.

3. The following individual will administer this Subcontract Plan on behalf of Better Builders, Inc.:

Name: Freddie Better Title: Executive Vice President

Address and Telephone Number: 4845 Tonka Drive
Fair Haven, CT 27413
800-621-4845

The individual's specific duties with regard to the conduct of our firm's Subcontracting Plan will include, but will not be limited to the following:

a. Developing and maintaining bidders lists of all types of small business concerns using sources such as the Pronet System developed by the Small Business Administration, the Minority Business Development Agency of the U.S. Department of Commerce, Local Minority Business Development Centers and Minority Contractor Associations, and the General Business Services Center in the project's Standard Metropolitan Statistical Area.

b. Assuring the inclusion of all types of small business concerns in all solicitations for products or services which they are capable of providing; and ensuring that all solicitations are structured to permit the maximum possible participation by all types of small business concerns.

c. Establishing and maintaining records of all solicitations and subcontract awards to all types of small business concerns to ensure that the members of the firm who review bidders proposals document their reasons for selecting or not selecting a bid.

d. Preparing and submitting the Subcontracting Report for Individual Contracts (SF 294) and the Summary Subcontract Report (SF 295) in accordance with the instructions provided on the forms, and coordinating and preparing for all compliance reviews by Federal agencies.

e. Conducting or arranging for all other activities necessary to further the intent and attainment of goals of the Plan to include motivational training of the firm's purchasing personnel attendance at workshop, seminars and trade fairs conducted by or on behalf of all types of small business concerns, and general cooperation with members of these concerns or their representatives.

4. The following steps will be taken to ensure that all types of small business concerns receive notice and have an equitable opportunity to compete for intended awards of subcontracts and/or purchase orders for the products and/or services described in paragraph 2 above:

a. Sources will be requested through the SBA's ProNet system, business development organizations, small business trade associations and at small business procurement conferences; sources will be contacted and bidding materials will be provided to all respond ing parties with interest.

b. Internally, motivational training will be conducted to guide and encourage purchasing personnel; source lists and guides to all types of small business concerns will be maintained and utilized by purchasing personnel while soliciting subcontracts and purchase orders; activities will be monitored to ensure sufficient time is allowed for interested bidders to prepare their bids and to evaluate continuing compliance with this Subcontracting Plan.

5. Better Builders, Inc. agrees that the clause entitled "Utilization of Small Business Concerns" will be included in all subcontracts which offer further subcontracting opportunities. All subcontractors, except small business concerns, who receive subcontracts in excess of $500,000 ($1,000,000 in the case of construction) will be required to adopt and comply with a subcontracting plan similar to this one. Such plans will be reviewed to assure that all minimum requirements of an acceptable subcontracting plan have been satisfied.

The acceptability of goals shall be determined on a case-by-case basis depending on the supplies/services involved, the availability of all potential small business and prior experience. Once approved and implemented, plans will be monitored through the submission of periodic reports or, as time and availability of funds permit, periodic visits to subcontractor's facilities to review applicable records and subcontracting program progress.

6. Better Builders, Inc. agrees to submit such periodic reports and cooperate in any studies or surveys as may be required by the Contracting agency or the Small Business Administration in order to determine the extent of compliance by the offeror with the subcontracting plan and with the clause entitled "Utilization of Small Business Concerns" contained in the solicitation.

7. Better Builders, Inc. agrees to maintain at least the following types of records to document compliance with this Subcontracting Plan:

a. The names of all organizations, agencies, and associations contacted for all small business sources, along with records of attendance at conferences, seminars and trade fairs where additional sources were developed.

b. Source lists, guides, and other data identifying all types of small business concerns

c. Records on all subcontract solicitations, on a contract-by-contract basis, indicating (1) whether all types of small business concerns were solicited, and if not, why not; and (2) the reasons for the failure of all solicited small businesses to receive a subcontract award.

d. Records of all subcontract award data, to include subcontractor's name and address, to be kept on a contract-by-contract basis.

e. Minutes of internal motivational and training meetings held for the guidance and encouragement of purchasing personnel, and records of all monitoring activities performed for compliance evaluation.

f. Copies of SF 294 and SF 295 showing date and place of filing and copies of all other reports or results of reviews conducted by the contracting agency or other interested agencies of the Federal government to monitor our compliance with this Subcontracting Plan.

In closing Better Builders, Inc. states that it will be the policy of Better Builders, Inc. to afford every practicable opportunity to all types of small business concerns to participate in construction contracts awarded to Better Builders, Inc. by the Federal Government to ensure that equitable opportunity is provided to all types of small business concerns to compete for award of subcontracts and purchase orders, and to diligently pursue the achievement of our goals by participation of all types of small business concerns in the dollars available for subcontract/purchase order award under the solicitation.

BY_____ DATE _____

_____
Signature

_____
Title, and Company Name

_____ DATE _____
Contract Specialist

Approval Recommended

_____ DATE _____
SADBU

Approve/Disapprove

_____ DATE _____
Contracting Officer

Approve/Disapprove

_____ DATE _____
Procurement Center Representative
Small Business Administration

WEEKLY TEMPORARY ELECTRICAL INSPECTION

Week ending _____

Contract No. _____

Contract Description _____

The following items were inspected in accordance with requirements in National Electrical Code and Corps of Engineers Safety and Health Requirements Manual, EM 385-1-1.

1. Wire (size, type, condition).

2. Systems and devices (polarity, continuity of ground, resistance to ground).

3. Resistance of ground rods (25 OHMS) measured and recorded.

4. Check GFI for 15/20 amp 120 volt circuits.

5. Plugs and receptacles (type, NEMA rating).

6. Circuit breakers and disconnect (size, type, weatherproof).

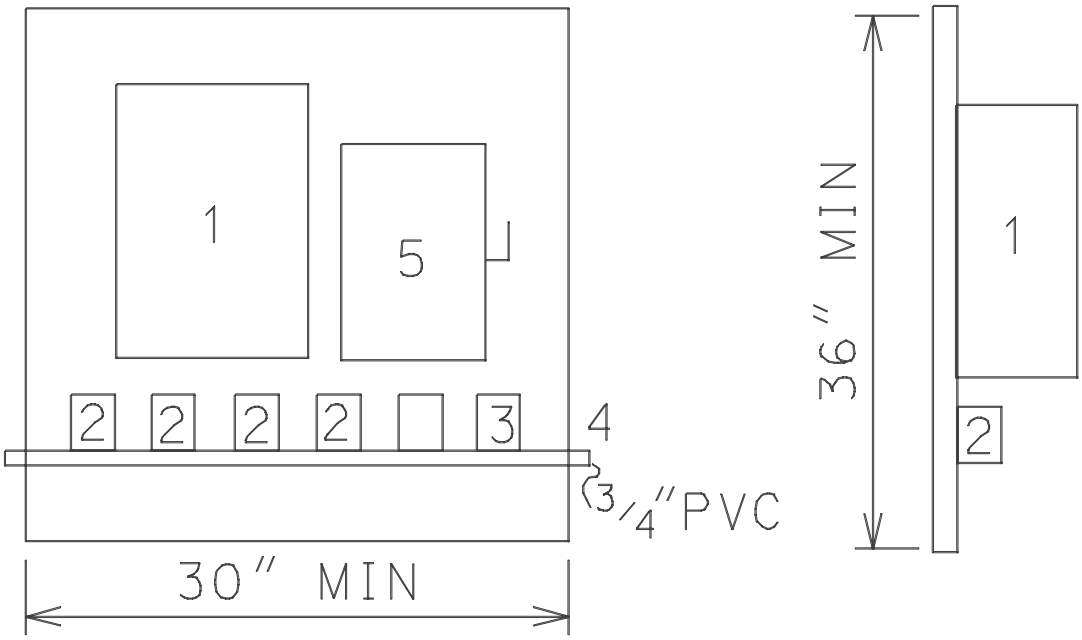
7. Extension cords (type, UL listed, insulation condition, splices, location).

8. Open wiring on insulators, nonmetallic sheathed cable, outside clearance (600 volts or less), Festoon lighting (as applicable).

_____

Signature Electrician/Electrical Engineer

MINIMUM STANDARD FOR TEMPORARY ELECTRICAL SERVICE



(DIMENSIONS ARE APPROXIMATE)

A. The backboard for temporary service shall consist of not less than 1/2 inch plywood of exterior grade.

B. Numbers above correspond to the item below:

Item 1 - NEMA 3R circuit breaker type panelboard. This panelboard shall consist of 1 two-pole 60 amp main circuit breaker, 4* one pole 20 AMP branch circuit breakers, and 1* two pole 20 AMP branch circuit breaker. Breakers shall meet Federal Specifications Standards for Class 1A breakers and shall be plug-in type. (*Number of breakers to be adjusted to suit the job requirements.)

Item 2 - Duplex grounding type convenience outlets in standard utility type outlet boxes with covers, meeting the NEC and NEMA requirements for wet locations. Connections to the branch circuit breakers shall be grounded by two conductors #12 NMC cable.

Item 3 – (Optional) A single three-conductor grounding type outlet rated for 250 volt service meeting the NEC and NEMA requirements for wet locations. Connections from this outlet to the two pole breaker shall be by two conductor grounded type NMC cable.

Item 4 - 3/4 inch PVC. This shall be used to support extension cords.

Item 5 – NEMA 3R service disconnect safety switch – 60 amp minimum.

C. The panelboard shall be grounded by #6 copper wire connected to a 3/4 inch by 10-foot long ground rod.

D. Service to the panel shall consist of three copper conductor #6 minimum service entrance cable. This cable may enter the top or side of the panelboard.

E. Periodic inspections of systems and devices will be made by the Contractor at intervals not to exceed 1 week, and a report will be submitted indicating the results.

F. All receptacle outlets that provide temporary electrical power during construction, remodeling, maintenance, repair, or demolition shall have ground-fault circuit-interrupter (CFCI) protection for personnel. GFCI protection shall be provided on all circuits serving portable electric hand tools or semi-portable electric power tools (such as block/brick saws, table saws, air compressors, welding machines, and drill presses). See EM 385-1-1 for exceptions.

G. Per EM 385-1-1 all temporary power distribution systems shall be submitted to the field office before installation.

ACTIVITY HAZARD ANALYSIS

1. Phase of Construction		
2. Location	3. Contract No.	4. Project
5. Prime Contractor	6. Date of Preparatory	7. Estimated Start Date
Potential Safety Hazard	Procedure to Control Hazard	
8. Contractor's Representative (signature)	9.	

SAS Form 9
1 Jan 82

SAFETY CHECKLIST FOR CRAWLER, TRUCK & WHEEL MOUNTED CRANES

Contract # and title:	
Equipment name & number: owned or leased?	
Contractor:	Subcontractor:
Contract Inspector:	Date inspected:

	Yes	No	N/A
1. Unless the manufacture has specified an on-rubber rating, outriggers will be fully extended and down? (16.D.10)			
2. Are lattice boom cranes equipped with a boom angle indicator, load indicating device, or a load moment indicator? (16.D.01)			
3. Are lattice boom and hydraulic cranes equipped with a means for the operator to visually determine levelness? (16.D.02)			
4. Are lattice boom and hydraulic cranes, except articulating booms cranes, equipped with drum rotation indicators located for use for the operator? (16.D.03)			
5. Are lattice boom and hydraulic mobile cranes equipped with a boom angle or radius indicator within the operator’s view? (16.D.04)			
6. Are lattice boom cranes, with exception of duty cycle cranes, equipped with an anti-two blocking device? (16.D.05)			
7. When duty cycle machines are required to make a non-duty lift, is the crane equipped with an international orange warning device and is a signal person present? (16.D 05)			
8. Are the following with the crane at all times: (16.C.02) a. the manufacturer’s operating manual? b. the load rating chart? c. the crane’s log book documenting use, maintenance, inspections and tests? d. operating manual for crane operator aids used on the crane.			

	Yes	No	N/A
9. Are the following on the project site: a. completed periodic inspection report prior to initial work? (16.C.12) b. pre-operational checklist used for daily inspection? (16.C.12) c. written reports of the operational performance test? (16.C.13) d. written reports of the load performance test? (16.C.13)			
10. Are all operators physically qualified to perform work? (16.C.05)			
11. Are all operators qualified by written and practical exam or by appropriate licensing agency for the type crane they are to operate? (16.C.05)			
12. Is the crane designed and constructed IAW the standards listed in Table 16-1? (16.C.06)			
13. Is a hazard analysis for set-up and set-down available? (16.C.08)			
14. Are accessible areas within the swing radius of the rear of the crane barricaded? (16.C.09)			
15. Are there at least 3 wraps of cable on the drum? (16.C.10)			
16. Are the hoisting ropes installed IAW the manufacturer’s recommendations? (16.C.10)			
17. Are critical lift plans available? (16.C.18)			
18. Are minimum clearance distance for high voltage lines posted at the operator’s position? (11.E.04)			
19. Do older lattice boom cranes with anti-two block warning devices in lieu of anti-two block prevention devices have a written exemption? (16.D.05)			
20. Is the slow moving emblem used on all vehicles which by design move at 25 MPH or less on public roads? (08.A.04)			
21. Are all vehicles which will be parked or moving slower than normal traffic on haul roads equipped with a yellow flashing light or flasher visible from all directions? (16.A.13)			

	Yes	No	N/A
22. Is all equipment to be operated on public roads provided with: (16A.07) a. headlights? b. brake lights? c. taillights? d. back-up lights? e. front and rear turn signals?			
23. Are seat and seat belts provided for the operator and each rider on equipment? (16.A.07 and 16.B.08)			
24. Is all equipment with windshields equipped with powered wipers and defogging or defrosting devices? (16.A.07)			
25. Is the glass in the windshield or other windows clear and unbroken to provide adequate protection and visiblity for the operator? (16.A.07, 16.B.10)			
26. Is all equipment equipped with adequate service brake system and emergency brake system? (16.A.18)			
27. Are areas on equipment where employees walk or climb equipped with platforms, footwalks, steps, handholds, guardrails, toeboards and non-slip surfaces? (16.B.03)			
28. Is all self propelled equipment equipped with automatic, audible, reverse signal alarms? (16.B.01)			
29. Is there a record of manufacturer’s approval of any modification of equipment which affects its capacity or safe operation? (16.A.18)			
30. Are truck and crawler cranes attached to a barge or pontoon by a slack tiedown system? (16.F.06)			
31. Have the following conditions been met for land cranes mounted on barges or pontoons: (16.F.04) a. Have load ratings been modified to reflect the increased loading from list, trim, wave, and wind action? b. Are all deck surfaces above the water? c. Is the entire bottom area of the barge or pontoon submerged? d. Are tie downs available? e. Are cranes blocked and secured?			
32. Are all belts, gears, shafts, spindles, drums, flywheels, or other rotating parts of equipment guarded where is a potential for exposure to workers? (16.B.03)			

	Yes	No	N/A
33. Is the area where the crane is to work level, firm and secured? (16.A.10)			
34. Is a dry chemical or carbon dioxide fire extinguisher rated at least 5-B:C on the crane? (16.A.26)			
35. Are trucks, for truck mounted cranes, equipped with a working reverse signal alarm? (16.B.01)			
36. Is a signal person provided where there is danger from swinging loads, buckets, booms, etc.? (16.B.13)			
37. Is there adequate clearance from overhead structures and electrical sources for the crane to be operated safely? (16.C.09)			
38. Is there adequate lighting for night operations? (16.C.19)			
39. Has the the boom stop test on cable-supported booms been performed? (16.D.06)			
40. Is the boom disenaging device functioning as required? (16.D.06)			
41. Has all rigging and wire rope been inspected? (Section 15)			
Remarks:(Enter actions taken for all “no” answers.)			
Contractor inspector signature			
Contractor QC/safety officer/project manager signature			

SAFETY CHECKLIST FOR PORTAL, TOWER, AND PILLAR CRANES

Contract # and Title:			
Equipment name & number: owned or leased?			
Contractor:	Subcontractor:		
Contract Inspector:	Date Inspected:		
	Yes	No	N/A
1. Are the following available: (16.E.02) a. written erection instructions? b. listing of the weight of each component? c. an activity hazard analysis for the erection? d. does the activity hazard analysis contain (1.) location of crane and adjacent structures? (2.) foundation design and construction requirements? (3.) clearance and bracing requirements?			
2. Is there a boom angle indicator within the operator's view? (16.E.04)			
3. Are luffing jib cranes equipped with: (16.E.05) a. shock absorbing jib stops? b. jib hoist limit switch? c. jib angle indicator visible to operator?			
4. If used, do rail clamps have slack between the point of attachment to the rail and the end fastened to the crane? (16E.06)			
5. Are the following with the crane at all times: (16.C.02) a. the manufacturer's operating manual? b. the load rating chart? c. the crane's log book documenting use, maintenance, inspections and tests? d. the operating manual for crane operational aids used on the crane?			

	Yes	No	N/A
6. Are the following on the project site: a. completed periodic inspection report prior to initial work? (16.C.12) b. pre-operational checklist used for daily inspections? (16.C.12) c. written reports of the operational performance tests? (16.C.13) d. written reports of the load performance tests? (16.C.13)			
7. Is every crane operator certified by a physician to be physically qualified to perform work? (16.C.05)			
8. Are all operators qualified by written and practical exam or by appropriate licensing agency for the type crane they are to operate? (16.C.05)			
9. Is the crane designed and constructed IAW the standards listed in Table 16-1? (16.C.05)			
10. Is a hazard analysis for set-up and set-down available? (16.C.08)			
11. Are there at least 3 wraps of cable on the drum? (16.C.10)			
12. Are the hoisting ropes installed IAW the manufacturer’s recommendations? (16.C.10)			
13. Is the a record of manufacturer’s approval of any modification of equipment which affects its capacity or safe operation? (16.A.07)			
5. Remarks: (Enter actions taken)			
Contractor inspector signature			
Contractor QC/safety officer/project manager signature			

SAFETY CHECKLIST FOR RIGGING

Contract # and title:			
Equipment name & number: owned or leased?			
Contractor	Subcontractor:		
Contractor inspector:	Date inspected:		
	Yes	No	N/A
1. Has all defective rigging been removed? (15.A.01)			
2. Is rigging stored properly? (15.A.01)			
3. Are running lines within 6.5’ of the ground or working level guarded? (15.A.03)			
4. Are all eye splices made in an approved manner with rope thimbles? (sling eyes excepted) (15.A.04)			
5. Are positive latching devices used to secure loads? (15.A.05)			
6. Are all custom lifting accessories marked to indicate their safe working loads? (15A.07)			
7. Are all custom designed lifting accessories proof-tested to 125% of their rated load? (15.A.07)			
8. Are the following conditions met for wire rope: (15.B.01-09) a. Are they free of rust or broken wires? b. Are defective ropes cut up or marked as unusable? c. Do rope clips attached with U-bolts have the U-bolts on the dead end or short end of the rope? d. Are protruding ends of strands in splices on slings and bridles covered or blunted? e. Except for eye splices in the end of wires and for all endless wire rope slings, are all wire ropes used in hoisting, lowering, or pulling loads one continuous piece, free of knots or splices?			

	Yes	No	N/A
f. Do all eye splices have at least 5 full tucks? g. If used, are wedge sockets fastening attached without attached the dead end of the wire rope to the live rope? h. Are they free of eyes or splices formed by wire rope clips or knots?			
9. Are the following conditions met for chain? (15.C.01-04) a. Are all chains alloyed? b. Do all coupling links or other attachments have rated capacities at least equal to that of the chain. c. Are makeshift fasteners restricted from use?			
10. Are the following conditions met for fiber rope:(15.D.01-07) a. Are all ropes protected from freezing, excessive heat or corrosive materials? b. Are all ropes protected from abrasion? c. Are splices made IAW manufacture's recommendations? d. Do all eye splices in manila rope contain at least 3 full tucks and do all short splices contain at least 6 full tucks(3 on each side of the centerline of the splice)? e. Do all splices in layed synthetic fiber rope contain at least 4 full tucks and do short splices contain at least 8 full tucks (4 on each side of the centerline of the splice)? f. Do the tails of fiber rope splices extend at least 6 rope diameters (for rope 1" diameter or greater) past the last full tuck? g. Are all eye splices large enough to provide an included angle of not greater than 60* at the splice when the eye is placed over the load or support?			
11. Are the following conditions met for all slings:(15.E.01-06) a. Is protection provided between the sling and sharp surfaces? b. Do all rope slings have minimum clear length of 40 times the diameter of component ropes between each end fitting or eye splice? c. Do all braided slings have a minimum clear length of 40 times the diameter of component ropes between each end fitting or eye splice?			

	Yes	No	N/A
d. Do all welded alloy steel chain slings have affixed permanent identification stating size, grade, rated capacity and manufacturer? e. Is each synthetic web sling marked or coded to identify its manufacturer, rated capacities for each type hitch and the type material?			
12. Are drums, sheaves, and pulley smooth and free of surface defects? (15.F.01)			
13. Is the ratio of the diameter of the rigging and the drum, block sheave or pulley thread diameter such that the rigging will adjust without excessive wear, deformation, or damage? (15F.02)			
14. Have all damaged drums, sheaves and pulleys been removed from service? (15.F.04)			
15. Are all connections, fittings, fastenings, and attachments of good quality, proper size and strength, and installed IAW manufacturer's recommendations? (15.F.05)			
16. Are all shackles and hooks sized properly? (15.F.06 & .07)			
17. Are hoisting hooks rated at 10 tons or greater provided with safe handling means? (15.F.07)			
18. Do all drums have sufficient rope capacity? (15.F.08)			
19. Is the drum end of the rope anchored by a clamp securely attached to the drum in a manner approved by the manufacturer? (15.F.08)			
20. Do grooved drums have the correct groove pitch for the diameter of the rope and is the groove depth correct? (15.F.08)			
21. Do the flanges on grooved drums project beyond the last layer of rope at a distance of either 2″ or twice the diameter of the rope, whichever is greater? (15.F.08)			
22. Do the flanges on ungrooved drums project beyond the last layer of rope a distance of either 2.5″ or twice the diameter of the rope, which ever is greater.			

	Yes	No	N/A
23. Are the sheaves compatible with the size of rope used and as specified by the manufacture? (15F.09)			
24. Are sheaves properly aligned, lubricated, and in good condition? (15.F.09)			
25. When rope is subject to riding or jumping off a sheave, are sheaves equipped with cablekeepers? 915.F.09)			
26. Are eye bolts loaded in the plane of the eye and at angles less than 45* to the horizontal? (15.F.10)			
27. Remarks: (Enter actions taken for “no” answers.)			
Contractor inspector signature			
Contractor QC/safety/project manager signature			

SAFETY CHECKLIST FOR MOTOR VEHICLES , TRAILERS AND TRUCKS

Contract # and title: owned or leased?	
Equipment name & number:	
Contractor:	Subcontractor:
Contractor inspector:	Date inspected:

	Yes	No	N/A
1. Are records of safety inspections of all vehicles available? (18.A.02)			
2. Are all vehicles to be operated between sunset and sunrise equipped with: (18.A.04) a. 2 headlights? b. taillights and brake lights? c. front and back turn signals? d. 3 emergency flares, reflective markers, or equivalent portable warning devices?			
3. Are vehicles, except trailers or semi-trailers having a gross weight of 5000 lbs or less, equipped with service brakes and manually operated parking brakes? (18.A.05)			
4. Are service brakes on trailers and semitrailers controlled from the driver’s seat of the prime mover? (18A.06)			
5. Does the vehicle have: (18.A.06) a. a speedometer? b. a fuel gage? c. an audible warning device (horn)? d. a windshield & adequate windshield wiper? e. an operable defroster and defogging device? f. an adequate rearview mirror? g. a cab, cab shield, and other protection to protect the driver from the elements and falling or shifting materials? h. non-slip surfaces on steps? I. a power-operated starting device?			

	Yes	No	N/A
6. Is all the glass safety glass and is all broken or cracked glass replace? (18.A.07)			
7. Do trailers meet the following: (18A.08) a. Are all towing devices adequate for the weight drawn? b. Are all towing devices properly mounted? c. Are locking devices or a double safety system provided on every 5th wheel mechanism and tow bar arrangement to prevent accidental separation? d. Are trailers coupled with safety chains or cables to the towing vehicle? e. Are trailers equipped with the power brakes equipped with a break-away device which will lock-up the brakes in the event the trailer separates from the towing vehicle?			
8. Are all dump trucks:(18.A.10) a. equipped with a holding device to prevent accidental lowering of the body? b. equipped with a hoist lever secured to prevent accidental starting or tipping? c. equipped with means to determine (from the operator’s position) if the dump box is lowered? d. equipped with trip handles for tailgates that allow the operator to be clear?			
9. Are all buses, trucks and combination of vehicles with a carrying capacity of 1.5 tons or more, to be operated on public roads equipped with: (18.A.11) a. 3 reflective markers? b. 2 wheel chocks for each vehicle? c. at least one 2A:10B:C fire extinguisher? d. at least two properly rated fire extinguishers (for vehicles carrying flammable cargo)? e. a red flag not less than 1 foot square.			
10. Is vehicle exhaust controlled so as not to present a hazard to personnel? (18.A.13)			
11. Are all rubber tired motor vehicles equipped with fenders or with mud flaps if the vehicle is not designed for fenders? (18.A.14)			

	Yes	No	N/A
12. Are all vehicles, except buses, equipped with seat belts? (18.B.02)			
13. Does all self-propelled construction and industrial equipment have a working reverse signal alarm? (16.B.01)			
14. Are all hot surfaces of equipment, including exhaust pipes or other lines, guarded or insulated to prevent injury or fire? (16.B.03)			
15. If an off the road vehicle, is it equipped with rollover protective structures? (16.B.12)			
16. Remarks: (Enter actions taken for “no” answers)			
Contractor inspector signature			
Contractor QC/safety officer/project manager signature			

SAFETY CHECKLIST FOR CRAWLER TRACTORS AND DOZERS

Contract # and title:	
Equipment name & number: owned or leased?	
Contractor:	Subcontractor:
Contractor inspector:	Date inspected:

	Yes	No	N/A
1. Are initial and daily/shift inspection records available? (16.A.01& .02)			
2. Are only qualified operators assigned to operate mechanized equipment? (16.A.04)			
3. Are sufficient lights provided for night operations? (16.A.11)			
4. Is the unit shut down before refueling? (16.A.14)			
5. Does the unit have as a minimum a 5-B:C fire extinguisher? (16.A.26)			
6. Is there an effective, working reverse alarm? (16.B.01)			
7. Are moving parts, shafts, sprockets, belts, etc., guarded? (16.B.03 ,07, and 13)			
8. Is protections against hot surfaces, exhausts, etc., provided? (16.B.03 and .13)			
9. Are fuel tanks located in a manner to prevent spills or overflows from running onto engine exhaust or electrical equipment?			

	Yes	No	N/A
10. Are exhaust discharges directed so they do not endanger person of obstruct operator vision?(16.B.05)			
11. Are seat belts provided? (16B.08)			
12. Is protection (grills, canopies, screens) provided to shield operator from falling or flying objects? (16.B.10 and .11)			
13. Is roll over protection provided? (16.B.12)			
14. Remarks: (Enter actions taken for “no” answers)			
Contractor inspector signature			
Contractor QC/safety officer/project manager signature			

SAFETY CHECKLIST FOR SCRAPERS, MOTOR GRADERS , AND OTHER MOBILE EQUIPMENT

Contract # and title:	
Equipment name and number: owned or leased?	
Contractor:	Subcontractor:
Contractor inspector:	Date inspected:

	Yes	No	N/A
1. Are initial and daily/shift inspection records available? (16.A.01 & .02)			
2. Are only qualified operators assigned to operate equipment? (16.A.04)			
3. Are sufficient lights provided for night operations? (16.A.11)			
4. Does the unit have as a minimum a 5-B:C fire extinguisher? (16.A.26)			
5. Is there an effective working reverse alarm? (16.B.01)			
6. Is the unit shut down for refueling? (16.A.14)			
7. Are moving parts, shafts, sprockets, belts, etc., guarded? (16.B.03, .07 and .13)			
8. Is protection against hot surfaces, exhausts, etc., provided? (16.B.03 and .13)			
9. Are fuel tanks located in a manner to prevent spills or overflow from running onto engine exhaust or electrical equipment? (16.B.04)			
10. Are exhaust discharges directed so they do not endanger persons or obstruct operator vision? (16.B.05)			

	Yes	No	N/A
11. Are seat belts provided for each person required to ride on the equipment? (16.B.08)			
12. Is protection (grills, canopies, screens) provided to shield operators from falling or flying objects? (16.B.10 and .11)			
13. Is roll over protection provided? (16.B.12)			
14. Is a safe means of access to the cab provided (steps, grab bars, non-slip surfaces)? (16.B.03)_			
15. Are adequate head and tail lights provided? (16.A.07)			
16. Have brakes been tested and found satisfactory? (16.A.07)			
17. Does the unit have an emergency brake which will automatically stop the equipment upon brake failure? Is this system manually operable from the drivers position? (16.A.07)			
18. Is all equipment with windshields equipped with powered wipers and defogging or defrosting system? (16.A.07)			
19. Are all vehicles which will be parked or moving slower than normal traffic on haul roads equipped with a yellow flashing light or flasher visible from all directions? (16.A.13)			
20. Is the slow moving emblem used on all vehicles which by design move at 25 MPH or less on public roads? (08A.04)			

	Yes	No	N/A
21. Have air tanks been tested and certified? (20.A.01)			
22. Is an air pressure gage in working condition installed on the unit? (20.A.12)			
23. Does the air tank have an accessible drain valve? (20.B.17)			
24. Remarks: (Enter action taken for all “no” answers)			
Contractor inspector signature			
Contractor QC/safety officer/project manager			

SAFETY CHECKLIST FOR MATERIAL HOISTS

Contract # and title:	
Equipment name & number:	
Contractor:	Subcontractor:
Contract Inspector:	Date inspected:

	Yes	No	N/A
1. Are all hoist towers, masts, guys or braces, counterweights, drive machinery supports, sheave supports, platforms, supporting structures, and accessories designed by a licensed engineer? (16.K.02)			
2. Is a copy of the hoist operating manual available? (16.K.04)			
3. Do all floors and platforms have slip-resistant surfaces? (16.K.08)			
4. Are landings and runways adequately barricaded and is overhead protection provided where needed? (16.K.08)			
5. Are hoisting ropes installed IAW manufacturer's instructions? (16.K.10)			
6. Are operating rules posted at the hoist operator's station? (16.K.14)			
7. Are air powered hoists connected to an air supply of sufficient capacity and pressure to safely operate the hoist? (16.K.15)			
8. Are pneumatic hoses secured by some positive means to prevent accidental disconnection? (16.K.15)			
9. Remarks: (Enter actions taken for all "no" answers.)			
Contractor inspector signature			
Contractor QC/safety officer/project manager signature			

SAD Form 1666g-R Mar 97 Previous editions may be used for contracts referencing the 1992 edition of EM 385-1-1.

SAFETY CHECKLIST FOR EARTH DRILLING EQUIPMENT

Contract # and title:	
Equipment name & number:	
Contractor:	Subcontractor:
Contractor inspector:	Date inspected:

	Yes	No	N/A
1. Is a copy of the manual for all drilling equipment available? (16.M.01)			
2. Have all overhead electrical hazards and potential ground hazards been identified in a site layout plan and addressed in an activity hazard analysis? (16.M.02)			
3. Are MSDSs for all drilling fluids available? (16.M.05)			
4. Does the drilling equipment have 2 easily accessible emergency shut down devices (one for the operator and one for the helper)? (16.M.06)			
5. Is the equipment posted with a warning of electrical hazards? (16.M.06)			
6. Is there a spotter or an electrical proximity warning device available to ensure safe distances from power lines are maintained? (16.M.06)			
7. Remarks: (Enter actions taken for “no” answers)			
Contractor inspector signature			
Contractor QC/safety officer/project manager			

SAD Form 1666h-R Mar 97 Previous editions may be used for contracts referencing the 1992 edition of EM 385-1-1.

TRANSMITTAL OF SHOP DRAWINGS, EQUIPMENT DATA, MATERIAL SAMPLES, OR MANUFACTURER'S CERTIFICATES OF COMPLIANCE *(Read instructions on the reverse side prior to initiating this form)*	DATE	TRANSMITTAL NO.

SECTION I - REQUEST FOR APPROVAL OF THE FOLLOWING ITEMS *(This section will be initiated by the contractor)*

TO:	FROM:	CONTRACT NO.	CHECK ONE: ☐ THIS IS A NEW TRANSMITTAL ☐ THIS IS A RESUBMITTAL OF TRANSMITTAL _____
SPECIFICATION SEC. NO. *(Cover only one section with each transmittal)*	PROJECT TITLE AND LOCATION		CHECK ONE: THIS TRANSMITTAL IS FOR ☐ FIO ☐ GOV'T. APPROVAL

ITEM NO. *a.*	DESCRIPTION OF ITEM SUBMITTED *(Type size, model number/etc.)* *b.*	MFG OR CONTR. CAT., CURVE DRAWING OR BROCHURE NO. *(See instruction no. 8)* *c.*	NO. OF COPIES *d.*	CONTRACT REFERENCE DOCUMENT		FOR CONTRACTOR USE CODE *g.*	VARIATION *(See instruction No. 6)* *h.*	FOR CE USE CODE *i.*
				SPEC. PARA. NO. *e.*	DRAWING SHEET NO. *f.*			

REMARKS	I certify that the above submitted items have been reviewed in detail and are correct and in strict conformance with the contract drawings and specifications except as other wise stated. NAME AND SIGNATURE OF CONTRACTOR

SECTION II - APPROVAL ACTION

ENCLOSURES RETURNED *(List by Item No.)*	NAME, TITLE AND SIGNATURE OF APPROVING AUTHORITY	DATE

INSTRUCTIONS

1. Section I will be initiated by the Contractor in the required number of copies.

2. Each transmittal shall be numbered consecutively in the space provided for "Transmittal No.". This number, in addition to the contract number, will form a serial number for identifying each submittal. For new submittals or resubmittals mark the appropriate box; on resubmittals, insert transmittal number of last submission as well as the new submittal number.

3. The "Item No." will be the same "Item No." as indicated on ENG FORM 4288-R for each entry on this form.

4. Submittals requiring expeditious handling will be submitted on a separate form.

5. Separate transmittal form will be used for submittals under separate sections of the specifications.

6. A check shall be placed in the "Variation" column when a submittal is not in accordance with the plans and specifications--also, a written statement to that effect shall be included in the space provided for "Remarks".

7. Form is self-transmittal, letter of transmittal is not required.

8. When a sample of material or Manufacturer's Certificate of Compliance is transmitted, indicate "Sample" or "Certificate" in column c, Section I.

9. U.S. Army Corps of Engineers approving authority will assign action codes as indicated below in space provided in Section I, column i to each item submitted. In addition they will ensure enclosures are indicated and attached to the form prior to return to the contractor. The Contractor will assign action codes as indicated below in Section I, column g, to each item submitted.

THE FOLLOWING ACTION CODES ARE GIVEN TO ITEMS SUBMITTED

A -- Approved as submitted.

B -- Approved, except as noted on drawings.

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.

FX -- Receipt acknowledged, does not comply as noted with contract requirements.

G -- Other *(Specify)*

10. Approval of items does not relieve the contractor from complying with all the requirements of the contract plans and specifications.

(Reverse of ENG Form 4025-R)

COST ESTIMATE ANALYSIS

For use of this form, see TM 5-800-2; the proponent agency is USACE.

PROJECT	INVITATION/CONTRACTOR	EFFECTIVE PRICING DATE	DATE PREPARED
LOCATION	CODE (Check one) ☐ A ☐ B ☐ C ☐ OTHER	DRAWING NO.	SHEET OF SHEETS
		ESTIMATOR	CHECKED BY

TASK DESCRIPTION	QUANTITY		LABOR				EQUIPMENT		MATERIAL		TOTAL	SHIPPING	
	NO. OF UNITS	UNIT MEAS	MH UNIT	TOTAL HRS	UNIT PRICE	COST	UNIT PRICE	COST	UNIT PRICE	COST		UNIT WT	TOTAL WT
TOTAL THIS SHEET													

DA FORM 5418-R, Apr 85

TRANSFER AND ACCEPTANCE OF MILITARY REAL PROPERTY

Form Approved
OMB No. 0704-0188

PAGE OF PAGES

Public reporting burden for this collection of information is estimated to average 30 minutes per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. Send comments regarding this burden estimate or any other aspect of this collection of information, including suggestions for reducing this burden, to Washington Headquarters Services, Directorate for Information Operations and Reports, 1215 Jefferson Davis Highway, Suite 1204, Arlington, Va 22202-4302, and to the Office of Management and Budget, Paperwork Reduction Project (0704-0188), Washington, DC 20503.

1. **FROM** *(Installation/Activity/Service and Zip code)*	2. OPERATING UNIT	3. DISTRICT CODE	4. OPERATING AGENCY	5. DATE	6. JOB NUMBER	7. SERIAL NUMBER	8. CONTRACT NUMBER

9. **TO** *(Installation/Activity/Service and Zip code)*	10. OPERATING UNIT	11. DISTRICT CODE	12. OPERATING AGENCY	13. ACCOUNTING NUMBER	14. ACCOUNTABLE OFFICE NUMBER	15. TYPE OF TRANSACTION		16. PROJECT NUMBER
						A. ☐ NEW CONSTR. ☐ EXISTING FAC. ☐ CAPITAL IMP. ☐ OTHER *(Specify)*	B. ☐ BENF/O ☐ PHYSICAL COM. ☐ FINAN. COM. ☐ OTHER *(Specify)*	

ITEM NO. 17	CATEGORY CODE 18	FACILITY *(Category description)* 19	NO. OF UNITS 20	TYPE 21	UNIT OF MEAS. 22	TOTAL QUANTITY 23	COST 24	DRAWING NUMBERS 25	REMARKS 26

27.		28. ACCEPTED BY *(Signature)*	DATE
TRANSFERRED BY *(Signature)*	DATE	TITLE *(Post Engr./Base Civ. Engr./Navy Rep.)*	29. PROPERTY VOUCHER NUMBER
TITLE *(Area Engr./Base Engr./DPWO)*			

30. CONSTRUCTION DEFICIENCIES

31. REMARKS

INSTRUCTIONS

This form has been designed and issued for use in connection with the transfer of military real property between the military departments and to or from other government agencies. It supersedes ENG Forms 290 and 290B (formerly used by the Army and Air Force) and NAVDOCKS Form 2317 (formerly used by the Navy).

Existing instructions issued by the military departments relative to the preparation of the three superseded forms are applicable to this form to the extent that the various items and columns on the superseded forms have been retained. Additional instructions, as appropriate, will be promulgated by the military departments in connection with any new items appearing hereon.

With the issuance of this DD form, it is not intended that the departments shall revise and reprint manuals and directives simply to show the number of this DD form. Such action can be accomplished through the normal course of revision for other reasons.

Approved by OM 0348-0046

DISCLOSURE OF LOBBYING ACTIVITIES

Complete this form to disclose lobbying activities pursuant to 31 U.S.C. 1352
(See reverse for public burden disclosure.)

1. Type of Federal Action:

☐ a. contract
b. grant
c. cooperative agreement
d. loan
e. loan guarantee
f. loan insurance

2. Status of Federal Action:

☐ a. bid/offer/application
b. initial award
c. post-award

3. Report Type:

☐ a. initial filing
b. material change

For Material Change Only:
year _____ quarter _____
date of last report _____

4. Name and Address of Reporting Entity:

☐ Prime ☐ Subawardee
Tier _____, *if known*:

Congressional District, *if known:*

5. If Reporting Entity in No. 4 is Subawardee, Enter Name and Address of Prime:

Congressional District, *if known*:

6. Federal Department/Agency:

7. Federal Program Name/Description:

CFDA Number, *if applicable*: _____

8. Federal Action Number, *if known*:

9. Award Amount, *if known*:

$

10. a. Name and Address of Lobbying Entity
(*if individual, last name, first name, MI):*

b. Individuals Performing Services *(including address if different from No. 10a)*
(last name, first name, MI):

(attach Continuation Sheet(s) SF-LLL-A, *if necessary*)

11. Amount of Payment *(check all that apply)*:

$ _____ ☐ actual ☐ planned

12. Form of Payment *(check all that apply)*:

☐ a. cash
☐ b. in-kind; specify: nature _____
value _____

13. Type of Payment *(check all that apply)*:

☐ a. retainer
☐ b. one-time fee
☐ c. commission
☐ d. contingent fee
☐ e. deferred
☐ f. other; specify: _____

14. Brief Description of Services Performed or to be Performed and Date(s) of Service, including officer(s), employee(s), or Member(s) contacted, for Payment indicated in Item 11:

(attach Continuation Sheet(s) SF-LLL-A, *if necessary*)

15. Continuation Sheet(s) SF-LLL-A attached: ☐ Yes ☐ No

16. Information requested through this form is authorized by title 31 U.S.C section 1352. This disclosure of lobbyig activities is a materia representation of fact upon which reliance was placed by the tier above when this transaction was made or entered into. This disclosure is required pursuant to 31 U.S.C. 1352 . This information will be reported to the Congress semi-annually and will be available for public inspection. Any person who fails to

Signature: _____

Print Name: _____

Title: _____

Telephone No.: _____ **Date:** _____

Federal Use Only:

Authorized for Local Reproduction

INSTRUCTIONS FOR COMPLETION OF SF-LLL, DISCLOSURE OF LOBBYING ACTIVITIES

This disclosure form shall be completed by the reporting entity, whether subawardee or prime Federal recipient, at the initiation or receipt of a covered Federal action, or a material change to a previous filing, pursuant to title 31 U.S.C. section 1352. The filing of a form is required for each payment or agreement to make payment to any lobbying entity for influencing or attempting to influence an officer or employee of any agency, a Member of Congress, an officer or employee of Congress, or an employee of a member of Congress in connection with a covered Federal action. Use the SF-LLL-A Continuation Sheet for additional information if the space on the form is inadequate. Complete all items that apply for both the initial filing and material change report. Refer to the implementing guidance published by the Office of Management and Budget for additional information.

1. Identify the type of covered Federal action for which lobbying activity is and/or has been secured to influence the outcome of a covered Federal action.

2. Identify the status of the covered Federal action.

3. Identify the appropriate classification of this report. If this is a followup report caused by a material change to the information previously reported, enter the year and quarter in which the change occurred. Enter the date of the last previously submitted report by this reporting entity for this covered Federal action.

4. Enter the full name, address, city, state and zip code of the reporting entity. Include Congressional District, if known. Check the appropriate classification of the reporting entity that designates if it is, or expects to be, a prime or subaward recipient. Identify the tier of the subawardee, e.g., the first subawardee of the prime is the 1st tier. Subawards include but are not limited to subcontracts, subgrants and contract awards under grants.

5. If the organization filing the report in item 4 checks “Subawardee”, then enter the full name, address, city, state and zip code of the prime Federal recipient. Include Congressional District, if known.

6. Enter the name of the Federal agency making the award or loan commitment. Include at least one organizational level below agency name, if known. For example, Department of Transportation, United States Coast Guard.

7. Enter the Federal program name or description for the covered Federal action (item 1). If known, enter the full Catalog of Federal Domestic Assistance (CFDA) number for grants, cooperative agreements, loans, and loan commitments.

8. Enter the most appropriate Federal identifying number available for the Federal action identified in item 1 (e.g., Request for Proposal (RFP) number; Invitation for Bid (IFB) number; grant announcement number; the contract, grant, or loan award number; the application/proposal control number assigned by the Federal agency). Include prefixes, e.g., “RFP-DE-90-001.”

9. For a covered Federal action where there has been an award or loan commitment by the Federal agency, enter the Federal amount of the award/loan commitment for the prime entity identified in item 4 or 5.

10. (a) Enter the full name, address, city, state and zip code of the lobbying entity engaged by the reporting entity identified in item 4 to influence the covered Federal action.

    (b) Enter the full names of the individuals(s) performing services, and include full address if different from 10 (a). Enter Last Name, First Name, and Middle Initial (MI).

11. Enter the amount of compensation paid or reasonably expected to be paid by the reporting entity (item 4) to the lobbying entity (item 10). Indicate whether the payment has been made (actual) or will be made (planned). Check all boxes that apply. If this is a material change report, enter the cumulative amount of payment made or planned to be made.

12. Check the appropriate box(es). Check all boxes that apply. If payment is made through an in-kind contribution, specify the nature and value of the in-kind payment.

13. Check the appropriate box(es). Check all boxes that apply. If other, specify nature.

    Provide a specific and detailed description of the services that the lobbyist has performed, or will be expected to perform, and the date(s) of any services rendered. Include all preparatory and related activity, not just time spent in

Public reporting burden for this collection of information is estimated to average 30 minutes per response, including time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. Send comments regarding the burden estimate or any other aspect of this collection of information, including suggestions for reducing this burden, to the Office of Management and Budget, Paperwork Reduction Project (0348-0046), Washington, D.C. 20503.

DISCLOSURE OF LOBBYING ACTIVITIES
CONTINUATION SHEET

Approved by OM
0348-0046

Reporting Entity: _____ Page ____ of ____ ____

*U.S. G.P.O. 1990-260-708:00012

DIRECTORATE OF ENGINEERING & HOUSING
EXCAVATION PERMIT

FB Reg 420-13 DATE

1. CLEARANCE IS REQUIRED TO PROCEED WITH WORK AT
_____

ON WORK ORDER NO _____ CONTRACT NO
_____

2. METHOD OF EXCAVATION	A.HAND		B.POWER SHOVEL		C. DITCHER		D. OTHER (SPECIFY)

3. SCOPE OF WORK (DEPTH, WIDTH, LENGTH, LOCATION, AND SKETCH AS APPLICABLE)
IF CONTRACT A COPY OF APPLICABLE DRAWINGS OR SKETCHES MUST BE ATTACHED.

4. DATE CLEARANCE REQUESTED	5. TERMINATION DATE OF CLEARANCE (60 DAYS UNLESS SPECIFIED)	
6. REQUESTING ORGANIZATION OR COMPANY	7. PHONE NUMBER	8. SIGNATURE (REQUESTING OFFICIAL)

9. EXCAVATION CLEARANCE APPROVAL

UTILITY	REMARKS	SIGNATURE OF APPROVING OFFICIAL	DATE
ELECTRICAL UNDERGROUND DISTRIBUTION			
STEAM OR HTW DISTRIBUTION			
CHILLER DISTRIBUTION			
SEWER LINES			
WATER DISTRIBUTION			
NATURAL GAS DISTRIBUTION			
TELEPHONE (DOIM)			
OTHER			
TELEPHONE (CT&T)			

FB Form 1605 DIGGING WILL NOT BE PERMITTED UNLESS SIGNED
1 May 87 (AFZA-DE) Previous Edition is Obsolete.

AFZA-DE-RJ (420-10c) Date: _____

MEMORANDUM FOR DEH ENVIRONMENTAL OFFICE

SUBJECT: Landfill Permit Application

1. Fill in the following information for each Contractor vehicle:

a. Landfill to Be Used: Sanitary _____ Demolition _____ Both _____

b. Company Name: _____

c. Contract Number: _____

d. Project Title: _____

e. Project Location: _____

f. Date of Notice to Proceed: _____

g. Project Length (In Days): _____

h. Vehicle Make: _____

i. Vehicle License Plate Number: _____

j. Contract Inspector: _____

2. Note: Applications must be forwarded to the Environmental Office by a Government Official (e.g., Contracting Officer's Representative or Project Inspector). Applications delivered on any working day will be processed and available for pickup the following workday by 0830.

FORT BRAGG ASBESTOS REMOVAL, TRANSPORTATION, AND
DISPOSAL DOCUMENTATION FORM

1. REMOVAL: ON _____ _____ (SY/LF/CF/OR POUNDS) OF ASBESTOS CONTAINING MATERIAL REMOVED FROM BUILDING #_____, _____ (STREET ADDRESS), FORT BRAGG, NC, PER _____ (WORK ORDER/CONTRACT NUMBER) WAS PREPARED FOR MOVEMENT TO THE LANDFILL UNDER THE SUPERVISION OF _____ (PRINT NAME OF SUPERVISOR) REPRESENTING _____ (NAME OF FIRM/ORGANIZATION.

_____ (SIGNATURE OF SUPERVISOR)

2. TRANSPORTATION: ON _____ THE ACM MENTIONED ABOVE WAS TRANSPORTED ON THE VEHICLE AUTHORIZED BY LANDFILL VEHICLE PERMIT NUMBER _____ BY _____(PRINT NAME OF DRIVER) _____ (SIGNATURE OF DRIVER) TO THE LONGSTREET LANDFILL ON LONGSTREET ROAD, FORT BRAGG, NC.

3. DISPOSAL: THE ACM DESCRIBED IN PARAGRAPH 1 WAS DELIVERED BY THE VEHICLE IDENTIFIED ABOVE TO THE LONGSTREET LANDFILL AND RECEIVED BY _____ (PRINT NAME OF LANDFILL OPERATOR)

I CERTIFY THAT THE LANDFILL HAS BEEN APPROVED FOR THE DISPOSAL OF ASBESTOS. THE MATERIAL DELIVERED WILL BE COVERED WITH NONASBESTOS MATERIAL IN THE PRESCRIBED MANNER.

_____
(PRINT NAME OF OPERATOR)

_____
(SIGNATURE)

_____
(DATE)

REAL PROPERTY INVENTORY

ITEM	TALLY	TOTAL
COMMODES		
LAVATORIES		
URINALS		
EXHAUST FAN (9")		
EXHAUST FAN (OTHER)		
WATER COOLER		
HOTWATER HEATER		
MOP SINK		
AC PLANT	LS 5 TN. 5-25 TN. 25-100 TN. OVER 100 TN.	
AS (WINDOW TYPE)		
FIRE ALARM SYSTEM	MANUAL HALON SPRINKLER	
EMERGENCY LIGHTS		
UNIT HEATER		
STRIP HEATER		
COOLING TOWER		
WALK-IN COOLER		
AIR CURTAIN		
EYE WASH		
SHOWERS		
BOILER	GAS FIRED OIL FIRED STEAM	
FUEL TANK	UNDERGROUND OUTSIDE	

REAL PROPERTY INVENTORY

ITEM	TALLY	TOTAL
WASH BASIN		
AIR COMPRESSOR		
HOISTS		
INVENTORY BY:		DATA:
RECONCILED BY:		DATA:

REAL PROPERTY INVENTORY

ITEM	TALLY	TOTAL
INVENTORIED BY:		DATE:
RECONCILED BY:		DATE:

TABLE OF CONTENTS

Section 01010: **General Project Description and Design Requirements**

Section 01030: **Design After Award**

Section 01320: **Project Schedule**

Section 01330: **Submittal Procedures**

Section 01420: **Sources For Reference Publications**

Section 01451: **Contractor Quality Control**

Section 01500: **Temporary Construction Facilities**

Section 01780: **Closeout Submittals**

Section 02013: **Environmental Protection During Construction**

Appendix A: **Site Photographs**

Appendix B: **Facility Drawings (included in the contract drawings)**

Appendix C: **Life Safety/Fire Protection Analysis.**

Appendix D: **Functional Area/Room Requirements.**

Appendix E: **Government Funded Contractor Installed Shop Equipment**
Part 1 – Shop Equipment List
Part 2 – Point of Contact
Part 3 – Shop Equipment Specifications
Part 4 – Enlarged Shop Equipment Location Plans

Appendix F: **Comprehensive Interior Design (CID) Requirements**

Appendix G: **Structural Interior Design (SID) Requirements**

Appendix H: **Additional Site Design Criteria**
Part 1 – Subsurface Exploration and Geotechnical Engineering Report (Preliminary)
Part 2 – Redundant Primary System

Part 3 – Telecommunications Duct Line Extension
Part 4 – Fire Flow Test
Part 5 – Percolation Tests
Part 6 – Environmental Analysis
Part 7 – Existing Caswell Road Range I-40 Trailer
Part 8 – Seismic Study Results
Part 9 – Asbestos and Lead Based Paints Survey

Appendix I: **Antiterrorism/Force Protection Construction Requirements**
Part 1 – Enclosures
Part 2 – December 16, 1999 Interim Department of Defense Antiterrorism/Force Protection Construction Standards

Appendix J: **Army Regulation 190-11 – Physical Security of Arms, Ammunition, and Explosives.**

Appendix K: **SPiRiT Requirements and Point Summary**

Appendix L: **Specific Instructions**
Part 1 – Section 08700 Builder's Hardware
Part 2 – Specific Instructions – Microstation Drawing Files
Part 3 – Architect Engineer Checklist of Items Governing Design for Arms Vault Constructed in Accordance with DOD 5 100.76M

SECTION 01010

GENERAL PROJECT DESCRIPTION AND DESIGN REQUIREMENTS

1. GENERAL.

1.1 This section provides general scope information and design/construction requirements for this project. The design and construction requirements within this Request For Proposal (RFP) represent the minimum quantity and quality acceptable for the proposal and project. The Contractor shall design and construct the Special Operations Forces (SOF) Weapons Training Facility at Fort Bragg, North Carolina resulting in a complete and useable facility. The contract award for design and construction for Bid Items 0001 through 0010 shall not exceed $16,253,000.00 (85% of PA) for this project. The programmed amount (PA) is $19,200,000.

The following represents the base bid items for this project:

ITEM NO. 0001
Design effort and engineering services during construction through completion.

ITEM NO. 0002
Construction of new SOF Weapons Training Facility, complete, to the 5.0 foot building line. This item will include the installation of all Intrusion Detection System (IDS) infrastructure conduit and utilities. IDS design of equipment and installation will be by others.

ITEM NO. 0003
Construction of new SOF Weapons Inspection Building, complete, to the 5.0 foot building line.

ITEM NO. 0004
Site preparation and development including utilities, everything outside the 5.0 foot building line through completion. This item will include the installation of all Intrusion Detection System (IDS) infrastructure conduit and utilities. IDS design of equipment and installation will be by others.

The following represents the bid option items for this project:

ITEM NO. 0005
OPTION 1: Install Comprehensive Interior Design (CID) Furniture/Furnishings.

ITEM NO. 0006
OPTION 2: Install Lift station and Force Main to connect to existing sanitary system and delete septic system design.

ITEM NO. 0007
OPTION 3: Install Water main to connect to existing water main.

ITEM NO. 0008
OPTION 4: Install Shop Equipment.

ITEM NO. 0009
OPTION 5: Provide underground Redundant Primary System.

ITEM NO. 0010
OPTION 6: Provide overhead Redundant Primary System.

1.2 The scope of work includes the design, site preparation and construction of a new one story 73,500 SF Weapons Maintenance and Training Facility and a new one story 2,500 SF Weapons Supplies Handling Facility for the Special Operations Forces on a vacant U.S. Government property at Fort Bragg, NC. Refer to the Appendices included in this RFP for further project descriptions. Supporting facilities will include parking, concrete pavement, sidewalks, water, sewer, electrical service, fire alarm systems, storm drainage, erosion control measures, intrusion detection systems, and landscaping/irrigation. Interior design for furniture and finishes is included in the scope of work. Interior equipment layout is also included in the scope of work.

1.3 The conceptual drawings provided, in the RFP, represent an acceptable solution to the functional requirements for this facility. They have been coordinated and approved by the using agency. All design components described in this RFP (site layout, site utility plan, structural building system, exterior construction materials, etc.) may be modified by the designer. The User desires the proposed floor plan shown in this RFP. The designer will be allowed to make deviations to the floor plan and overall design to enhance the project and/or economy, however the general functional requirements described in this RFP must be met. The designers are encouraged to show their innovations and design/construction experience with this type of facility. Any modifications and/or improvements will be evaluated accordingly.

1.4 Sustainable Design. This project has a requirement of achieving Bronze level of sustainable design features as measured through the use of Sustainable Project Rating Tool (SPiRiT), Appendix K in this RFP. SPiRiT is a modified version of the U.S. Green Building Council LEED Green Building Rating System. As stated in the contract clauses each offeror will complete and submit the SPiRiT Facility Points Summary (See Appendix K) with the proposal; the total points score will determine the SPiRiT Sustainable Project Certificate Level: SPiRiT Bronze, Silver, Gold or Platinum. The proposed level will be used as a proposal evaluation factor as defined in the contract clauses. A minimum of Bronze level rating is required. A rating of Silver or Gold will be considered betterment to the project and will be evaluated accordingly. See paragraph 31 for additional Sustainable Design information.

1.5 Site Development and Utilities. Site development will include all clearing, grading, roads, parking lots, landscaping, sidewalks, curbs and gutters and utilities for the complex.

1.6 Demolition. Demolition requirements are not anticipated at the project site, but verification of survey and removal of any existing and unnecessary items will be required. Demolition is required for a portion of the existing facility. Building D-1405 is the only building to be demolished. This building is adjacent to the existing Weapons Storage Facility and is a World War II era wood building. The building size is listed as 3,812 s.f. in the Fort Bragg Facilities Inventory, but should be confirmed by the Contractor. An asbestos and lead based paints survey was done on the building (see Appendix H – Part 9). The lab results detected no asbestos or lead based paints in building D-1405. The building can be crushed. The demolition of this building is to be phased to schedule the demolition to occur after the completion of the new facility and after the using agency has relocated. Any areas disturbed by the demolition are to be dressed, seeded and mulched in accordance with Fort Bragg erosion control requirements. The utilities for building D-1405 are to be capped at a reasonable point of termination. All other buildings, fencing, utilities, pavements and appurtenances at the existing facility site are not to be disturbed.

1.7 There are no Army Standard Designs for this project.

1.8 The Contractor will be allowed to Fast-Track design and construction.

1.9 The Contractor is required to include an Industrial Systems Engineer as part of his design team. The Industrial Systems Engineer will be responsible for the coordination, layout, and infrastructure design (power, plumbing, exhaust, air intakes, thickened slabs, etc.) of all shop equipment described in Appendix E. The Industrial Systems Engineer will be part of the design team for the life of the design and shall attend all design review meetings and the Predefinition Conference described in paragraph 24.3. The relevant experience of the Industrial Systems Engineer with similar facilities will be evaluated accordingly.

1.10 The Contractor is required to provide a copy of warranties for all building materials. The copy of warranties shall be provided in 8 ½ x 11 inch notebook format and will provided along with the 100% Final design submittal and/or corrected final design submittal.

2. DESIGN CRITERIA.

2.1 The proposal documents shall include adequate information in the form of narratives, drawings, specifications, calculations, catalog cuts, etc., to enable the Government to adequately review the proposal. The information that is required to be submitted is identified in Section 01010 of this RFP. Proposal documents shall include

all requirements listed in the Contract Clauses and compliance with the format requirements is encouraged to facilitate review and award.

2.2 The design, following award, will include a 60%, a 100% or final design submittal, and a corrected final submittal if needed. A corrected final design submittal is not considered a normal design review level but may be required only when final submittals must be revised or corrected due to errors or omissions. Refer to section 01030 and the Savannah District Design Manual for Construction (May 2000) for submittal requirements.

2.3 The proposal drawings may be done with any CADD software. Once the contract is awarded all drawings will be initiated and done in Microstation version SE or J software (or later version) in accordance with A/E/C CADD Standards Manual which is available at: (http://tsc.wes.army.mil/). All building types will have a complete set of drawings. Common details used throughout will be copied to each set so that it can stand-alone. Drawings for each building type will be grouped together so that it will be a complete set. Site development and utilities will naturally be in a set by itself.

2.4 Codes, reference documents and criteria referenced within this RFP, although not attached, are an integral part of this RFP. Each proposer shall be responsible for securing any necessary reference at their expense and resources. Requirements of this RFP may delete, revise, add to, or substitute for criteria contained in the referenced documents and this RFP shall be deemed the controlling authority of any changes to the other referenced documents and criteria.

2.5 Information provided in the Appendices is intended to provide additional design requirements and information. Following are the Appendices included in this RFP:

Appendix A: Site Photographs

Appendix B: Facility Drawings (included in the contract drawings)

Appendix C: Life Safety/Fire Protection Analysis.

Appendix D: Functional Area/Room Requirements.

Appendix E: Government Funded Contractor Installed Shop Equipment
Part 1 – Shop Equipment List
Part 2 – Point of Contact
Part 3 – Shop Equipment Specifications
Part 4 – Enlarged Shop Equipment Location Plans

Appendix F: Comprehensive Interior Design (CID) Requirements

Appendix G: Structural Interior Design (SID) Requirements

Appendix H: Additional Site Design Criteria
Part 1 – Subsurface Exploration and Geotechnical Engineering Report (Preliminary)
Part 2 – Redundant Primary System
Part 3 – Telecommunications Duct Line Extension
Part 4 – Fire Flow Test
Part 5 – Percolation Tests
Part 6 – Environmental Analysis
Part 7 – Existing Caswell Road Range I-40 Trailer
Part 8 – Seismic Study Results
Part 9 – Asbestos and Lead Based Paints Survey

Appendix I: Antiterrorism/Force Protection Construction Requirements
Part 1 – Enclosures
Part 2 – December 16, 1999 Interim Department of Defense Antiterrorism/Force Protection Construction Standards.

Appendix J: Army Regulation 190-11 – Physical Security of Arms, Ammunition, and Explosives.

Appendix K: SPiRiT Requirements and Point Summary

Appendix L: Specific Instructions
Part 1 – Section 08700 Builder's Hardware
Part 2 – Specific Instructions – Microstation Drawing Files
Part 3 – Architect Engineer Checklist of Items Governing Design for Arms Vault Constructed in Accordance with DOD 5 100.76M

3. SPECIFICATION INTENT. The intent of these specification sections is to describe the requirements for quality, function, and materials, and types of construction in sufficient detail to enable engineering and design to be completed by the Contractor. In this specification section, each engineering and design discipline describes design intent and outlines the parameters to which the Contractor shall design.

3.1 SECTION 01030 - DESIGN AFTER AWARD defines the design and performance criteria. The applicable building codes and standards shall be used as the minimum criteria to develop the construction documents unless more stringent criteria are defined for a specific area.

3.2 SECTION 01330 - SUBMITTAL PROCEDURES (DESIGN BUILD) defines the format and submittal requirements in which the design and the construction documents shall be prepared by the Contractor.

4. COORDINATION BETWEEN THE VARIOUS DISCIPLINES. The Contractor shall be responsible for the coordination between design, engineering and construction

disciplines in order to fulfill the requirements of this contract and to provide for a complete, integrated and functional design.

5. QUALITY OF WORK. Construction documents shall be sufficient to afford a clear understanding of the construction work required. The work shall be organized in a manner that will assure thorough coordination between the various details on the drawings, and between the drawings and the specifications. The Contractor shall cross-check all work until all conflicts have been reconciled. The US Army Corps of Engineers, Savannah District Design Manual, current edition, and Savannah District Guide Specifications are available on the Internet at:

http://www.hnd.usace.army.mil/TECHINFO/ or http://www.ccb.org/ufgs/ufgs.htm

SpecsIntact Software, which is used to edit the guide specifications, is available at the same site.

Unified Facility Guide Specifications (UFGS) are available on the Internet at:

http://www.hnd.usace.army.mil/

They shall be used as the basis for format and preparation of construction documents.

6. DESIGN REQUIREMENTS

6.1 GENERAL. The project shall be designed and constructed in accordance with the criteria contained herein using industry standard materials and efficient practices. The Contractor shall use materials and equipment accepted within the construction industry. The building design and the materials selected shall be of high quality, durable and easily maintained.

6.2 The Contractor shall prepare complete construction documents for all work designed as required by the RFP. The construction documents to be prepared include, but are not limited to construction drawings, specifications, submittals, and design analyses as required in Section 01030, Design After Award and 01330 Submittal Procedures (Design Build). The Contractor's Designers of Record shall develop construction document technical specifications for all areas of work. The design documents are to be provided in English units.

6.3 The Contractor shall be responsible for the professional quality, code compliance, technical accuracy and coordination of all designs, drawings, specifications and other documents or publications upon which the design and construction are based. In projects having multiple buildings, each building shall have it’s own complete set of drawings. Drawings will not be cross-referenced between building types. Copy

common details to each set. Stating that this building is a mirror of another is not acceptable either. Create a complete set of drawings for that building.

6.4 The project specifications shall be prepared using UFGS guide specifications. If there is more than one UFGS guide specification for the same thing, use the one with an “A” (Army) suffix. If a UFGS guide specification cannot be found, contact the Savannah District to see if a guide specification exists. If a guide specification does not exist the Design/Build Contractor will prepare a job-specific specification. The UFGS shall be edited and adapted by the designer for this project, incorporating UFGS instructions and recommendations in the notes to specifier contained in the guide specs. The designer is to delete inapplicable portions of the guide specification and revise and/or supplement, as required, the applicable portions to provide a complete project specification. Editing of specifications shall be for bracketed options and project requirements as stated in the RFP only. Specifications shall be submitted at final design submittal in hard copy form that shows the text added and deleted with additions highlighted and deletions lined through but still readable. This feature is available in SpecsIntact or Microsoft Word. In Microsoft Word this feature is located under “Tools”, “Track Changes” and “Highlight Changes”. Following is a partial list of UFGS specifications required for this project. Other UFGS sections shall be added and submitted by the Design/Build Contractor as needed to address all other portions of the work in the accepted proposal. Use the Division 01 GENERAL REQUIREMENTS specifications as provided in the RFP. No changes to these sections.

Division 01 General Requirements

01320A PROJECT SCHEDULE
01330 SUBMITTAL PROCEDURES
01420 SOURCE OF REFERENCE PUBLICATIONS
01451A CONTRACTOR QUALITY CONTROL
01500A TEMPORARY CONSTRUCTION FACILITIES
01572A CONSTRUCTION AND DEMOLITION WASTE MANAGEMENT
01780A CLOSEOUT SUBMITTALS
01781N OPERATIONS AND MAINTENANCE DATA
02013 ENVIRONMENTAL PROTECTION DURING CONTRUCTION

Division 02 Sitework

02013 ENVIRONMENTAL PROTECTION DURING CONSTRUCTION
02111 EXCAVATION AND HANDLING OF CONTAMINATED MATERIAL
02221 EXCAVATION, FILLING AND BACKFILLING FOR BUILDINGS
02300A EARTHWORK
02315A EXCAVATION, FILLING AND BACKFILLING FOR BUILDINGS
02316A EXCAVATION, FILLING AND BACKFILLING FOR UTILITIES SYSTEMS
02364A TERMITICIDE TREATMENT FOR SUBTERRANEAN TERMITE CONTROL
02531 SANITARY SEWERS
02547 BITUMINOUS PAVEMENT WITH BASE COURSE
02556 GAS DISTRIBUTION SYSTEM
02630 STORM-DRAINAGE SYSTEM

02754 CONCRETE PAVEMENTS FOR SMALL PROJECTS
02763 PAVEMENT MARKINGS
02364A TERMITICIDE TREATMENT MEASURES FOR SUBTERRANEAN TERMITE CONTROL
02770 CONCRETE SIDEWALKS AND CURBS AND GUTTERS
02921 SEEDING
02922 SODDING
02923 SPRIGGING
02930 EXTERIOR PLANTING
02936 TURF – BERMUDA GRASS SEEDING

Division 3 Concrete
03150 XPANSION JOINTS, CONTRACTION JOINTS, AND WATERSTOPS
03307 CONCRETE FOR MINOR STRUCTURES
03413A PRECAST ARCHITECTURAL CONCRETE (if used)

Division 4 Masonry
04200A MASONRY
04220A NONBEARING MASONRY VENEER/STEEL STUD WALLS (if used)

Division 5 Metals
05120 STRUCTURAL STEEL
05300 STEEL DECKING
05450 PRE-ENGINEERED LIGHT GAUGE STEEL TRUSSED FRAMES (if used)
05500A MISCELLANEOUS METAL

Division 6 Woods and Plastics
06100A ROUGH CARPENTRY
06200A FINISH CARPENTRY

Division 7 Thermal and Moisture Protection
07416A STRUCTURAL STANDING SEAM METAL ROOF (SSMR) SYSTEM (if used)
07600A SHEET METALWORK, GENERAL
07840A FIRESTOPPING
07900A JOINT SEALING

Division 8 Doors and Windows
08110 STEEL DOORS AND FRAMES
08120 ALUMINUM DOORS AND FRAMES
08210 WOOD DOORS
08520A ALUMINUM AND ENVIRONMENTAL CONTROL WINDOWS
08700 BUILDER'S HARDWARE (FORT BRAGG SPECIFIC)
08810A GLASS AND GLAZING

Division 9 Finishes

09000 BUILDING COLOR AND FINISH SCHEDULE
09009 FLOOR GRID SYSTEM – WALK OFF MAT
09250A GYPSUM WALLBOARD
09310A CERAMIC TILE
09510A ACOUSTICAL CEILINGS
09680A CARPET
09900A PAINTING, GENERAL

Division 10 Specialties
10100A VISUAL COMMUNICATIONS SPECIALTIES
10160A TOILET PARTITIONS
10260A WALL AND CORNER PROTECTION
10270A RAISED FLOOR SYSTEM
10430A EXTERIOR SIGNAGE
10440A INTERIOR SIGNAGE
10800A TOILET ACCESSORIES
10999 FIRE EXTINGUISHER CABINETS

Division 11 Equipment
11020A SECURITY VAULT DOOR

Division 12 Furnishings
12320A CABINETS AND COUNTERTOPS
12490A WINDOW TREATMENT
12705 PREWIRED WORKSTATIONS
12910 ENTRANCE MATS AND FRAMES

Division 13 Special Construction
13080A SEISMIC PROTECTION FOR MISCELLANEOUS EQUIPMENT
13100A LIGHTNING PROTECTION
13721 SMALL INTRUSION DETECTION SYSTEM
13851A FIRE DETECTION/ALARM SYSTEM, ADDRESSABLE SYSTEM
13930 WET PIPE SPRINKLER, FIRE PROTECTION
13935 DRY PIPE SPRINKLER SYSTEM, FIRE PROTECTION
13945 PREACTION AND DELUGE SPRINKLER SYSTEMS

Division 15 Mechanical
15070A SEISMIC PROTECTION FOR MECHANICAL EQUIPMENT
15080A THERMAL INSULATION FOR MECHANICAL SYSTEMS
15181A CHILLED AND CONDENSER WATER PIPING AND ACCESSORIES
15182A REFRIGERANT PIPING
15190A GAS PIPING SYSTEMS
15400A PLUMBING, GENERAL PURPOSE
15566A WARM AIR HEATING SYSTEMS
15569A WATER AND STEAM HEATING; OIL, GAS OR BOTH; UP TO 20 MBTUH
15620A LIQUID CHILLERS

15700A UNITARY HEATING AND COOLING EQUIPMENT
15895A AIR SUPPLY, DISTRIBUTION, VENTILATION, AND EXHAUST SYSTEM
15951A DIRECT DIGITAL CONTROL FOR HVAC
15990A TESTING, ADJUSTING, AND BALANCING OF HVAC SYSTEMS
15995A COMMISSIONING OF HVAC SYSTEMS

Division 16 Electrical

13080A SEISMIC PROTECTION FOR MISCELLANEOUS EQUIPMENT
13100A LIGHTNING PROTECTION
13851A FIRE DETECTION/ALARM SYSTEM, ADDRESSABLE SYSTEM
16070A SEISMIC PROTECTION FOR ELECTRICAL EQUIPMENT
16264A DIESEL-GENERATOR SET, STATIONARY 15-300 KW, STANDBY APPLICATIONS
16375A ELECTRICAL DISTRIBUTION SYSTEM, UNDERGROUND
16410A AUTOMATIC TRANSFER SWITCH AND BY-PASS/ISOLATION SWITCH
16415A ELECTRICAL WORK INTERIOR
16528A EXTERIOR LIGHTING INCLUDING SECURITY AND CCTV APPLICATIONS
16710A PREMISES DISTRIBUTION SYSTEM
16711A TELEPHONE SYSTEM, OUTSIDE PLANT
16770A RADIO AND PUBLIC ADDRESS SYSTEM
16771 TELEPHONE SYSTEM OUTSIDE PLANT
16815A CABLE TELEVISION PREMISES DISTRIBUTION SYSTEM

7. RFP DESIGN AND TECHNICAL CRITERIA. All designs and construction document drawings and specifications shall be prepared to comply with the RFP. The RFP describes the design work that shall not be changed, and shall be included in the construction documents. All remaining design work shall be performed by the Contractor based on the design criteria as required by the RFP. No deviations from the criteria will be allowed unless prior approval is obtained from the Contracting Officer's Representative. All questions or problems encountered by the Contractor in following criteria shall be promptly submitted with recommendations to the Contracting Officer's Representative for approval.

7.1 CONFLICTS IN RFP CRITERIA. Where the various elements of the RFP are in conflict, the following priority shall be used to establish precedence, unless specifically noted otherwise:

1. Specifications
2. Drawings

8. APPLICABLE BUILDING CODES AND STANDARDS.

The following codes of the most current edition shall be used as standards for building construction and life safety design. Where there is a conflict between the RFP and building codes, the most stringent shall apply. When codes are in conflict, the most stringent shall apply. This list is not intended to be a complete list. All work shall be designed and constructed to meet all state and federal codes, standards and laws. Refer to the technical specifications for other standards and references not listed below.

8.1 Regulatory, Reference Requirements and Standards

ASSOCIATED AIR BALANCE COUNCIL (AABC) PUBLICATIONS

AMERICAN CONCRETE INSTITUTE

ACI 318-95 Building Code Requirements for Reinforced Concrete

ACI 302 Guide for Concrete Floors and Slab Construction

ACI-ASCE 530 Building Code for Masonry

ACI-ASCE 530.1 Masonry Specifications

AMERICAN NATIONAL STANDARDS INSTITUTE

AMERICANS WITH DISABILITIES ACT (ADA)

Accessibility Guidelines for Buildings and Facilities. Available from US Architectural and Transportation Barriers Compliance Board, 1111 18th Street, N.W., Suite 501, Washington, DC 20036-3894, (202) 653-7834 v/TDD or (202) 653-7863 FAX

AASHTO American Association of State Highway and Transportation Officials

ADAAG Americans with Disabilities Act Accessibility Guidelines

ARMY/AIR FORCE TECHNICAL MANUAL ™

TM 5-809-12 Concrete Floor Slabs on Grade Subjected to Heavy Loads

TM 5-813-4 Water Supply, Water Storage

TM 5-822-5 Pavement Design for Roads, Streets, Walks, and Open Storage Areas

TM 5-822-7 Standard Practice for Concrete Pavements

TM 5-822-8 Bituminous Pavements Standard Practice

TM 5-822-13 Pavement Design for Roads, Streets, and Open Storage Areas,

Elastic Layered Method

TM 5-811-7 Electrical Design, Cathodic Protection

Manual for Erosion and Sediment Control in Georgia (latest-edition)

ARMY/COE MILITARY HANDBOOKS

MIL-HDBK-1190 Sept. 1987, Facility Planning and Design Guide

MIL-HDBK-1008C Fire Protection for Facilities Engineering, Design, and Construction, 1997

ARMY REG 190-11 Physical Security of Arms, Ammunition and Explosives

ENGINEER TECHNICAL LETTER (ETL), MANUAL (EM) AND REGULATIONS (ER)

EM 1110-2-3102 General Principals of Pumping Station Design and Layout

ETL 91-6 Cathodic Protection

ETL 1110-3-466 Selection and Design of Oil/Water Separators at Army Facilities

ETL 1110-3-474 Cathodic Protection

ETL 1110-9-10 Cathodic Protection System Using Ceramic Anodes

ER 1110-3-110 Information Systems Design in Support of Military Construction

AMERICAN INSTITUTE OF TIMBER CONSTRUCTION (AITC)

Timber Construction Manual

AMERICAN INSTITUTE OF STEEL CONSTRUCTION (AISC)

American Institute of Steel Construction (AISC), Manual of Steel Construction

AMERICAN IRON AND STEEL INSTITUTE (AISI)

American Iron and Steel Institute (AISI), Specification for the Design of Cold-Formed Steel Structural Members

AMERICAN NATION STANDARDS INSTITUTE (ANSI)

ANSI 302.9 Standard Test Methods for Impact Resistance of Flat Rigid Plastic Specimens by Means of a TUP (Falling Object)

ANSI 402.9 Retaining Rings

ANSI A117.1 (1986) Buildings and Facilities - Providing Accessibility and Usability for Physically Handicapped People

ANSI A156.1 (1988) Butts and Hinges (BHMA 101)

ANSI A156.2 (1989) Bored and Preassembled Locks and Latches (BHMA 601)

ANSI A156.4 (1992) Door Controls - Closers

A156.5 (1992) Auxiliary Locks and Associated Products

ANSI A156.9 (1988) Cabinet Hardware (BHMA 201)

ANSI A156.12 (1992) Interconnected Locks and Latches

ANSI A161.1 (1990) Recommended Construction and Performance Standards for Kitchen and Vanity Cabinets

ANSI B16.3-85 Malleable Iron Threaded Fittings, Classes 150 and 300

ANSI C2 (1996) National Electrical Safety Code

ANSI Z21.45 (1985; Z21.ag; Z21.45b) Flexible Connectors of Other Than All Metal Construction for Gas Appliances (Fourth Edition)

AIR CONDITIONING AND REFRIGERATION INSTITUTE (ARI)

Air Conditioning and Refrigeration Institute (ARI), publication Directory of Certified Unitary Air Conditioners, latest edition.

AMERICAN SOCIETY OF CIVIL ENGINEERS (ASCE)
ASCE 7(1995) Minimum Design Loads for Buildings and Other Structures

AMERICAN SOCIETY OF HEATING, REFRIGERATING AND AIR CONDITIONING ENGINEERS (ASHRAE)

ASHRAE Handbooks

Standard 62 (1999) Ventilation for Acceptable Indoor Air Quality

Standard 90.1 (1999) Energy Standard for Buildings except Low-Rise Residential Buildings

Standard 15 (1994) Safety Code for Mechanical Refrigeration

AMERICAN SOCIETY FOR TESTING AND MATERIALS (ASTM)

ASTM C 136 (1995a) Sieve Analysis of Fine and Coarse Aggregates

ASTM D 422 (1963; R 1990) Particle-Size Analysis of Soils

ASTM D 1556 (1990) Density of Soil in Place by the Sand-Cone Method

ASTM D 1557 (1991) Laboratory Compaction Characteristics of Soil Using Modified Effort (56,000 ft-lbf/ft3 (2,700 kN-m/m3))

ASTM D 2216 (1992), Laboratory Determination of Water (Moisture) Content of Soil, and Rock

ASTM D 2487 (1990) Classification of Soils for Engineering Purposes

ASTM D 2661 (1991) Acrylonitrile-Butadiene-Styrene (ABS) Plastic Drain, Waste, and Vent Pipe and Fittings

ASTM D 2665 (Rev. B-91) Poly(Vinyl Chloride) (PVC) Plastic Drains, Waste, and Vent Pipe and Fittings

ASTM D 2666 Polybutylene (PB) Plastic Tubing (1989)

ASTM D 4318 (1993) Liquid Limit, Plastic Limit, and Plasticity Index of Soils

ASTM E 119 (1988) Standard Test Methods and Fire Tests of Building Construction and Materials

ASTM E 779 (E1-87) Standard Test Method for Determining Air Leakage Rate by Fan Pressurization

AIR CONDITIONING AND REFRIGERATION INSTITUTE (ARI)

Directory of Certified Unitary Air Conditioners (Latest Edition)

U.S. Army Corps of Engineers, Architectural and Engineering Instructions, Design Control

TECHNICAL INSTRUCTIONS (TI)

TI 800-01 Design Criteria

TI 809-04 Seismic Design For Buildings

TI 809-07 Design of Cold-Formed Load Bearing Steel Systems

TI 810-10 Mechanical Design Heating, Ventilating, and Air Conditioning

TI 810-11 Heating, Ventilating and Air Conditioning (HVAC) Control System

AMERICAN WATER WORKS ASSOCIATION (AWWA)

AWWA C500 (1986) Gate Valves for Water and Sewerage Systems (DOD adopted)

AWWA C502 (1985) Dry-Barrel Fire Hydrants

AMERICAN WELDING SOCIETY (AWS)

ENVIRONMENTAL PROTECTION AGENCY (EPA)

EPA 340/1-90-018 (1990) Asbestos/NESHAP Regulated Asbestos Containing Materials Guidance

EPA 340/1-90-019 (1990) Asbestos/NESHAP Adequately Wet Guidance

EPA 560/5-85-024 (1985) Guidance for Controlling Asbestos Containing Materials in Buildings

FACTORY MUTUAL SYSTEM (FM) STANDARDS

FEDERAL STANDARD SPECIFICATIONS (FS)

FED-STD 595 (Rev B) Colors

Fort Bragg Installation Design Guide (IDG)

http://www.bragg.army.mil\pwbc-cmd

FS795 Federal Standard 795 (Accessibility)

FS WW-P-541 Plumbing Fixtures

FS WW-P-541/5 Plumbing Fixtures (Sinks, Kitchens, Service, Laundry Trays - Detail Specification)

INTERNATIONAL CONFERENCE OF BUILDING OFFICIALS

ILLUMINATING ENGINEERING SOCIETY (IES)

LIGHTING HANDBOOK REFERENCE AND APPLICATION, 9TH EDITION
INSTITUTE OF ELECTRICAL AND ELECTRONIC ENGINEERS (IEEE)

IEEE STD 144 IEEE Recommended Practice for Grounding of Industrial and Commercial Power Systems

INTERNATIONAL PLUMBING CODE

NATIONAL ASSOCIATION OF ARCHITECTURAL METAL MANUFACTURERS (NAAMM)

NAAMM-01 (1988) Metal Finishes Manual for Architectural and Metal Products

NATIONAL ASSOCIATION OF CORROSION ENGINEERS (NACE)

NACE RP0169 Control of External Corrosion and Underground or Submerged Metallic

National Electrical Code (NEC)

NATIONAL ENVIRONMENTAL BALANCING BUREAU (NEBB), NEBB PUBLICATIONS

NEBB-01 (1991) Procedural Standards for Testing, Adjusting, and Balancing of Environmental Systems

NATIONAL CONCRETE MASONRY ASSOCIATION (NCMA)

Specifications for the Design and Construction of Load Bearing Concrete Masonry

Building Code Requirements for Concrete Masonry (ACI-ASCE 530 Building Code for Masonry; ACI-ASCE 530.1 Masonry Specifications).

NATIONAL ELECTRICAL MANUFACTURER'S ASSOCIATION (NEMA)

NATIONAL ELECTRICAL SAFETY CODE (NESC)

NATIONAL FIRE PROTECTION ASSOCIATION CODES AND STANDARDS (NFPA)

National Fire Codes (NFC) Current as of 2001

NATIONAL FOREST PRODUCTS ASSOCIATION (NFPA)

NATIONAL DESIGN SPECIFICATION FOR WOOD CONSTRUCTION

OCCUPATIONAL SAFETY AND HEALTH ACT (OSHA)

29 CFR Occupational Safeties and Health Standards Part 1910
10 CFR 435B Energy Conservation Performance Standards

29 CFR 1926 Safety and Health Regulations for Construction

40 CFR 61 National Emission Standards for Hazardous Air Pollutants

40 CFR 260 Hazardous Waste Management System General

40 CFR 261 Identification and Listing of Hazardous Waste

40 CFR 763 Asbestos

SAVANNAH DISTRICT DESIGN MANUAL
Design Manual for Military Construction, June 2000

SHEET METAL AND AIR CONDITIONING CONTRACTORS NATIONAL ASSOCIATION (SMACNA)

STEEL DECK INSTITUTE (SDI)

STEEL DECK INSTITUTE DIAPHRAGM DESIGN MANUAL (Latest Edition)

STEEL JOIST INSTITUTE

STANDARD PLUMBING CODE (SBCC)

Standard Specification for Load Table for Open Web Joists (latest edition)

UNIFORM BUILDING CODE (UBC) OF THE INTERNATIONAL CONFERENCE OF BUILDING OFFICIALS, 1997 Edition

UNDERWRITERS LABORATORIES STANDARDS (UL)

UNIFORM FEDERAL ACCESSIBILITY STANDARD (UFAS)

UNIFORM MECHANICAL CODE (UMC)

9. ENGLISH OR METRIC DESIGN. The design shall be developed using English units of measure. The site survey is done in English units. The Contractor shall coordinate. Specifications requiring metric measurements may contain requirements for equipment (e.g. printers, HVAC systems) described in inch-pound (I-P) units in which case no metric substitution will be allowed. Specifications requiring metric measurements shall include references to related non-metric industry and/or Government standards. Discrepancies, such as mismatches or product unavailability, arising from use of both

metric and non-metric measurements and discrepancies between the measurements in the specifications and the measurements in the drawings shall be resolved by the Contractor. Submittals for Government approval or for information only shall cover the SI or I-P products actually being furnished for the project. The Contractor shall submit the required drawings and calculations in the same units used in the contract documents describing the product or requirement unless otherwise instructed or approved.

10. GENERAL CONSTRUCTION REQUIREMENTS

10.1 GOVERNMENT FUNDED GOVERNMENT INSTALLED EQUIPMENT (GFGI). All existing loose furniture, equipment, computers and related hardware, video projectors, VCR's, TV's, drink machines, vending machines, microwaves, and refrigerators are Government furnished and installed. The Contractor shall provide utility connections and space for these items.

10.2 GOVERNMENT FUNDED CONTRACTOR INSTALLED EQUIPMENT (GFCI).

10.2.1 The shop equipment specified in Appendix E, Government Funded Contractor Installed Shop Equipment (CNC Turning Center, Band Saw, Vault Weapon Modular Storage System, etc.) are GFCI equipment. The installation of these items is an Option to the Base Bid as indicated in the Bidding Schedule.

10.2.2 The items to be specified in the Comprehensive Interior Design Package (modular office furniture and new loose furnishings) are GFCI equipment. See Appendix F. The installation of these items is an Option to the Base Bid as indicated in the Bidding Schedule.

11. SITE CONDITIONS AND REQUIREMENTS.

11.1 PROJECT LIMITS. The Contractor shall confine all work within the area shown on the site survey and in paragraph 12 below.

11.2 ENVIRONMENTAL. An environmental site assessment has been completed. The proposed project to construct a Weapons Training Center for SOF would have no adverse environmental impact.

11.2.1 Spills would be addressed in accord with Fort Bragg’s Spill Contingency Plan and Spill Prevention, Control, and Countermeasure Plan.

11.2.2 One historic cemetery, recorded as archaeological site 31CD205, is preserved and maintained by the army adjacent to the planned construction site. Any new construction in the vicinity of Ellis cemetery will allow at least a 20-meter naturally vegetated buffer zone around the existing cemetery fence line. There will be no ground

disturbance within this 20-meter buffer. Pursuant to Fort Bragg's Integrated Cultural Resource Management Plan, SOPs 14 Maintenance of Historic Cemeteries on Fort Bragg and 23 Historic Cemetery Access and Marker Placement, Ellis cemetery will continue to be maintained and made accessible to descendants of people interred in the cemetery.

11.2.3. In the project area, approximately 25-acres of suitable RCW habitat within the Greenbelt will be cut down. At this time, there are no known cavity trees or start trees in the project area. As a mitigation measure, 28 acres will be reforested with longleaf pine in FY03-FY04. Sixteen acres associated with an inactive borrow pit and 12-acres of an abandoned recycling storage area will be reforested with longleaf pine in FY03 and FY04, respectively. Reforestation of these open areas will help maintain a contiguous link along the southern entrance to the Green Belt. In addition, this acreage will contribute to the total potential quality forage acres belonging to cluster 406. In the near future, this site will be augmented with artificial cavity trees. A mitigation measure would be to add 4 suitable cavity trees to this cluster and conduct biannual status checks for 5 years or until active. Management of this species should continue uninterrupted by project.

Implementing this action would not adversely affect wetlands because there are none on the proposed project site. No adverse impacts are anticipated to wetlands downstream because the project manager will ensure that the contractor follows the erosion control plan that will be approved by the State before construction begins. Storm water runoff would be directed into a retention pond on site. Construction of the proposed project would require stringent attention to maintaining soil conservation measures prescribed in the project's state approved Soil Erosion Control Plan. Key measures include a storm water detention basin. This will prevent uncontrolled runoff from leaving the site. The final Soil and Erosion Control Plan will be developed and submitted by design build contractor.

11.3 HAZARDOUS MATERIALS AND CONTAMINATION. While land fill notes, on the site drawings, provide information on the disposal of hazardous materials, the Government does not anticipate that the Contractor will be required to remove or dispose of any hazardous materials or waste during the site preparation phase of this project.

11.3.1 Borrow. The Contractor will be permitted to use the Government-controlled borrow pits and landfills at Fort Bragg as described on the Site Location Map. See Appendix B.

11.3.2 The Contractor shall edit and submit the appropriate UFGS as defined in Section 01010 paragraphs 6.4 and 11 and sections deemed necessary by the contractor.

11.4 DISPOSAL OF WASTE MATERIALS.

11.4.1 The Contractor shall identify, as a part of his submittals required by this contract, the specific disposal site or sites for any waste materials generated by the contractors operations at Fort Bragg.

11.5 EXISTING SITE TOPOGRAPHY & UTILITIES. Topographic Survey: The Government had the site surveyed in May 2002, on which the plans are based. This topographic survey will be provided to the contractor in electronic format for the use in the design. The contractor shall verify the survey. The contractor shall survey and stakeout the project boundaries before starting work. The Contractor is responsible for furnishing any additional required survey data, all line and grade surveys, and as-built survey of the construction.

11.6 DEMOLITION AND REMOVALS The Contractor shall survey and stake-out the project boundaries before starting work. The survey drawing provided in the RFP indicates existing conditions and locations of existing utilities. The Contractor may utilize the utilities during construction operations and may incorporate the utilities as part of the final project. If these existing utilities are determined to be inadequate for construction operations or incorporation into the final facility, they will be upgraded as part of the construction project. However, if the Contractor elects not to use the existing utilities, they will be demolished and removed as part of the construction project. Existing utilities that interfere with this project will be relocated. The information shown on the survey drawing is the most recent data. The Contractor shall be responsible for furnishing an independent topographic survey of the project site, and all line and grade surveys, and as-built surveys of the construction. All demolition debris shall be removed to the landfill on post.

11.6.1 Demolition requirements are not anticipated at the project site, but verification of survey and removal of any existing and unnecessary items will be required. Demolition is required for a portion of the existing facility. Building D-1405 is the only building to be demolished. This building is adjacent to the existing Weapons Storage Facility and is a World War II era wood building. The building size is listed as 3,812 s.f. in the Fort Bragg Facilities Inventory, but should be confirmed by the Contractor. An asbestos and lead based paints survey was done on the building (see Appendix H – Part 9). The lab results detected no asbestos or lead based paints in building D-1405. The building can be crushed. The demolition of this building is to be phased to schedule the demolition to occur after the completion of the new facility and after the using agency has relocated. Any areas disturbed by the demolition are to be dressed, seeded and mulched in accordance with Fort Bragg erosion control requirements. The utilities for building D-1405 are to be capped at a reasonable point of termination. All other buildings, fencing, utilities, pavements and appurtenances at the existing facility site are not to be disturbed.

11.7 UTILITIES. The Contractor shall provide and install meters on all utilities used during construction. The Contractor shall reimburse the government for the cost of all utilities during construction.

12. NEW SITE DESIGN AND CONSTRUCTION. The concept site plan presents the general geometric layout for the site work. Access by vehicles is required at the East side of the Weapons Training Facility. The Contractor shall design the paving, sidewalks and utilities including fire hydrants, irrigation, septic system and street lights. The Contractor has the option to rearrange or improve the site layout to achieve better site function and/or economy, however the general functional requirements described in this RFP must be met.

12.1 Project Limits. The Contractor shall confine all work within the area of the project limits shown on the concept site plan.

12.1.1 The Contractor shall include counter-surveillance measures during construction. These measures shall include a temporary perimeter fence with black mesh screen around the site during construction. The permanent perimeter fence may be incorporated in these measures.

12.2 PERMITS

12.2.1 All permits, design and construction, shall be obtained by the contractor. A list of known and/or suspected required permits is included herein for informational purposes and shall not be construed as absolute. Contractor shall verify and complete all required permits, including and permits not listed herein. The contractor shall submit all applications and fees directly to the permitting agency. Permitting information, requirements and applications can be found on the State of North Carolina Department of Environmental and Natural Resources Website, www.envhelp.org.

12.2.2 All approved plans shall be on site at all times for inspection by EPA, NCDENR, and Fort Bragg environmental personnel. All activities in the approved plan shall be implemented. All permit applications and construction completion certificates shall be prepared by the contractor, an engineer registered in the state of North Carolina. The approved permit application must be provided to the Contacting Officer's Representative prior to starting construction on any of these activities. The contractor shall submit the construction completion certificate on all permit applications received by the contractor from local, state and federal agencies within 30 days of completion of the permitted activity.

12.2.3 A Stormwater Pollution Prevention Plan (Best Management Plan) shall be designed and included in the design submittals shown in Section 01030. The Stormwater Pollution Prevention Plan shall be developed, approved and permitted by the contractor in accordance with the North Carolina Department of Environmental and Natural Resources (NCDENR) requirements prior to starting work, except that timber harvesting may proceed prior to approval of final permit. The Contractor shall control erosion and sedimentation during construction. The contractor must submit an erosion and sediment control plan for approval by the state. This plan must be approved before work can start on site and must be posted at the job site. Sedimentation of adjacent

sites or downstream ditches will not be permitted. The Fort Bragg point of contact for this issue is Lynn Vaughn, tel. (910) 396-3341 x 314. The NCDENR representative for Fort Bragg is Steve Cook, tel. (910) 486-1541.

12.2.4 National Pollution Discharge Elimination System (NPDES): Fort Bragg is currently operating under a general NPDES. Design and construction shall be performed in accordance with the General permit. The Fort Bragg point of contact is Lynn Vaughan, tel. (910) 396-3341 x 314

12.2.5 Stormwater Runoff: Storm runoff design shall be in accordance with TM-5-820-4 and the State of North Carolina. A “NC Stormwater Runoff” permit may be required for the construction of the facility. In addition to state requirements, Contractor is advised that Fort Bragg requires that the Post Development runoff not exceed Pre-development runoff for the 25 year design storm.

12.2.6 Water System Connection: A “Water Supply System” permit may be required by the NC Department of Environmental Health, Public Water Supply Section.

12.2.7 Sewage Treatment and Disposal Systems: A “Wastewater Systems” permit may be required by the NC Department of Environmental Health and Natural Resources, On-Site Wastewater Section.

12.2.8 Air Quality Permit: This permit and Construction Certificate may be required if a boiler or combination of boilers is installed greater in size than one million BTU’s. The winning proposer shall provide the requested information to the Fort Bragg Fort Bragg Environmental Sustainment Office. The Fort Bragg point of contact is Gary Cullen, tel. (919) 396-3341 x354

12.3 CONSTRAINTS.

12.3.1 The new project grading and storm water system shall not impact the surrounding areas. Construction shall not impact the existing natural drainage systems and topography adjacent to the site.

12.3.2 BUILDING SETBACK REQUIREMENTS. The building shall be located on the site in accordance with the DOD Antiterrorism/Force Protection Construction Standards included in Appendix “I”. The Facility will have over 50 full time Military Personnel and is therefore classified as a “Primary Gathering Structure”.

Building Setbacks	Minimum acceptable
Adjacent Buildings	50 feet
Building front to main street curb	85 feet

12.3.3 The hardwood trees and pines on the site shall be incorporated in the design, retained and protected during construction to the extent possible. Proposers are encouraged to delineate areas of trees that will remain in the site design they propose.

The Government may chose to harvest all, some or none of the timber on the site prior to clearing operations by the contractor. Contractor shall notify the Government when clearing limits have been clearly delineated in the field and allow the Government 60 days to perform harvesting operations. The contractor is responsible for ensuring all necessary permitting has been performed and in place prior to harvesting operations. The Point of Contact for Fort Bragg timber harvesting is the Natural Resources Department, Steve Reilly (910) 396,2510 or Danny Sewell (910) 396-1493.

Refer to paragraph 11.2 for the Environmental Assessment on the project site.

12.4 ACCESS DRIVES, PARKING AND SIDEWALKS. Connections to existing asphalt or concrete pavements shall be accomplished by saw cutting the adjacent existing pavement.

12.4.1 WIDTH CRITERIA. Dimensions for parking and drive aisles shall be in accordance with the Fort Bragg Installation Design Guide (IDG) and requirements herein. All pavement and radii dimensions in this Section are from face of curb to face of curb. Minimum access drive width shall be 24 feet. Minimum turning radius for all intersections shall be 20 feet except where fire truck access and semi-truck and trailer access is required. Designer shall consider the types of vehicles traversing and parking on these facilities. Vehicles shall include but not be limited to: passenger cars, emergency vehicles, garbage, fire trucks, military vehicles, delivery service, and utility vehicles. The contractor shall provide traffic control signage in accordance with MUTCD and NCDOT requirements. Parking stripes shall be white and handicap parking stripes shall be blue.

12.4.2 CURB AND GUTTERS. All bituminous asphalt pavement shall be bordered with 6 inch concrete curb and gutter 2 feet wide. All concrete pavement shall be bordered with 6 inch concrete curb poured monolithic with the pavement. All gradients shall provide positive drainage (no ponding). Curb cuts shall be provided as necessary for pavement drainage.

12.4.3 PAVEMENT THICKNESS. Pavement structure shall be designed for actual vehicle loadings and frequencies. Access drives shall be asphalt pavement with graded crushed aggregate base course, or portland cement concrete. A portion of the access drive to the facility crosses over an existing and functional training tank trail. See the conceptual site plan for locations of each pavement type. Pavement structure thickness shall be in accordance with TM-5-822-5, Chapter 1 and TM 5-822-5, Chapter 3. Pavement structure shall be designed for a twenty year pavement life.

12.4.3.1 CONCRETE PAVEMENT. Concrete pavement shall be provided where excessive wear is expected, such as dumpster pad areas and all heavy delivery vehicle routes. A concrete joint layout plan shall be required for all concrete pavements. Joint spacing, joint types, and joint grading shall be shown. Concrete pavement thickness shall be designed for an equivalent 18,000 pound (8,165 kilogram) single axle load for the design vehicle loading and number of passes. Pavement life shall be twenty years.

Concrete pavement shall be designed in accordance with TM 5-822-5, Chapter 1. Concrete pavement shall have a minimum thickness of 8” with a minimum of 6” aggregate base. Concrete pavement shall be non-reinforced except for odd shaped slabs. The number of joints shall be kept to a minimum by using the greatest joint spacing that will effectively control cracking. The maximum length to width ratio of the slabs shall be 125 percent. Joint sealant type shall be preformed compression seal.

12.4.3.2 BITUMINOUS CONCRETE PAVEMENT. Bituminous concrete pavements shall be provided for all parking and access roads, except where excessive wear is expected to occur. All asphalt pavement design structure (thickness) shall be based on TM 5-822-5. Chapter 1, Pavement Design for Roads, Streets, Walks, and Open Storage Areas. Drive aisles and the side service area shall be designed as light-duty roads with periodic tour bus loading. Bituminous pavement for POV parking areas shall be designed with a minimum section of 1.5” bituminous concrete and 6” aggregate base. Minimum for all other parking and drives shall be 3” Bituminous Concrete and 8” aggregate base. Specification section 02547, Bituminous Pavement with Base Course, developed by the Savannah District should be used as it coordinates Federal Government specifications with NC DOT specifications.

12.4.4 SIDEWALKS. Sidewalks, minimum 6 feet wide, shall be provided as indicated on the concept site plan. Sidewalks shall be widened as necessary to meet building entrance and exit way widths. Sidewalks shall connect the parking areas to the building exits. Sidewalks shall be steel wire reinforced concrete with a minimum nominal thickness of 4 inch with 3,000 psi compressive strength. Contraction joints shall be spaced at 6 feet on center and expansion joints shall be placed at 50 feet on center and at the intersection of walks and curbs. Minimum cross slope on sidewalks shall be 2 percent.

12.4.5 HANDICAPPED ACCESS. Ramps shall be provided for handicapped access. Number of parking slots and site access for the physically disabled shall be as required by ADAAG, UFAS and FS 795.

12.4.6 PARKING.

12.4.6.1 Parking shall be provided as generally indicated in the layout presented in the concept site plan. All parking shall be 90 degrees off-street parking. Handicap parking stalls shall be provided. Parking areas design shall conform to TM 5-822-3. Area lighting and landscaping shall reinforce the parking area in accordance with the Fort Bragg Installation Design Guide while meeting functional and safety requirements. Area lighting shall also coordinate with the Intrusion Detection System (IDS) and security camera lighting requirements.

12.4.6.2 Parking areas shall be paint striped and adequately drained. Parking stalls shall be 9 feet wide by 19 feet deep. Paint markings shall be 4 inch in width. Traffic isles shall be 26 feet in width. Parking stalls and access drives shall be asphalt pavement with graded crushed aggregate base course. Pavement structure thickness

shall be in accordance with TM 5-822-5, Chapter 3. The pavement structure shall be designed for a twenty-year pavement life.

12.4.6.3 Parking area drainage shall sheet flow to inlets then into the storm collection system. Parking area slopes shall be adequate to provide proper drainage.

12.4.6.4 Area Lighting. The Contractor shall design parking lot area lighting and shall install dark bronze anodized poles and fixtures. Area lighting and landscaping shall be provided and installed to meet functional and safety requirements.

12.4.7 LOADING DOCK PAVEMENT. The loading dock access area shown at the front of the Weapons Training Facility and in front of the Weapons Supplies Handling Facility shall be designed by the Contractor for standard maximum legal-sized semi-truck and trailer combinations, and shall be concrete paved.

12.5 BUILDING CONNECTION TO THE SITE.

12.5.1 The finish floor shall be a minimum of 6 inches above finished grade.

12.5.2 Finished grade shall slope a minimum of 4 percent away from the new building for a distance of 10 feet.

12.6 EARTH RETAINING STRUCTURES. Generally, vegetated area slopes may not exceed 4:1 and may be governed by the more restrictive criteria as stated in the IDG and this section. Where site slopes exceed 4H: 1V earth retaining structures may be utilized. Architecturally pleasing earth retaining structures which complement the site shall be incorporated.

12.7 SUSTAINABLE SITE DESIGN. The contractor shall utilize sustainable design features to enhance the site and to meet the stormwater/site drainage requirements. Possible sustainable features include porous pavements, recycled irrigation water source(s), and recycled concrete/asphalt.

12.8 TRAFFIC CONTROL SIGNAGE. The contractor shall provide traffic control signage in accordance with MUTCD and NCDOT requirements.

12.9 TRAFFIC CONTROL SIGNAL. A traffic study was conducted during the month of November 2002. The purpose of the traffic study was to determine if the installation of a traffic signal is warranted under existing traffic conditions at the intersection of Chicken Road and MacRidge Road. The driveway for the new Weapons Training and Maintenance Facility will align with MacRidge Road at the intersection of Chicken Road. Trips generated by the new facility were estimated based on traffic counts and observations at the existing Weapons Training and Maintenance Facility, as well as engineering judgment.

Based on the traffic signal warrant analysis, a traffic signal is not warranted at the intersection of Chicken Road and MacRidge Road under existing (2002) traffic conditions. In addition, the findings indicated that a traffic signal will not be warranted at the study intersection under future (2005) traffic conditions with the new Weapons Training and Maintenance Facility in place.

13. FOUNDATIONS AND GEOTECHNICAL DESIGN

13.1 Government Investigation. The Government has performed geotechnical explorations at the project site. The locations of and drilling logs of soil test borings are shown on the drawings included with this RFP. A report of the explorations and analysis is included in Appendix H, Part 1. This “preliminary” report provides an overview of the soils and geologic conditions, and is furnished for informational and proposal purposes and not for final design; however, the recommendations provided in the report shall be considered to be minimum requirements that shall be incorporated into the final design and construction of the project.

13.2 Contractor Investigation. The offeror to whom this contract is awarded, shall employ the services of a consulting professional geotechnical engineer experienced in geotechnical engineering, who shall be responsible for determining site specific geotechnical conditions. The site-specific geotechnical conditions, together with recommendations specific to the geotechnical design and construction requirements for the proposed project, shall be addressed in a “final” geotechnical report prepared by the consulting geotechnical engineer. The geotechnical report shall include, but not be limited to, the following:

a. Description of the site as to topography, existing surface conditions, and any other features that might influence the design.

b. Description of the investigation program and the methods used. Information obtained from the explorations performed by the Government can be used, supplemented by the minimum numbers of additional explorations specified below, and any further investigations as deemed necessary by the consulting geotechnical engineer. Subsurface exploration may include soil test borings, cone penetrometer test (CPT) soundings, and test pits. The investigation, sampling, and identification of subsurface materials shall be in accordance with methods and procedures described in ASTM D 420. Soil investigation and sampling by hollow-stem auger borings shall be in accordance with AASHTO T 251. Drilling and sampling with the "Standard Penetration Test" (SPT) split-barrel sampler shall be in accordance with ASTM D 1586. The procedure shall be modified to provide for continuous standard penetration and sampling tests for the initial 12 feet of the boring. Beginning at a depth of 15 feet below grade, penetration and sampling tests every 5 feet and at each change in soil stratification or soil consistency are recommended. The location of the groundwater table, if encountered, shall be measured and recorded after 24 hours. If drilling techniques that prevent determination of the groundwater table are used, install at least

one piezometer for every five explorations to measure the depth to the groundwater table. Classification of soils shall be in accordance with ASTM D 2487 or D 2488, as appropriate. Cone penetrometer test (CPT) soundings shall be in accordance with ASTM D 5778. Undisturbed soil sampling shall be in accordance with ASTM D 1587.

The following minimum numbers of explorations (soil test borings and/or CPT soundings) shall be performed by the Contractor.

Feature	**Minimum Number of Borings**
Weapons Training and Maintenance Facility	**6**
Weapons Supplies Handling Facility	**2**
Roads	**1 per each 250 feet**
Parking Areas	**1 per each 5,000 square feet**

The depths of explorations shall be of sufficient depth to evaluate bearing capacity and settlement potential. However, beneath structures, explorations shall extend to a minimum depth of 25 feet below existing ground surface or below final design grade, whichever is lower. Beneath roads, hardstands, and/or parking areas explorations shall extend to a minimum depth of 5 feet below existing ground surface or below final design grade, whichever is lower.

The Contractor shall be responsible for all applicable clearances and permits and for the protection of all underground utilities from damage during field investigations. Utility clearances and digging permits are required prior to drilling on the installation. Procurement of the clearances and permits shall be coordinated through the Contracting Officer.

c. Discussion of the subsurface soil conditions and stratigraphy and groundwater conditions.

d. Location plan of explorations.

e. Logs of explorations. Indicate on logs complete information on who, when, and how made. Show soil description, standard penetration resistance, N, or other type resistance, topsoil, water level observations, surface elevation and datum, and any other information gathered during the exploration.

Exploration locations shall be surveyed. Surveyed elevations and coordinates shall be provided on each exploration log. Elevations shall be in accordance with NGVD 29 and horizontal coordinates shall be in accordance with NAD 83 (North Carolina State Plane

Coordinates); accuracy to be plus or minus 3 feet horizontal and plus or minus 0.5 foot vertical.

Soil test boring logs shall show graphical representation of soil strata, location of each change by depth or elevation, location of each sample by depth or elevation, and number of blows for each 6 inches and amount of soil recovered for each sample location. Logs shall also indicate type and size of casing, type of drilling fluid, and type and size of drill bit. If no casing is used, indicate size of borehole. Indicate when boring is terminated due to refusal.

Soil classifications for final logs shall be based on the field classifications, the results of tests, and further inspection of samples in the laboratory by geotechnical engineers.

Include a chart illustrating the soil classification criteria and the terminology and symbols used on the boring logs.

Locations of all explorations shall be shown on the grading and drainage plates of the submittal drawings. Logs of all explorations shall be included on plate(s) of the submittal drawings. Locations of all explorations, logs of all explorations, and results of all laboratory testing shall be included on drawing sheets in the final "As-Built" drawings. If necessary, the logs and test results can be scanned onto the drawing sheets.

f. Laboratory test data shall be included in detail. Laboratory testing shall be in accordance with the requirements set forth in EM 1110-2-1906, Laboratory Soils Testing, EM 1110-2-1909, Calibration of Laboratory Soils Testing Equipment, and/or applicable ASTM standards. All laboratory testing shall be performed by a commercial testing laboratory which has been validated by the Engineer Research and Development Center Materials Testing Center (MTC) under the Corps of Engineers laboratory inspection and validation program. The laboratory shall be listed on the list of Corps of Engineers Validated Laboratories.

g. Notation of the location of strata containing organic materials, weak materials or other inconsistencies that might affect engineering conclusions.

h. Pavement design, or if not responsible for pavement design, pavement structural design data, including design California Bearing Ratio (CBR) and modulus of subgrade reaction. Address treatment of high plasticity clays and silts in subgrades as discussed in SUBSURFACE EXPLORATION AND GEOTECHNICAL ENGINEERING REPORT (PRELIMINARY) included in Appendix H, Part 1.

i. Discussion of the facilities under design and recommendations regarding foundation support of the structures and slabs on grade, including soil bearing pressures, bearing elevations, foundation design recommendations and anticipated settlements, including total and differential.

j. Anticipation of, and management of, groundwater.

k. Discussion of site preparation and the effect of weather and construction equipment on soils during construction.

l. Areas requiring undercutting and removal of unsatisfactory soils.

m. Types of materials to be excavated and possible uses and/or disposition of the materials.

n. Fill and backfill placement procedures, including recommended moisture content range, and types of compaction equipment.

o. Results of pH tests and salinity tests and resistivity measurements, as appropriate, necessary to design corrosion control and grounding systems. The raw field data shall be included in the report.

p. Lateral earth pressures and pressure coefficients (active, passive, and at rest) and internal friction angles for design of walls below grade, including backfill, compaction and subdrainage, and their requirements.

q. Results of laboratory soils testing, to include classification and compaction tests, on representative samples of proposed borrow material (both on and/or off the installation). Testing shall be as specified in paragraph 13.8.1. If borrow material is to be obtained from sources off the installation, provide the name and location of the borrow source.

r. Provide calculations that support the recommendations for the foundation design. The calculations may be included in an appendix to the report. Calculations shall include loadings, capacities, safety factors, settlement analysis, bearing analysis, and references from which calculations are based. Any graphs and formulas shall be clearly indicated along with derivation of curve slopes and data derived from laboratory testing. Computer outputs shall also be included.

Three copies of the geotechnical report shall be submitted with the 60 percent submittal. If revisions are made to the 60 percent design submittal that require revisions to the geotechnical report, a revised report (three copies) shall be provided with the final design submittal. In addition, the pavement design and/or pavement structural design data shall also be submitted with the 100 percent Site/Utility Design Submittal.

13.3 Certification. The successful proposer shall be fully responsible for acceptable foundations, pavements and other geotechnical aspects for the proposed project. The proposer and his professional geotechnical engineering consultant shall certify in writing that the design of the project has been developed consistent with the site specific geotechnical conditions. The certification shall be stamped by the consulting

professional geotechnical engineer and shall be submitted with the 100 percent design submittal.

13.4 Foundation Design.

13.4.1 General. Given the proposed site and the proposed structures, it is anticipated that shallow spread footings can be used for support of the proposed buildings.

13.4.2 Allowable Bearing Pressure. Allowable soil bearing pressure shall be determined by the consulting geotechnical engineer. An adequate level of protection against structural failure due to uniform and/or differential foundation settlement or general shear shall be provided.

13.4.3 Footing Dimensions. Column footings and load-bearing wall footings shall have minimum dimensions of 30 inches and 24 inches, respectively, and shall be located at a minimum depth of 24 inches below finish floor or finish grade, as appropriate. Non load-bearing wall footings shall have a minimum width of 18 inches and shall be located at a minimum depth of 18 inches below finish floor or finish grade, as appropriate.

13.4.4 Foundations Over Utility Lines. No foundation shall be constructed over existing or new water, sewer, steam, natural gas, chilled water, industrial waste and foundation drain lines. All foundations shall be stepped down to an elevation below the pipe invert elevation, or the utility line relocated.

13.4.5 Additional Requirements. Thickened slabs shall be required for walls and partitions which have a vertical load of 300 plf to 1100 plf. A separate isolated wall footing shall be used for walls having a vertical load in excess of 1100 plf.

13.4.6 Segmental Concrete Block Retaining Wall. The design of any segmental block retaining walls shall be in accordance with National Concrete Masonry Association (NCMA) SRW Design Manual for Segmental Retaining Walls, latest edition, or the Federal Highway Administration (FHWA) manual Mechanically Stabilized Earth Walls and Reinforced Soil Slopes: Design and Construction Guidelines. Only one method shall be followed for the complete design, including reinforcement design strength, layout, stability calculations, and seismic effects. The segmental retaining wall system shall be designed under the direction of, and be signed by, a professional engineer.

13.5 Site Classification for Seismic Design. The project site shall be classified as Site Class D for the purpose of determining maximum considered earthquake spectral response accelerations S_{ms} and S_{ml} in accordance with Corps of Engineers Technical Instruction “TI809-04, Seismic Design for Buildings.”

13.6 Slabs on Grade. All interior slabs on grade, including storage rooms, shall be underlain by a moisture vapor barrier consisting of lapped polyethylene sheeting having a minimum thickness of 6 mils and a minimum 4-inch thick capillary water barrier of open graded, washed pea gravel, or crushed stone. Concrete slabs shall be jointed

around columns and along supported walls to minimize cracking due to possible differential movement.

13.7 Soil Compaction.

13.7.1 Soil compaction shall be achieved by equipment approved by the consulting geotechnical engineer. Soil materials shall be moistened or aerated as necessary to provide the moisture content that will readily facilitate obtaining the compaction specified with the compaction equipment used.

Each layer of structural fill and subgrades shall be compacted to the following minimum percent of the modified Proctor maximum density, determined in accordance with ASTM D 1557:

Beneath structures and building slabs, to 5 feet beyond structure limits, around footings and in trenches	90 percent
Beneath streets and paved areas, except top 12 inches in fill and top 8 inches in native soil	90 percent
Beneath streets and paved areas, top 12 inches in fill and top 8 inches in native soil	95 percent
Beneath shoulders	90 percent
Beneath sidewalks and grassed areas	85 percent
Base course under paved areas	100 percent

The requirements shall be verified or modifications recommended by the consulting professional geotechnical engineer in the report wherever engineering, soils, or climatic factors indicate the necessity. Any modification to the specified compaction requirements shall require the approval of the Contracting Officer.

13.7.2 The Contractor, with recommendations and input from his consulting geotechnical engineer, shall edit and submit the following UFGS Specifications:

02300A Earthwork
02315A Excavation, Filling and Backfilling for Buildings
02316A Excavation, Filling and Backfilling for Utilities

Compaction control using one- and two-point compaction tests with a family of curves as described in the Appendix of the Corps “preliminary” geotechnical report shall be included in the specification sections.

13.8 Construction Quality Control Testing.

13.8.1 Prior to initiating any structural fill placement and/or compaction operations, representative samples of the soils which will be used as structural fill or subgrade, both suitable on-site soils and off-site soils (borrow, both on and/or off the installation), shall be obtained and tested to determine their classification and compaction characteristics. The samples shall be carefully selected to represent the full range of soil types to be used. The moisture content, maximum dry density, optimum moisture content, grain-size and plasticity characteristics shall be determined. These tests are required to determine if the fill and subgrade soils are acceptable and for compaction quality control of the subgrades and structural fill. A minimum of 12 compaction tests shall be performed on materials classified as satisfactory for use.

Tests for the above soil properties shall be in accordance with the following:

Moisture Content	ASTM D 2216
Maximum Dry Density and Optimum Moisture	ASTM D 1557
Grain-Size (Wash No. 200, w/o Hydrometer)	ASTM D 422 and ASTM D 1140
Plasticity	ASTM D 4318

13.8.2 A representative number of in-place field density tests shall be performed in the subgrade of compacted on-site soils and in the structural fill and backfill to confirm that the required degree of compaction has been obtained. In-place density tests shall be performed in accordance with the sand cone method prescribed in ASTM D 1556; the use of nuclear gauges for density testing will not be permitted.

In-place density tests shall be performed in the material and at the minimum frequency specified below:

Material Type	Location of Material	Minimum Test Frequency
Fill, embankment and backfill	Beneath structures to 5-foot building line	One test per lift per each increment, or fraction, of 6000 square feet
Fill, embankment and backfill	Beneath paved areas	One test per lift per each increment, or fraction, of 7500 square feet
Fill, embankment and backfill	All other areas	One test per lift per each increment, or

		fraction, of 10,000 square feet
Subgrade	Under building slabs	One test per each increment, or fraction, of 6000 square feet
Subgrade	Under paved areas, excluding roads	One test per each increment, or fraction, of 5000 square feet
Subgrade	Roads	One test per each increment, or fraction, of 100 linear feet
Subgrade	Under footings	One test per every fifth column footing and for each increment, or fraction, of 100 linear feet of wall footings
Backfill	Utility trenches beneath roads and paved areas	One test per each increment, or fraction, of 150 linear feet per foot of depth of backfill
Backfill	Utility trenches beneath grassed areas	One test per each increment, or fraction, of 150 linear feet per 2 feet of depth of backfill
Fill, embankment and Backfill	Areas compacted by hand operated compaction equipment, other than utility trenches	One test per foot of depth per each increment, or fraction, of 250 square feet, or for each 100 linear feet of long narrow (less than 3 feet wide) fills 100 feet or more in length

13.8.3 Any area that does not meet the required compaction criteria shall be reworked, and retested. If the moisture content of the soil is within the recommended range, additional compaction may be all that is necessary to increase the density. If the

moisture content is not within the recommended range, then, the moisture content shall be adjusted to within the range, and the area recompacted.

13.8.4 All laboratory and field density testing shall be performed by a commercial testing laboratory which has been validated by the Engineer Research and Development Center Materials Testing Center (MTC) under the Corps of Engineers laboratory inspection and validation program. The laboratory shall be listed on the list of Corps of Engineers Validated Laboratories.

13.9 Soil Treatment.

13.9.1 The pesticide applicator's principal business shall be pest control and the pesticide applicator shall be State certified in the U.S. Environmental Protection Agency (EPA) pesticide applicator category which includes structural pest control, and certified in the State of the project's location.

13.9.2 Pesticides shall be delivered to the project site in sealed and labeled containers in good condition as supplied by the manufacturer or formulator. Pesticides shall be stored, handled, and used in accordance with manufacturer's labels. Labels shall bear evidence of registration under the Federal Insecticide, Fungicide, and Rodenticide Act (MX), as amended.

13.9.3 The Contractor shall formulate, treat, and dispose of termiticides and their containers in accordance with label directions. Pesticides and related materials shall be kept under lock and key when unattended. Proper protective clothing and equipment shall be worn and used during all phases of termiticide application.

13.9.4 The Contractor shall provide a 5-year written warranty against infestations or reinfestations by subterranean termites of the buildings constructed under this contract. Warranty shall include annual inspections of the buildings. If live subterranean termite infestation or subterranean termite damage is discovered during the warranty period, and the soil and building conditions have not been altered in the interim, the Contractor shall:

a. Retreat the soil and perform other treatment as may be necessary for elimination of subterranean termite infestation;

b. Repair damage caused by termite infestation; and

c. Reinspect the building approximately 180 days after the retreatment.

13.9.5 Termiticides shall be currently registered by the EPA.

13.9.6 At the time of application, the soil moisture content shall be sufficiently low to allow uniform distribution of the treatment solution throughout the soil. Applications

shall not be made during or immediately following heavy rains or when conditions may cause runoff and create an environmental hazard.

13.9.7 The Contractor shall establish complete and unbroken vertical and/or horizontal (as necessary) soil poison barriers between the soil and all portions of the intended structure that may allow termite access to wood and wood related products. Application shall not be made to areas intended for use as a plenum air space. Surface treatments shall not be made for areas to serve as crawl spaces. Termiticide shall be applied as a coarse spray and provide uniform distribution unto the soil surface. Treatment shall be applied prior to placement of the vapor barrier and at least 12 hours prior to concrete placement. Where treated soil or fill material is not to be covered with a vapor barrier or waterproof membrane; adequate precautions shall be taken to prevent its disturbance. Soil or fill material disturbed after treatment shall be retreated as specified above before placement of slabs or other covering structures. Treatment of the soil on the exterior sides of foundation walls, grade beams, and similar structures shall be coordinated with final grading and planting operations so as to avoid disturbance of the treated barriers. Manufacturer's warnings and precautions shall be observed in the handling and use of such materials. Care shall be taken to prevent these chemicals from entering water supply systems, potable water supplies, or aquifers; and that they do not endanger plants or animals. The Contracting Officer shall be notified at least 48 hours prior to beginning of treatment and formulating, mixing, and application shall be performed in the presence of the Contracting Officer's representative.

13.9.8 Rates and methods of application shall be in accordance with the manufacturer's instructions on the pesticide label. Maximum application or dosage rates shall be used. If the pesticide contains less than the amount of active ingredient specified on the label, work shall be repeated with pesticides conforming to this specification.

13.9.9 The Contractor shall dispose of residual pesticides and containers off Government property in accordance with label instructions and EPA criteria.

13.9.10 The Contractor shall edit and submit the following UFGS Specification:

02364A TERMITICIDE TREATMENT MEASURES FOR SUBTERRANEAN TERMITE CONTROL

13.10 Decay Treatment. The Contractor shall be responsible for determining and implementing the appropriate treatment for prevention of subsurface induced decay.

13.11 Radon Mitigation. The design and construction of foundation walls, slabs, and crawl spaces shall include provisions for the reduction of radon entry and facilitate its removal. Radon mitigation shall comply with the requirements of EPA 402-R-94-009.

13.12 Soil Resistivity Testing. The proposer to whom this contract is awarded shall be responsible for all soil resistivity testing required for cathodic protection design of underground utilities and for design of grounding systems.

13.13 Borrow. Borrow material (if needed) shall be selected to meet the requirements and conditions of the particular fill or embankment for which it is to be used. Borrow material shall be obtained from the borrow area on the installation as shown on the drawings. Necessary clearing, grubbing, and satisfactory drainage of borrow pits and the disposal of debris thereon shall be considered related operations to the borrow excavation. Borrow pits shall be neatly trimmed and drained after the excavation is completed. Borrow materials shall be free of any contaminants.

14. LANDSCAPE DESIGN. The landscape shall be designed using the Fort Bragg Installation Design Guide as modified here. Graded and scarred areas shall be solid sodded. Landscaping shall be absolutely minimum maintenance. Planting shall consist predominantly of tree species matching adjacent growth. Trees shall be planted in a formal pattern to highlight the building entrance. Trees shall also be planted in islands designed in the Contractor's parking layout with the intent of breaking up the linear image of the parking lots. Care should be taken to ensure placement of shrubs and trees is coordinated with mechanical and electrical features, such as parking area light poles, transformers, etc.

14.1 TURF. Solid centipede sod shall be provided for all graded and scarred areas. All existing grassed areas not graded or disturbed shall remain sodded. Contractor shall be responsible for proper care and watering of grass from the beginning of the turfing operation and continuing for 3 months after completion of sod placement. New trees and shrubs shall be maintained for a 12 month period after installation. Proper care means watering, fertilizing, cutting and weeding. Trees and shrubs shall require a one year warranty and sod shall require a ninety day warranty. Turf preparation shall include eradication of unwanted vegetation with Roundup and the use of a pre-emergent granular herbicide. Provide for a soil test that includes pH, potassium, phosphorus, calcium, magnesium, nematode count, and soil amendment recommendations (N-P-K). Post planting fertilizer for the turf after the sod is rooted shall be applied based on the soil analysis. Grass shall be mowed initially after achieving a 3 inch growth and then twice monthly thereafter.

14.2 LANDSCAPE PLANTINGS. Landscaping shall emphasize low maintenance. Mulch shall be shredded cyprus or pine bark. Mulch should have a minimum thickness of 4”. Also, there shall be a weed barrier under the mulch. Solid rubber guys with 2’-0” stakes shall be used to stabilize newly planted trees. Landscaping shall be in accordance with the Fort Bragg Installation Design Guide. Quality plant material shall be as specified by the American Standard for Nursery Stock, ANSI 260.1.

14.3 APPROVED PLANT LIST. Large trees, and small shrubs at entrances, as defined in the Fort Bragg Installation Design Guide consistent with adjacent existing trees and

plants. Planting within 30 feet of building cannot exceed 12” high in order to meet the Anti-Terrorism requirements

15. IRRIGATION SYSTEM. The project shall include a complete operating lawn and landscape irrigation system. The system may connect to the existing potable water system. In the interest of providing a sustainable site design, the system may utilize recycled water from site runoff recovery systems. Cut-off valves shall be installed at the water supply source. The piping design and layout shall be coordinated with the landscaping plan to provide adequate irrigation requirements/coverage to protect and maintain the health of all areas of trees, shrubs, and grass areas within the design boundaries including the parking areas islands. A system shall be selected for minimum maintenance and operational skill requirements, without waste of water, including the piping, valves, sprinkler heads, controller and wiring, and all of the other system appurtenances that help to make a complete and operable landscape irrigation system. The system selected shall be divided into zones and shall be automatically controlled. The system shall be designed and installed by an experienced firm licensed for irrigation design and installation in the State and County.

16. UTILITY LAYOUT. Coordination of all site work on the project, including utility work, is the responsibility of the Contractor. It is the Contractor's responsibility to confirm the specific locations of the existing utilities and to design and construct new utility services for the new buildings. All utilities, including electrical service, telephone and cable TV, shall be installed underground. New underground utility lines, including appurtenant structures such as valve boxes, manholes, vaults, etc., shall not be located under pavement, road shoulders or drainage ditches to the maximum extent practicable. Unless otherwise approved, placing utilities and culverts under existing roads shall be by jack and bore.

16.1 Backflow prevention valves, post indicator valves, transformers, electric switches, telephone/cable boxes, manholes, irrigation pump and controller, etc., shall be located in locations not immediately apparent to the facility users or personnel passing by the site. New utility lines shall not be located within 15 feet of the footprint of any future building as shown on the site.

16.2 MARKING OF UTILITY LINES. Utility lines shall be marked with plastic marking tape. Plastic marking tape shall be acid and alkali-resistant polyethylene film, 6 inch wide with minimum thickness of 0.01 inch. Tape shall have a minimum strength of 12.5 MPa lengthwise and 10.5 MPa crosswise. The tape shall be manufactured with integral wires, foil backing or other means to enable detection by a metal detector when the tape is buried up to 3 feet. The tape shall be of a type specifically manufactured for marking and locating underground utilities. The metallic core of the tape shall be encased in a protective jacket or provided with other means to protect it from corrosion. Warning tapes shall be installed directly above all buried pipes or wires, at a depth of

18 inches below finished grade. Tape color shall be as specified below and shall bear a continuous printed inscription describing the specific utility.

Tape Color:

Red:	Electric
Orange:	Telephone, Telegraph, Television, Police, and Fire Communications
Blue:	Water Systems
Green:	Sewer Systems
Yellow:	Gas, Dangerous Materials

16.2.1 TRACER WIRE. In addition to the plastic marking tape, tracer wire shall also be provided for all new underground utilities. Tracer wire shall be provided for all pipelines, including force mains but excluding storm drain and sanitary sewer lines. Tracer wire shall be provided for all electrical and communication conduits and direct buried cables. Tracer wire shall be installed on the bottom of the trench just to one side of where the pipe, conduit, or cable contacts the trench bottom. The wire shall run continuously between and terminate at valve boxes on water and gas lines, regulator stub-ups on gas lines, sprinkler heads and valve boxes on sprinkler system lines, panel boxes on electrical lines, and other such aboveground appurtenances. Each end of the wire shall have an additional length of at least 2 feet coiled up in the appurtenance. Tracer wire shall be insulated No. 12 AWG solid copper and of a type specifically manufactured for locating underground utilities. Insulation shall be solid yellow in color. Tracer wire shall be subject to approval by the Contracting Officer.

16.3 METERING. Area master meters shall be provided where water and electricity are connected to base distribution lines. Water and electrical meters shall transmit usage data to the existing Fort Bragg digital control system. Meters, interface devices and programming of the existing host shall be furnished as required to accomplish complete utility metering and remote usage monitoring as required by Fort Bragg utility managing agency.

17. Omitted

18. STORM DRAINAGE.

18.1 The site storm drainage system shall be designed for a 10-year return storm frequency. No ponding shall occur for the 10-year event. Storm drainage system design shall be checked for a 100-year return event to insure no flooding or adverse impacts down stream. Storm drainage design shall be in accordance with TM-5-820-4.

18.2 The storm drain collection system may consist of grassed swales, concrete inlet drop or curb inlets, concrete headwall and pipe systems. The proposed system shall tie to the existing grassed ditches or pipe systems. Minimum pipe velocities shall be 2 feet

per second and the maximum shall be 5 feet per second with outlet erosion protection. The minimum pipe size for an open pipe system shall be 18 inches and 15 inches for a closed system.

18.3 The allowable pipe types shall include concrete pipe, type III or IV, fully coated corrugated metal pipe as required. Pipe joints shall be water tight with gaskets.

18.4 Concrete inlets/catch basins may be poured in-place or pre-cast concrete. Metal grates and manholes covers shall be galvanized. Basins shall have 3 inch weepholes cast into the walls. The exterior of the weep holes shall receive a 1/4" wire mesh with a 12 inch width belt of crushed rock, ASTM #357. Precast manhole or inlet rings shall connect with industry standard gaskets. Storm drain pipes shall be grouted into the concrete structures to provide a watertight connection.

18.5 Building downspouts shall connect to an underground storm drain collection system.

18.6 Stormwater Runoff: Storm runoff design shall be in accordance with TM-5-820-4 and the State of North Carolina. In addition to state requirements, Contractor is advised that Fort Bragg requires that the Post Development runoff not exceed Pre-development runoff for the 25 year design storm.

19. WATER AND WASTE WATER.

19.1 The Contractor shall design and construct the new water supply and wastewater utility services for the new complex. The Contractor shall provide water service lines, new water distribution lines (as required) and connection to the existing water mains. The Contractor shall also provide new wastewater building laterals and new sewage mains (as required). The water and sewage facilities shall be designed and constructed in accordance with the criteria contained herein. Placement of a buried utility main under a new building shall not be allowed. Minimum earth cover for the new utility lines will not be less than 27 inches, except for fire water supply lines where the minimum cover shall be 30 inches.

19.2 The Government anticipates that the Contractor will connect the new water laterals to the existing water distribution system and that sufficient pressure and quantity will be available for domestic and industrial uses. The design of the water distribution mains and service lines shall provide adequate quantity at sufficient pressure for domestic use and industrial use (vehicle washing, etc.). The Contractor shall determine minimum pressures in accordance with applicable plumbing and fire protection criteria.

19.3 The mains shall be designed and installed in accordance with NFPA 24 and applicable AWWA standards. Water mains shall follow existing streets or utility corridors. The design shall limit installation beneath pavement.

19.4 Design of the service lines shall be in accordance with the National Plumbing Code and applicable AWWA standards. A curb stop or valve shall be installed near the point of connection to the main. Water service lines shall be equipped with suitable meters. Metering of fire service lines is not required.

19.5 Water Supply for Fire Protection.

19.5.1 Interior and outside fire protection shall be designed in accordance with MILITARY HANDBOOK 1008C (MIL-HDBK 1008C). Fire flow test data may be found in an Appendix H as a part of this document:

Hydrant No. X-0001

Static pressure = 110 psig
Residual pressure = 70 psig
Flow = 1424 gpm

Hydrant No. 0-0001

Static pressure = 100 psig
Residual pressure = 68 psig
Flow = 1300 gpm

Based on the fire flow test data and the specific fire protection requirements, the Contractor shall perform a preliminary design to determine the need for additional water supply components such as fire pumps, water storage, or new connection to off-site water mains (perhaps several blocks from the building site). Final system design shall be based on actual fire hydrant flow tests performed by the contractor.

19.5.2 The Contractor shall provide the required water flow and pressure for the interior and outside (hose stream) demand. Fire pumps and storage shall be provided as required to meet the required water demand. Connection to off-site water mains shall be considered the most desirable solution to water supply needs. Fire pumps (if required) shall be designed and installed in accordance with NFPA 20. Fire pumps shall be electric motor driven. Water storage (if required) shall be designed and installed in accordance with AWWA D100.

19.5.3 The fire sprinkler supply line shall include a post indicator valve with a tamper switch wired to the building fire alarm panel and a double check valve assembly backflow prevention device equipped with a flow detection meter. The backflow prevention device is located in the building.

19.5.4 Specifications. The contractor shall edit and submit as required the appropriate UFGS as defined in Section 01030, Design After Award.

19.6 Wastewater.

19.6.1 The wastewater collection and conveyance system shall be designed in accordance with the Water Pollution Control Federation Manual of Practice No.FD-4, Design of Wastewater and Stormwater Pumping Stations, and No. FD-5, Gravity Sanitary Sewer Design and Construction. In addition, the designer shall comply with specific state and local regulations that apply.

19.6.2 If a sewage pump station is necessary, the Contractor shall provide (as a minimum requirement) a duplex submersible sewage pump station with a 5'-0" minimum diameter reinforced concrete wet well, with aluminum cover. All electrical components and controls shall be included.

19.6.3 The wastewater conveyance system shall comply with all the above requirements and shall be compatible with the wastewater to be conveyed. The materials specified shall withstand the effects of the wastewater and not deteriorate as a result of pollutants in the wastewater.

19.6.4 The wastewater septic system shall be designed and constructed by the contractor in accordance with all State of North Carolina and other local health department regulations.

19.6.5 Percolation tests were performed at the locations shown on the concept site plans on August 2, 2002 to determine the hydraulic capacity of the on-site soils. Refer to Appendix H for more information. The results of these tests are as follows:

Water level drop per 10-minute interval (inches)

Test Hole	Interval	1	2	3	4	5	6	Avg.	t(avg)	Q
1		1.0	1.0	1.0	1.5	2.0	2.0	1.4	7.1	1.9
2		2.0	1.5	1.5	2.0	1.5	1.5	1.7	5.9	2.1
3		2.0	1.5	1.0	1.0	1.5	2.0	1.5	6.7	1.9
4		1.5	1.5	1.0	1.0	1.5	1.5	1.3	7.7	1.8

Q is in Gallons per day per square foot of absorption area.

19.6.6 The percolation tests were performed at a depth of 3 feet below existing ground surface. Depending on the design grades of the absorption field or lines of the wastewater septic system, the results of the present tests might not be appropriate. Furthermore, the proposers and the Contractor are advised that in Boring B-9, which was located just outside the southeast corner of the proposed area for the septic field, high plasticity elastic silt was encountered at a depth of about 1 foot below the existing ground surface. This material is generally impermeable. The Contractor shall perform additional percolation tests as necessary at the design grades of the absorption field or lines to ensure satisfactory design of the septic system.

20. Omitted

21. ARCHITECTURAL DESIGN REQUIREMENTS.

21.1 GENERAL. The SOF Weapons Training Facility shall meet the functional requirements described herein and shall comply with the Fort Bragg Installation Design Guide. Proposers are encouraged to follow the given design envelope or improving upon it, but items such as the clerestory and clerestory towers are important design items and are to be incorporated into the proposers design. The building aesthetics shall reflect a welcoming, human scale modern facility that embraces the principles of sustainable design. The exterior shall be designed for durability and attractiveness with minimal required maintenance. The Weapons Supplies Handling Facility and guard gate (guardhouse) are to have a similar aesthetic and similar materials as the Weapons Training Facility. The building colors and exterior appearance shall be submitted to the Fort Bragg Architectural Review Board for approval prior to proceeding with final design.

21.1.1 RENDERING. After receiving approval of the Exterior Architectural Design and Structural Interior Design (SID) of the facility, the Contractor shall provide a color artist rendering, approximately 16 inches x 24 inches. Five full size photographic copies shall be made and the original and five copies shall be matted and framed. Six 8 inch x 10 inch copies shall also be provided.

21.2 APPLICABLE CODES AND STANDARDS. Applicable codes and standards are listed in paragraph 8.

21.3 FUNCTIONAL LAYOUT. The designer will be allowed to make deviations to the floor plan and overall design to enhance the project and/or economy, however the general functional requirements described in this RFP must be met. The designers are encouraged to show their innovations and design/construction experience with this type of facility. Any modifications and/or improvements will be evaluated accordingly.
Functional requirements are described in the Functional Area/Room Requirements document in Appendix D. Spaces have been arranged in an efficient, functional manner with simple circulation.

21.4 ACCESSIBILITY. This facility is handicapped-accessible and all spaces accessible to the public shall meet handicap accessibility requirements in the ADAAG, UFAS and Federal Standard 795.

21.5 SUSTAINABLE DESIGN. This project has a requirement of achieving Bronze level of sustainable design features as measured through the use of Sustainable Project Rating Tool (SPiRiT), Appendix K in this RFP. The use of sustainable design features will be an area of evaluation for the RFP proposer.

21.5.1 The Contractor shall develop drawings and specifications with an emphasis on environmentally sensitive materials, recycling and sustainable design and construction principles.

21.5.2 Architectural contributions include building envelope characteristics, solar control and daylighting, views, indoor air quality, environmentally preferable materials selections, salvage/reuse opportunities, waste reduction, and close collaboration with all team members and User to synthesize successful sustainable design solutions.

21.5.3 Mandatory Requirements. The SPiRiT Points Summary, Appendix K indicates what SPiRiT items are contract requirements for this project in the "Mandatory Points in RFP" column. A description of these SPIRIT items is contained in the SPiRiT document itself, Appendix K. This column also indicates the status of SPiRiT points that fall outside the scope of design and construction, such as features of the selected site.

21.6 ANTITERRORISM / FORCE PROTECTION. This facility shall be designed to comply with the interim Department of Defense Antiterrorism / Force Protection Construction Standards contained in Appendix I. The DOD AT/FP standards classifies the instructional facility as a Primary Gathering Structure (PGS), which is a subset of inhabited structures in which 50 or more DOD personnel routinely gather (e.g., office buildings, and indoor recreation facilities). For PGS, minimum construction criteria in Appendix 2 of the Interim DOD AT/FP Construction Standards apply regardless of the findings of the threat analysis. It is the Contractor's responsibility to review Appendix K and verify that the construction features are met. The Contractor shall coordinate the Force Protection construction features and receive a final approval from Fort Bragg Force Protection Agency prior to completing construction.

21.6.1 A threat analysis was conducted for the subject project in accordance with Army Technical Manual 5-853-1, Volume 1, Security Engineering Project Development, to determine specific AT/FP threat standards. A planning team consisting of personnel from the U.S. Army John F. Kennedy Special Warfare Center and School, and the U.S. Army Special Operations Command (safety, security, and engineering) identified the asset, threats to asset and level of protection for the assets against the threats. The team completed DD Form 2684, Asset Value/Aggressor Likelihood Worksheet, and DD Form 2685, Tactic and Threat Severity Level Worksheet. The DD Form 2683, Design Criteria Summary Worksheet, was completed based on the Asset Value/Aggressor Likelihood Worksheet, and Tactic and Threat Severity Level Worksheet. This worksheet defines the tactics that require force protection countermeasures to protect the assets (weapons). The project has a High level of Protection and a Medium Threat Level. Based on the threat analysis, the following construction requirements apply for this project and must be met by the contractor's design:

21.6.1.1 Sitework Elements:

- Provide a non-exclusive standoff zone at a minimum distance of 100 feet from the facility and exterior lighting. (Refer to enclosure #1 in Appendix I)
- Provide an exclusive standoff zone at a minimum distance of 80 feet from the facility and exterior lighting. (Refer to enclosure #1 in Appendix I)

- Provide a chain link fence with 2-3/4 inch diameter cable (total height equals 7 feet) to function as the passive vehicle barrier for the non-exclusive standoff zone. Include woven slats through fence to function as an obscuration screen.
- Provide concrete planters and pipe bollards at the entrance of the armament facility and training facility to function as the passive vehicle barrier for the exclusive standoff zone. (Refer to enclosure #2 and #3 in Appendix I)
- Provide a chain link fence with 2-3/4 inch diameter cable (total height equals 7 feet) to complete the passive vehicle barrier for the exclusive standoff zone. Include woven slats through fence to function as an obscuration screen.
- Provide an entry control point at the non-exclusive standoff zone (compound entrance) and at the exclusive standoff zone (loading dock).
- Provide remote access capability at each entry control point.
- Provide communication and closed-circuit television (CCTV) to grant access remotely at each entry control point. Coordinate with Intrusion detection System design for the contractor's scope of work limitations.
- Provide an electronic card reader at each entry control point to grant access to pre-authorized vehicles while unmanned for the non-exclusive standoff zone (compound entrance).
- Provide trees and shrubs of evergreen variety that overlap enough to fill gaps for year round foliage to block building sightlines. Locate vegetation on the exterior side of passive vehicle barrier and setback so as not to provide an access point over the barrier. The setback will also provide a clear visual zone for operation of intrusion detection cameras and sensors.
- Provide an active barrier (sliding crash gate) at each entry control point. (Refer to enclosure #4 in Appendix I)
- Provide lighting and auxiliary lighting at each entry control point for manned operations.
- Conceal and secure utility access ports.
- Eliminate all natural and man-made features near the facility perimeter.
- Avoid re-entrant corners in building design. Preference is to eliminate hiding places.
- Do not mount plumbing or electrical fixtures on inside face of exterior walls.
- Orient building where sides are not parallel to boundaries accessible by vehicles.

21.6.1.2 Building Components:

- Provide a foyer where exterior door is offset from interior door and is backed up by a masonry wall at the entrance of the armament facility and training facility. (Refer to AR 190-11, Appendix G)
- Provide 24-inch thick reinforced concrete walls. This requirement is specific to the main weapons vault and ancillary weapons vaults located throughout the facility. The contractor is to use the more stringent of this requirement or Appendix G of Army Regulation 190-11. (Refer to AR 190-11, Appendix G)
- Provide a 6-inch reinforced concrete flat or pitched roof. This requirement is specific to the main weapons vault and ancillary weapons vaults located throughout the facility. The contractor is to use the more stringent of this

requirement or Appendix G of Army Regulation 190-11. (Refer to AR 190-11, Appendix G)

- Provide bullet resistant door assemblies. This requirement is specific to the main weapons vault and ancillary weapons vaults located throughout the facility. The contractor is to use the more stringent of this requirement or Appendix G of Army Regulation 190-11 (refer to enclosure #6 in Appendix I).
- Provide narrow recessed windows and use sloped window sills with insulated laminated glass. (Refer to enclosure #5 in Appendix I)

21.6.1.3 Weapons Supplies Handling Facility:

- Provide a separate handling facility on site at least 150 feet from the protected facility. The following requirements are for a handling facility located 100 feet from the protected facility.
    - Provide blast resistant doors (12 PSI) on the face of the protected facility, which faces the handling facility.
    - Provide ¼-inch annealed laminated glass windows.
    - Provide 1/2-inch thick blast resistant glazing on windows along the face of the protected facility facing the handling facility.
    - Provide 4-inch thick reinforced concrete roof on the protected facility.

21.7 CONSTRUCTION TYPE, FIRE PROTECTION AND LIFE SAFETY. This facility shall comply with MILHDBK 1008C, including EC1110-1-92 dated 21 June 2000. MIL HDBK 1008c requires compliance with UBC for construction type, occupancy separation and features related to location on property and compliance with NFPA 101 for egress and life safety. It also contains specific requirements contained in the document itself. UBC Construction Type for this facility consists of Types F-1, H-1, S-1, and B. The facility shall be fully sprinklered. See Appendix C for additional code analysis information.

21.8 GROSS AREA. The gross area of this facility shall not exceed 76,000 square feet gross area, as listed in project DD Form 1391 and measured in accordance with TI 800-1. Information shown below is an overview of gross area calculation requirements. Refer to TI 800-1, Chapter 5, paragraph 1.c for specific instructions.

21.8.1 ENCLOSED SPACE. The gross area includes the total area including all enclosed spaces as determined by the outside dimensions of the building.

21.8.2 HALF SPACE. One-half of the area will be included in the gross area for covered raised loading platforms and covered exterior usable areas such as covered porches and covered walkways.

21.8.3 EXCLUDED SPACE. Open paved areas; roof overhangs and soffits for weather protection; uncovered ramps; uncovered stoops; covered unpaved areas; and utility tunnels and raceways will be excluded from the gross area.

21.9 EXTERIOR CONSTRUCTION. This facility shall be designed and constructed to provide a watertight durable facility consistent with industry standards and compliant with model building and energy codes. Appearance, materials and colors shall comply with the IDG. The following paragraphs are an overview of the exterior construction requirements.

21.9.1 EXTERIOR WALLS. Primary exterior wall finish shall be one or a mix of the following systems:

- Pre-cast or tilt-up concrete panels. This system will require the construction of a metal-stud framed interior wall with appropriate interior finish affixed, insulation held between the studs and electrical distribution and outlets within the stud framework. Alternatively, the interior wall could be CMU, with furring and finish as described below.
- Brick veneer with CMU wall construction. As stated in Structural section, below, steel frame construction with CMU infill is preferred over CMU bearing wall construction. This system will require the construction of metal channel furring on the interior side of the load-bearing CMU with appropriate interior finish affixed, insulation held between the studs and electrical distribution and outlets within the furring framework. Provide a cavity space similar to the split-face ribbed concrete block described below.
- Split-face, ribbed concrete block, and Ground-face masonry units. Note that masonry construction must consist of two wythes with minimum 2” airspace.

The following materials/systems shall NOT be used as the primary exterior wall finish:

- Exterior Insulation Finish System.
- Vertical, ribbed metal panels.
- Architectural (rectangular, horizontally oriented) metal panels.
- Painted CMU

As indicated in the exterior elevations, the use of industrial materials, which effectively express the technical complexity of the building’s function, are appropriate as a secondary exterior wall finish.

21.9.1.1 For a design with face brick, an efflorescence test from an approved independent testing laboratory shall be incorporated in the design and construction of the facility. (Test reports on a previously tested material shall be certified as the same as that proposed for use in this project.) The test shall be on a brick that will be exposed to weathering. Tests shall be scheduled far enough in advance of starting masonry work to permit retesting if necessary. Sampling and testing shall conform to the applicable provisions of ASTM C 67. units meeting the definition of “effloresced” shall be rejected.

21.9.2 ROOF. Roof shall be pitched minimum 1:12 slope. Roof covering shall be structural standing seam metal roof (SSSMR) system. Architectural (nonstructural) standing seam metal roof is not permitted. Standing seam metal roof shall have concealed clip-fastening system and be warranted per UFGS 07416. Exposed

fasteners are not permitted at roofing system. Roof color shall be no lighter than Medium Bronze. Painted wood is not permitted for eaves, fascia or soffits. Gutters and downspouts are required. Concealed gutters are not permitted. Roof detailing shall be in accordance with NRCA Roofing and Waterproofing Manual recommendations and standard details. Joint sealants used at building exterior shall have a service life for the exposure condition of at least ten years, retaining elasticity and seal. All exposed roof penetrations, equipment or sheet metal shall be painted or fabricated from sheet metal to match the roof color.

21.9.3 INSULATION. Provide a complete thermal envelope. All water and sprinkler pipes must be inside the thermal envelope. Insulation shall not be placed directly on acoustic tile ceiling panels.

21.9.4 LOADING DOCK. The loading docks shall be covered. Finished dock floor shall be approximately even with building finish floor (no step) and shall be pitched to shed water away from the building interior. Loading dock floor shall be approximately 48” above adjacent grade. Provide dock levelers at one bay of the Weapons Handling Facility and at all bays of main Facility loading dock to accommodate military vehicle bed heights. Vertical clearance of minimum 14’-0” clear measured from grade at face of loading dock is required for deliveries by semi tractor-trailer. Heavy duty dock bumpers (continuous horizontal bumper and four rows of vertical bumpers spaced equally across the face of the dock) shall be installed to protect the dock. A concrete ramp at least six feet wide with metal railings is required for deliveries from smaller trucks and for emergency egress. The dock and ramp shall have non-slip finish and shall slope to drain. Refer to TM 5-840-2, Storage Depots, for additional Loading Dock design criteria.

21.9.5 SCREEN WALLS. Provide double wythe masonry screen walls. Composite wall construction (grout-filled cavity between wythes) is not permitted. The screen walls shall match the facility exterior where mechanical and electrical equipment are installed at grade outside of the facility. Wall screening shall be higher than the concealed equipment and shall completely screen the equipment from adjacent streets, parking areas and driveways.

21.9.6 EXTERIOR SIGNAGE. Provide architectural letters on building faces indicating the building number. Building numbers and locations shall be in accordance with Fort Bragg IDG. Provide freestanding facility entrance sign, per IDG section 6.9.1. at entrance of facility on Chicken Road Provide freestanding facility entrance sign, per IDG section 6.9.1. at entry control point # 1 (guard gate).

21.9.7 DOORS AND WINDOWS. All doors and windows shall comply with Antiterrorism/Force Protection Standards and requirements listed in Appendix I. All exterior glass, including clerestory glass, must be insulated laminated glass with the inner pane having a minimum of ¼-inch annealed laminated glass. It is desired for both panes to be laminated. This option will be treated as betterment to the submittal and will be evaluated accordingly. Single glazed doors should be a minimum of ¼-inch

annealed laminated glass. Windows and storefront shall have prefinished commercial grade aluminum frames with Architectural Class I anodic or high-performance organic coating finish and thermal breaks. Windows shall be Performance Class HC. Entry vestibule doors shall be medium or wide stile storefront. All other exterior doors and frames shall be painted insulated hollow metal. All exterior hollow metal frames shall be welded type construction. All windows and fixed exterior glass (except in doors and clerestory) shall have operable window treatments for solar control. Reflective (mirror) glass finish is not permitted.

21.9.7.1 All door sizes shall be coordinated with life safety/ fire protection requirements as listed in Appendix C. Provide 4'-0" wide doors at main entrance to the Training Facility. Provide 4'-0" wide double doors at corridor exits to Loading Dock and Mechanical Yard, at corridor entrance to Weapons Vault M-144, and between Weapons Vault M-144 and Classroom Vault T-127 for forklift access. Provide a minimum height clearance of 10'-0" AFF for all doors requiring forklift access.

21.10 INTERIOR CONSTRUCTION. The following paragraphs are an overview of the interior construction.

21.10.1 ROOM SIZES. Room sizes shown on the concept floor plan (See Appendix B) are approximate clear space. Adjustments to room sizes may be acceptable if furnishing and functioning of the rooms are unaffected.

21.10.2 SOUND CONTROL. Spaces requiring sound control shall have minimum STC-50 ratings. This includes all door and ceiling treatments as needed to achieve this performance for the entire space.

21.10.3 SECURE CONSTRUCTION. Three types of secure construction are required; as outlined in paragraphs 21.10.3.1, 21.10.3.2, and 21.10.3.3.

21.10.3.1 WEAPONS VAULTS. Refer to Appendix I, Antiterrorism/Force Protection Construction Requirements and Appendix J, Army 190-11 Physical Security of Arms, Ammunition, and Explosives for design criteria in these vaults. The following are the 7 vaults requiring this construction type (Refer to Contract Drawings):

- FSS Vault M-114
- X-Ray Vault M-124
- Heavy Weapons Vault M-134
- Light Weapons Vault M-137
- Turn-In Vault M-138
- Weapons Vault M-144
- Classroom Vault T-127

Information shown below is an overview of construction requirements. Refer to Appendix I and J for actual design criteria. Walls, floors and ceilings will be reinforced concrete. Walls will have minimum thickness of 24 inches and ceilings will have a minimum thickness of 6 inches. Penetrations shall be minimized. All penetrations shall

have approved baffles installed to prevent inadvertent disclosure of conversations. All penetrations exceeding 96 square inches shall also be protected with minimum 3/8" diameter hardened steel rods maximum 4" on center so that openings do not exceed 32 square inches.

21.10.3.2 MAINTENANCE SHOPS. These spaces shall be enclosed on all sides so that physical intrusion into the space cannot be accomplished without obvious physical evidence remaining. Partitions shall be constructed of masonry. Ceilings in these spaces must be drywall or open to construction. Acoustic tile ceilings are not permitted. These requirements also apply to partitions surrounding concealed spaces such as raised floors. All penetrations shall have approved baffles installed to prevent inadvertent disclosure of conversations. Door must resist forceful entry. Acceptable doors, in order of preference, are standard 1-3/4 inch internally reinforced hollow metal industrial door and metal-clad or solid hardwood doors at least 1-3/4 inch thick. The door frame must be securely attached to the facility and fitted with a heavy-duty/high security strike plate and hinges installed with screws long enough to resist removal by prying. The door must be installed to resist removal of hinge pins by locating the hinge pins inside the room or by set screwing/welding the pins in place. Door must be equipped with a GSA-approved electro-mechanical lock meeting Federal Specification FF-L-2740. An electronically actuated lock (for example, cipher lock or keyless pushbutton lock) will be added to facilitate the admittance of authorized personnel when the room is attended.

21.10.3.3 COMPUTER CLASSROOMS. These spaces shall be enclosed on all sides so that physical intrusion into the space cannot be accomplished without obvious physical evidence remaining. Partitions shall be constructed of masonry. Ceilings in these spaces must be drywall. Acoustic tile ceilings are not permitted. These requirements also apply to partitions surrounding concealed spaces such as raised floors.

21.10.4 RAISED FLOORS. Spaces requiring raised floor will have finished floor level flush with adjoining spaces (no ramps) and shall have minimum 12" vertical clear space for cabling under the raised floor. Floor finish at all raised floors shall be antistatic (2.0 kV) carpet or similar.

21.10.5 DOORS AND FRAMES. Interior doors may be metal or solid core wood. Door frames shall be metal. Doors at Weapons Handling Facility and doors at the Indoor Firing Range (Weapons Training Facility) shall be bullet and blast resistant. Vault doors shall comply with Antiterrorism/Force Protection Standards and requirements listed in Appendix I. Vault doors shall comply with Army Regulation 190-11 (See Appendix J).

21.10.5.1 Once the facility is constructed, qualified engineer personnel are required to verify structural composition of the vaults to include the composition of doors, and issue a DA Form 4604-R (Security Construction Statement) before it can be used as an arms storage facility, Para 2-2d, AR 190-11. Larry Raynor, 910-396-8891 of DPWE is usually

the person that does the certification and issues the statement. The DPWE person that certifies the AR should be consulted to provide input for the design of the doors.

21.10.5.2 All door sizes shall be coordinated with life safety/ fire protection requirements as listed in Appendix C. Provide 4'-0" wide doors at main entrance to the Training Facility. Provide 4'-0" wide double doors at corridor exits to Loading Dock and Mechanical Yard, at corridor entrance to Weapons Vault M-144, and between Weapons Vault M-144 and Classroom Vault T-127 for forklift access. Provide a minimum height clearance of 10'-0" AFF for all doors requiring forklift access.

21.10.6 CASEWORK AND TRIM. Cabinets and countertops shall comply with AWI Quality Standards, Section 400, Custom Grade. Wood standing and running trim shall comply with AWI Section 300 Custom Grade.

21.11 DOOR HARDWARE. Devices shall comply with Fort Bragg's specifications Section 08700 Builder's hardware. Refer to Appendix L for information.

21.12 LIFE SAFETY DESIGN REQUIREMENTS. See Appendix C included in this RFP

21.13 INTERIOR FINISHES. Finishes shall be durable and convey the appropriate aesthetics such as would be expected for a typical facility/space of this type in the commercial sector. Sustainable design considerations shall be incorporated into finish selections and building aesthetics. All interior walls are to be painted 8" CMU block and are to extend to structure (provide metal furring channels and gypsum finish up to 8" above ceiling in all offices, vestibules, lobbies (except lobby M-103 and T-102), conference rooms, and instructor admin areas. Interior Finishes required for the facility are described in Appendix G, Structural Interior Design (SID) Requirements, and in the following paragraphs:

21.13.1 CERAMIC TILE. Ceramic tile shall have a maximum water absorption shall be 0.50 percent. Floor tile minimum coefficient of friction wet or dry shall be 0.60. Floor tile shall be Class IV Heavy Traffic durability classification. Expansion joints shall be per TCA Handbook. Wall tile shall be installed in accordance with TCA-01 method F112. Wall tile shall be installed in accordance with TCA-01 method W223, where not installed over CMU tile shall be installed over concrete backer board. In showers tile shall be installed in accordance with TCA-01 method W222. All latrines and showers are to have full height ceramic tile finish.

21.13.2 VINYL COMPOSITION TILE (VCT). Vinyl composition tile shall conform to ASTM F 1066, Class 1 or Class 2, composition 1, asbestos free. Tile shall have a minimum thickness of 1/8 inch. Tile shall be installed with adhesive in accordance with the manufacturer's installation instructions. All break rooms and vestibules are to have VCT floor finish.

21.13.3 CARPET. Carpet shall be tufted; multilevel or level loop; commercial 100% branded nylon continuous filament type 6 or 6/6 100% recyclable pile fiber; solution or yarn dyed; minimum 0.114 inch pile height; minimum two yarn ply; minimum 1/10 inch gauge; minimum 26 oz. per square yard pile yarn weight, not including weight of backing. Carpet shall be multicolored with at least three colors, random and/or tweed pattern. Avoid extremely bright colors, extremely light colors and high contrast patterns. All offices, conference rooms, instructor admin areas, and lobby M-104 are to have a carpet finish.

21.13.4 PAINTING. The term painting shall include all emulsion, enamels, paints, stains, varnishes, sealers, cement-emulsion fillers and other coatings, whether used as the prime, intermediate or finish coat. Painting shall conform to the requirements of the U.S.G.F. grade specifications and shall be three coat work for all interior and exterior surfaces except where specifically noted otherwise by the guide specification.

21.13.4.1 Paint containing lead in excess of 0.06 percent by weight of total nonvolatile content (calculated as lead metal) shall not be used. Paint containing zinc chromate or strontium chromate pigments shall not be used. Low-emitting materials are strongly recommended to improve indoor air quality and to help achieve the sustainable goal addressed in paragraph 21.5 Sustainable Design.

21.13.4.2 All colors, both interior and exterior, shall be submitted in the Structural Interior Design (SID) package for approval. Exterior equipment such as mechanical equipment, transformers, etc. shall be painted as per the Fort Bragg Installation Design Guide.

21.13.5 ACOUSTICAL CEILING TILES. Acoustic units shall be no larger than 24 inch x 24 inch. 24 inch x 48 inch ceiling tiles will not be permitted. 24 inch X 24 inch moisture resistant acoustic ceiling tiles shall be used in restrooms and janitor closets.

21.13.5.1 Acoustical units shall conform to ASTM E 1264, Class A.

21.13.5.2 Suspension system shall conform to ASTM C 635, standard of fire rated, exposed grid, intermediate duty. Suspension system in moist areas shall be moisture resistant.

21.13.5.3 Ceiling attenuation class (CAC) range of acoustical units, when required, shall be determined in accordance with ASTM E1414. Test ceiling shall be continuous at the partition and shall be assembled in the suspension system in the same manner that the ceiling will be installed on the project. System shall be tested with all acoustical units installed.

21.13.5.4 Minimum CAC of 45 shall be required in office spaces and sound attenuation between classrooms and restrooms.

21.13.6 LOCKERS. Provide double tier lockers and benches in latrines as shown in plans and described in Appendix D, Functional Room Requirements. Provide completely installed lockers with filler strips, corners and finish strips. Anchor lockers securely to floor. Lockers shall be 12 inches wide x 18 inches deep x 36 inches tall with sloped tops and shall be set on raised concrete base with a ceramic tile finish edge or same finish as adjacent floors. Provide benches.

21.13.6.1 General construction. All lockers shall be pre-assembled, with all seams and joints welded for rigidity and durability. No bolts, screws or rivets shall be used in the assembly of the locker bodies.

21.13.7 ACCESSORIES. The following bath accessories shall be provided in toilet and shower areas unless otherwise indicated. Metal finish shall be either stainless steel, with No. 4 satin finish or carbon steel, copper alloy, or brass with chromium plated, bright finish. To the extent possible, bath accessories shall be of one manufacturer, style and finish.

21.13.7.1 Grab bars shall be minimum 18 gauge, 1 ½ inch OD Type 304 stainless steel with concealed mounting, capable of withstanding a minimum 227 kg vertical load without coming loose or visible deformation.

21.13.7.2 Glass mirrors shall be minimum Type I, flat Class 1-clear, quality q1, ¼ thick.

21.13.7.3 Tilt mirrors shall be in compliance with ADAAG and in conformance with requirements of glass mirrors, and ASTM C1036.

21.13.7.4 Toilet Tissue Holder shall be minimum Type II surface mounted, with two rolls of tissue.

21.13.7.5 Metal Shelf shall be provided in each shower stall and shall be minimum 18 gauge, stainless steel, with hemmed edges. Shelf shall be minimum 12 inches long by 4 inches deep.

21.13.7.6 Combination Paper Towel Dispenser/Waste Receptacles shall have a minimum capacity of 600 folded towels. Waste receptacle shall have a minimum capacity of 18 gal.

21.13.7.7 Sanitary Napkin Dispenser shall be stainless steel with removable leak-proof receptacles for disposal liners.

21.13.7.8 Soap Dispenser shall be surface mounted, liquid type with stainless steel tank with 1.2 liter capacity and corrosion resistant all-purpose valve that dispenses liquid soaps, lotions, detergents and antiseptic soaps.

21.13.7.9 Shower Curtain Rods shall be extra heavy duty and shall be minimum 1 ¼ diameter, 18 gauge stainless steel rods with hooks and vinyl fabric shower curtain at each shower.

21.13.7.10Toilet and Urinal Partitions shall be floor supported overhead braced type with solid panels.

21.13.8 Mop and broom hangars shall be provided in each Janitor Closet. The hangers shall be fabricated from minimum 20 gauge stainless steel and be equipped with four rubber cam holders, ribbed for gripping.

21.13.9 Fire Extinguishers and Cabinets. Provide UL-rated, Nominal Capacity Multi-Purpose Dry Chemical type. Surface mounted cabinets with a baked enamel finish on a heavy gauge steel box shall be provided when in public areas. Door shall be full glass with full length piano type hinge. Locations shall be as per NFPA 10.

21.13.10 Window Blinds. Provide window blinds with horizontal vinyl slats in all exterior windows except storefront windows.

21.13.11 Front Projection Screen. Provide ceiling recessed projection screen with automatic ceiling closure, electrically operated with vinyl white matt screen with woven fiberglass backing. Front Projection Screens shall be provided in all conference rooms and classrooms.

21.13.12 Flag Pole. Provide aluminum seamless extruded flagpole, 30 feet of exposed height, designed for a maximum un-flagged wind speed of 120 mph, with an external halyard system. The pole color shall be coordinated with Installation Design Guidelines.

21.13.13. Corner Guards. Provide steel bollards or heavy gauge and heavy impact metal corner guards at all corners of corridors in the Armament Center and Weapons Supplies Handling Facility. Provide heavy gauge and heavy impact metal corner guards at all corners of corridors in the Training Center.

21.13.14 Walk-Off-Matt. Provide recessed grid system type matt with carpet inserts in bronze anodized aluminum rails with continuous hinges to permit roll back for cleaning.

21.13.15 Ceiling Fans. Provide ceiling suspended and remote operated ceiling fans with a minimum 48 inch length blade in all conference rooms and classrooms.

22. INTERIOR DESIGN

22.1 Structural Interior Design.

22.1.1 Definition. The Structural Interior Design (SID) shall involve the selection and sampling of all applied building related finishes necessary to complete the buildings interior and exterior architecture. The SID submittal shall be submitted concurrent with the architectural design submittals. The SID requirements and format shall be in accordance with the Savannah District Interior Design Presentation Format. The preparation and procurement of the Structural Interior Design are part of the Base Bid. Refer to Appendix G, Structural Interior Design (SID) Requirements for additional design criteria and guidelines.

22.1.1.1 Predefinition Conference. The Contractor shall lead a predefinition conference at Fort Bragg, North Carolina. This meeting shall be attended by Government personnel responsible for this project to include facility user representatives, Fort Bragg Directorate of Public Works, and Savannah District personnel. The purpose of the predefinition conference is to present and discuss the SID color Scheme for the project. Actual exterior and interior materials, finishes and colors are to be provided for review and comment. The format for this presentation may be on 2’ x 3’ matte board. The Contractor may provide colored exterior elevations/ perspectives of both the SID exterior and interior color schemes to assist in the discussion and presentation. At the end of the predefinition conference the Government will decide the final SID finishes that will be accepted for incorporation into the construction. The facility user representatives must provide concurrence with the SID prior to Contractor purchase and installation of finishes. Final interior and exterior finishes will be submitted in 8½” x 11” notebook format.

22.1.2 In general, the SID should reflect a transitional, professional image. Wall colors throughout the facility shall be a neutral color that will enhance accent colors in the existing furniture related items. Accent walls will not be approved for private offices. Accent walls will not be approved except for the lobby. The cove base and door trim shall be a neutral color and shall be consistent throughout the facility. Interior stain colors and finishes shall be consistent throughout the facility. All finishes are to be Class A. This section covers only the general color and minimum characteristics of the exterior and interior materials and products that are exposed to view in the finished construction. The word "color" as used herein includes surface color and pattern. Requirements for quality and method of installation are covered in appropriate sections of the specifications herein and which the General Contractor will submit after award. Specific locations where the various materials are required will be indicated during the Predefinition Conference, 50% and 90% design after award submittals. The Contractor shall propose all colors not listed in Section 09000, BUILDING COLOR AND FINISH SCHEDULE.

22.1.3 Signage Requirements. Interior Signage is an important item that is to be fully integrated with the architecture and building related finishes. All signage shall be in accordance with the Department of the Army technical manual, Signage, TM 5-807-10 and/or Fort Bragg sign standards. All signs are to be from one manufacturer and shall match in color and style. All room sign copy is to be Helvetica medium with a ratio of height and width to meet Americans with Disabilities Act (ADA) requirements. Signs are

to be provided for all interior doors. Installation shall be wall mounted, on the latch side of the door with the center of the sign installed 5'-0" above the finish floor and 6 inches from the outside edge of the metal door frame. Where conditions do not allow signs to be mounted directly adjacent to the door, install signs on the wall at the nearest point to the latch side. Signage for General Office areas shall be a modular plaque format with a minimum of three insert slides. All signs are to have a changeable room number sign. All signs are to be a minimum overall dimension of 8 inches wide and 6 inches high. Copy for the first slide is to have a changeable integral, tactile, raised room number with corresponding, Grade 2 Braille indicating the room number. The second two slides are to be window insert slides to accommodate personnel changes or room name changes. Mechanical rooms and other building system room and service support rooms including restrooms are to have permanent room signs with copy that has raised room numbers and permanent room names. Copy is to be raised, tactile, letters and Grade 2 Braille indicating the room number and room name. All signs are to be permanently and mechanically attached to the building. Double-sided tape will not be accepted. Signage message shall be coordinated with the Government/user before ordering or installation. Provide Emergency Egress sign plaques that indicate "YOU ARE HERE" and the path of egress. These signs are to be fully coordinated with the Fort Bragg Fire Marshall at the 100% review Submittal design phase and before fabrication and installation. The Fire Marshall is to review the correct placement and quantity of these signs within the building and also review the proposed path of egress that will be graphically illustrated on the sign. Suggested placements for these signs are to be determined before installation.

22.1.4 Reference To Manufacturer's Color and Product. Where color and product is shown as being specific to one manufacturer, an equivalent color by another manufacturer may be submitted for approval. Manufacturers and materials specified are not intended to limit the selection of equal colors, patterns and textures from other manufacturers. However the intent of the design is to remain consistent with this section of the contract.

22.1.4.1 Color Schedule
The color schedule in 09000, BUILDING COLOR AND FINISH SCHEDULE lists the colors, patterns and textures and products required for exterior and interior finish, including both factory applied and field applied colors.

23. COMPREHENSIVE INTERIOR DESIGN.

23.1 The preparation of the Comprehensive Interior Design is part of the Base Bid. The procurement of the items specified in the Comprehensive Interior Design <u>will be accomplished separate from this contract</u>. <u>The installation of these items will be an Option to the Base Bid as indicated in the Bidding Schedule.</u> If <u>awarded</u>, the Contractor shall install the modular office furniture and other items listed in the Contractor-prepared CID. The CID Submittals shall be in accordance with the Savannah District Interior Design Presentation Format. The furniture shall be coordinated with the

prepared and approved Furniture Placement drawings developed in the SID package. Installation shall include scheduling shipments from vendors, accepting delivery at the site, unloading, inventorying, securing and installing the items.

23.2 Definition. The CID shall involve all the furniture-related components necessary to complete the interior environment. The necessary components shall include all loose furniture/furnishings/artwork.

23.3 CID Philosophy. The CID for this facility shall be coordinated in color, texture, pattern, size, form and function with building footprint and the SID. Furnishings submitted for approval shall reflect the image and style presented in the architecture to further support the corporate image. The Contractor shall select those CID items from UNICOR for which they can meet specifications. The UNICOR web site is: www.unicor.gov. If they are unable to meet the specifications, the contractor shall coordinate approval of the waiver with UNICOR and prepare the basis of the waiver request for submission by the Government. All items of furniture/furnishings not available from UNICOR shall be selected from General Services Schedules (GSA). The GSA web site is: www.gsa.gov.

23.4 Format. The CID format shall be in accordance with the Savannah District Interior Design Presentation Format.

23.5 CID Coordination and Installation. The Contractor shall develop, complete and fully coordinate the CID package with the SID package. The CID submittals shall run concurrent with the SID submittals. The Contractor is required to purchase the CID package items and is required to schedule with all the CID vendors the delivery and installation of the CID. Phasing the delivery and installation of the CID package items shall be determined by the Contractor. The Contractor will procure the CID items.

23.6 Requirement Analysis. The Contractor shall interview the Government and determined the CID requirements. CID items and quantities shall be determined by but are not limited to: (1) the number of personnel to occupy the building, (2) job functions and related furniture/office equipment to support the job function (3) room functions (4) rank and grade.

23.7 CID Furnishing List. Typical CID items to specify for this building are:

Executive Wood Furniture
Support desks
Artwork
Bookcases
Bulletin Board, Porcelain Marker Boards
Chairs-all kinds, including stools
Desks-freestanding Technical support and Executive Level Quality
Desk-based systems furniture workstations
Files-all kinds

Lamps-all kinds
Podium/lecture stands
Storage-all kinds
Silk Plants
Tables-all kinds
Waste cans-various sizes
All specific/special items as required by the government/user

23.8 The Government will direct the Contractor as to the sources that will be used to ensure coordination with existing items. To the fullest extent possible, General Services Administration Sources will be specified.

24. MISCELLANEOUS SHOP EQUIPMENT

24.1 A Shop Equipment Plan is included in Appendix B, Facility Drawings, and a Shop Equipment Matrix is included in Appendix E, Government Funded Contractor Installed Shop Equipment. The Contractor will review and coordinate with the using agency the final location of all electrical equipment. The coordination of equipment placement and the required building construction and utility preparation (i.e. power, ventilation, isolation slabs, etc.) is part of the Base Bid. The procurement of the items specified in Appendix E will be accomplished separate from this contract. The installation of these items will be an Option to the Base Bid as indicated in the Bidding Schedule. If awarded, the Contractor shall install the electrical equipment and other related items listed in Appendix E. The electrical equipment shall be coordinated with the prepared and preliminary Equipment Placement drawings developed in the RFP package. Installation shall include scheduling shipments from vendors, accepting delivery at the site, unloading, inventorying, securing and installing the items.

24.2 The Contractor is required to include an Industrial Systems Engineer as part of his design team. The Industrial Systems Engineer will be responsible for the coordination, layout, and infrastructure design (power, plumbing, exhaust, air intakes, thickened slabs, etc.) of all shop equipment described in Appendix E. The Industrial Systems Engineer will be part of the design team for the life of the design and shall attend all design review meetings and the Predefinition Conference described in paragraph 24.3. The relevant experience of the Industrial Systems Engineer with similar facilities will be evaluated accordingly.

24.3 Predefinition Conference. The Contractor shall lead a predefinition conference at Fort Bragg, North Carolina. This meeting shall be attended by Government personnel responsible for this project to include facility user representatives, Fort Bragg Directorate of Public Works, and Savannah District personnel. The purpose of the predefinition conference is to present and discuss the final Shop Equipment Layout for the project. Actual equipment specifications, related materials, power requirements, ventilation requirements, lighting requirements are to be provided for review and comment. At the end of the predefinition conference the Government will decide the final Equipment location that will be accepted for incorporation into the construction.

The facility user representatives must provide concurrence with the Shop Equipment Plan prior to Contractor installation of equipment.

25. STRUCTURAL DESIGN REQUIREMENTS

25.1 GENERAL DESIGN REQUIREMENTS. The Structural Engineer shall be responsible for the selection and design of the structural building system. A complete structural system for the building shall include foundations, walls, roof framing, roof diaphragms, lateral load stability, framing and connection of any architectural features, and support of mechanical and electrical equipment. The structural design shall comply with Antiterrorism/Force Protection Standards and requirements listed in Appendix I and shall be in accordance with the criteria, requirements, and guidance provided in the U.S. Army Corps of Engineers, Savannah District Design Manual unless modified by the following requirements.

25.2 DESIGN LOADS

25.2.1 Design loads and load combinations shall be in accordance with the requirements of ASCE 7, “Minimum Design Loads for Buildings and Other Structures”, unless otherwise specified herein.

25.2.2 Wind loads shall be based on a 100 mph basic wind speed, building classification category IV, exposure category C, and an importance factor of 1.15. Wind loads shall be computed and applied in accordance with ASCE 7-1998.

25.2.3 Seismic loads shall be in accordance with the guidance given in TI 809-04, “Seismic Design For Buildings”, using the following:

Spectral Response
Ss = 0.35g
S1 = 0.13g
Seismic Use Group III
I = 1.5

25.3 FOUNDATIONS.

25.3.1 Design of foundations shall be based on the site-specific geotechnical report prepared by the Contractor's consulting geotechnical engineer and the requirements specified in this section.

25.4 CONCRETE

25.4.1 Codes and References.

American Concrete Institute
Portland Cement Association

25.4.2 Additional Requirements.

25.4.2.1 Minimum concrete strength shall have at least a compressive strength of 3000 psi (20.6 Mpa) at 28 days. All footings shall be constructed of reinforced cast-in-place concrete.

25.4.2.2 Reinforcing Materials. Reinforcing Bars: ASTM A 615, Grade 60, deformed.

25.4.2.3 Concrete Materials

a. Cement: ASTM C 150, Type I-II Portland cement.
b. Fine Aggregate: ASTM C 33.
c. Coarse Aggregate: ASTM C 33.
d. Air-Entraining Admixture: ASTM C 260.
e. Flowing Concrete Admixture: ASTM C 1017, Type 1 or 2.
f. Calcium Chloride will not be permitted.
g. Fly Ash: ASTM C 618, Class "F".

25.4.2.4 Ready-Mix Concrete
ASTM C94.

25.4.2.5 Reinforcement of concrete walls, continuous footings, and tie and bond beams shall be continuous, and typical details of reinforcing at corners and intersections of these members shall be shown on the drawings.

25.4.2.6 Slabs

25.4.2.6.1 Slabs supported on ground shall be a minimum thickness of 4 inches and reinforced with either welded wire fabric or fiber reinforcing.

25.4.2.6.2 Slabs supported on ground will conform to the minimum requirements for slab-on-grade: Horizontal runs of conduits and pipes shall not be embedded in slabs supported by ground. Vertical penetrations will conform to ACI 318-95. Aluminum conduit and pipes will not be embedded in any concrete.

25.4.2.6.3 Building slabs on grade shall be protected from moisture intrusion with 4 inch capillary water barrier covered with a vapor barrier of 6 mil thick polyethylene sheeting that is protected with 2 inches of sand.

25.4.6.4 Slabs thickness in the Armament Center shall be sufficient for the intended use to include load of vertical storage equipment, location of large shop equipment, travel path of equipment to be removed or replaced, and isolation slabs as necessary for large equipment.

25.5 STEEL.

25.5.1 Codes and References.

American Iron and Steel Institute
American Institute of Steel Construction
Steel Joist Institute
ER 1110-345-53 Structural Steel Connections

25.5.2 Additional Requirements.

25.5.2.1 Shop connections for structural steel shall be welded, and generally field connections shall be made with high strength bolts (ASTM A325) in bearing type connections. All connections other than standard AISC shear connections shall be designed by the engineer of record and detailed on the final plans.

25.5.2.2 Joists shall be anchored to steel supports by bolting or field welding. Provide steel insert plates in concrete work. Where top chords are extended, provide required section modulus or SJI top chord extension type of extensions on the drawings.

25.5.2.3 If braced frames are used as all or part of the main lateral force resisting system, the stability of the structural system shall not depend on any single member or connection. Redundancy shall be provided either by using multiple bays of tension only X-bracing members or by using bracing members that are capable of both tension and compression if bracing is placed in a single bay.

25.6 METAL DECK.

25.6.1 Codes and References.

Steel Deck Institute

25.6.2 Additional Requirements.

25.6.2.1 Form deck shall be galvanized. Metal form material shall have a minimum thickness of 20 gauge.

25.6.2.2 Steel roof deck material shall be galvanized and have a minimum thickness of 22 GA. A structural steel roof deck shall be provided under all nonstructural metal roofs in accordance with EI 01S908, Structural Considerations for Metal Roofing.

25.6.2.3 Galvanized steel roof deck in areas without ceilings which are exposed to view and are scheduled to be finish painted should be specified to receive a factory primer coat on the underneath side of the deck.

25.7 MASONRY.

25.7.1 Codes and References.

American Concrete Institute
Brick Institute of America
National Concrete Masonry Association

25.7.2 Additional Requirements.

25.7.2.1 Mortar used on this project shall be type “S” mortar.

25.7.2.2 Brick veneer ties shall be corrugated galvanized steel spaced 16 inches on centers both vertically and horizontally.

25.7.2.3 Installation of brickwork shall comply with the latest edition of the Brick Institute of America Technical Notes No. 28; Brick Veneer, New Construction.

25.7.2.4 Concrete masonry units shall have a minimum compressive strength of 2000 psi (13.8 Mpa) at 28 days.

25.7.2.5 Structural masonry walls (load bearing walls, shear walls, or exterior walls) shall be designed as reinforced masonry, in accordance with ACI 530.

25.7.2.6 Horizontal reinforcement shall be provided continuously at floor and roof levels and at the tops of walls. Horizontal reinforcement shall also be provided above and below all wall openings as shown in FEMA 302.

25.7.2.7 Nonstructural masonry walls shall be reinforced in accordance with TI 809-04 and FEMA 302.

25.7.2.8 Masonry walls shall have vertical control joints as follows:

a. Exterior and Interior Walls: 24 feet maximum,
b. At changes in wall height or thickness,
c. Near wall intersections,
d. At points of stress concentration,
e. At control joints in foundation walls and in floors that support masonry walls.

25.7.2.9 Brick walls shall be provided with 3/8 inch expansion joints at 22 feet maximum. Brick expansion joints shall be provided near the corner of exterior walls within a distance of 10 feet.

25.7.2.10 Brick walls shall be of cavity-type construction. Damp proofing shall be used on the exterior face of CMU backup walls. Brick veneer/steel stud walls shall be designed and constructed in accordance with TI 809-07 “Design of Cold-Formed Load bearing Steel Systems and Masonry Veneer/Steel”.

25.7.2.11 Masonry or precast stone cap and flashing shall be provided on top of all masonry parapet end walls and masonry screen walls.

25.8 WOOD.

25.8.1 Codes and References.

National Forest Products Association
American Institute of Timber Construction
American Plywood Association

25.8.2 Additional Requirements.

25.8.2.1 Fire Retardant Treatment. Recommendations regarding the use of fire retardant treatments are provided in the USDA Wood Handbook and the National Fire Protection Handbook. Pressure impregnation is the preferred treatment method.

25.8.2.2 Termite Control. Termite control measures will be used in areas prone to termite infestation. Soil will be treated with commonly accepted termite control products prior to construction.

25.8.2.3 Oriented Strand Board. The use of oriented strand board (OSB) for non-vertical applications is not permitted. For floor and roof sheathing, only APA structural rated plywood shall be used. Specifically, for floors use APA rated STURD-I-FLOOR, Exposure 1, Tongue and Grove, glued and nailed.

25.9 ROOF.

25.9.1 Roof Requirements.

25.9.1.1 Roofing shall be structural standing-seam metal.

25.9.1.2 Standing seam roof clips shall be attached to roof framing members and not just to plywood roof sheathing or metal decking, unless it is 16 GA minimum thickness.

25.9.1.3 Roofing shall comply with Antiterrorism/Force Protection Standards and requirements listed in Appendix I.

25.10 COLD FORMED STEEL FRAMING.

25.10.1 Codes and References.

American Iron and Steel Institute
TI 809-07 Design of Cold-Formed Load Bearing Steel Systems

25.10.2 Additional Requirements.

25.10.2.1 Trusses fabricated from cold-formed steel members shall be designed and the drawings stamped by an engineer registered in the State of North Carolina.

25.10.2.2 Cold-formed steel members, their components, and connection material shall have G60 galvanized coating.

25.10.2.3 Cold-formed metal framing systems used for fascias, soffits, exterior brick back-up (if used), and architectural framing that is subject to the design loads specified in this section shall be designed by the engineer.

25.10.2.4 Top chords of cold-formed roof members shall be 16 GA, minimum, where standing seam roof clips are connected with screws.

26. PLUMBING & MECHANICAL REQUIREMENTS

26.1 Plumbing system shall be designed and installed in accordance with the International Plumbing Code (IPC). Inspection and testing of the plumbing system shall be performed as prescribed in the IPC. The plumbing system shall conform with the applicable rules of the Standard Building Code, governing venting of plumbing fixtures, sizing of waste, vents, drains, and water systems. Fixture count shall be as shown on the conceptual floor plan and as required by the section entitled "Minimum number of required Fixtures" of the IPC. All piping shall be labeled, color coded, titled, and indicate direction of flow. All shutoff/isolation valves and water hammer arrestors shall be accessible. If installed above hard ceilings, access doors shall be provided. Corps of Engineer Guide Specification 15400, Plumbing, General Purpose shall be the basis for the plumbing system specifications. Corps of Engineer Guide Specification 15190, Gas Piping Systems shall be the basis for the gas piping system specifications.

26.1 Domestic Hot Water Temperatures: Hot water shall be stored at a minimum temperature of 140°F, and the temperature delivered to plumbing fixtures shall not exceed 120°F.

26.2 PLUMBING MATERIALS, EQUIPMENT AND FIXTURE REQUIREMENTS.

26.2.1 Material for Domestic Water Lines: Water piping under concrete slab floors shall be copper tubing, type K, annealed and shall be completely wrapped in polyethylene. Joints under the slabs are not permitted. Amount of supply piping located under concrete slabs shall be held to a minimum. Materials for various services shall be in accordance with Table II – Pipe and Fitting Materials for Pressure Piping Systems of UFGS 15400A, Plumbing General Purpose. Pipe schedules shall be selected based on service requirement. Material or equipment containing lead shall not be used in any potable water system. See Table II of UFGS 15400A, Plumbing General Purpose, for a complete list of domestic water piping materials.

26.2.1.1 Routing & Design. All piping shall be concealed, properly supported with allowances for expansion and contraction. Interior water distribution piping shall not be buried under concrete floors. All piping systems shall be drainable. Interior hot and cold water piping systems shall be insulated. Water piping systems (including sprinkler piping) shall not be routed or located where subjected to freezing, and shall be located within the insulated building envelope. Heat tracing (to prevent freezing) of interior piping systems will not be allowed. Individual shutoff or stop valves shall be provided on water supply lines to all plumbing fixtures. Individual stops shall also be furnished at all equipment connections such as dishwashers, vending machines, icemakers, etc. Shower control valves shall be provided with integral stops (shut-offs). Isolation shutoff valves shall be provided for each toilet room group to allow isolation shutoff for maintenance purposes while continuing service to the remainder of the building. Consolidate fixture vents through one common vent whenever possible. All vent penetrations through the roof shall be made through a roof jack designed for use with the roofing system furnished and color-matched to the roof. Above ground piping shall run parallel with the lines of the building and in accordance with UFGS 15400A, Plumbing General Purpose, unless otherwise indicated.

26.2.2 Material for Waste Lines. Materials for various services shall be in accordance with Table I – Pipe and Fitting Materials for Drainage, Waste, and Vent Piping System of UFGS 15400A, Plumbing General Purpose. Pipe schedules shall be selected based on service requirement. Pipe fitting shall be compatible with applicable pipe. Plastic piping systems shall not be installed in air plenums. Soil, waste, drain and vent piping installed in spaces used as HVAC air plenums shall be cast iron. Each fixture and piece of equipment requiring connections to the drainage system shall be equipped with a trap. Surface or wall cleanouts shall be provided for each drainage main. Cleanouts shall be provided at the intervals specified in the International Plumbing Code and at the building service entrance. All cleanouts shall be permanently accessible. Ground cleanouts shall be installed in a 12 inch by 12 inch , 4 inch thick concrete pad, flush with grade. Pipes passing through the slab shall pass through a pipe sleeve and be installed in accordance with UFGS 15400, Plumbing General Purpose. All waste containing oil shall be piped separately through and oil/water separator before entering the sewer system. Cleanouts shall not be located in floor or walls of corridors or in entry vestibule areas.

26.2.3 Gas System. Piping for underground gas piping shall be in accordance with the materials found in UFGS 02556A, Gas Distribution System. Underground gas piping shall be routed to the building from the new propane tank. Tank shall be in accordance with UFGS 13202S, Fuel Storage Systems. Design shall include all pipe, valves, unions, pressure regulators and other appurtenances for a complete gas piping system. All piping in the building shall be in accordance with UFGS 15190A Gas Piping Systems. Gas Connections. The use of semi-rigid tubing and flexible connectors for gas equipment and appliances is prohibited. Provide accessible gas shutoff valve and coupling for each gas equipment item. Gas on-site will be propane.

26.2.3.1 Gas Connections. The use of semi-rigid tubing and flexible connectors for gas equipment and appliances is prohibited. Provide accessible gas shutoff valve and coupling for each gas equipment item. Gas on-site will be propane.

26.2.4 Plumbing Fixtures. Fixtures shall be provided complete with fittings, and trim. All shutoff valves shall be metal construction. Plastic valves are not acceptable. All fixtures, fittings, and trim in a project shall be from the same manufacturer and shall have the same finish.

26.2.4.1 Plumbing shall meet the following criteria:

(a) In general, all faucets shall have solid brass bodies, ceramic valving, and chrome plated or trim. Water flow shall be no more than 2.5 gpm from any faucet.

(b) Fixtures shall be water conservation type, in accordance with the International Plumbing Code.

(c) All vitreous china plumbing fixtures shall conform to ANSI A112.19.2M, Vitreous China Plumbing Fixtures. Stainless steel fixtures shall be in accordance with ANSI A112.19.3M, Stainless Steel Plumbing Fixtures (residential design).

(d) Floor drains shall be provided in toilet rooms, mechanical rooms, at eye wash stations, and for equipment requiring drainage. Floor drains shall be cast iron body and grate. All floor drain traps shall be automatically primed by single trap primers or where appropriate distribution unit type trap primers.

(e) Fixture descriptions shall be a described by the American Society of Mechanical Engineers, ASME A112.19.

26.2.4.2 Water Closets. Siphon-jet, elongated bowl, top supply spud, ASME A112.19.2M, floor mounted. Gasket shall be wax type. Seat - ANSI Z124.5, Type A, white plastic, elongated, open front. Flushometer Valve - ASSE ANSI/ASSE 1037, large diaphragm type with non-hold-open feature, backcheck angle control stop, and vacuum breaker. Minimum upper chamber inside diameter of not less than 2½ inch at the point where the diaphragm is sealed between the upper and lower chambers. The maximum water use shall be 1.6 gallon per flush. Water closet trim shall conform to ANSI A112.19.5, Trim for Water-Closet Bowls, Tanks, and Urinals (Dimensional Standards). Any water closets designed as handicapped water closets shall meet the top rim of the bowl height requirements of CABO A117.1.

26.2.4.3 Urinals. Wall hanging, with integral trap and extended shields, ASME A112.19.2M, siphon jet. Top supply connection, back outlet. Flushometer Valve - ASSE ANSI/ASSE 1037, large diaphragm type with non-hold-open feature, backcheck

angle control stop, and vacuum breaker. Minimum upper chamber inside diameter of not less than 2½ inch at the point where the diaphragm is sealed between the upper and lower chambers. The maximum water use shall be 1.0 gallon per flush. Urinal trim shall conform to ANSI A112.19.5, Trim for Water-Closet Bowls, Tanks, and Urinals (Dimensional Standards).

26.2.4.4 Lavatories. Manufacturer's standard sink depth, vitreous china ASME A112.19.2M, wall hung or lay-in countertop.

(a) Faucet - Faucets shall be single lever, centerset, washerless type. Faucets shall have all brass and copper waterways and ceramic valving. The flow shall be limited to 2.5 gpm per second at a flowing pressure of 80 psi.

(b) Drain - Strainer shall be copper alloy or stainless steel.

(c) Handicap lavatories shall conform to ADA and Uniform Federal Accessibility Standards (Fed. Std. 795) for fixture height and safety insulation. Handicap lavatory faucets shall be ADA compliant.

26.2.4.5 Standard Shower.

(a) Shower valve shall be single lever, pressure-balancing, thermostat mixing type, designed to maintain constant water temperature by automatically compensating for water pressure changes. Faucet shall be of solid brass construction with washerless ceramic valving. Adjustable pattern showerheads shall be provided and shall be chrome plated or polished nickel finish to match levers and escutcheons. Provide a flow control device with the shower head to limit the flow to a maximum of 2.5 gpm at a flowing pressure of 80 psi.

(b) Drain - stainless steel.

26.2.4.6 Break Room Sinks. Sinks shall be of size and configuration shown on the conceptual floor plan or as found in the architectural specifications and shall be constructed of stainless steel. Faucets shall be same as the bath faucets in material, but designed for kitchen sink application.

26.2.4.7 Water cooler drinking fountains. Water cooler drinking fountains shall be located in close proximity to each restroom and break room. Corridors which are distant from these rooms shall contain at least one water cooler drinking fountain as well. Water cooler drinking fountains shall: be self contained, conform to ARI 1010, use one of the fluorocarbon gases conforming to ARI 700 and ASHRAE 34 which has an Ozone Depletion Potential of less than or equal to 0.05, have a capacity to deliver 7.6 gph of water at 50° F with an inlet water temperature of 80° F while residing in a

room environment of 90° F and have self-closing valves. Self-closing valves shall have automatic stream regulators, have a flow control capability, have a push button actuation or have a cross-shaped index metal turn handle without a hood. Exposed surfaces of stainless steel shall have No. 4 general polish finish. Spouts shall provide a flow of water at least 4 inch high so as to allow the insertion of a cup or glass under the flow of water. Handicap lavatories shall conform to ADA and Uniform Federal Accessibility Standards (Fed. Std. 795) for fixture height and function.

26.2.4.8 Wall Hydrants (Exterior). Wall Hydrants shall be provided at a maximum spacing interval of 200 feet around the exterior wall of the building. Each hydrant shall be box type, freeze proof, with an integral vacuum breaker/backflow preventer. Hydrants shall have 3/4 inch hose connections.

26.2.4.9 Emergency Eyewash Stations: Emergency eyewash shall be a wall mounted unit consisting of chrome plated brass sprayhead assembly with twin eye/face wash heads with pop-off covers, chrome plated brass 1/2" stay open ball valve manually operated by stainless steel push flag handle, integral stream control, dome strainer and drain fitting, heavy-gauge wall bracket, stainless steel bowl, and wall mounted identification sign. Eyewash shall be fitted with a tailpiece and p-trap with extension to wall. Floor drain will be provided at every emergency eyewash station. Eyewash stations shall be provided with tepid potable water in accordance with ANSI Z358.1-1998.

26.2.4.10 Major Appliance Plumbing Connections. The Contractor shall provide appropriate connections for all appliances, vending machines, and any other items requiring water and/or drain connections.

26.2.4.11 Domestic hot water heater shall be propane gas type, with a heating capacity and auxiliary storage adequate for the building occupancy. A pressure/temperature relief valve, vacuum breaker on the water supply line, drain and a 6 inch concrete pad shall be provided for the water heater and/or storage tank. Domestic hot water heater shall be equipped with a mixing valve, recirculation pump and recirculation piping and balancing valves. Water heater sizing shall include tepid water demand for emergency eyewash stations. The demand shall be 23 gallons per minute for 15 minutes of tepid water.

26.2.4.12 Testing: Test soil, waste and vent piping by capping or plugging and filling the system with water, allowing it to stand filled for 1 hour. If tested in sections, each section shall be subjected to not less than a 10 foot head.

Test cold water, hot water, and hot water circulating by applying a hydrostatic pressure of 125 psig for 1 hour.

Test piping under floor slabs in floor fill before slabs are poured.

Soldered piping which is not tight under tests shall be taken down and reassembled. Joints in cast iron hub and spigot pipe not tight under test shall be replaced. Joints in cast iron no-hub pipe not tight under test shall be taken down and reassembled using new couplings.

Test each fixture for soundness, stability of support and operation.

Submit a statement certifying that piping has passed the herein specified tests.

Tests shall be made while pipe is exposed to view.

26.2.5 Compressed Air System: Air compressor unit shall be a factory-packaged assembly, including 1 phase, 120 volt motor controls, switches, wiring, accessories, and motor controllers, in a NEMA 250, Type 4 enclosure. Tank-mounted air compressors shall be manufactured to comply with UL listing requirements. Each compressor shall start and stop automatically at upper and lower pressure limits of the system. Air compressor shall be equipped with all controls, air receiver, intake filter, aftercooler, pressure regulators, air dryer. Compressed air piping shall be installed as specified for water piping and suitable for 125 psig working pressure. Compressed air piping shall have supply lines and discharge terminals legibly and permanently marked at both ends with the name of the system and the direction of flow. Provide compressed air to rooms as required by the Functional Room Requirements.

26.2.6 Backflow Preventers: Backflow preventers shall be approved and listed by the Foundation For Cross-Connection Control & Hydraulic Research. Reduced pressure principle assemblies, double check valve assemblies, atmospheric (non-pressure) type vacuum breakers, and pressure type vacuum breakers shall be tested, approved, and listed in accordance with FCCCHR-01. Backflow preventers with intermediate atmospheric vent shall conform to ASSE 1012. Reduced pressure principle backflow preventers shall conform to ASSE 1013. Hose connection vacuum breakers shall conform to ASSE 1011. Pipe applied atmospheric type vacuum breakers shall conform to ASSE 1001. Air gaps in plumbing systems shall conform to ASME A112.1.2.

26.2.6.1 The domestic water service shall require a minimum of double check backflow preventer assembly. All hose bibbs shall be provided with vacuum breakers. Any mechanical equipment connected to the potable water system shall be separated from the potable water system by a reduced pressure principle backflow preventer.

26.3 PIPING MATERIALS:

26.3.1 UFGS 15400A Table I and II shall be the basis for Plumbing Systems and Materials.

27. FIRE PROTECTION

27.1 QUALIFICATIONS OF FIRE PROTECTION ENGINEER. The design of the fire protection features shall be by a qualified fire protection engineer meeting one of the following conditions: a.) An engineer with a Bachelor of Science or Masters of Science Degree in fire protection engineering from an accredited university engineering program, plus a minimum of 5 years' work experience in fire protection engineering. b.) A registered professional engineer who has passed the National Council of Examiners for Engineering and Surveys (NCEE) fire protection engineering written examination. c.) A registered P.E. in a related engineering discipline with a minimum of 5 years' experience dedicated to fire protection engineering. The principle duties of this individual shall be fire protection engineering. The fire protection engineer shall certify in written form that the design meets the NFPA and other referenced codes and criteria as applicable to the project under design. The name and credentials (education, registration, experience) of the fire protection engineer shall be submitted with the initial contract documents and approved by the District fire protection engineer prior to proceeding with fire protection design.

27.2 FIRE SUPPRESSION SYSTEM. Automatic wet pipe sprinkler protection shall be provided for all buildings in this project. The Computer Classroom shall be protected with a double interlocked pre-action system. Protection shall include the area beneath the raised computer floor. The requirements indicated below shall be incorporated into the design. All areas including the Training Center of the Facility shall be protected by an automatic wet pipe sprinkler system. The designer will coordinate the final design of fire suppression system with the using agency after award. Refer to Functional Room Requirements for specific sprinkler requirements.

27.3 SPRINKLER SYSTEM.

27.3.1 The facilities shall be fully protected with an automatic wet pipe and pre-action sprinkler systems. All floors and all areas of the facilities shall be protected. Sprinkler protection shall be included for the elevator. The sprinkler system designs shall be in accordance with MIL-HDBK-1008C, NFPA 13, NFPA 20, NFPA 75, NFPA 230, UFGS Specification Section 13930, Wet Pipe Sprinkler System and UFGS Specification Section 13945, Preaction And Deluge Sprinkler Systems, Fire Protection. The minimum required components for the preaction system shall include an OS&Y valve, deluge/preaction valve, air compressor for pipe monitoring, control panel, detection system and all other appurtenances necessary for a complete preaction system. The sprinkler hazard classifications shall be in accordance with MIL-HDBK-1008C, NFPA 13, and NFPA 230. Design densities, design areas and exterior hose streams shall be in accordance with MIL-HDBK-1008C. The sprinkler systems shall be designed and all piping sized with computer generated hydraulic calculations. The exterior hose stream demand shall be included in the hydraulic calculations. A complete sprinkler system design, including sprinklers, branch lines, floor mains and risers, shall be shown on the drawings. All sprinkler system drains, including main drains, test drains and auxiliary drains, shall be routed to a 2 x 2 splash block at exterior grade.

27.3.2 The sprinkler service main shall be provided with an exterior post indicator valve with tamper switch reporting to the fire alarm control panel (FACP). The sprinkler entry riser shall include a double check backflow preventer, a fire department connection, and a wall hydrant for testing of backflow preventer. The sprinkler system shall include an indicating control valve, an alarm check valve, a water motor alarm and a flow switch reporting to the FACP. All control valves shall be OS&Y type and shall be provided with tamper switches connected to the FACP.

27.3.3 The Contractor shall edit UFGS Specification Section 13930, Wet Pipe Sprinkler System and UFGS Specification Section 13945, Preaction And Deluge Sprinkler Systems, Fire Protection for this project. This shall be submitted for review with the preliminary and final design submittals. These specifications shall be followed for the design and installation of the sprinkler systems.

27.3.4 The Contractor shall submit material data, hydraulic calculations, and shop drawings as required by Specification Sections 13930 and 13945 to the Contracting Officer for review and approval.

27.4 EXTERIOR HOSE STREAM. Exterior hose stream demand shall be in accordance with MIL-HDBK-1008C. This shall be 250 gpm for light hazard, 500 gpm for ordinary hazard and 750 gpm for extra hazard. Exterior hose stream demand shall be included in the sprinkler system hydraulic calculations.

27.5 BACKFLOW PREVENTER. A double check backflow preventer shall be provided on the fire water main serving each building. This shall be located within the building. An exterior wall hydrant with OS&Y valve shall be provided to allow testing of backflow preventer at design flow as required by NFPA 13.

27.6 FIRE DEPARTMENT CONNECTION. A fire department connection shall be provided for each building with sprinkler protection. These shall be located to be directly accessible to the fire department, either on the front side or on the main street side of the building.

27.7 ELEVATORS: The fire protection features of elevators, hoist ways, machine rooms and lobbies shall be in accordance with MIL-HDBK-1008C, ASME A17.1, NFPA 13, NFPA 72, and UFGS Section 14240 (including the notes to the specification writer).

27.8 SYSTEM COMPONENTS AND HARDWARE. Materials for the sprinkler system, fire pump system, and hose standpipe system shall be in accordance with Specification Sections 13930 and 13935 and with NFPA 13 and NFPA 230. Sprinkler system piping shall be black steel and shall be minimum Schedule 40 for sizes 2 inches and less and minimum Schedule 10 for sizes greater than 2 inches.

27.9 PROTECTION OF PIPING AGAINST EARTHQUAKE DAMAGE. Sprinkler and fire pump piping systems shall be protected against damage from earthquakes. Seismic protection shall include flexible and rigid couplings, sway bracing, seismic separation

assemblies where piping crosses building seismic separation joints, and other features as required by NFPA 13 for protection of piping against damage from earthquakes.

27.10 FIRE WATER SUPPLY. Refer to Civil Design for design requirements.

27.11 FIRE DETECTION AND ALARM. Refer to Electrical Design for design requirements.

27.12 FIRE EXTINGUISHERS. Refer to Architectural Design for design requirements.

27.13 FIRE HYDRANTS. Refer to Civil Design for design requirements.

27.14 PROPOSAL SUBMITTAL REQUIREMENTS. A narrative will be provided addressing the fire protection items for each building type in this project. Provide written certification by the fire protection engineer that the building designs shall comply with the life safety and fire protection provisions of the applicable criteria indicated in Section 01020. Automatic fire extinguishing systems and hose standpipe systems: Identification of all areas provided with sprinkler protection and the type of sprinkler system provided, sprinkler hazard classification for these areas, areas protected by other automatic suppression systems and the type system provided, buildings provided with hose standpipe systems and the type of standpipe system provided. Fire alarm and detection systems: Type of alarm and detection system, location of the fire alarm and detector equipment, and catalog data sheets of major components.

27.14.1 Specifications: The contractor shall edit the appropriate Unified Guide Specifications (UFGS) for this project. Options and choices shall be limited to those within the sections. These shall be submitted for review with the preliminary and final design submittals. Marked up versions of specifications shall be provided in the preliminary design submittal to allow reviewer to identify the changes made. These specifications shall be followed for the design and installation of the sprinkler systems. The Contractor shall submit material data, hydraulic calculations, and shop drawings as required by Specification Section 13930 to the Contracting Officer for review and approval.

27.14.2 Catalogs Cuts: Manufacturers Catalog Cuts for major pieces of equipment shall be provided with submittal, and shall represent actual equipment proposed to be installed. Deviations and installation of equipment from that indicated in the proposal will not be allowed or accepted unless approved by the Contracting Officer.

27.14.3 Site Investigation: The contractor shall perform site investigations as necessary to gather any additional information necessary for completing fire protection system design for the project.

27.14.4 Credentials of Fire Protection Engineer (Proposer). Provide the credentials of the fire protection engineer in the proposal submittal. The design of the fire protection features shall be by a qualified fire protection engineer meeting one of the following

conditions: a.) An engineer with a Bachelor of Science or Masters of Science Degree in fire protection engineering from an accredited university engineering program, plus a minimum of 5 years' work experience in fire protection engineering. b.) A registered professional engineer who has passed the National Council of Examiners for Engineering and Surveys (NCEE) fire protection engineering written examination. c.) A registered P.E. in a related engineering discipline with a minimum of 5 years' experience dedicated to fire protection engineering. The name and credentials (education, registration, experience) of the fire protection engineer shall be submitted with the initial contract documents and approved by the District fire protection engineer prior to proceeding with fire protection design.

27.15 PRELIMINARY (60%) DESIGN SUBMITTAL REQUIREMENTS FOR SUCCESSFUL PROPOSER. Design Analysis: As a minimum, RFP shall require that submittal requirements be in accordance with the DMMC, Chapters A-4, 5, and 6 for preliminary (60%) design submittals. Project fire protection design shall be complete and detailed as required for critical projects per the DMMC, Chapters A-4 and A-6. Design analysis shall include analysis for fire protection/life safety, fire suppression systems and alarm and detection systems.

27.15.1 Drawings: As a minimum, RFP shall require that submittal requirements be in accordance with the DMMC, Chapters A-4, 5, and 6 for preliminary (60%) design submittals. Project fire protection design shall be complete and detailed as required for critical projects per the DMMC, Chapters A-4 and A-6. Drawings shall include fire protection/life safety plans, fire suppression system plans and alarm and detection system plans.

27.15.2 Specifications: As a minimum, RFP shall require that submittal requirements be in accordance with the DMMC, Chapters A-4, 5, and 6 for preliminary (60%) design submittals. Specifications submitted shall be "marked-up" versions such that reviewer can visually see the revisions. The proposer's optional items shall be limited to bracketed items only.

27.16 FINAL (100%) DESIGN SUBMITTAL REQUIREMENTS FOR SUCCESSFUL PROPOSER. Design Analysis: As a minimum, RFP shall require that submittal requirements be in accordance with the DMMC, Chapters A-4, 5, and 6 for final (100%) design submittals. Project fire protection design shall be complete and detailed as required for critical projects per the DMMC, Chapters A-4 and A-6. Design analysis shall include analysis for fire protection/life safety, fire suppression systems and alarm and detection systems.

27.16.1 Drawings: As a minimum, RFP shall require that submittal requirements be in accordance with the DMMC, Chapters A-4, 5, and 6 for final (100%) design submittals. Project fire protection design shall be complete and detailed as required for critical projects per the DMMC, Chapters A-4 and A-6. Drawings shall include fire protection/life safety plans, fire suppression system plans and alarm and detection system plans.

27.16.2 Specifications: As a minimum, RFP shall require that submittal requirements be in accordance with the DMMC, Chapters A-4, 5, and 6 for final (100%) design submittals.

28. HEATING, VENTILATING, AND AIR CONDITIONING REQUIREMENTS.

28.1 GENERAL. The heating, ventilation, and air conditioning equipment shall be as described herein.

28.2 MECHANICAL DESIGN REFERENCES. The mechanical systems will be designed in accordance with the Request for Proposal issued by the Savannah Corps of Engineers and the following design criteria, latest editions, in addition to that in the Appendices:

- American Society of Heating, Refrigeration, and Air Conditioning Engineers (ASHRAE) Manuals.
- Technical Instructions TI 800-01, Design Criteria.
- Technical Instructions TI 800-03, Technical Requirements for Design Build.
- Technical Instructions TI 809-04, Seismic Design for Buildings.
- Technical Instructions TI 810-10, Mechanical Design Heating, Ventilating, and Air Conditioning.
- National Fire Protection Association (NFPA), National Fire Codes (NFC).
- Savannah District Engineering Design Manual for Military Construction.
- Army Technical Manual TM 5-785, Engineering Weather Data.
- ASHRAE Standard 62, Ventilation for Acceptable Indoor Air Quality.
- Army Technical Manual TM 5-805-4, Noise and Vibration Control for Mechanical Equipment.
- Industrial Ventilation, A Manual of Recommended Practice (published by ACGIH).
- Uniform Federal Accessibility Standards.
- Department of Defense Antiterrorism Construction Standards, 2 October 2001.
- ETL 1110-3-49, Sustainable Design for Military Facilities.
- CEGS-15951, Direct Digital Control Systems for HVAC
- Technical Instructions TI 810-11, Heating, ventilating, and Air Conditioning (HVAC) Control Systems.
- Unified Facilities Criteria UFC 3-400-01

28.3 MECHANICAL SYSTEMS

28.3.1 GENERAL. The mechanical systems design for this project shall be in accordance with ASHRAE Handbooks, TI 800-01 Design Criteria Technical Instructions, UFC 3-400-01, ASHRAE Standard 62 - Ventilation for Acceptable Indoor Air Quality, Savannah District Design Manual for Military Construction, Volume II of II, applicable NFPA Standards, other applicable references listed within the RFP, and

governing industry standards as applicable. The contractor's proposal will list all pertinent standards and specifications and their applicability to the project. Catalog cuts for major equipment will include manufacturer's published data stating that such equipment meets the applicable standard. Catalog cuts for major equipment shall be for the actual equipment proposed to be installed. Deviations and installation of equipment other than proposed are only allowed subject to Contracting Officer approval. As a minimum, the mechanical equipment room shall reflect the minimum clearance as specified by the equipment manufacturer in all five directions (all four sides and top). Equipment tube bundle and coil pull spaces shall be shown on mechanical room layouts. Mechanical room shall be adequate to allow the layout of equipment such that the removal or replacement of one major piece of equipment shall not require removal of adjacent equipment.

28.3.2 SYSTEM SELECTION. HVAC systems will typically consist of a central air-handling unit with chilled water coils or a unitary direct expansion-type unit(s) capable of controlling the dew point of the supply air for all load conditions. In addition to life cycle cost considerations, the designer must base system selection on the capability of the air-conditioning system to control the humidity in the conditioned space continuously under full load and part load conditions. System selection will be supported by an energy analysis computer program that will consider the latent-heat gain due to vapor flow through the building structure, to air bypassed through cooling coils, and to the dehumidification performance of the air-conditioning system under varying external and internal load conditions. Peak latent load outdoor design conditions (the design wet bulb temperature and the mean-coincident dry bulb temperature) or low sensible loads and high latent loads (relatively cool cloudy days) will, in some cases, cause inside relative humidity to be higher than desired. If analysis indicates that this condition will occur, reheat will be used. Use recovered heat for reheat where possible.

28.3.3 MECHANICAL EQUIPMENT. Mechanical equipment shall be designed in accordance UFGS guide specifications. All materials and equipment provided shall be standard catalogued products of manufacturers regularly engaged in the production of such materials and equipment shall be of the manufacturers' latest standard design. Equipment shall comply with the requirements of Underwriter's Laboratories, Inc. (UL), Air Conditioning Refrigeration Institute (ARI), American Society for Testing and Materials (ASTM), National Electric Manufacturer's Association (NEMA), American National Standards Institute (ANSI), National Fire Protection Association (NFPA), or other national trade associations as applicable.

28.3.3.1 Mechanical Equipment Requirements.

28.3.3.1.1 DX Equipment:

- All DX air conditioning equipment shall have a SEER rating of 10 or better.
- All DX equipment to be Trane, York, Carrier, or approved equal.

28.3.3.1.2 Air Cooled Chillers

- All air-cooled chillers to have an efficiency of 1.2 kW/ton or less.

- All air-cooled chillers shall be scroll or screw type with a 5 year warranty.
- All air-cooled chillers shall have microprocessor controls with self diagnostic capabilities.
- All air-cooled chillers shall be provided with low ambient controls down to 0 degrees F.
- All air-cooled chillers to be Trane, Carrier, York, or approved equal.

28.3.3.1.3 Water Cooled Chillers

- All reciprocating water-cooled chillers to have an efficiency of 0.8 kW/ton or less (APLV).
- All centrifugal water-cooled chillers to have an efficiency of 0.6 kW/ton or less (APLV).
- All screw water-cooled chillers to have an efficiency of 0.65 kW/ton or less (APLV).
- All water-cooled chillers to be Trane, Carrier, York, or approved equal.

28.3.3.1.4 Cooling Towers

- All cooling towers to be equipped with induced draft centrifugal fan. Fan to be a minimum of 2 speed or equipped with a variable speed drive with bypass.
- All cooling towers to be BAC, Evapco, or approved equal.

28.3.3.1.5 Fan Coils

- All fan coil units to be equipped with permanent split capacitor motors.
- All fan coils to be Trane, Carrier, York, or approved equal.

28.3.3.1.6 Infrared Heaters

- All infrared heaters to have an 82% flue efficiency or greater.
- All infrared heaters to be Space-Ray or approved equal.

28.3.3.1.7 Boilers

- Sectional cast iron boilers shall not incorporate o-ring connections between the sections. Steel push nipples shall be used between boiler sections

28.3.3.1.8 Heating Fuel

- All heating fuel to be propane.

28.3.4 All pieces of floor mounted mechanical equipment shall be installed on a 6-inch thick concrete equipment pad. Provide pad 6 inch larger than equipment footprint on all sides. All suspended equipment shall be properly supported according to the manufacturer's instructions. Provide trapeze hangers for larger pieces of equipment. Provide adequate clearance around all pieces of equipment for periodic maintenance, inspection and cleaning. Service of one piece shall not require disturbance of adjacent equipment.

28.3.5 Mechanical components shall be installed and mounted in accordance with TI-809-4 "Seismic Design for Buildings."

28.3.6 AIR DISTRIBUTION. Ductwork shall be constructed of sheet metal to SMACNA HVAC Duct Construction Standards, latest edition. Flexible ductwork runouts to terminal devices shall be limited to 5 feet in length. Each duct branch shall be fitted with a manual balancing damper. All ductwork shall be located above slab, supported from roof structures. Return air shall be ducted to unit from each space. Ceiling return air plenums shall not be used except in limited cases in which written approval shall be obtained from the Savannah District. Duct return shall maintain NC-25 requirements at rooms for general occupancy space. Low pressure distribution ductwork shall be installed to SMACNA pressure class 2" wg. as a minimum. Test ductwork in accordance with SMACNA 10. Access must be provided to all devices or areas that may require periodic inspection, including but not limited to balancing devices, motor operated dampers, flow measuring stations, smoke/fire dampers, etc. Return air plenums shall not be used on this project. All return air shall be ducted.

28.3.7 All ducts penetrating vault areas must meet criteria as stated in Army Regulation 190-11. (See Appendix J)

28.3.8 FILTRATION. For administrative facilities and similar occupancies filter the combined supply air, including return and outside air, using a combination of 25- to 30-percent efficient prefilter(s) and 80- to 85- percent efficient final filter(s) as determined by the dust spot test specified in ASHRAE Standard 52. Where practical, provide separate filtration or other means to clean the outdoor air, typically equivalent to that used for the combined air stream, prior to mixing it with the return air. Due to the decrease in system airflow as the pressure drop across the filter increases, size fans for the “dirty” filter condition. This will ensure that each fan has adequate capacity to deliver the design airflow as the filter becomes loaded.

28.3.9 Fan coil unit configurations that directly utilize untreated/untempered outside air shall not be used on this project. A separate outside air system that pre-treats outside air shall be used where fan coil units are provided.

28.3.10 HVAC System alternatives shall not include VAV Systems or variable speed drives.

28.3.11 Multiplicity of self-contained refrigeration systems (i.e. split-system heat pumps, thru-wall heat pumps, package terminal units, etc.) shall not be provided on this project, unless supported by life cycle cost analysis (LCCA).

28.3.12 Fiberglass duct and internally insulated duct will not be allowed.

28.3.13 Air handling units shall be factory packaged, and constructed of pre-insulated double wall panels. Adequate access doors and access sections shall be provided with air handling unit to facilitate maintenance and inspection of all internal components.

28.3.14 The location of all mechanical equipment must meet the force protection requirements. Refer to Appendix I – Antiterrorism/Force Protection Construction Requirements.

28.3.14.1 It is desirable for the outdoor mechanical equipment to be located a minimum of 80ft. from the building and 10ft. from the fence.

28.3.15 All exposed exterior water piping systems (i.e. chilled water) shall be provided with protective aluminum jacketing. Freeze protection design measures shall be provided to protect all interior and exterior piping systems, and equipment.

28.3.16 Refrigeration equipment provided shall be equipped with low-ambient controls to allow equipment operation down to 20 degrees F.

28.4 MECHANICAL SYSTEM MAINTAINABILITY AND ACCESSIBILITY. Ensure that filters, controls, control valves, and coils are easily accessible for servicing and cleaning. Isolation valves shall be provided for each terminal unit, zone, branch, long runs, etc. as necessary for proper isolation and maintenance. Coils shall be fully removable without requiring demolition of any building components. Piping configuration at all coils shall include unions to facilitate easy coil removal. Provide adequate clearances around all pieces of equipment for periodic maintenance, inspection and cleaning. Service of one piece of equipment shall not require disturbance of adjacent equipment.

28.4.1 Mechanical room drawings shall indicate space required for maintenance of all mechanical equipment. Indicate space required for items such as coil pull, filter removal, belt replacement, ect.

28.5 DESIGN CALCULATIONS

28.5.1 HEATING/COOLING LOAD CALCULATIONS. Heat gain and loss calculations shall be, as a minimum, in accordance with the current edition of the American Society of Heating, Refrigeration, and Air Conditioning Engineers (ASHRAE) Handbook of Fundamentals. Computer generated loads must be submitted with complete input and output summaries during the design process. Load calculation software must be ASHRAE based. The cooling equipment shall be selected based on satisfying both the total and latent calculated loads. System shall be designed, installed, balanced, and adjusted to distribute heating and cooling to all habitable rooms, in proportion to the calculated heat losses/gains in these rooms. Heating shall also be provided to utility rooms, and other uninhabitable areas as needed to prevent pipes from freezing. Verify ventilation rates of each space with the referenced publications in this mechanical design section. Conduct air balance calculations for the space in the complex to verify total supply air, outdoor air, return air, and exhaust air. The space (airflow) pressure relationships shall be maintained. Total airflow calculations are required to verify that the building pressure is positive to the outdoors. The design shall reflect heating and cooling capacities based on the following design conditions.

28.5.2 Air handling systems shall be zoned by functional requirements, operation schedules, temperature and humidity requirements and load characteristics.

28.6 DESIGN CONDITIONS

28.6.1 OUTDOOR CONDITIONS.

- Heating Season: 21 degrees F Dry Bulb.
- Cooling Season: 92 degrees F Dry Bulb. 76 degrees F Wet Bulb.

28.6.2 INDOOR CONDITIONS.

- Office & Classroom Areas: Summer: 78 degrees F, 50 percent RH (no RH control). Winter: 68 degrees F.
- Mechanical Rooms: Summer: Mechanically ventilate to 105 deg. F maximum. Winter: 40 deg. F for freeze protection only.
- Electrical Rooms: Summer: Mechanically ventilate to 105 deg. F maximum.
- Communications Rooms: Provide standalone units to supply 24hrs/day - 7 days/week cooling to these spaces. Temperature must be maintained between 64 degrees F and 75 degrees F. Humidity must be maintained between 30% and 55% relative humidity.
- Shop Areas & Vaults: Summer: 80 degrees F, 50 percent RH (Provide rooms with humidity control). Winter: 68 degrees F.
- Computer Classroom T107: Summer: 72 degrees F, 50 percent RH (Provide rooms humidity control). Winter: 72 degrees F. Computer room unit with humidify and de-humidify capabilities shall be used for this space.

28.7 MINIMUM THERMAL CHARACTERISTICS: The maximum thermal U values for wall and roof construction must comply with AHSRAE 90.1-1999.

28.8 BUILDING HEAT GAIN LOADS

28.8.1 Refer to Appendix D – Functional Room Requirements and Appendix E – Government Funded Contractor Installed Shop Equipment Matrix for room occupancy and equipment.

28.8.2 Load calculations for the classrooms and office areas shall include one personal computer for each occupant.

28.8.3 Coordinate with Ft Bragg ITBC office for the quantity and type of network electronics components to be installed in each communications room.

28.8.4 Heat load calculations shall include miscellaneous equipment for the office areas and break rooms.

28.9 VENTILATION

28.9.1 Ventilation for building occupants shall be provided in accordance with ASHRAE Standard 62-2001 and Industrial Ventilation (ACGIH 2001). Outside air quantities will be sufficient to meet ventilation requirements and maintain a positive pressure relative to the outdoors in occupied areas. The outside air intakes shall be located at least 10 ft. above finish grade. Outside air intakes shall be located away from fumes including vehicle exhaust, generator exhaust, toilet exhaust, etc. Ventilation systems shall have emergency switches that shut down the ventilation systems throughout the building. These switches should be located in easily accessible areas.

28.9.2 MECHANICAL VENTILATION. Equipment rooms will usually be ventilated using outside air intake louvers and a thermostatically controlled exhaust fan. Use a supply fan in lieu of an exhaust fan in rooms where atmospheric burners are located. The ventilation fan will have a two-speed motor that is sized at the high speed to have adequate capacity to limit the room dry bulb temperature to a maximum of 10 degrees F above the outdoor dry bulb temperature when both equipment and ambient loads are at their maximum peaks.

28.9.3 Exhaust systems shall be provided for all bathrooms, janitor's closets, mechanical rooms, electrical rooms, and other spaces as required. Refer to Appendix D: Functional Room Requirements for rooms that require special ventilation.

28.10 INFILTRATION. Design air distribution systems for central HVAC systems to maintain a slightly positive pressure within the area served in order to reduce or eliminate infiltration unless there is a valid need to maintain a negative pressure in that area.

28.11 NOISE AND VIBRATION CONTROL. Design HVAC systems with respect to noise and vibration control in accordance with TM 5-805-4. Use acoustical duct liner only where other methods of noise control are not feasible.

28.12 TESTING, ADJUSTING, AND BALANCING. Testing, adjusting, and balancing of each system shall be the Contractor's responsibility. Work shall be performed in accordance with UFGS 15990A.

28.13 COMMISSIONING. All HVAC systems and equipment, including controls, shall be commissioned in accordance with UFGS 15995A, Commissioning of HVAC Systems.

28.14 GUIDE SPECIFICATIONS

28.14.1 The mechanical system design, submittal, and commissioning process shall conform to the latest edition of the Corps of Engineers Unified Facilities Guide Specifications. These specifications can be downloaded from: http://www.ccb.org/ufgs/ufgs.htm

28.15 CONTROLS EQUIPMENT

28.15.1 CONTROLS. The HVAC controls design shall be in accordance with TI 810-11, HVAC Control Systems. Direct Digital Controls (DDC) shall be used to control HVAC systems and equipment. Small equipment such as unit heaters need not be included as part of the DDC system. The controls drawings shall use the Corps of Engineers standard control drawings. These drawings are available at the following website: www.sas.usace.army.mil/eng/hvac

28.15.1.1 The controls system for this facility shall be connected to the existing Fort Bragg Facility Management and Control System. Coordinate with Ft. Bragg Public Works Business Center for controls guidelines.

28.15.2 UTILITY METERING. Metering equipment shall be provided on all main energy and water supplies to the building. Meters shall determine consumption, and not rate of consumption. All meters shall be monitored by the DDC system.

28.15.2.1 All new construction to be equipped with all applicable energy meters. This is to include but is not limited to electrical, natural gas, and water.

28.15.2.2 ELECTRICAL METERS

- All electrical meters to be Siemens type S4.
- All electrical meters to be hard-wired to building JACE panel or be equipped with remote monitoring equipment with JACE interface to the existing facility EIS as described below.

28.15.2.3 GAS METERS

- All gas meters to be equipped with a by-pass line around the meter for service capability.
- All gas meters to be equipped with a by-pass line around the meter for service capability.
- All gas meters to be hard-wired to building JACE panel or be equipped with remote monitoring equipment with JACE interface to the existing facility EIS as described below.

28.15.2.4 WATER METERS

- All water meters to be ABB (Kent), Sensus, Slomberge, or Badger sized for the individual application.
- All water meters to be equipped with a by-pass line around the meter for service capability.
- All water meters to be hard-wired to building JACE panel or be equipped with remote monitoring equipment with JACE interface to the existing facility EIS as described below.

28.15.2.5 REMOTE MONITORING

- All remote monitoring to be Innovatec RF (Radio Frequency) technology.
- All remotely monitored meters to be equipped with an Innovatec transmitter to send RF signal to an Innovatec receiver located with-in half a mile. Innovatec receivers are located at buildings 0-1900, 1-4865, 1-4930, 2-5935, 3-1602, 3-1631, 4-2175, 4-2843, 6-9572, 8-3684, A-3275, A-4105, B-6837, C-2337, C-6039, C-7620, D-2004, D-3529, E 2823, H-6240, J-1952, M-8139, N-6002, P-3807, P-9647, R-2965, U-2004, V 3308, Y-6707.
- All Innovatec receivers to be hard-wired to JACE panel located in associated building.
- All Innovatec transmitters to be supplied with 120V power supply.
- All Innovatec transmitters to be equipped with an external antenna mounted at highest point possible adjacent to meter location.
- All Innovatec receivers to be equipped with an external antenna mounted at highest point possible and hard-wired to associated JACE panel.
- All remote monitoring equipment to be installed per manufacturer's specifications.

29. ENERGY ANALYSIS AND ECONOMIC ANALYSIS

29.1 DESIGN STANDARDS AND CODES

- Savannah District Engineering Design Manual for Military Construction.
- NBS Handbook 135, LCC Manual – Federal Energy Program
- Unified Facilities Criteria UFC 3-400-01
- Technical Instructions TI 800-03, Technical Requirements for Design Build.
- ETL 1110-3-491, Sustainable Design for Military Facilities

29.2 ENERGY CALCULATIONS

29.2.1 ENERGY USE CALCULATIONS. Energy calculations shall be provided by the successful proposer. Any Army facility that is heated and/or cooled or heated only and exceeds 280 sq-m. (3,000sqft.) of gross floor area shall be analyzed with a computer program that uses established weather data files and performs 8,760 hourly calculations. Energy calculations for buildings that do not require a computer simulation may use a computer program or appropriate methods explained in the 2001 ASHRAE Fundamentals Handbook, Chapter 29. Some acceptable programs are Trane TRACE, Carrier Hourly Analysis Program, BLAST, and DOE-2. Electricity for heating is prohibited except under certain conditions dictated in Chapter 14 of TI 800-01. This document is available from the COE web site at:
http://www.hnd.usace.army.mil/techinfo/ti/810-10/810-10.pdf

29.2.2 LCCA CALCULATIONS. A LCCA is required for this project. HVAC system alternatives shall be submitted to the Savannah district for approval. LCCA calculations and reports will be performed in accordance with TM 5-802-1. This document can be down loaded from http://www.usace.army.mil/inet/usace-docs/armytm/tm5-802-1/entire.pdf. Computerized economic analyses shall be made using the Life Cycle Cost

in Design (LCCID) program, the Building Life Cycle Cost (BLCC) program or one approved by HQUSACE, CEMP-E to be the equivalent thereof. The LCCID program is available from Building Systems Laboratories at 217-333-3977. The BLCC program is available from the FEMP web site at www.eren.doe.gov.femp. The energy to be considered will include all known thermal loads including process, ventilation and occupant loads. Operating hours will be those actually anticipated for operation. The design team will consider and evaluate all design alternatives that are feasible and appropriate for the particular design application under consideration. Special attention will be given to ensure that all feasible energy and water conservation alternatives are included in the analysis. For each analysis the alternative with the lowest life cycle cost (LCC) will be incorporated into the design. All economic analyses will use the current energy price escalation rates and current energy prices for the area being analyzed. During periods of rapid change in fuel prices the average local fuel price for the previous 12-month period should be used in the analysis in lieu of the current contract price. Contractor shall analyze three systems using LCC analysis. The LCC analysis shall be done prior to calculation of the energy conservation calculations. Along with the LCCA submit the following: 1) Complete input and output of energy analysis economic programs. 2) Cost estimate. 3) Documentation of the source of the maintenance costs. Proposals shall address energy conservation features such as economizer cycles, energy recovery, etc. where economically feasible. In addition the energy efficiency ratings for equipment shall be in the upper 25 percent of that available as long as these efficiencies are economically feasible. The Department of Energy (DOE) and Federal Energy Management Program recommendations from the Buying Energy Efficient Products Guide and the Environmental Protection Agency Star products program meet these requirements. The DOE recommendations are available at www.eren.doe.gov/femp/procurement.

29.2.3 ENERGY CONSERVATION CALCUALTIONS. A minimum requirement of the sustainable project certification is to show compliance with ASHRAE 90.1-1999. This may be accomplished by providing a summary table of design features that minimally comply with applicable mandatory and prescriptive requirements in ASHRAE 90.1-1999, sections 5 through 10 or by providing a copy of the Energy Cost Budget Compliance Report. The compliance documentation shall be submitted by the successful proposer after contract award. All proposers must submit in their proposals a statement that they will provide a facility that complies with ASHRAE 90.1-1999.

If the Energy Cost Budget Method is used the operational hours for the calculation shall be 10 hours/day, 5 days/week for Administration, Classroom and Shop areas, and 24 hours/day, 7 days/week for Storage Use 0700-1700 as the 10-hour period for energy budget calculations.

29.3 ENERGY CONSERVATION. The designer shall incorporate energy conservation features where possible. For conservation methods with an investment cost exceeding 1.00 percent of the PA, a report shall be submitted with supporting economic analyses.

30. ELECTRICAL DESIGN

30.1 CODES AND STANDARDS

30.1.1 The design and construction of the electrical systems shall be in compliance with: (1) National Fire Protection Association Codes & Standards, (2) the rules and recommendations of ANSI C2, (3) as required herein, (4) the referenced Unified Facility Guide Specifications (UFGS), and (5) Ft. Bragg's Installation Design Guide. Guide specifications are referenced in this RFP for their use in preparation of the design and shall be edited consistent with the criteria furnished. The most current edition of the codes and standards shall be used for building construction and life safety design. Where there is a conflict between the RFP and the codes and standards the most stringent shall apply. When codes and standards are in conflict, the most stringent shall apply. Standards and codes are listed in the guide specifications.

30.1.1.1 The following criteria references will also be used in the design of this project:

i. TM 5-811-1 Electric Power Supply and Distribution
ii. TM 5-811-2 Electrical Design, Interior Electrical Design
iii. TM 5-811-9 Voice/Data Telephone Systems
iv. TM 5-809-10 Seismic Design for Buildings
v. TI 800-01 Technical Instructions Design Criteria
vi. TI 811-16 Technical Instructions Lighting Design
vii. EI 16E500 Engineering Instructions Lighting Design
viii. ANSI-C2 National Electrical Safety Code
ix. ANSI/EIA/TIA-568 Commercial Building Telecommunications Cabling Standard
x. ANSI/EIA/TIA-569 Commercial Building Standard for Telecommunications Pathways and Spaces
xi. ANSI/EIA/TIA-606 Administration Standard for the Telecommunications Infrastructure of Commercial Buildings
xii. NFPA 70 National Electrical Fire Code, 2002 Edition
xiii. NFPA 101 Life Safety Code, 1999 Edition
xiv. NFPA 780 Installation of Lightning Protection Systems
xv. Savannah District Design Manual for Military Construction
xvi. IES Lighting Handbook
xvii. Installation Design Handbook, Ft. Bragg, Ga.
xviii. Installation Information Infrastructure Architecture (I3A) Design and Implementation Guide.

30.2 DESIGN ANALYSIS. Provide the following items with the final design submittal:

30.2.1 Interior lighting. Provide calculations for each room or area.

30.2.2 Exterior lighting. Provide calculations for all site lighting to include parking areas, walkways, and security.

30.2.3 Load Analysis for each building to include connected and estimated demand. Separate loads by categories such as lighting, receptacles, HVAC, special equipment, etc.

30.2.4 Fault – short circuit calculations for electrical system(s).

30.2.5 Voltage drop – Provide calculations to verify voltage drops. Do not exceed limits as given in the National Electric code (NEC).

30.2.6 Coordination – provide data to verify proper protection and coordination is provided for the equipment/system(s).

30.2.7 Field Trip Report.

30.3 MATERIALS AND EQUIPMENT. All materials and equipment shall be the standard catalogued products of manufacturers regularly engaged in the production of such equipment and material, and shall be the manufacturer's latest design. All equipment and material shall conform to the requirements of American National Standards Institute (ANSI), American Society of Testing and Materials (ASTM), National Electrical Manufacturer's Association (NEMA), National Fire Protection Association (NFPA) or other national trade association as applicable. Where standards exist, materials and equipment shall bear the label and be listed by Underwriters Laboratories, Inc. (UL) or other recognized testing organizations.

30.3.1 Space requirements. Electrical space shall be provided for all electrical equipment. Space shall provide clearances and working areas as required by codes. Coordinate location to consider factors such as ease of maintenance, vicinity to loads being served and accessibility.

30.3.2 Wiring. Shall be copper and shall be run in conduit. Use solid bare copper wire for sizes No. 8 AWG and smaller diameter, and Class B, stranded bare copper wire for sizes No. 6 AWG and larger diameter.

30.3.3 Motors. Motors shall be high energy efficient type. Motors larger than one-third horse power shall be three phase. Motors one-third horsepower and smaller shall be single phase. Motor starters for mechanical and special equipment will be furnished as an integral part of the mechanical or special systems.

30.3.3.1 Motor Efficiencies. Minimum motor efficiencies shall be either Energy Star or in accordance with DOE Buying Energy Efficient Products Recommendations (refer to www.eren.doe.gov/femp/procurement for recommended efficiencies). Applications which require definite purpose, special purpose, special frame, or special mounted polyphase induction motors are excluded from these efficiency requirements. Motors

provided as an integral part of motor driven equipment are excluded from this requirement if a minimum seasonal or overall efficiency requirement is indicated for that equipment by the provisions of another section.

30.3.4 Switchboard/panelboard. Dead-front construction, NEMA PB1 and UL 67.

30.4 SITE ELECTRICAL

30.4.1 Each building shall be served by a dedicated liquid-filled, pad mounted transformer, located adjacent or near as possible to the main distribution panel or switchboard in the respective building. See the site layout plan in the drawing set for proposed location of the transformer at the main building.

30.4.1.1 The secondary compartment of each transformer shall be provided with current transformers and an electronic KWH-KW demand meter.

30.4.2 A minimum two-way 4” concrete duct-bank (one conduit for the phase conductors, the other for a spare) shall be provided for the primary distribution system, from the dip pole to the pad mounted transformers.

30.4.3 Two aerial primary circuits shall be extended onto the site to serve the new facility. The main circuit will be existing circuit 4B that runs along Chicken road. Existing circuit 6A shall be extended from the intersection of Longstreet road and McRidge Rd to the new site as well. The two circuits shall provide a redundant primary system to the facility. A manual switch shall be provided for transfer of circuits. Refer to Appendix H, Additional Design Criteria, for a sketch of the routing of circuit 6A onto the site and additional sizing requirements.

30.4.4 Any outages on the existing systems shall be scheduled for an off peak time (night, weekend, holiday) to be determined by Ft. Bragg’s DPW office. Full preparation shall be done before the outage to keep the downtime duration to a minimum. Design/Build Contractor shall schedule all work items requiring an outage on the same feeder to be accomplished concurrently during the single outage. All coordination with Fort Bragg’s DPW shall be done through the Contracting Officer's Representative.

29.4.5 The landscape architect shall be consulted to provide appropriate screening of pad-mounted transformers, sectionalizing cabinets and primary switches.

30.5 SITE COMMUNICATIONS

30.5.1 Ft. Bragg’s ITBC office will install all outside plant cabling. The Design/Build Contractor shall install the ducts and manhole systems. The duct bank shall be installed 2 feet below grade (min). The communications ductlines shall be concrete encased under roads and all areas subject to vehicle traffic. A pull wire shall be provided in all empty ducts.

30.5.1.1 The Design/Build Contractor shall coordinate all phases of the exterior communications ductbank installation with Ft. Bragg's ITBC representative. The cable installers for ITBC shall be allowed access to the site for inspection and cable installation purposes.

30.5.2 The ductbank shall extend from the telecommunications service entrance room to an existing EV Hut located to the west of the site. Refer to the electrical site plans for exact locations. Refer to Appendix H for the designated route required.

30.5.3 The type of manholes will be 38Y-J4. Distance between manholes shall be no greater than 500 feet apart with a maximum of 100 feet of leeway (either shortening or lengthening the distance) for buildings and other obstructions if it does not violate the cable reel lengths for the cables to be installed. Each manhole will require a sump, ground rod, straps and cable racks. All ducts shall be installed at the lowest manhole window first, allowing future ducts to be installed above existing ducts. A single line diagram depicting the manhole and ductbank system for the project will be required. Manhole elevations and elevations of duct lines entering manholes will be shown. Manholes located in traffic areas shall be design for a H2O wheel loading as defined by AASHTO HB-13.

30.5.4 Coordinate the exact elevation, placement and orientation of communications manholes with Fort Bragg's ITBC office through the Contracting Officer's Representative. Coordinate the tie-in of new ducts with Fort Bragg's ITBC office through the Contracting Officer's Representative. The ducts shall be placed in the lowest terminators. No conduit crossovers in the telephone manholes will be allowed.

30.5.5 Manholes and ductbank systems must be completed (to include pumped out and clean), inspected and accepted by the ITBC office at least six (6) months prior to the BOD (Beneficiary Occupancy Date) for the project.

30.5.6 The telecommunications design for this project shall comply with the Installation Information Infrastructure Architecture (I3A) Design and Implementation Guide.

30.6 UTILITY ROUTING

30.6.1 All power and communications ductlines shall be concrete encased under all paved areas and any other areas subject to vehicular traffic. Jack and bore under all existing roads crossed.

30.6.2 Coordinate the installation of the underground electric and communication lines with all other new utilities which shall include but not be limited to: power, communications, storm drains, sanitary sewers, water lines, steam lines, high temp water lines, chilled water lines, gas lines, and any other utilities. The minimum separation between electric or communication lines and other utility lines shall be 3 feet vertically and 3 feet horizontally when running adjacent. If utilities are crossing minimum separation shall be 1 foot vertically. In the case of concrete encasement, the clearances

shall be measured from the outermost dimension of the utility line and shall have suitable supports on each side of the upper line to prevent transferring any direct load onto the lower line.

30.6.3 Prior to commencing work on any new underground power or communication line, the Design/Build Contractor shall stake the route of each line and indicate the exact location of all new ducts, primary sectionalizing cabinets and switches, manholes and transformers for approval by the Base's DPW and ITBC, and by the Contracting Officer's Representative.

30.6.4 The routing of the secondary and communications service ductlines into the buildings shall be coordinated with the structural footings to avoid any conflicts.

30.6.5 New underground utilities including manholes shall be located outside the tree drip lines of existing trees scheduled to remain. Ducts that cannot be routed around tree drip lines shall be tunneled through the drip line area as approved by the Contracting Officer's Representative.

30.7 GROUNDING

30.7.1 The secondary electrical distribution system shall be the solidly grounded neutral type with no intentionally introduced grounding impedance. Grounding shall be in accordance with Article 250, National Electrical Code. A green insulated grounding conductor shall be provided with all branch and feeder wiring.

30.7.2 A grounding counterpoise shall be provided around each transformer pad and around each building. Counterpoises shall be bonded together. Building counterpoises provided under lightning protection system requirements shall be connected to the transformer counterpoise, the main electrical panel, the main communications ground, building steel, and lightning protection down conductors. Ground rods shall be provided at each counterpoise connection. Connections shall be by exothermic weld. Building counterpoises shall be connected together where one building is located next to another building.

30.7.3 Resistance of driven grounding electrodes shall be tested at the time of installation by the fall-of-potential method. Resistance of the grounding systems shall be a maximum of 25 ohms.

30.7.4 Grounding conductors shall be copper. Driven grounding electrodes shall be ¾" diameter solid rods of the following materials: copper or copper-clad steel. Rods over 10 feet long may be sectional built-up type.

30.7.5 Each telecommunications room shall be provided with a #1/0 bare grounding wire that extends from the facility's electrical service entrance and is bonded to the building grounding system. Ground wire shall be bonded to grounding busbars located

at the bottom of each 4' wide plywood backboard in each telecommunications backboard.

30.7.6 Grounding and bonding shall conform to UL 467.

30.8 EXTERIOR LIGHTING

30.8.1 The design of exterior lighting and associated lighting levels not indicated shall be in accordance Illuminating Engineering Society, IES, Lighting Handbook Reference and Application, 9th Edition. Exterior lighting shall include the new roads, parking lots, walkways, canopies, facility entrances/exits, and loading dock areas. All exterior lighting shall utilize color corrected high pressure sodium (HPS) lamps. Parking lots and street lighting shall be photocell controlled. All site lighting shall be zoned and shall have a separate photocell for control. Each contactor/zone shall be equipped with Hand-Off-Auto switches, location of controls shall be coordinated with the User after Contract award. Walkways shall be illuminated to 5.4 Lux (.5 footcandles) with concrete bollards. Parking areas shall be illuminated to 5.4 Lux (.5 footcandles) and utilize high cut-off type fixtures mounted on 40 foot (9.1 meters) square aluminum poles. Where poles are located in areas capable of being struck by a vehicle, poles shall be mounted on concrete pedestals (height to be determined during the design of the project). Aluminum poles mounted in turf or landscaping areas shall be mounted on concrete pedestals 3 inches (75 mm) in height above the ground. Facility entrances/exits shall be illuminated with wall mounted fixtures or recessed fixtures mounted in the soffit, if applicable. All exterior fixtures shall be dark bronze anodized aluminum.

30.8.2 Metal poles shall be the pole manufacturer's standard design for supporting the number of fixtures indicated. Poles shall be designed for a wind velocity of 110 mi/hr (177 km/hr)at the base of the pole, for a wind gust factor of 1.3, and for the height and drag factors recommended by AASHTO LTS-3. The effective projected area of luminaries and other pole-mounted devices shall be taken into account in pole design. Poles shall have grounding provisions. The type of pole shaft material provided shall not be mixed for the same type of fixture types. Grounding connection shall be provided near the bottom of each metal pole and at each concrete pole anchor base. Scratched, stained, chipped, or dented poles shall not be installed.

30.8.3 All exterior site lighting shall be of the types that are compatible with security cameras and sensors. The location of fixtures shall be coordinated with the security system as well.

30.9 LIGHTING

30.9.1 Lighting shall be provided in the building. Average maintained horizontal illumination levels at 2.5 feet above the finished floor shall be provided as listed in TI 800-01 Design Criteria. Vertical illumination levels for all rooms and horizontal and vertical illumination levels for rooms or areas that are not listed on the Schedules in TI-800-01 shall be in accordance with the Illuminating Engineering Society, IES, Lighting

Handbook Reference and Application, 9th Edition. The IES handbook shall also be consulted for additional lighting requirements.

30.9.2 General ambient illumination shall provide a generally glare-free, high quality lighting environment. Linear-type fluorescent lighting installations in offices, conference room, workroom, file rooms and similar spaces shall achieve Visual Comfort Probabilities (VCP) of 70 or higher. Fluorescent high bay fixtures shall be used in the high bay areas.

30.9.3 Occupancy sensors shall be used in storage rooms and restrooms. Occupancy sensors may also be used in other areas for energy savings.

30.9.4 Fluorescent lamps shall be T8 (3500° K) or compact. Fluorescent ballast shall be the electronic type. All fluorescent lamps shall be low mercury content certified to pass the U.S. Environmental Protection Agency (EPA) Toxic Characteristics Leaching Procedures (TCLP) test for non-hazardous waste.

30.9.5 Dimming shall be provided for Training Rooms and Conference rooms. Dimming ballasts shall have range of 1% to 100%.

30.9.6 Wall switches shall be located on the strike side of a door, 6 inches from the door opening, unless otherwise functionally required.

30.9.7 Incandescent lighting fixtures may be utilized only in small, infrequently used areas, such as janitor closets.

30.9.8 All lighting requirements with respect to the Secure Vault shall be in compliance with AR 190-11. Refer to Appendix J.

30.10 EMERGENCY LIGHTING

30.10.1 Illuminated exit signs and emergency lights shall be provided for all emergency exits and passageways as required by the NFPA Life Safety Code No. 101. Exit fixtures shall be LED (red).

30.10.2 Upon loss of power the emergency lamp shall light regardless of the light switch position.

30.10.3 Night lighting (24 hour) shall be provided at the entrances to all secure storage areas. The fixture is also to be equipped with emergency battery ballast. Refer to Appendix J for specific requirements.

30.10.4 Security lighting shall be provided at service entrances and at utility rooms (i.e. mechanical, electrical, communications, etc.). Wall mounted security light fixtures shall be shrouded to minimize glare. Fixture shall use compact fluorescent lamps whenever

possible; where compact fluorescent lamps are inadequate, fixtures shall be equipped with metal halide lamps.

30.10.5 Wall mounted light fixtures at main entrances and other high visibility areas shall be selected for aesthetics and compatibility with the building architecture.

30.10.6 Lighting shall be provided for specialty items such as display cases, accent lighting and other items as necessary.

30.11 RECEPTACLES

30.11.1 Provide a minimum of one general-purpose 120 volt, 15 or 20 ampere duplex receptacle outlet in each room. In rooms where walls exceed 10 feet horizontally, provide an additional duplex outlet for each additional 10 feet of wall or fraction thereof. Receptacles spacing shall not exceed 10 feet. The general-purpose receptacles are in addition to the special purpose and dedicated outlets for special equipment. Receptacles shall also be located adjacent to all data jacks and shall be coordinated with furniture layouts. Unless otherwise indicated or required for handicap, all receptacles will be 18 inches above finish floor (AFF). Receptacles mounted above counter tops or in any control desk areas shall be appropriately mounted. Quadruplex, 120v, 20 amp receptacles shall be provided at each 4’ wide backboard throughout each telecommunications room.

30.11.2 Receptacles in corridors shall be provided for floor cleaning equipment. The receptacles shall be spaced in such a manner as to permit full coverage by the equipment with a 25 foot long extension cord. Floor receptacles shall not be used.

30.11.3 Receptacles shall be located at the ADAT Platform according to the above requirements. All receptacles in this area shall be Weatherproof, GFCI type.

29.11.4 An overhead projector system will be used in each Conference Room and each classroom. Provide a receptacle at the ceiling for power to the projector and provide the necessary conduits, wiring, outlets, etc. for the User to connect a laptop computer to operate with this projector. Location of these outlets will be coordinated with the User after contract award. Also coordinate location with overhead ceiling fan if provided.

30.11.5 Special Function Receptacles

30.11.5.1 Appropriate outlet types shall be provided for items identified in other portions of the RFP (i.e coffee pots, vending machines, overhead motorized projectors and screens, etc.) Provide appropriate outlet types for any Government furnished equipment identified.

30.11.5.2 Outlets shall be provided for copying machines. The user may adjust locations after the Final Review stage.

30.11.5.3 Waterproof receptacles shall be provided on the outside areas at entrances to all buildings and at the ADA/AT platform in the Weapons Training Facility.

30.11.6 Ground Fault Circuit Interrupter (GFCI) Outlets. GFCI outlets are to be used for 20-amp convenience type outlets in the following areas: Outdoor, wet locations, toilets, and other locations as required by the National Electric Code or OSHA. GFCI receptacles are to be wired such that the loss of power on one receptacle does not affect downstream receptacles.

30.11.7 Shop Equipment Connections. Refer to Appendix D – Functional Room Requirements for electrical characteristics for all shop and other government provided equipment. The Contractor shall determine and provide the appropriate disconnecting means (receptacle, special receptacle, fused disconnect, etc.) for connection of equipment to the electrical system. Where electrical information is not provided in Appendix D – a visual inspection of nameplate data and existing conditions shall be made prior to the rough-in of dedicated circuits.

30.12 DATA, TELEPHONE, AND CABLE TV

30.12.1 Ft. Bragg's DOIM office will provide all cabling for data and telephone systems at this facility. The Design/Build Contractor shall provide a complete CATV system to serve the specified television locations. All coaxial cables, type F connectors, splitters, directional couplers, amplifiers, etc. shall be designed to provide a complete wired system. All CATV distribution equipment shall be installed in the main telecommunications room on one 4' wide plywood backboard. A 4" empty conduit (with pullstring) for the future CATV service entrance shall be stubbed from the CATV backboard to a point 5' outside of the building perimeter. Design/Build Contractor shall provide a complete conduit and cable tray infrastructure to support these cabling systems including, but not limited to, all necessary raceway, cable tray, and device junction boxes. All duplex outlet (voice/data) and cable TV (CATV) outlet boxes will be 18 inches above finish floor (AFF) except wall telephone outlets will be 54 inches AFF. Voice and data jacks will be in the same device box. Device boxes for the secure data system (red) shall be completely separate from all other low voltage systems. These boxes and their associated conduits within walls between boxes and cable tray shall be placed no closer than 12" from any other low voltage system junction boxes.

30.12.1.1 Provide type AC fire retardant plywood along all walls in each Communications room, from floor to ceiling.

30.12.1.2 Design/Build Contractor shall ensure that the Communications rooms are adequately sized and are located such that data cables do not exceed 250 feet in length.

30.12.1.3 Provide device boxes for wall phones in all mechanical, electrical, and telecommunications rooms.

30.12.2 Conduit from data, telephone or CATV outlets shall be a minimum of 1-inch electrical metallic tubing (EMT) conduit. One inch EMT conduits shall be installed as a "home run" between the telecommunications closet telephone backboard and each outlet or between each outlet and the cable tray. "Home run" means one continuous conduit run with NO pull boxes and NO more than two 90-degree bends in the entire conduit run. Solid bottom cable trays shall be used to provide a centralized cable distribution system in all the buildings if space permits and is readily accessible. Cable trays shall be no higher than 6 inches above finished ceilings. The cable tray shall be provided with one square-inch of cross-sectional area per outlet location to be served. A separate cable tray system shall be provided for the secure (red) data system cables. This cable tray shall be installed such that the secure system cables will be no closer than 36” to any other low voltage system’s cables. An optimal fill ration of 40% should be the design plan. The EMT conduit shall be physically strapped to the cable tray and an anti-chaffing grommet attached. All empty conduits routed to outlet boxes shall be provided with a pull cord. All conduits to administrative outlet boxes shall be provided with a pull cord for future installation of fiber optic cable (FOC).

30.12.3 CATV jacks shall be provided in the following locations:

All Classrooms.
All Conference Rooms.
All Offices
All Break rooms
Instructor Admin Area (T-114)

30.12.4 Two – 4” conduit shall be provided from the Main Telecommunications Room in the main building to each guard house for future communications cabling.

30.12.5 The telecommunications design for this project shall comply with the Installation Information Infrastructure Architecture (I3A) Design and Implementation Guide.

30.12.6 The Design/Build Contractor shall coordinate all phases of the data and telephone infrastructure installation with Ft. Bragg’s ITBC representative. The cable installers for ITBC shall be allowed access to the site for inspection and cable installation purposes.

30.13 FIRE ALARM SYSTEM

30.13.1 The building will have an intelligent, addressable fire alarm system. The fire alarm system will consist of a control panel, manual pull stations, horns and strobe lights, sprinkler waterflow switches, valve tamper switches, air pressure supervisory switches, control and monitor modules for non-addressable devices and smoke and heat detectors. Fire Alarm system for this building shall comply with the Americans with Disabilities Act (ADA).

30.13.2 The fire alarm system shall be by Honeywell and shall be compatible with the existing basewide Honeywell Delta 1000 system at the central receiving station. Coordinate with Ft. Bragg's Fire Chief for exact requirements.

30.13.3 In addition to the manual pull stations at all exits, provide pull stations at all other exterior entrances and in all electrical, mechanical, communications rooms. In addition to the horns/strobes throughout the facility, provide them also in all electrical, mechanical and communications rooms.

30.13.4 Provide horns/strobes throughout the facility so that alarm sound levels at any location are at least 15 dB above normal ambient sound levels and can be heard in all rooms (i.e. in shower with water running). Provide strobe lights to comply with NFPA 72-1999. Strobe lights shall meet Underwriter's Laboratories (UL) Standard 1971 and shall be synchronized.

30.13.5 The fire alarm system shall be a completely supervised system employing analog addressable initiating devices and multiplex communication techniques. Each detection, monitor and control device shall be individually addressable. Devices not inherently addressable (i.e. tamper, flow switches etc.) shall be equipped with addressable monitor and control modules.

30.13.6 Coordinate with the other disciplines to provide tamper switches on all fire alarm system control valves and the Post Indicator Valve (PIV).

30.13.7 System shall be a four wire, two conduit loop system. Vertical and horizontal separation of conduits shall be in accordance with NFPA 72. Conduits are to be marked with a red stripe every 10 feet. All junction or pullboxes shall be painted red.

30.13.8 Provide cabinet mounted MOV based surge protection device in addition to surge protection integral to the FACP. Device shall be UL 1449 listed and shall satisfy the requirements of IEEE C62.41.

30.13.9 All alarm and trouble signals shall be transmitted via phone lines to Ft. Bragg's central receiving station. Locate the Fire Alarm Control Panel (FACP) in the Electrical Rooms.

30.14 SERVICE EQUIPMENT.

30.14.1 Provide only one main service disconnect device for the normal power supply to the facility and located in the Main Distribution Panel (MDP) inside the building.

30.14.2 The main service equipment and all other electrical equipment shall fit into the space required and provided with all the access and clearance required by code.

30.14.3 Electrical Disconnects. Electrical disconnects shall be installed adjacent to equipment and accessible to equipment operators for the following equipment: Motors and equipment as required by the NEC and OSHA requirements.

30.15 LIGHTNING PROTECTION. Lightning protection shall be provided for each building. A complete protection via air terminals and ground counterpoise loop shall be provided. The system shall have the appropriate U.L. master label installed on the building. Down and roof conductors shall be concealed within the buildings. Lightning Protection System shall be in accordance NFPA 780.

30.16 TRANSIENT VOLTAGE SURGE SUPPRESSION(TVSS). Surge suppressors shall parallel the operating devices in providing a path to ground for an electrical surge and limiting the magnitude of transient voltage surges on the system. Units shall be mounted adjacent to the Main Distribution Panel in accordance with the manufacturer recommendation. Unit shall be hard-wired into the electrical distribution system utilizing a circuit breaker connection. Units shall be tested in accordance with IEEE C62.45 using an IEEE C62.41 Category B waveform. Units shall be UL 1449 listed and labeled. Modes of protection shall be normal mode (L-N, L-L) and common mode (L-G, N-G). The unit shall include self-diagnostic and self-testing capabilities, a resettable transient event counter, and a local audible alarm with mute capability.

30.17 SEISMIC PROTECTION. Seismic design shall be in accordance with Army Technical Manual, TI 809-04, Seismic Design for Buildings, dated December 1998 and Specification Section 16070A Seismic Protection For Electrical Equipment.

30.18 INTRUSION DETECTION SYSTEM (IDS) PROVISIONS. An IDS system shall be provided to cover the entire facility. The system design has been provided by the Corps of Engineers and shall be used by the Design/Build Contractor to provide a complete conduit infrastructure to support the system wiring.

30.19 EMERGENCY POWER

30.19.1 Provide a skid mounted, diesel-powered generator to operate the following loads:

Egress lighting
Vault Room entrance lighting
Fire Alarm Panel
Security Alarm System

30.19.2 The fuel tank shall be sized to allow a generator run time of 12 hours. Locate the fuel tank within the skid.

30.19.3 Refer to the site plans for the proposed location of the generator.

30.19.4 The electrical system shall comply with the Americans with Disabilities Act (ADA) for buildings identified in the RFP with this requirement.

30.19.5 The design and construction of the electrical system shall be in accordance with the most current codes and standards. Provide adequate electrical power and safe and efficient distribution from panelboards and switchboards to lighting, wiring devices, motors, miscellaneous equipment, kitchen equipment, appliances and the locations where it is needed, based on the project requirements as contained within this RFP (architectural, mechanical, etc). Panelboards and other electrical distribution equipment shall be located in electrical rooms only. Locating panels in corridors is prohibited.

30.19.5.1 Series rated breakers shall not be used.

30.20 NONLINEAR LOADS. The increasing presence of solid-state switching mode power supply components in electrical equipment requires the designer to consider the equipment to be supplied by the distribution system and to make provisions for nonlinear loads in this facility. These loads generate harmonics, which can overload conventionally-sized conductors or equipment causing safety hazards and premature failures.

30.20.1 For additional electrical criteria, See TI-800-01 (Design Criteria).

30.21 UNIFIED FACILITY GUIDE SPECIFICATIONS (UFGS)

30.21.1 The project specifications shall be prepared using the guide specifications. If additional specification sections are required, contact the Savannah District to see if a guide specification exists. If a guide specification does not exist, the Design/Build Contractor will prepare job specific specifications.

30.21.2 The guide specifications are to be edited and adapted by the designer to fit each individual project in accordance with the project requirements. The designer is to delete the inapplicable portions of the guide specifications and revise and/or supplement, as required, the applicable portions to provide a complete project specification. Deviations will not be allowed without prior approval from the Savannah District.

30.21.3 The following specifications sections shall be edited and submitted at the Final Review stage or earlier. Sections shall be submitted in hard copy form that indicates the changes being added and those to be deleted. For example if Microsoft Word is used, this feature is located under “Tools” “Track Changes” “Highlight Changes”.

13080A Seismic Protection For Miscellaneous Equipment
13100A Lightning Protection
13851A Fire Detection/Alarm System, Addressable System
16070A Seismic Protection For Electrical Equipment
16264A Diesel-Generator Set, Stationary 15-300 KW, Standby Applications
16375A Electrical Distribution System, Underground
16410A Automatic Transfer Switch And By-Pass/Isolation Switch

16415A Electrical Work Interior
16528A Exterior Lighting Including Security And CCTV Applications
16710A Premises Distribution System
16711A Telephone System, Outside Plant
16770A Radio And Public Address System
16771 Telephone System Outside Plant
16815A Cable Television Premises Distribution System

30.22 Location of Documents referenced in Section 30.

30.22.1 TI-800-01 & TI-800-04:
http://www.hnd.usace.army.mil/techinfo/ti.htm

30.22.2 Specifications Sections – http://www.ccb.org/ufgs/ufgs.htm

30.22.3 Installation Information Infrastructure Architecture (I3A) Design and Implementation Guide –
"http://akea-cio.army.mil/i3a/General_Docs/Implementation"

31. SUSTAINABLE DESIGN

31.1 Sustainable Design Goal. This project has a requirement of achieving Bronze level of sustainable design features as measured through the use of Sustainable Project Rating Tool (SPiRiT), Appendix K in this RFP. SPiRiT is a modified version of the U.S. Green Building Council LEED Green Building Rating System. As stated in the contract clauses each offeror will complete and submit the SPiRiT Facility Points Summary (See Appendix K) with the proposal; the total points score will determine the SPiRiT Sustainable Project Certificate Level: SPiRiT Bronze, Silver, Gold or Platinum. The proposed level will be used as a proposal evaluation factor as defined in the contract clauses.

31.2 Mandatory Requirements. The SPIRIT Points Summary Table, Appendix K, indicates what SPIRIT items are contract requirements for this project in the “Mandatory Points in RFP” column. A description of these SPIRIT items is contained in the SPIRIT document itself, Appendix K. This column also indicates the status of SPIRIT points that fall outside the scope of design and construction, such as features of the selected site.

32.3 Prohibited Solutions. The following will not be accepted as proposed features to earn SPIRIT points: None.

- End of Section -

SECTION 01030

DESIGN AFTER AWARD

1. DESIGN RESPONSIBILITY: The Contractor shall furnish and be responsible for a complete set of design documents as called for in Section 01010, DESIGN REQUIREMENTS and as called for hereinafter.

2. DESIGN SUBMITTAL:

The Contractor shall submit the design at different stages of design to the Government for review. All submittals required at each stage of design shall be submitted as a complete package at one time. No partial submittals will be allowed except as agreed to by the Contracting Officer's Representative. The number and requirements of each design submittal are listed hereinafter. The number and contents of the design submittals shall be reflected in the Contractor's Network Analysis Systems (NAS) Project Schedule (see Section 00800).

General submittal requirements are identified in the Savannah District Design Manual. This is available on the internet (under "Engineering Criteria") at:

http://en.sas.usace.army.mil

Specific submittal requirements are identified in the sections below.

3. GOVERNMENT APPROVED DESIGN SUBMITTALS: The approval of submittals by the Contracting Officer shall not be construed as a complete check, but will indicate only that the design is in conformance with the contract requirements. Approval will not relieve the Contractor of the responsibility for any error which may exist, as the Contractor is responsible for the design and construction of all work.

4. DESIGN SCHEDULE:

Within 21 days after Notice to Proceed, the Contractor shall submit, for approval, a complete design schedule with all submittals and review times indicated by calendar dates. This separate design schedule will be included in the Preliminary NAS Submittal due within 30 days of NTP. This schedule shall be updated monthly as part of the Contractor's NAS. No progress payments will be made without an approved schedule. Any additional changes which the Contractor may wish to make to number or composition of design submittals shall be made 30 days prior to the expected submittal date. The Contractor shall allow 21 days for the Government review period if submittal dates are met. If a scheduled design submittal date is not met without notifying the Contracting officer in writing one (1) week in advance, 28 days shall be allowed for the Government review period. If a submittal date is not going to be met, the Contractor shall notify the contracting officer, in

writing, one (1) week prior to the scheduled submittal date. Failure to do so will increase the Government review time by seven (7) days.

5. STAGES AND CONTENTS OF DESIGN SUBMITTALS:

5.1 60% Preliminary Design Submittal. The 60% preliminary design submittal is a set of drawings in half-size representing 60% of the design. It will also include a tabulation recapitulating the total utility system loads – electrical, sanitary sewer, water, etc., - giving the point of connection into the existing utility systems. Any unusual utility system aspects of the project, especially those requiring resolution prior to final design, will be addressed. Prior to submittal of the preliminary design, the Design Build Contractor shall ensure that the design has been thoroughly checked and coordinated between the various design specialties. All material submitted shall be dated. Whenever items are corrected or later resubmitted, they will show a revised date in order to differentiate later material from the original submittal. Each discipline has unique Preliminary Design submittal requirements. Respective chapters of the Savannah District Design Manual should be reviewed to determine the exact nature of these requirements.

5.1.1 SPIRIT Summary Table. Submit a SPIRIT Summary Table using the format of Appendix K reflecting points already earned as reflected by the submittal and the points that you plan to earn in further design development.

5.1.2 Sustainable Design Narrative. For each SPIRIT point indicated on the SPIRIT Summary Table provide a brief description of the feature(s) that constitute how the point is or will be earned. Briefly describe maintenance requirements associated with that feature as applicable. For features that were considered but not incorporated briefly describe the feature and the reason(s) for not pursuing them.

5.2 100% Final Design Submittal. The 100% final design submittal should represent final drawings and technical specifications. All design work should be complete. Each discipline has unique Final Design submittal requirements. Respective chapters of the Savannah District Design Manual should be reviewed to determine the exact nature of these requirements.

For HVAC Controls: HVAC Controls System Drawings (MC-Plates) shall be submitted at the final design stage and shall include the following.

HVAC Controls System Legend
Control System Schematic
Equipment Schedule
Valve Schedule
Damper Schedule
Sequence of Operations
I/O Summery table and Data Terminal Strip Diagram
Wiring Diagram
Communications Network and Block Diagram

Metering of Utilities (gas, electrical and water)
DDC Panel locations

The control drawings shall use the Corps of Engineers standard control drawings. These drawings are available at the following website: http://www.sas.usace.army.mil/eng/hvac/ or on the SAS_STD CD available from the project manager.

5.2.1 SPIRIT Summary Table. Submit a SPIRIT Summary Table using the format of Appendix K reflecting points already earned as reflected by the submittal and the points that you plan to earn in further design development.

5.2.2 Sustainable Design Narrative. For each SPIRIT point indicated on the SPIRIT Summary Table provide a brief description of the feature(s) that constitute how the point is or will be earned. Briefly describe maintenance requirements associated with the feature as applicable. For features that were considered but not incorporated briefly describe the feature and the reason(s) for pursuing them. Include supporting documentation (calculations, etc.) as required by SPIRIT to document achievement goals.

5.3 Corrected Final Design Submittal. The corrected final submittal is not to be considered a normal design level and will be provided in those cases in which the review comments require revision due to A-E error or omission. Each discipline has unique Corrected Final Design submittal requirements. Respective chapters of the Savannah District Design Manual should be reviewed to determine the exact nature of these requirements. Provide a statement with the Corrected Final Submittal that this has been done.

5.3.1 Verify consistency between plans, specifications, structural interior design, comprehensive interior design, and final SPIRIT score.

5.4 Fast-Track Site Design Submittal. To facilitate fast-track design-construction activities, the contractor will be allowed to submit a 100% Site/Utility Design as the first design submittal. Following review, resolution, and incorporation of all government comments, and submittal of a satisfactory set of site/utility design documents, the Contracting Officer shall issue a limited Notice-to-Proceed (NTP) which will allow the contractor to proceed with site development activities within the parameters set forth in the accepted design submittal. No on-site construction activities shall begin prior to receipt of a construction NTP by the contractor. Design submittals (and any re-submittals or corrected final submittals) for this site design will be sent in 4 copies to the first three addressees listed in paragraph 7 of section 01030, and 1 copy will be sent to all other addressees listed. Submittals will include drawings, specifications, design analysis, permit information/applications, and any annotated comments.

6. QUANTITY OF SUBMITTAL ITEMS:

General: The documents which the Contractor shall submit to the Government for each submittal are listed and generally described in Paragraph 8 below. All drawings for review submittals shall be full-size blue or black lines.

7. MAILING OF SUBMITTALS

All submittals to the Government during design shall be mailed using overnight mailing service. The addresses to where each copy shall be mailed are listed below. Each submittal shall have a transmittal letter accompanying it, which indicates the date, design percentage, type of submittal, list of items submitted, transmittal number and point of contact with telephone number. Additionally the transmittal letter shall state the method of making comments, the suspense date for the comments, and the week of the review conference. Coordinate with the Savannah Corps project manager on wording prior to sending out submittals. The following represent the addresses and submittal distribution:

1. U.S. Army Engineer District, Savannah
   ATTN: CESAS-PM-MD (Kurt Amundson)
   100 W. Oglethorpe Avenue
   Savannah, GA 31401-3640

2. U.S. Army Special Operations Command
   ATTN: AEON (Charles Brown)
   Building D-2507 Ardennes Street,
   Fort Bragg, NC 28310-5200
   (910) 432-2354

3. Directorate of Public Works & Environmental
   ATTN: AFZA-PW-PM (Camille Cole)
   Building 3-1634 Butner Road
   Fort Bragg, NC 28310-5000
   (910) 396-5300

4. U.S. Army Corps of Engineers
   Special Operations Area Office
   ATTN: CESASCD-PSS (V. Crudrup)
   Building D-2507 Ardennes Street,
   Fort Bragg, NC 28310-5200

5. Commander UFACCOM-TAO
   ATTN: AMSEL-DSA-TAM (Calvin Flannigan)
   1671 Nelson Street
   Fort Detrick, Maryland 21702-5047
   (301) 619-6315

The following table lists the number of copies of design submittal requirements for this project:

	# Item 60%	# Item 100% Final	# Item Corrected Final
(1) COE SAS	7 Design Analysis	7 Design Analysis	7 Design Analysis
	7 Drawings	7 Drawings	7 Drawings
	7 Specifications	7 Specifications	7 Specifications
	7 SPiRiT Narratives	7 SPiRiT Narratives	7 SPiRiT Narratives
	-	7 Annotated Comments	7 Annotated Comments
	3 Permit Application(s)	3 Permit Document(s)	
	3 SID	3 SID	3 SID
	3 CID (if applicable)	3 CID (if applicable)	3 CID (if applicable)
	-	1 CD w/ all electronic files	1 CD w/ all electronic files
(2) USASOC	9 Design Analysis	9 Design Analysis	9 Design Analysis
	9 Drawings	9 Drawings	9 Drawings
	9 Specifications	9 Specifications	9 Specifications
	9 SPiRiT Narratives	9 SPiRiT Narratives	9 SPiRiT Narratives
	-	9 Annotated Comments	9 Annotated Comments
	2 Permit Application(s)	2 Permit Document(s)	
	3 SID	3 SID	3 SID
	3 CID (if applicable)	3 CID (if applicable)	3 CID (if applicable)
		1 CD w/ all electronic files	1 CD w/ all electronic files
(3) PW-CR	14 Design Analysis	14 Design Analysis	14 Design Analysis
	14 Drawings	14 Drawings	14 Drawings
	14 Specifications	14 Specifications	14 Specifications
	14 SPiRiT Narratives	14 SPiRiT Narratives	14 SPiRiT Narratives
	-	14 Annotated Comments	14 Annotated Comments
	2 Permit Application(s)	2 Permit Document(s)	
	3 SID	3 SID	3 SID
	3 CID (if applicable)	3 CID (if applicable)	3 CID (if applicable)
	-	1 CD w/ all electronic files	1 CD w/ all electronic files
(4)	1 Design Analysis	1 Design Analysis	1 Design Analysis
	1 Drawing	1 Drawing	1 Drawing
	1 Specifications	1 Specifications	1 Specifications
	1 SPiRiT Narrative	1 SPiRiT Narrative	1 SPiRiT Narratives
	-	1 Annotated Comments	1 Annotated Comments
	1 SID	1 SID	1 SID
	1 CID (if applicable)	1 CID (if applicable)	1 CID (if applicable)

(5)	1 Design Analysis	1 Design Analysis	1 Design Analysis
	1 Drawing	1 Drawing	1 Drawing
	1 Specifications	1 Specifications	1 Specifications
	1 SPiRiT Narrative	1 SPiRiT Narrative	1 SPiRiT Narratives
	-	1 Annotated Comments	1 Annotated Comments
	1 SID	1 SID	1 SID
	1 CID (if applicable)	1 CID (if applicable)	1 CID (if applicable)

8. DESIGN SUBMITTAL REVIEWS. For each design review submittal, the Contractor will be furnished comments from the various design sections of the Savannah District and from other concerned agencies involved in the review process. The Contractor shall annotate the comments with actions taken, and shall provide the annotated comments with the next submittal.

DrChecks is the required method for preparing and annotating comments. This is an Internet based database. The Contractor will be given the DrChecks web address to use prior to making the first design submittal.

The review will be for conformance with the technical requirements of the solicitation. The Government will take twenty-one (21) days to review and comment on each design submittal. If the Contractor disagrees technically with any comment or comments and does not intend to comply with the comment, he shall clearly outline, with ample justification, the reasons for noncompliance within five (5) days after receipt of these comments in order that the comment can be resolved. The disposition of all comments shall be furnished in writing with the next scheduled submittal. The Contractor is cautioned in that if he believes the action required by any comment exceeds the requirements of this contract, that he should take no action and notify the COR in writing immediately.

Review conferences will be held for each design submittal at Fort Bragg, NC. The Contractor shall bring the personnel that developed the design submittal to the review conference. These conferences will take place the week after the review period.

9. PAYMENT DURING DESIGN

Payments, as authorized by the Authorized Representative Contracting Officer (COR), will be made monthly for the amount and value of the work and services performed by the Contractor. This estimate will be verified by the Contracting Officer utilizing the CONTRACTOR-PREPARED NETWORK ANALYSIS SYSTEM submitted by the Contractor and independent analyses of progress. See Contract Clause entitled PAYMENTS UNDER FIXED-PRICE CONSTRUCTION CONTRACTS for additional information.

10. DESIGN ANALYSIS

Media and Format: The design analysis shall comply with ER 1110-345-700. The design analysis shall be presented on 8-1/2 inch by 11-inch paper except that larger sheets may be used when required for graphs or other special calculation forms. All sheets shall be reproducible form. The material may be typewritten, hand lettered, handwritten, or a combination thereof, provided it is legible. Side margins shall be 1-inch minimum to permit side binding and head to head printing. Bottom margins shall be 1-1/4-inches, with page numbers centered 1-inch from the bottom.

Organization: The several parts and sheets of the design analysis shall be given a sequential binding number and bound under a cover indicating the name of the facility and project number, if applicable. The cover for the bound design analysis shall be a different color from that of the specifications. The title page shall carry the designation of the submittal being made. The complete design analysis presented for final review with the final drawings and specifications shall carry the designation "FINAL DESIGN ANALYSIS" on the title page.

Design Calculations: Design calculations are a part of the design analysis. When they are voluminous, they shall be bound separately from the narrative part of the design analysis. The design calculations shall be presented in a clean and legible form incorporating a title page and index for each volume. A table of contents, which shall be an index of the indices, shall be furnished when there is more than one volume. The source of loading conditions, supplementary sketches, graphs, formulae, and references shall be identified. Assumptions ad conclusions shall be explained. Calculation sheets shall carry the names or initials of the computer and the checker and the dates of calculations and checking. No portion of the calculations shall be computed and checked by the same person.

Automatic Data Processing Systems (ADPS): When ADPS are used to perform design calculations, the design analysis shall include descriptions of the computer programs used and copies of the ADPS input data and output summaries. When the computer output is large, it may be divided into volumes at logical division points. Each set of computer printouts shall be preceded by an index and by a description of the computation performed. If several sets of computations are submitted, they shall be accompanied by a general table of contents in addition to the individual indices. Preparation of the descriptions which must accompany each set of ADPS printouts shall include the following:

a. Explain the design method, including assumptions, theories, and formulae.

b. Include applicable diagrams, adequately identified.

c. State exactly the computation performed by the computer.

d. Provide all necessary explanations of the computer printout format, symbols, and abbreviations.

e. Use adequate and consistent notation.

f. Provide sufficient information to permit manual checks of the results.

11. DRAWINGS.

All drawings shall be Computer-Aided Design and Drafting (CADD) in Bentley MicroStation format in accordance with A/E/C CADD Standards at http://tsc.wes.army.mil. The Contractor shall prepare the drawings in such a manner that the Corps of Engineers could construct the facility without any additional assistance from the Contractor. Drawings shall be complete. Unnecessary work such as duplicate views, notes and lettering, and repetition of details shall not be permitted. Standard details not applicable to the project shall not be shown. Details of standard products or items which are adequately covered by specifications shall not be included on the drawings. Drawings shall be detailed such that conformance with the RFP can be checked and to the extent that shop drawings can be checked. Shop drawings shall not be used as design drawings. The Contractor shall use standard Corps of Engineers title blocks and borders on all drawings at all submittal stages. Standard drawing sheet formats and title blocks, and file and drawing CADD file names will be furnished to the Contractor by the Government. The Contractor shall incorporate the drawing, file, and contract numbers on individual drawing sheets at the earliest submittal.

Refer to Appendix L for additional specific instructions.

60% and Final Submittals. Drawing submittals shall be full size plots and shall include a CD with the electronic drawing files.

Corrected Final Submittal. Drawing submittals shall be full size plots and shall include a CD with the electronic drawing files.

12. SPECIFICATIONS.

The Contractor shall submit marked-up guide specifications at the 60% submittal and edited final specifications at the final and corrected final submittals. The project specifications shall be prepared using the Unified Facilities Guide Specifications (UFGS) with SPECSINTACT software for editing.

If a UFGS specification section isn't available for a particular need, or if a Ft. Bragg specific sections is required, Savannah District Specifications should be used only for those specific sections. These guide specifications are on the internet at:

http://en.sas.usace.army.mil/

Many of these specifications are in Specsintact format (*.sec).

These specifications shall be edited and tailored by the Contractor in the basic specification format (Parts 1, 2 and 3) to meet the requirements of the project under design. The Contractor Submittal Register must be edited and included. The UFGS and CEGS are GUIDE specifications only. The Contractor is to delete what is not needed and add what is needed.

For marked-up specifications at the 60% submittal, the Contractor shall mark out and/or add to the original text, as required, showing intended additions and deletions. Intended additions and deletions may be made by marking with a red pencil, manually typing inserts, or by word processing. If a red pencil is used, the Contractor shall mark out all unneeded specification data and/or add as required to fully describe the work. Additions may be penciled in the margin or typed on individual pieces of paper, marked as inserts, and attached to the specification in the proper location.

Final format, clean specifications will be submitted at the Final and Corrected Final submittals. All marked-out or redlined text shall be deleted and all inserted text shall be typed and accepted.

The specification shall be detailed enough such that alternate products meeting the specification could be substituted and they would not adversely impact the project.

13. SUBMITTAL REGISTER.

The Contractor shall develop submittal requirements required during construction as part of the design phase of the contract. This shall be done by the Contractor’s Designer of Record by producing a Contractor Submittal Register at each submittal during design. A submittal register shall be prepared for each section of the specifications for the submittal requirements of that section. The Contractor’s Designer of Record shall be responsible for listing all required submittals necessary to insure the project requirements are complied with. The Register shall identify submittal items such as shop drawings, manufacturer's literature, certificates of compliance, material samples, guarantees, test results, etc. that the Contractor shall submit for review and/or approval action during the life of the construction contract. See Section 01330 SUBMITTAL PROCEDURES (DESIGN BUILD) for submittal and submittal register definitions and procedures.

14. DESIGNER OF RECORD.

The Contractor shall identify and have on his staff a State of North Carolina licensed or board certified Designer of Record to develop submittal requirements during design and construction, and be responsible for each submittal identified in the Contractor Submittal Register. A Designer of Record may be responsible for more than one submittal. All areas of work shall be accounted for by a listed Designer of Record. Designers of Record shall approve all submittals that they are responsible for prior to submittal to the Government.

-- END OF SECTION --

SECTION 01320A

PROJECT SCHEDULE
05/02

PART 1 GENERAL

1.1 REFERENCES

The publications listed below form a part of the specification to the extent referenced. The publications are referenced in the text by basic designation only.

U.S. ARMY CORPS OF ENGINEERS (USACE)

ER 1-1-11 (1995) Progress, Schedules, and Network Analysis Systems

1.2 QUALIFICATIONS

The Contractor shall designate an authorized representative who shall be responsible for the preparation of all required project schedule reports.

PART 2 PRODUCTS (NOT APPLICABLE)

PART 3 EXECUTION

3.1 GENERAL REQUIREMENTS

Pursuant to the Contract Clause, SCHEDULE FOR CONSTRUCTION CONTRACTS, a Project Schedule as described below shall be prepared. The scheduling of design and construction shall be the responsibility of the Contractor. Contractor management personnel shall actively participate in its development. Designers, Subcontractors and suppliers working on the project shall also contribute in developing and maintaining an accurate Project Schedule. The approved Project Schedule shall be used to measure the progress of the work, to aid in evaluating time extensions, and to provide the basis of all progress payments.

3.2 BASIS FOR PAYMENT

The schedule shall be the basis for measuring Contractor progress. Lack of an approved schedule or scheduling personnel will result in an inability of the Contracting Officer to evaluate Contractor's progress for the purposes of payment. Failure of the Contractor to provide all information, as specified below, shall result in the disapproval of the entire Project Schedule submission and the inability of the Contracting Officer to evaluate Contractor progress for payment purposes. In the case where Project Schedule revisions have been directed by the Contracting Officer and those revisions have not been included in the Project Schedule, the Contracting Officer may hold retainage up to the maximum allowed by contract, each payment period, until revisions to the Project Schedule have been made.

3.3 PROJECT SCHEDULE

The computer software system utilized by the Contractor to produce the Project Schedule shall be capable of providing all requirements of this specification. Failure of the Contractor to meet the requirements of this specification shall result in the disapproval of the schedule. Manual methods used to produce any required information shall require approval by the Contracting Officer.

3.3.1 Use of the Critical Path Method

The Critical Path Method (CPM) of network calculation shall be used to generate the Project Schedule. The Contractor shall provide the Project Schedule in the Precedence Diagram Method (PDM).

3.3.2 Level of Detail Required

The Project Schedule shall include an appropriate level of detail. Failure to develop or update the Project Schedule or provide data to the Contracting Officer at the appropriate level of detail, as specified by the Contracting Officer, shall result in the disapproval of the schedule. The Contracting Officer will use, but is not limited to, the following conditions to determine the appropriate level of detail to be used in the Project Schedule:

3.3.2.1 Activity Durations

Contractor submissions shall follow the direction of the Contracting Officer regarding reasonable activity durations. Reasonable durations are those that allow the progress of activities to be accurately determined between payment periods (usually less than 2 percent of all non-procurement activities' Original Durations are greater than 20 days).

3.3.2.2 Design and Permit Activities

Design and permitting activities, including necessary conferences and follow-up actions and design package submission dates, shall be integrated into the schedule.

3.3.2.3 Procurement Activities

Tasks related to the procurement of long lead materials or equipment shall be included as separate activities in the project schedule. Long lead materials and equipment are those materials that have a procurement cycle of over 90 days. Examples of procurement process activities include, but are not limited to: submittals, approvals, procurement, fabrication, and delivery.

3.3.2.4 Critical Activities

The following activities shall be listed as separate line activities on the Contractor's project schedule:

a. Submission and approval of mechanical/electrical layout drawings.

b. Submission and approval of O & M manuals.

c. Submission and approval of as-built drawings.

d. Submission and approval of 1354 data and installed equipment lists.

e. Submission and approval of testing and air balance (TAB).

f. Submission of TAB specialist design review report.

g. Submission and approval of fire protection specialist.

h. Submission and approval of testing and balancing of HVAC plus commissioning plans and data.

i. Air and water balance dates.

j. HVAC commissioning dates.

k. Controls testing plan.

l. Controls testing.

m. Performance Verification testing.

n. Other systems testing, if required.

o. Prefinal inspection.

p. Correction of punchlist from prefinal inspection.

q. Final inspection.

3.3.2.5 Government Activities

Government and other agency activities that could impact progress shall be shown. These activities include, but are not limited to: approvals, design reviews, environmental permit approvals by State regulators, inspections, utility tie-in, Government Furnished Equipment (GFE) and Notice to Proceed (NTP) for phasing requirements.

3.3.2.6 Responsibility

All activities shall be identified in the project schedule by the party responsible to perform the work. Responsibility includes, but is not limited to, the subcontracting firm, contractor work force, or government agency performing a given task. Activities shall not belong to more than one responsible party. The responsible party for each activity shall be identified by the Responsibility Code.

3.3.2.7 Work Areas

All activities shall be identified in the project schedule by the work area in which the activity occurs. Activities shall not be allowed to cover more than one work area. The work area of each activity shall be identified by the Work Area Code.

3.3.2.8 Modification or Claim Number

Any activity that is added or changed by contract modification or used to justify claimed time shall be identified by a mod or claim code that changed the activity. Activities shall not belong to more than one modification or claim item. The modification or claim number of each activity shall be identified by the Mod or Claim Number. Whenever possible, changes shall be added to the schedule by adding new activities. Existing activities shall not normally be changed to reflect modifications.

3.3.2.9 Bid Item

All activities shall be identified in the project schedule by the Bid Item to which the activity belongs. An activity shall not contain work in more than one bid item. The bid item for each appropriate activity shall be identified by the Bid Item Code.

3.3.2.10 Phase of Work

All activities shall be identified in the project schedule by the phases of work in which the activity occurs. Activities shall not contain work in more than one phase of work. The project phase of each activity shall be by the unique Phase of Work Code.

3.3.2.11 Category of Work

All Activities shall be identified in the project schedule according to the category of work which best describes the activity. Category of work refers, but is not limited, to the procurement chain of activities including such items as designs, design package submissions design reviews, review conferences, permits, submittals, approvals, procurement, fabrication, delivery, installation, start-up, and testing. The category of work for each activity shall be identified by the Category of Work Code.

3.3.2.12 Feature of Work

All activities shall be identified in the project schedule according to the feature of work to which the activity belongs. Feature of work refers, but is not limited to, a work breakdown structure for the project. The feature of work for each activity shall be identified by the Feature of Work Code.

3.3.3 Scheduled Project Completion

The schedule interval shall extend from NTP to the contract completion date.

3.3.3.1 Project Start Date

The schedule shall start no earlier than the date on which the NTP was acknowledged. The Contractor shall include as the first activity in the project schedule an activity called "Start Project". The "Start Project" activity shall have an "ES" constraint date equal to the date that the NTP was acknowledged, and a zero day duration.

3.3.3.2 Constraint of Last Activity

Completion of the last activity in the schedule shall be constrained by the contract completion date. Calculation on project updates shall be such that if the early finish of the last activity falls after the contract completion date, then the float calculation shall reflect a negative float on the critical path. The Contractor shall include as the last activity in the project schedule an activity called "End Project". The "End Project" activity shall have an "LF" constraint date equal to the completion date for the project, and a zero day duration.

3.3.3.3 Early Project Completion

In the event the project schedule shows completion of the project prior to the contract completion date, the Contractor shall identify those activities that have been accelerated and/or those activities that are scheduled in parallel to support the Contractor's "early" completion. Contractor shall specifically address each of the activities noted in the narrative report at every project schedule update period to assist the Contracting Officer in evaluating the Contractor's ability to actually complete prior to the contract period.

3.3.4 Interim Completion Dates

Contractually specified interim completion dates shall also be constrained to show negative float if the early finish date of the last activity in that phase falls after the interim completion date.

3.3.4.1 Start Phase

The Contractor shall include as the first activity for a project phase an activity called "Start Phase X" where "X" refers to the phase of work. The "Start Phase X" activity shall have an "ES" constraint date equal to the date on which the NTP was acknowledged, and a zero day duration.

3.3.4.2 End Phase

The Contractor shall include as the last activity in a project phase an activity called "End Phase X" where "X" refers to the phase of work. The "End Phase X" activity shall have an "LF" constraint date equal to the completion date for the project, and a zero day duration.

3.3.4.3 Phase X

The Contractor shall include a hammock type activity for each project phase called "Phase X" where "X" refers to the phase of work. The "Phase X" activity shall be logically tied to the earliest and latest activities in the phase.

3.3.5 Default Progress Data Disallowed

Actual Start and Finish dates shall not be automatically updated by default mechanisms that may be included in CPM scheduling software systems. Actual Start and Finish dates on the CPM schedule shall match those dates provided from Contractor Quality Control Reports. Failure of the Contractor to document the Actual Start and Finish dates on the Daily Quality Control report for every in-progress or completed activity, and failure to ensure that the data contained on the Daily Quality Control reports is the sole basis for schedule updating shall result in the disapproval of the Contractor's schedule and the inability of the Contracting Officer to evaluate Contractor progress for payment purposes. Updating of the percent complete and the remaining duration of any activity shall be independent functions. Program features which calculate one of these parameters from the other shall be disabled.

3.3.6 Out-of-Sequence Progress

Activities that have posted progress without all preceding logic being satisfied (Out-of-Sequence Progress) will be allowed only on a case-by-case approval of the Contracting Officer. The Contractor shall propose logic corrections to eliminate all out of sequence progress or justify not changing the sequencing for approval prior to submitting an updated project schedule.

3.3.7 Negative Lags

Lag durations contained in the project schedule shall not have a negative value.

3.4 PROJECT SCHEDULE SUBMISSIONS

The Contractor shall provide the submissions as described below. The data disk, reports, and network diagrams required for each submission are contained in paragraph SUBMISSION REQUIREMENTS.

3.4.1 Preliminary Project Schedule Submission

The Preliminary Project Schedule, defining the Contractor's planned operations for the first 60 calendar days shall be submitted for approval within 20 calendar days after the NTP is acknowledged. The approved preliminary schedule shall be used for payment purposes not to exceed 60 calendar days after NTP.

3.4.2 Initial Project Schedule Submission

The Initial Project Schedule shall be submitted for approval within 40 calendar days after NTP. The schedule shall provide a reasonable sequence of activities which represent work through the entire project and shall be at a reasonable level of detail.

3.4.3 Periodic Schedule Updates

Based on the result of progress meetings, specified in "Periodic Progress Meetings," the Contractor shall submit periodic schedule updates. These submissions shall enable the Contracting Officer to assess Contractor's progress. If the Contractor fails or refuses to furnish the information and project

schedule data, which in the judgment of the Contracting Officer or authorized representative is necessary for verifying the Contractor's progress, the Contractor shall be deemed not to have provided an estimate upon which progress payment may be made.

3.4.4 Standard Activity Coding Dictionary

The Contractor shall use the activity coding structure defined in the Standard Data Exchange Format (SDEF) in ER 1-1-11, Appendix A. This exact structure is mandatory, even if some fields are not used.

3.5 SUBMISSION REQUIREMENTS

The following items shall be submitted by the Contractor for the preliminary submission, initial submission, and every periodic project schedule update throughout the life of the project:

3.5.1 Data Disks

Two data disks containing the project schedule shall be provided. Data on the disks shall adhere to the SDEF format specified in ER 1-1-11, Appendix A.

3.5.1.1 File Medium

Required data shall be submitted on 3.5 disks, formatted to hold 1.44 MB of data, under the MS-DOS Version 5. or 6.x, unless otherwise approved by the Contracting Officer.

3.5.1.2 Disk Label

A permanent exterior label shall be affixed to each disk submitted. The label shall indicate the type of schedule (Preliminary, Initial, Update, or Change), full contract number, project name, project location, data date, name and telephone number or person responsible for the schedule, and the MS-DOS version used to format the disk.

3.5.1.3 File Name

Each file submitted shall have a name related to either the schedule data date, project name, or contract number. The Contractor shall develop a naming convention that will ensure that the names of the files submitted are unique. The Contractor shall submit the file naming convention to the Contracting Officer for approval.

3.5.2 Narrative Report

A Narrative Report shall be provided with the preliminary, initial, and each update of the project schedule. This report shall be provided as the basis of the Contractor's progress payment request. The Narrative Report shall include: a description of activities along the two most critical paths, a description of current and anticipated problem areas or delaying factors and their impact, and an explanation of corrective actions taken or required to be taken. The narrative report is expected to relay to the Government, the Contractor's thorough analysis of the schedule output and its plans to compensate for any problems, either current or potential, which are revealed through that analysis.

3.5.3 Approved Changes Verification

Only project schedule changes that have been previously approved by the Contracting Officer shall be included in the schedule submission. The Narrative Report shall specifically reference, on an activity by activity basis, all changes made since the previous period and relate each change to documented, approved schedule changes.

3.5.4 Schedule Reports

The format for each activity for the schedule reports listed below shall contain: Activity Numbers, Activity Description, Original Duration, Remaining Duration, Early Start Date, Early Finish Date, Late Start Date, Late Finish Date, Total Float. Actual Start and Actual Finish Dates shall be printed for those activities in progress or completed.

3.5.4.1 Activity Report

A list of all activities sorted according to activity number.

3.5.4.2 Logic Report

A list of Preceding and Succeeding activities for every activity in ascending order by activity number. Preceding and succeeding activities shall include all information listed above in paragraph Schedule Reports. A blank line shall be left between each activity grouping.

3.5.4.3 Total Float Report

A list of all incomplete activities sorted in ascending order of total float. Activities which have the same amount of total float shall be listed in ascending order of Early Start Dates. Completed activities shall not be shown on this report.

3.5.4.4 Earnings Report

A compilation of the Contractor's Total Earnings on the project from the NTP until the most recent Monthly Progress Meeting. This report shall reflect the Earnings of specific activities based on the agreements made in the field and approved between the Contractor and Contracting Officer at the most recent Monthly Progress Meeting. Provided that the Contractor has provided a complete schedule update, this report shall serve as the basis of determining Contractor Payment. Activities shall be grouped by bid item and sorted by activity numbers. This report shall: sum all activities in a bid item and provide a bid item percent; and complete and sum all bid items to provide a total project percent complete. The printed report shall contain, for each activity: the Activity Number, Activity Description, Original Budgeted Amount, Total Quantity, Quantity to Date, Percent Complete (based on cost), and Earnings to Date.

3.5.5 Network Diagram

The network diagram shall be required on the initial schedule submission and on monthly schedule update submissions. The network diagram shall depict and display the order and interdependence of activities and the sequence in which the work is to be accomplished. The Contracting Officer will use, but is not limited to, the following conditions to review compliance with this paragraph:

3.5.5.1 Continuous Flow

Diagrams shall show a continuous flow from left to right with no arrows from right to left. The activity number, description, duration, and estimated earned value shall be shown on the diagram.

3.5.5.2 Project Milestone Dates

Dates shall be shown on the diagram for start of project, any contract required interim completion dates, and contract completion dates.

3.5.5.3 Critical Path

The critical path shall be clearly shown.

3.5.5.4 Banding

Activities shall be grouped to assist in the understanding of the activity sequence. Typically, this flow will group activities by category of work, work area and/or responsibility.

3.5.5.5 S-Curves

Earnings curves showing projected early and late earnings and earnings to date.

3.6 PERIODIC PROGRESS MEETINGS

Progress meetings to discuss payment shall include a monthly onsite meeting or other regular intervals mutually agreed to at the preconstruction conference. During this meeting the Contractor shall describe, on an activity by activity basis, all proposed revisions and adjustments to the project schedule required to reflect the current status of the project. The Contracting Officer will approve activity progress, proposed revisions, and adjustments as appropriate.

3.6.1 Meeting Attendance

The Contractor's Project Manager and Scheduler shall attend the regular progress meeting.

3.6.2 Update Submission Following Progress Meeting

A complete update of the project schedule containing all approved progress, revisions, and adjustments, based on the regular progress meeting, shall be submitted not later than 4 working days after the monthly progress meeting.

3.6.3 Progress Meeting Contents

Update information, including Actual Start Dates, Actual Finish Dates, Remaining Durations, and Cost-to-Date shall be subject to the approval of the Contracting Officer. As a minimum, the Contractor shall address the following items on an activity by activity basis during each progress meeting.

3.6.3.1 Start and Finish Dates

The Actual Start and Actual Finish dates for each activity currently in-progress or completed .

3.6.3.2 Time Completion

The estimated Remaining Duration for each activity in-progress. Time-based progress calculations shall be based on Remaining Duration for each activity.

3.6.3.3 Cost Completion

The earnings for each activity started. Payment will be based on earnings for each in-progress or completed activity. Payment for individual activities will not be made for work that contains quality defects. A portion of the overall project amount may be retained based on delays of activities.

3.6.3.4 Logic Changes

All logic changes pertaining to NTP on change orders, change orders to be incorporated into the schedule, contractor proposed changes in work sequence, corrections to schedule logic for out-of-sequence progress, lag durations, and other changes that have been made pursuant to contract provisions shall be specifically identified and discussed.

3.6.3.5 Other Changes

Other changes required due to delays in completion of any activity or group of activities include: 1) delays beyond the Contractor's control, such as strikes and unusual weather. 2) delays encountered due to submittals, Government Activities, deliveries or work stoppages which make re-planning the work necessary. 3) Changes required to correct a schedule which does not represent the actual or planned prosecution and progress of the work.

3.7 REQUESTS FOR TIME EXTENSIONS

In the event the Contractor requests an extension of the contract completion date, or any interim milestone date, the Contractor shall furnish the following for a determination as to whether or not the Contractor is entitled to an extension of time under the provisions of the contract: justification, project schedule data, and supporting evidence as the Contracting Officer may deem necessary. Submission of proof of delay, based on revised activity logic, duration, and costs (updated to the specific date that the delay occurred) is obligatory to any approvals.

3.7.1 Justification of Delay

The project schedule shall clearly display that the Contractor has used, in full, all the float time available for the work involved with this request. The Contracting Officer's determination as to the number of allowable days of contract extension shall be based upon the project schedule updates in effect for the time period in question, and other factual information. Actual delays that are found to be caused by the Contractor's own actions, which result in the extension of the schedule, will not be a cause for a time extension to the contract completion date.

3.7.2 Submission Requirements

The Contractor shall submit a justification for each request for a change in the contract completion date of under 2 weeks based upon the most recent schedule update at the time of the NTP or constructive direction issued for the change. Such a request shall be in accordance with the requirements of other appropriate Contract Clauses and shall include, as a minimum:

a. A list of affected activities, with their associated project schedule activity number.

b. A brief explanation of the causes of the change.

c. An analysis of the overall impact of the changes proposed.

d. A sub-network of the affected area.

Activities impacted in each justification for change shall be identified by a unique activity code contained in the required data file.

3.7.3 Additional Submission Requirements

For any requested time extension of over 2 weeks, the Contracting Officer may request an interim update with revised activities for a specific change request. The Contractor shall provide this disk within 4 days of the Contracting Officer's request.

3.8 DIRECTED CHANGES

If the NTP is issued for changes prior to settlement of price and/or time, the Contractor shall submit proposed schedule revisions to the Contracting Officer within 2 weeks of the NTP being issued. The proposed revisions to the schedule will be approved by the Contracting Officer prior to inclusion of those changes within the project schedule. If the Contractor fails to submit the proposed revisions, the

Contracting Officer may furnish the Contractor with suggested revisions to the project schedule. The Contractor shall include these revisions in the project schedule until revisions are submitted, and final changes and impacts have been negotiated. If the Contractor has any objections to the revisions furnished by the Contracting Officer, the Contractor shall advise the Contracting Officer within 2 weeks of receipt of the revisions. Regardless of the objections, the Contractor shall continue to update the schedule with the Contracting Officer's revisions until a mutual agreement in the revisions is reached. If the Contractor fails to submit alternative revisions within 2 weeks of receipt of the Contracting Officer's proposed revisions, the Contractor will be deemed to have concurred with the Contracting Officer's proposed revisions. The proposed revisions will then be the basis for an equitable adjustment for performance of the work.

3.9 OWNERSHIP OF FLOAT

Float available in the schedule, at any time, shall not be considered for the exclusive use of either the Government or the Contractor.

-- End of Section --

SECTION 01330
SUBMITTAL PROCEDURES
(DESIGN/BUILD)
10/2000

PART 1 GENERAL

1.1 SUBMITTAL CLASSIFICATION

Submittals are classified as follows:

1.1.1 Designer of Record Approved

Designer of Record approval is required for extensions of design, critical materials, any deviations from the solicitation, the accepted proposal, or the completed design, equipment whose compatibility with the entire system must be checked, and other items as designated by the Contracting Officer's Representative. Within the terms of the Contract Clause entitled "Specifications and Drawings for Construction," they are considered to be "shop drawings." The Contractor shall provide the Government the number of copies designated hereinafter of all Designer of Record approved submittals. The Government may review any or all Designer of Record approved submittals for conformance to the Solicitation and Accepted Proposal. The Government will review all submittals designated as deviating from the Solicitation or Accepted Proposal, as described below.

1.1.2 Government Approved Construction Submittals

Administrative Contracting Officer approval is required for any deviations from the Solicitation or Accepted Proposal and other items as designated by the Contracting Officer's Representative. Within the terms of the Contract Clause entitled "Specifications and Drawings for Construction," they are considered to be "shop drawings."

1.1.3 Government Reviewed Extension of Design

Government review is required for extension of design construction submittals, used to define contract conformity, and for deviation from the completed design. Review will be only for conformance with the contract requirements. Included are only those construction submittals for which the Designer of Record design documents do not include enough detail to ascertain contract compliance. Government review is not required for extensions of design such as structural steel or reinforcement shop drawings.

1.1.4 Information Only

All submittals not requiring Designer of Record or Government approval will be for information only. They are not considered to be “shop drawings” within the terms of the Contract Clause referred to above.

1.1.5 GOVERNMENT REVIEWED OR “APPROVED” SUBMITTALS

The Contracting Officer’s Representative conformance review or approval of submittals shall not be construed as a complete check, but will indicate only that the design, general method of construction, materials, detailing and other information appear to meet the Solicitation and Accepted Proposal. Government Review or approval will not relieve the Contractor of the responsibility for any error which may exist, as the Contractor, under the Design and CQC requirements of this contract, is responsible for design, dimensions, all design extensions, such as the design of adequate connections and details, etc., and the satisfactory construction of all work. After submittals have been reviewed for conformance or approved, as applicable, by the Contracting Officer’ Representative, no resubmittal for the purpose of substituting materials or equipment will be considered unless accompanied by an explanation of why a substitution is necessary.

1.2 DISAPPROVED SUBMITTALS

The Contractor shall make all corrections required by the Contracting Officer’s Representative, obtain the Designer of Record’s approval, when applicable, and promptly furnish a corrected submittal in the form and number of copies specified for the initial submittal. Any “information only” submittal found to contain errors or unapproved deviations from the Solicitation or Accepted Proposal shall be resubmitted as one requiring “approval” action, requiring both Design of Record and Government approval. If the Contractor considers any correction indicated by the Government on the submittals to constitute a change to the contract, it shall promptly provide a notice in accordance with the Contract Clause “Changes” to the Contracting Officer’s Representative.

1.3 WITHHOLDING OF PAYMENT

No payment for materials incorporated in the work will be made if all required Designer of Record or required Government approvals have not been obtained. No payment will be made for any materials incorporated into the work for any conformance review submittals or information only submittals found to contain errors or deviations from the Solicitation or Accepted Proposal.

PART 2 PRODUCTS (Not Used)

PART 3 EXECUTION

3.1 GENERAL

The Contractor shall make submittals as required by the specifications. The Contracting Officer may request submittals in addition to those specified when deemed necessary to adequately describe the work covered in the respective sections. Units of weights and measures used on all submittals shall be the same as those used in the contract drawings. Each submittal shall be complete and in sufficient detail to allow ready determination of compliance with contract requirements. Prior to submittal, all items shall be checked and approved by the Contractor's Quality Control (CQC) System Manager and each item shall be stamped, signed, and dated by the CQC System Manager indicating action taken. Proposed deviations from the contract requirements shall be clearly identified. Submittals shall include items such as: Contractor's, manufacturer's, or fabricator's drawings; descriptive literature including (but not limited to) catalog cuts, diagrams, operating charts or curves; test reports; test cylinders; samples; O&M manuals (including parts list); certifications; warranties; and other such required submittals. Submittals requiring Government approval shall be scheduled and made prior to the acquisition of the material or equipment covered thereby. Samples remaining upon completion of the work shall be picked up and disposed of in accordance with manufacturer's Material Safety Data Sheets (MSDS) and in compliance with existing laws and regulations.

3.1.1 Design Submittals

The Contractor shall provide design submittals in accordance with Section 01030 entitled "DESIGN AFTER AWARD."

3.2 SUBMITTAL REGISTER

The Contractor's Designer(s) of Record shall develop a complete list of submittals during design. The Designer of Record shall identify required submittals in the specifications. Use the list to prepare ENG Form 4288 Submittal Register or a computerized equivalent. The list may not be all-inclusive and additional submittals may be required by other parts of the contract. The approved submittal register will serve as a scheduling document for submittals and will be used to control submittal actions throughout the contract period. The submit dates and need dates used in the submittal register shall be coordinated with dates in the Contractor prepared progress schedule. Updates to the submittal register showing the Contractor action codes and actual dates with Government action codes and actual dates shall be submitted as required until all submittals have been satisfactorily completed. The Contractor shall use the RMS System for submittal control.

3.3 SCHEDULING

Submittals covering component items forming a system or items that are interrelated shall be scheduled to be coordinated and submitted concurrently. Certifications to be submitted with the pertinent drawings shall be so scheduled. Adequate time (a

minimum of 14 calendar days exclusive of mailing time) shall be allowed and shown on the register for review and approval. No delay damages or time extensions will be allowed for time lost in late submittals.

3.4 TRANSMITTAL FORM (ENG FORM 4025)

The sample transmittal form (ENG Form 4025) attached to this section shall be used for submitting both Government approved and information only submittals in accordance with the instructions on the reverse side of the form. These forms are included in the RMS-QC software that the Contractor is required to use for this contract. This form shall be properly completed by filling out all the heading blank spaces and identifying each item submitted. Special care shall be exercised to ensure proper listing of the specification paragraph and/or sheet number of the contract drawings pertinent to the data submitted for each item.

3.5 SUBMITTAL PROCEDURE

Submittals shall be made as follows:

3.5.1 Procedures

The Government will further discuss and detail the required submittal procedures at the Pre-Construction Conference.

3.5.2 Deviations

For submittals, which include proposed deviations requested by the Contractor, the column “variation” of ENG Form 4025 shall be checked. The Contractor shall set forth in writing the reason for any deviations and annotate such deviations on the submittal. As stated above, the Contractor’s Designer of Record approval is required for any proposed deviations. The Government reserves the right to rescind inadvertent approval of submittals containing unnoted deviations.

3.6 CONTROL OF SUBMITTALS

The Contractor shall carefully control his procurement operations to ensure that each individual submittal is made on or before the Contractor scheduled submittal date shown on the approved “Submittal Register.”

3.7 GOVERNMENT CONFORMANCE REVIEW AND APPROVED SUBMITTALS

Upon completion of review of submittals requiring Government approval, the submittals will be identified as having received approval by being so stamped and dated. Three copies of the submittal will be retained by the Contracting Officer and the remaining copies of the submittal will be returned to the Contractor. If the Government performs a

conformance review of other Designer of Record approved submittals, the submittals will be so identified and returned, as described above.

3.8 INFORMATION ONLY SUBMITTALS

Normally submittals for information only will not be returned. Approval of the Contracting Officer is not required on information only submittals. The Government reserves the right to require the Contractor to resubmit any item found not to comply with the contract. This does not relieve the Contractor from the obligation to furnish material conforming to the plans and specifications; will not prevent the Contracting Officer from requiring removal and replacement of nonconforming material incorporated in the work; and does not relieve the Contractor of the requirement to furnish samples for testing by the Government laboratory or for check testing by the Government in those instances where the technical specifications so prescribe.

3.9 STAMPS

Stamps used by the Contractor on the submittal data to certify that the submittal meets contract requirements shall be similar to the following:

CONTRACTOR
(Firm Name)

____ Approved
____ Approved with corrections as noted on the submittal data and/or attached sheets.

SIGNATURE:_____

TITLE: (DESIGNER OF RECORD)

DATE:_____

UFGS-01420 (September 2001)

SECTION 01420

SOURCES FOR REFERENCE PUBLICATIONS
09/01

PART 1 GENERAL

1.1 REFERENCES

Various publications are referenced in other sections of the specifications to establish requirements for the work. These references are identified in each section by document number, date and title. The document number used in the citation is the number assigned by the standards producing organization, (e.g. ASTM B 564 Nickel Alloy Forgings). However, when the standards producing organization has not assigned a number to a document, an identifying number has been assigned for reference purposes.

1.2 ORDERING INFORMATION

The addresses of the standards publishing organizations whose documents are referenced in other sections of these specifications are listed below, and if the source of the publications is different from the address of the sponsoring organization, that information is also provided. Documents listed in the specifications with numbers which were not assigned by the standards producing organization should be ordered from the source by title rather than by number. The designations "AOK" and "LOK" are for administrative purposes and should not be used when ordering publications.

ACI INTERNATIONAL (ACI)
P.O. Box 9094
Farmington Hills, MI 48333-9094
Ph: 248-848-3700
Fax: 248-848-3701
Internet: www.aci-int.org
AOK 5/01
LOK 2/01

ACOUSTICAL SOCIETY OF AMERICA (ASA)
2 Huntington Quadrangle
Melville, NY 11747-4502
Ph: 516-576-2360
Fax: 516-576-2377
email: asa@aip.org
Internet: www.asa.aip.org

To order ASA Standards, contact:
Standards and Publications Fulfillment Center
P.O. Box 1020
Sewickley, PA 15143-9998
Phone: 412-741-1979
Fax: 412-741-0609
Email: asapubs@abdintl.com

AOK 5/01
LOK 2/01

AIR CONDITIONING AND REFRIGERATION INSTITUTE (ARI)
4301 North Fairfax Dr., Suite 425
ATTN: Pubs Dept.
Arlington, VA 22203
Ph: 703-524-8800
Fax: 703-528-3816
E-mail: ari@ari.org
Internet: www.ari.org
AOK 5/01
LOK 2/01

AIR CONDITIONING CONTRACTORS OF AMERICA (ACCA)
2800 Shirlington Road, Suite 300
Arlington, VA 22206
Ph: 703-575-4477
FAX: 703-575-4449
Internet: www.acca.org
AOK 5/01
LOK 6/00

AIR DIFFUSION COUNCIL (ADC)
104 So. Michigan Ave., No. 1500
Chicago, IL 60603
Ph: 312-201-0101
Fax: 312-201-0214
Internet: www.flexibleduct.org
AOK 5/01
LOK 6/00

AIR MOVEMENT AND CONTROL ASSOCIATION (AMCA)
30 W. University Dr.
Arlington Heights, IL 60004-1893
Ph: 847-394-0150
Fax: 847-253-0088
Internet: www.amca.org

AOK 5/01
LOK 2/01

ALUMINUM ASSOCIATION (AA)
900 19th Street N.W.
Washington, DC 20006
Ph: 202-862-5100
Fax: 202-862-5164
Internet: www.aluminum.org
AOK 5/01
LOK 2/01

AMERICAN ARCHITECTURAL MANUFACTURERS ASSOCIATION (AAMA)
1827 Walden Ofc. Sq.
Suite 104
Schaumburg, IL 60173-4268
Ph: 847-303-5664
Fax: 847-303-5774
Internet: www.aamanet.org
AOK 5/01
LOK 2/01

AMERICAN ASSOCIATION OF STATE HIGHWAY AND TRANSPORTATION OFFICIALS (AASHTO)
444 N. Capital St., NW, Suite 249
Washington, DC 20001
Ph: 800-231-3475 202-624-5800
Fax: 800-525-5562 202-624-5806
Internet: www.transportation.org
AOK 5/01
LOK 2/01

AMERICAN ASSOCIATION OF TEXTILE CHEMISTS AND COLORISTS (AATCC)
P.O. Box 12215
Research Triangle Park, NC 27709-2215
Ph: 919-549-8141
Fax: 919-549-8933
Internet: www.aatcc.org
AOK 5/01
LOK 2/01

AMERICAN BEARING MANUFACTURERS ASSOCIATION (ABMA)
2025 M Street, NW, Suite 800
Washington, DC 20036
Ph: 202-429-5155

Fax: 202-828-6042
Internet: www.abma-dc.org
AOK 5/01
LOK 2/01

AMERICAN BOILER MANUFACTURERS ASSOCIATION (ABMA)
4001 North 9th Street, Suite 226
Arlington, VA 22203-1900
Ph: 703-522-7350
Fax: 703-522-2665
Internet: www.abma.com
AOK 5/01
LOK 2/01

AMERICAN CONCRETE PIPE ASSOCIATION (ACPA)
222 West Las Colinas Blvd., Suite 641
Irving, TX 75039-5423
Ph: 972-506-7216
Fax: 972-506-7682
Internet: www.concrete-pipe.org
e-mail: info@concrete-pipe.org
AOK 5/01
LOK 6/00

AMERICAN CONFERENCE OF GOVERNMENTAL INDUSTRIAL HYGIENISTS (ACGIH)
1330 Kemper Meadow Dr.
Suite 600
Cincinnati, OH 45240
Ph: 513-742-2020
Fax: 513-742-3355
Internet: www.acgih.org
E-mail: pubs@acgih.org
AOK 5/01
LOK 2/01

AMERICAN FOREST & PAPER ASSOCIATION (AF&PA)
American Wood Council
ATTN: Publications Dept.
1111 Nineteenth St. NW, Suite 800
Washington, DC 20036
Ph: 800-294-2372 202-463-2700
Fax: 202-463-2471
Internet: www.afandpa.org
AOK 5/01
LOK 6/00

AMERICAN GAS ASSOCIATION (AGA)
400 N. Capitol St. N.W.Suite 450
Washington, D.C. 20001
Ph: 202-824-7000
Fax: 202-824-7115
Internet: www.aga.org
AOK 5/01
LOK 2/01

AMERICAN GAS ASSOCIATION LABORATORIES (AGAL)
400 N. Capitol St. N.W.Suite 450
Washington, D.C. 20001
Ph: 202-824-7000
Fax: 202-824-7115
Internet: www.aga.org
AOK 10/00
LOK 0/00

AMERICAN GEAR MANUFACTURERS ASSOCIATION (AGMA)
1500 King St., Suite 201
Alexandria, VA 22314-2730
Ph: 703-684-0211
Fax: 703-684-0242
Internet: www.agma.org
AOK 5/010
LOK 3/01

AMERICAN INSTITUTE OF STEEL CONSTRUCTION (AISC)
One East Wacker Dr., Suite 3100
Chicago, IL 60601-2001
Ph: 312-670-2400
Publications: 800-644-2400
Fax: 312-670-5403
Internet: www.aisc.org
AOK 5/01
LOK 3/01

AMERICAN INSTITUTE OF TIMBER CONSTRUCTION (AITC)
7012 So. Revere Parkway, Suite 140
Englewood, CO 80112
Ph: 303-792-9559
Fax: 303-792-0669
Internet: www.aitc-glulam.org
AOK 5/01
LOK 3/01

AMERICAN IRON AND STEEL INSTITUTE (AISI)
1101 17th St., NW Suite 1300
Washington, DC 20036
Ph: 202-452-7100
Internet: www.steel.org
AOK 5/01
LOK 3/01

AMERICAN NATIONAL STANDARDS INSTITUTE (ANSI)
1819 L Street, NW, 6th Floor
Washington, DC 20036
Ph: 202-293-8020
Fax: 202-293-9287
Internet: www.ansi.org/

Acoustical Society of America
Standards and Publications Fulfillment Center
P. O. Box 1020
Sewickley, PA 15143-9998
Ph: 412-741-1979
Fax: 412-741-0609
Internet: http://asa.aip.org
General e-mail: asa@aip.org
Publications 3 e-mail: asapubs@abdintl.com
AOK 5/01
LOK 6/00

AMERICAN NURSERY AND LANDSCAPE ASSOCIATION (ANLA)
1250 I St., NW, Suite 500
Washington, DC 20005-3922
Ph: 202-789-2900
FAX: 202-789-1893
Internet: www.anla.org
AOK 5/01
LOK 3/01

AMERICAN PETROLEUM INSTITUTE (API)
1220 L St., NW
Washington, DC 20005-4070
Ph: 202-682-8000
Fax: 202-682-8223
Internet: www.api.org
AOK 5/01
LOK 3/01

AMERICAN PUBLIC HEALTH ASSOCIATION (APHA)
800 I Street, NW
Washington, DC 20001
PH: 202-777-2742
FAX: 202-777-2534
Internet: www.apha.org
AOK 6/01
LOK 0/00

AMERICAN RAILWAY ENGINEERING & MAINTENANCE-OF-WAY ASSOCIATION (AREMA)
8201 Corporate Dr., Suite 1125
Landover, MD 20785-2230
Ph: 301-459-3200
Fax: 301-459-8077
Internet: www.arema.org
AOK 5/01
LOK 3/01

AMERICAN SOCIETY FOR NONDESTRUCTIVE TESTING (ASNT)
1711 Arlingate Lane
P.O. Box 28518
Columbus, OH 43228-0518
Ph: 800-222-2768
Fax: 614-274-6899
Internet: www.asnt.org
AOK 5/01
LOK 6/00

AMERICAN SOCIETY FOR QUALITY (ASQ)
600 North Plankinton Avenue
Milwaukee, WI 53202-3005
Ph: 800-248-1946
Fax: 414-272-1734
Internet: www.asq.org
AOK 5/01
LOK 3/01

AMERICAN SOCIETY FOR TESTING AND MATERIALS (ASTM)
100 Barr Harbor Drive
West Conshohocken, PA 19428-2959
Ph: 610-832-9585
Fax: 610-832-9555
Internet: www.astm.org
AOK 5/01
LOK 3/01

AMERICAN SOCIETY OF CIVIL ENGINEERS (ASCE)
1801 Alexander Bell Drive
Reston, VA 20191-4400
Ph: 703-295-6300 - 800-548-2723
Fax: 703-295-6222
Internet: www.asce.org
e-mail: marketing@asce.org
AOK 5/01
LOK 3/01

AMERICAN SOCIETY OF HEATING, REFRIGERATING AND AIR-CONDITIONING ENGINEERS (ASHRAE)
1791 Tullie Circle, NE
Atlanta, GA 30329
Ph: 800-527-4723 or 404-636-8400
Fax: 404-321-5478
Internet: www.ashrae.org
AOK 5/01
LOK 3/01

AMERICAN SOCIETY OF SANITARY ENGINEERING (ASSE)
901 Canterbury, Suite A
Westlake, OH 44145
Ph: 440-835-3040
Fax: 440-835-3488
E-mail: asse@ix.netcom.com
Internet: www.asse-plumbing.org
AOK 5/01
LOK 3/01

AMERICAN WATER WORKS ASSOCIATION(AWWA)
6666 West Quincy
Denver, CO 80235
Ph: 800-926-7337 - 303-794-7711
Fax: 303-794-7310
Internet: www.awwa.org
AOK 5/01
LOK 3/01

AMERICAN WELDING SOCIETY (AWS)
550 N.W. LeJeune Road
Miami, FL 33126
Ph: 800-443-9353 - 305-443-9353
Fax: 305-443-7559
Internet: www.amweld.org

AOK 5/01
LOK 3/01

AMERICAN WOOD-PRESERVERS' ASSOCIATION (AWPA)
P.O. Box 5690
Grandbury, TX 76049-0690
Ph: 817-326-6300
Fax: 817-326-6306
Internet: www.awpa.com
AOK 5/01
LOK 3/01

APA - THE ENGINEERED WOOD ASSOCIATION (APA)
P.O.Box 11700
Tacoma, WA 98411-0700
Ph: 253-565-6600
Fax: 253-565-7265
Internet: www.apawood.org
AOK 5/01
LOK 6/00

ARCHITECTURAL & TRANSPORTATION BARRIERS COMPLIANCE BOARD (ATBCB)
The Access Board
1331 F Street, NW, Suite 1000
Washington, DC 20004-1111
PH: 202-272-5434
FAX: 202-272-5447
Internet: www.access-board.gov
AOK 6/01
LOK 0/00

ARCHITECTURAL WOODWORK INSTITUTE (AWI)
1952 Isaac Newton Square West
Reston, VA 20190
Ph: 703-733-0600
Fax: 703-733-0584
Internet: www.awinet.org
AOK 5/01
LOK 6/00

ASBESTOS CEMENT PIPE PRODUCERS ASSOCIATION (ACPPA)
PMB114-1745 Jefferson Davis Highway
Arlington, VA 22202
Ph: 703-412-1153
Fax: 703-412-1152

AOK 5/01
LOK 0/00

ASME INTERNATIONAL (ASME)
Three Park Avenue
New York, NY 10016-5990
Ph: 212-591-7722
Fax: 212-591-7674
Internet: www.asme.org
AOK 5/01
LOK 6/00

ASPHALT INSTITUTE (AI)
Research Park Dr.
P.O. Box 14052
Lexington, KY 40512-4052
Ph: 859-288-4960
Fax: 859-288-4999
Internet: www.asphaltinstitute.org
AOK 5/01
LOK 6/00

ASSOCIATED AIR BALANCE COUNCIL (AABC)
1518 K St., NW, Suite 503
Washington, DC 20005
Ph: 202-737-0202
Fax: 202-638-4833
Internet: www.aabchq.com
E-mail: aabchq@aol.com
AOK 5/01
LOK 6/00

ASSOCIATION FOR THE ADVANCEMENT OF MEDICAL INSTRUMENTATION (AAMI)
1110 N. Glebe Rd., Suite 220
Arlington, VA 22201-5762
Ph: 703-525-4890
Fax: 703-276-0793
Internet: www.aami.org
AOK 5/01
LOK 6/00

ASSOCIATION OF EDISON ILLUMINATING COMPANIES (AEIC)
600 No. 18th St.
P.O. Box 2641
Birmingham, AL 35291

Ph: 205-257-2530
Fax: 205-257-2540
Internet: www.aeic.org
AOK 5/01
LOK 6/00

ASSOCIATION OF HOME APPLIANCE MANUFACTURERS (AHAM)
1111 19th St. NW., Suite 402
Washington, DC 20036
Ph: 202-872-5955
Fax: 202-872-9354
Internet: www.aham.org
AOK 5/01
LOK 6/00

ASSOCIATION OF IRON AND STEEL ENGINEERS (AISE)
Three Gateway Center, Suite 1900
Pittsburgh, PA 15222-1004
Ph: 412-281-6323
Fax: 412-281-4657
Internet: www.aise.org
AOK 5/01
LOK 6/00

BIFMA INTERNATIONAL (BIFMA)
2680 Horizon Drive SE, Suite A-1
Grand Rapids, MI 49546-7500
Ph: 616-285-3963
Fax: 616-285-3765
Internet: www.bifma.com
E-mail: email@bifma.com
AOK 5/01
LOK 6/00

BIOCYCLE, JOURNAL OF COMPOSTING AND RECYCLING (BIOCYCLE)
The JG Press Inc.
419 State Avenue
Emmaus PA. 18049
Ph: 610-967-4135
Internet: www.biocycle.net
E-mail: jgpress@jgpress.com
AOK 5/01
LOK 0/00

BRICK INDUSTRY ASSOCIATION (BIA)
11490 Commerce Park Dr., Suite 308
Reston, VA 22091-1525
Ph: 703-620-0010
Fax: 703-620-3928
Internet: www.brickinfo.org
AOK 5/01
LOK 6/00

BRITISH STANDARDS INSTITUTE (BSI)
389 Chiswick High Road
London W4 4AL
United Kingdom
Phone: +44 (0)20 8996 9000
Fax: +44 (0)20 8996 7400
Email: Info@bsi-global.com
Website: www.bsi-global.com
AOK 8/01
LOK 6/01

BUILDERS HARDWARE MANUFACTURERS ASSOCIATION (BHMA)
355 Lexington Ave.
17th floor
New York, NY 10017-6603
Ph: 212-297-2122
Fax: 212-370-9047
Internet: www.buildershardware.com
AOK 5/01
LOK 6/00

BUILDING OFFICIALS & CODE ADMINISTRATORS INTERNATIONAL (BOCA)
4051 W. Flossmoor Rd.
Country Club Hills, IL 60478
Ph: 708-799-2300
Fax: 708-799-4981
Internet: www.bocai.org
AOK 5/01
LOK 6/00

CALIFORNIA REDWOOD ASSOCIATION (CRA)
405 Enfrente Drive., Suite 200
Novato, CA 94949
Ph: 415-382-0662
Fax: 415-382-8531

Internet: www.calredwood.org
AOK 5/01
LOK 6/00

CARPET AND RUG INSTITUTE (CRI)
310 Holiday Ave.
Dalton, GA 30720
P.O. Box 2048
Dalton, GA 30722-2048
Ph: 706-278-0232
Fax: 706-278-8835
Internet: www.carpet-rug.com
AOK 5/01
LOK 6/00

CAST IRON SOIL PIPE INSTITUTE (CISPI)
5959 Shallowford Rd., Suite 419
Chattanooga, TN 37421
Ph: 423-892-0137
Fax: 423-892-0817
Internet: www.cispi.org
AOK 5/01
LOK 6/00

CEILINGS & INTERIOR SYSTEMS CONSTRUCTION ASSOCIATION (CISCA)
1500 Lincoln Highway, Suite 202
St. Charles, IL 60174
Ph: 630-584-1919
Fax: 630-584-2003
Internet: www.cisca.org
AOK 5/01
LOK 6/00

CENTERS FOR DISEASE CONTROL AND PREVENTION (CDC)
1600 Clifton Road
Atlanta, GA 30333
PH: 404-639-3534
FAX:
Internet: www.cdc.gov
AOK 6/01
LOK 0/00

CHEMICAL FABRICS & FILM ASSOCIATION (CFFA)
1300 Sumner Ave.
Cleveland OH 44115-2851

PH: 216-241-7333
FAX: 216-241-0105
www.chemicalfabricsandfilm.com/welcome.htm
AOK 6/01

CHLORINE INSTITUTE (CI)
2001 L St., NW Suite 506
Washington, DC 20036
Ph: 202-775-2790
Fax: 202-223-7225
Internet: www.cl2.com
AOK 5/01
LOK 6/00

COMPRESSED AIR AND GAS INSTITUTE (CAGI)
1300 Sumner Ave.
Cleveland OH 44115-2851
PH: 216-241-7333
FAX: 216-241-0105
www.cagi.org/welcome.htm
AOK 6/01

COMPRESSED GAS ASSOCIATION (CGA)
1725 Jefferson Davis Highway, Suite 1004
Arlington, VA 22202-4102
Ph: 703-412-0900
Fax: 703-412-0128
Internet: www.cganet.com
e-mail: Customer_Service@cganet.com
AOK 5/01
LOK 6/00

CONCRETE REINFORCING STEEL INSTITUTE (CRSI)
933 N. Plum Grove Rd.
Schaumburg, IL 60173-4758
Ph: 847-517-1200
Fax: 847-517-1206
Internet: www.crsi.org
AOK 5/01
LOK 6/00

CONSUMER PRODUCT SAFETY COMMISSION (CPSC)
4330 East-West Highway
Bethesda, Maryland 20814-4408
Ph: 301-504-0990
Fx: 301-504-0124 and 301-504-0025

Internet: www.cpsc.gov
AOK 5/01
LOK 6/00

CONVEYOR EQUIPMENT MANUFACTURERS ASSOCIATION (CEMA)
6724 Lone Oak Blvd.
Naples, Florida 34109
Ph: 941-514-3441
Fax: 941-514-3470
Internet: www.cemanet.org
AOK 5/01
LOK 6/00

COOLING TECHNOLOGY INSTITUTE (CTI)
530 Wells Fargo Dr., Suite 218, Houston, TX 77090
Ph: 281-583-4087
Fax: 281-537-1721
Internet: www.cti.org
AOK 5/01
LOK 6/00

COPPER DEVELOPMENT ASSOCIATION (CDA)
260 Madison Ave.
New York, NY 10016
Ph: 212-251-7200
Fax: 212-251-7234
Website: www.copper.org
E-mail: staff@cda.copper.org
AOK 5/01
LOK 6/00

CRANE MANUFACTURERS ASSOCIATION OF AMERICA (CMAA)
8720 Red Oak Blvd., Ste, 201
Charlotte, NC 28217 USA
Ph: 704-676-1190/800722-6832
Fx: 704-676-1199
Internet: www.mhia.org/psc/psc_products_cranes.cfm
AOK 6/01
LOK 0/00

DIAMOND CORE DRILL MANUFACTURERS ASSOCIATION (DCDMA)
Organization no longer exists. See National Drilling Association.

DISTRICT OF COLUMBIA MUNICIPAL REGULATIONS (DCMR)
441 4th Street NW
Wachington DC 20001

PH: 202-727-1000
http://pw2.netcom.com/~flowers
AOK 6/01

DOOR AND ACCESS SYSTEM MANUFACTURERS ASSOCIATION (DASMA)
1300 Sumner Avenue
Cleveland, OH 44115-2851
Ph: 216-241-7333
Fax: 216-241-0105
Internet: www.dasma.com
e-mail: dasma@dasma.com
AOK 5/01
LOK 6/00

DOOR AND HARDWARE INSTITUTE (DHI)
14150 Newbrook Dr.Suite 200
Chantilly, VA 20151-2223
Ph: 703-222-2010
Fax: 703-222-2410
Internet: www.dhi.org
e-mail: techdept@dhi.org
AOK 5/01
LOK 6/00

DUCTILE IRON PIPE RESEARCH ASSOCIATION (DIPRA)
245 Riverchase Parkway East, Suite 0
Birmingham, AL 35244
Ph: 205-402-8700
Fax: 205-402-8730
Internet: www.dipra.org
E-mail: info@dipra.org
AOK 5/01
LOK 6/00

EIFS INDUSTRY MEMBERS ASSOCIATION (EIMA)
3000 Corporate Center Drive, Suite 270
Morrow, GA 30260
Ph: 800-968-7945
Fax: 770-294-3462
Internet: www.eifsfacts.com
AOK 5/01
LOK 6/00

ELECTRICAL GENERATING SYSTEMS ASSOCIATION (EGSA)
1650 South Dixie Highway, Ste. 500
Boca Raton, FL 33432
Ph: 561-750-5575
Fax: 561-395-8557
Internet: www.egsa.org
AOK 5/01
LOK 6/00

ELECTRONIC INDUSTRIES ALLIANCE (EIA)
2500 Wilson Blvd.
Arlington, VA 22201-3834
Ph: 703-907-7500
Fax: 703-907-7501
Internet: www.eia.org
AOK 5/01
LOK 6/00

ENGINE MANUFACTURERS ASSOCIATION (EMA)
Two North LaSalle Street, Suite 2200
Chicago, Il 60602
PH: 312-827-8700
FAX: 312-827-8737
www.engine-manufacturers.org/index.cfm
AOK 6/01

EUROPEAN COMMITTEE FOR ELECTROTECHNICAL STANDARDIZATION (CENELEC)
35 Rue de CENELEC CS Info & Publications Department
Rue de Stassartstraat 35
1050 Brussels
Phone: + 32 2 519 68 71
Fax: + 32 2 519 69 19
www.cenelec.org
AOK 9/01

EXPANSION JOINT MANUFACTURERS ASSOCIATION (EJMA)
25 N Broadway
Tarrytown, NY 10591
Ph: 914-332-0040
Fax: 914-332-1541
Internet: www.ejma.org
AOK 5/01
LOK 6/00

FACTORY MUTUAL ENGINEERING AND RESEARCH (FM)
500 River Ridge Drive
Norwood, MA 02062
Ph: 781-255-6681
Ph: (Toll-Free): 877-364-6726
Fax: 781-255-0181
Internet: www.fmglobal.com
AOK 5/01
LOK 6/00

FLAT GLASS MARKETING ASSOCITATION (FGMA)
3310 SW. Harrison St.,
Topeka Kansas
USA 66611-2279
AOK 0/00
LOK 0/00

FLUID SEALING ASSOCIATION (FSA)
994 Old Eagle School Road #1019
Wayne, PA 19087
610.971.4850 (USA)
www.fluidsealing.com
E-mail: info@fluidsealing.com
AOK 6/01

FORESTRY SUPPLIERS (FSUP)
205 West Rankin St.
P.O. Box 8397
Jackson, MS 39284-8397
Ph: 601-354-3565
Fax: 601-292-0165
Internet: www.forestry-suppliers.com
AOK 5/01
LOK 6/00

FOUNDATION FOR CROSS-CONNECTION CONTROL AND HYDRAULIC RESEARCH (FCCCHR)
University of South California
Kaprielian Hall 200
Los Angeles, CA 90089-2531
Ph: 213-740-2032
Fax: 213-740-8399
Internet: www.usc.edu/dept/fccchr
AOK 5/01
LOK 6/00

GEOLOGICAL SOCIETY OF AMERICA (GSA)
P.O. Box 9140
Boulder, CO 80301-9140
3300 Penrose Place
Boulder, CO 80301-1806
Ph: 800-447-472-1988
Fax: 303-447-1133
Internet: www.geosociety.org
AOK 5/01
LOK 6/00

GEOSYNTHETIC INSTITUTE (GSI)
475 Kedron Ave.
Folsom, PA 19033-1208
Ph: 610-522-8440
Fax: 610-522-8441
Internet: geosynthetic-institute.org
AOK 5/01
LOK 6/00

GERMANY INSTITUTE FOR STANDARDIZATION (DIN)
BURGGRAFENSTRAE 6
POSTFACH 11 07
10787 BERLIN
GERMANY
Internet: www.gsf.de
Ph: 49-30-2601-2260
Fax: 49-30-2601-1231
AOK 8/00
LOK 6/00
Order from a United States publications service.

GLASS ASSOCIATION OF NORTH AMERICA (GANA)
2945 SW Wanamaker Drive, Suite A
Topeka, KS 66614-5321
Ph: 785-271-0208
Fax: 785-271-0166
Internet:www.glasswebsite.com/GANA
AOK 5/01
LOK 6/00

GYPSUM ASSOCIATION (GA)
810 First St. NE, Suite 510
Washington, DC 20002
Ph: 202-289-5440
Fax: 202-289-3707

Internet: www.gypsum.org
AOK 5/01
LOK 6/00

HARDWOOD PLYWOOD & VENEER ASSOCIATION (HPVA)
1825 Michael Faraday Dr.
P.O. Box 2789
Reston, VA 20195-0789
Ph: 703-435-2900
Fax: 703-435-2537
Internet: www.hpva.org
AOK 5/01
LOK 6/00

HEAT EXCHANGE INSTITUTE (HEI)
1300 Sumner Ave
Cleveland, OH 44115-2851
Ph: 216-241-7333
Fax: 216-241-0105
Internet: www.heatexchange.org
email: hei@heatexchange.org
AOK 5/01
LOK 6/00

HOIST MANUFACTURERS INSTITUTE (HMI)
8720 Red Oak Blvd., Suite 201
Charlotte, NC 28217
PH: 704-676-1190
FAX: 704-676-1199
www.mhia.org/psc/PSC_Products_Hoists.cfm
AOK 6/01
LOK 0/00

HOLLOW METAL MANUFACTURERS ASSOCIATION (HMMA)
NAAMM Headquarters
8 South Michigan Avenue, Suite 1000
Chicago, IL 60603
PH: 312-332-0405
FAX: 312-332-0706
www.naamm.org/hmma.htm
AOK 6/01
LOK 0/00

H.P. WHITE LABORATORY (HPW)
3114 Scarboro Rd.
Street, MD 21154

Ph: 410-838-6550
fax: 410-838-2802
Internet: www.hpwhite.com
AOK 5/01
LOK 6/00

HYDRAULIC INSTITUTE (HI)
9 Sylvan Way, Suite 180
Parsippany, NJ 07054-3802
Ph: 888-786-7744 or 973-267-9700
Fax: 973-267-9055
Internet: www.pumps.org
AOK 5/01
LOK 6/00

HYDRONICS INSTITUTE DIVISION OF GAMA (HYI)
35 Russo Pl.
P.O. Box 218
Berkeley Heights, NJ 07922-0218
Ph: 908-464-8200
Fax: 908-464-7818
Internet: www.gamanet.org/publist/hydroordr.htm
AOK 5/01
LOK 6/00

IBM CORPORATION (IBM)
Publications
P.O. Box 29570
Raleigh, NC 27626-0570
Ph: 800-879-2755, Option 1
Fax: 800-445-9269
Internet: www.ibm.com/shop/publications/order
AOK 5/01
LOK 6/00

ILLUMINATING ENGINEERING SOCIETY OF NORTH AMERICA (IESNA)
120 Wall St., 17th Floor
New York, NY 10005-4001
Ph: 212-248-5000
Fax: 212-248-5017
Internet: www.iesna.org
AOK 5/01
LOK 6/00

INDUSTRIAL FASTENERS INSTITUTE (IFI)
1717 East 9th St., Suite 1105
Cleveland, OH 44114-2879
Ph: 216-241-1482
Fax: 216-241-5901
Internet: www.industrial-fasteners.org
e-mail: indfast@aol.com
AOK 5/01
LOK 6/00

INSECT SCREENING WEAVERS ASSOCIATION (ISWA)
DEFUNCT in 1997
P.O. Box 1018
Ossining, NY 10562
Ph: 914-962-9052
Fax: 914-923-3031
AOK 5/01
LOK 6/00

INSTITUTE OF CLEAN AIR COMPANIES (ICAC)
1660 L St., NW, Suite 1100
Washington, DC 20036-5603
Ph: 202-457-0911
Fax: 202-331-1388
E-mail: sjenkins@icac.com
Internet: icac.com
AOK 5/01
LOK 6/00

INSTITUTE OF ELECTRICAL AND ELECTRONICS ENGINEERS (IEEE)
445 Hoes Ln, P. O. Box 1331
Piscataway, NJ 08855-1331
Ph: 732-981-0060 OR 800-701-4333
Fax: 732-981-9667
Internet: www.ieee.org
E-mail: customer.services@ieee.org
AOK 5/01
LOK 6/00

INSTITUTE OF ENVIRONMENTAL SCIENCES AND TECHNOLOGY (IES)
940 East Northwest Highway
Mount Prospect, IL 60056
Ph: 847-255-1561
Fax: 847-255-1699
Internet: www.iest.org
AOK 5/01

LOK 12/00

INSTRUMENT SOCIETY OF AMERICA (ISA)

INSULATED CABLE ENGINEERS ASSOCIATION (ICEA)
P.O. Box 440
South Yarmouth, MA 02664
Ph: 508-394-4424
Fax: 508-394-1194
E-mail: Internet: www.icea.net
AOK 5/01
LOK 6/00

INTERNATIONAL APPROVAL SERVICES (IAS)
8501 East Pleasant Valley Rd.
Cleveland, OH 44131
Ph: 216-524-4990
Fax: 216-328-8118
Internet: www.iasapprovals.org
AOK 5/01
LOK 6/00

INTERNATIONAL ASSOCIATION OF PLUMBING AND MECHANICAL OFFICIALS (IAPMO)
20001 Walnut Dr., So.
Walnut, CA 91789-2825
Ph: 909-595-8449
Fax: 909-594-3690
Fax for Stds: 909-594-5265
Internet: www.iapmo.org
AOK 5/01
LOK 6/00

INTERNATIONAL CODE COUNCIL (ICC)
5203 Leesburg Pike, Suite 600
Falls Church, VA 22041
Ph: 703-931-4533
Fax: 703-379-1546
Internet: www.intlcode.org
AOK 5/01
LOK 6/00

INTERNATIONAL CONCRETE REPAIR INSTITUTE (ICRI)
3166 S. River Road, Suite 132
Des Plaines, IL 60018
Phone: 847-827-0830

Fax: 847-827-0832
www.icri.org
AOK 9/01
LOK 0/00

INTERNATIONAL CONFERENCE OF BUILDING OFFICIALS (ICBO)
5360 Workman Mill Rd.
Whittier, CA 90601-2298
Ph: 800-284-4406
Ph: 562-699-0541
Fax: 562-692-3853
Internet: icbo.org
AOK 5/01
LOK 6/00

INTERNATIONAL ELECTRICAL TESTING ASSOCIATION (NETA)
P.O. Box 687
106 Stone Street
Morrison, Colorado 80465
PH: 303-697-8441
FAX: 303-697-8431
www.netaworld.org
AOK 6/01

INTERNATIONAL ELECTROTECHNICAL COMMISSION (IEC)
3, rue de Varembe, P.O. Box 131
CH-1211 Geneva 20, Switzerland
Ph: 41-22-919-0211
Fax: 41-22-919-0300
Internet: www.iec.ch
e-mail: info@iec.ch
AOK 5/01
LOK 6/00

INTERNATIONAL GROUND SOURCE HEAT PUMP ASSOCIATION (IGSHPA)
490 Cordell South
Stillwater OK 74078-8018
PH: 800-626-4747
FAX: 405-744-5283
www.igshpa.okstate.edu/Technology/Infopackets/WhatsIGSHPA.html
AOK 6/01
LOK 0/00

INTERNATIONAL INSTITUTE OF AMMONIA REFRIGERATION (IIAR)
1110 N. Glebe Rd., Suite 250
Arlington, VA 22201
Ph: 703-312-4200
Fax: 703-312-0065
Internet: www.iiar.org
e-mail: iiar@iiar.org
AOK 5/01
LOK 6/00

INTERNATIONAL MUNICIPAL SIGNAL ASSOCIATION (IMSA)
P.O. Box 539
165 East Union St.
Newark, NY 14513-0539
Ph: 315-331-2182
Ph: 800-723-4672
Fax: 315-331-8205
Internet: www.imsasafety.org
AOK 5/01
LOK 6/00

INTERNATIONAL ORGANIZATION FOR STANDARDIZATION (ISO)
1, rue de Varembe'
Case Postale 56
CH-1211 Geneve 20
Switzerland
Ph: 41-22-749-0111
Fax: 41-22-733-3430
Internet: www.iso.ch
e-mail: central@iso.ch
AOK 5/01
LOK 6/00

INTERNATIONAL SLURRY SURFACING ASSOCIATION (ISSA)
3 Church Circle, PMB 250
Annapolis, MD 21401
Ph: 410-267-0023
Fax: 410-267-7546
Internet: www.slurry.org
e-mail: krissoff@slurry.org
AOK 5/01
LOK 6/00

INTERNATIONAL TELECOMMUNICATION UNION (ITU)
Order from:
U.S. Dept of Commerce

National Technical Information Service
5285 Port Royal Road.
Springfield, VA 22161
Ph: 703-605-6040
FAX: 703-605-6887
Internet: www.ntis.gov

For documents not avail from Dept of Commerce:
Sales Service
International Telecommunication Union
Place des Nations
CH-1211 Geneve 20
Switzerland
E-Mail: sales@itu.ch
Ph: 41.22.730.6141
Fax: 41.22.730.5194
Internet: www.itu.org
AOK 5/01
LOK 6/00

IPC - ASSOCIATION CONNECTING ELECTRONICS INDUSTRIES (IPC)
2215 Sanders Rd.
Northbrook, IL 60062-6135
Ph: 847-509-9700
Fax: 847-509-9798
Internet: www.ipc.org
e-mail: orderipc@ipc.org
AOK 5/01
LOK 6/00

IRON & STEEL SOCIETY (ISS)
186 Thorn Hill Road
Warrendale, PA 15086-7528
Ph: 724-776-1535 Ext 1
Fax: 724-776-0430
E-Mail: dennisf@iss.org
Internet: www.issource.org
AOK 5/01
LOK 6/00

ISA - THE INSTRUMENTATION, SYSTEMS AND AUTOMATION SOCIETY (ISA)
67 Alexander Drive
P.O. Box 12277
Research Triangle Park, NC 27709
Ph: 919-549-8411

Fax: 919-549-8288
e-mail: info@isa.org
Internet: www.isa.org
AOK 5/01
LOK 6/00

JOINT INDUSTRIAL COUNCIL (JIC)
Association for Manufacturing Technology
7901 Westpark Dr.
McLean, VA 22102
Ph: 703-893-2900
Fax: 703-893-1151
AOK 0/0
LOK 0/0

KITCHEN CABINET MANUFACTURERS ASSOCIATION (KCMA)
1899 Preston White Dr.
Reston, VA 20191-5435
Ph: 703-264-1690
Fax: 703-620-6530
Internet: www.kcma.org
AOK 5/01
LOK 6/00

L.H. BAILEY HORTORIUM (LHBH)
c/o Cornell University
Information and Referral Center
Day Hall Lobby
Ithaca, NY 14853-2801
PH: 607-254-INFO (4636)
www.plantbio.cornell.edu/Hortorium
AOK 6/01
LOK 0/00

MANUFACTURERS STANDARDIZATION SOCIETY OF THE VALVE AND FITTINGS INDUSTRY (MSS)
127 Park St., NE
Vienna, VA 22180-4602
Ph: 703-281-6613
Fax: 703-281-6671
Internet: www.mss-hq.com
e-mail: info@mss-hq.com
AOK 5/01
LOK 6/00

MAPLE FLOORING MANUFACTURERS ASSOCIATION (MFMA)
60 Revere Dr., Suite 500
Northbrook, IL 60062
Ph: 847-480-9138
Fax: 847-480-9282
Internet: www.maplefloor.org
AOK 5/01
LOK 6/00

MARBLE INSTITUTE OF AMERICA (MIA)
30 Eden Alley, Suite 301
Columbus, OH 43215
Ph: 614-228-6194
Fax: 614-461-1497
Internet: www.marble-institute.com
e-mail: stoneassociations@hotmail.com
AOK 5/01
LOK 6/00

MASTER PAINTERS INSTITUTE (MPI)
4090 Graveley Street
Burnaby, BC CANADA V5C 3T6
PH: 888-674-8937
Fx: 888-211-8708
www.paintinfo.com/mpi
AOK 9/01
LOK 0/00

MATERIAL HANDLING INDUSTRY OF AMERICA (MHI)
8720 Red Oak Blvd., Suite 201
Charlotte, NC 28217-3992
Ph: 800-345-1815 or 704-676-1190
Fax: 704-676-1199
Internet: www.mhia.org
AOK 5/01
LOK 6/00

METAL BUILDING MANUFACTURERS ASSOCIATION (MBMA)
1300 Sumner Ave.
Cleveland, OH 44115-2851
Ph: 216-241-7333
Fax: 216-241-0105
Internet: www.mbma.com
e-mail: mbma@mbma.com
AOK 5/01
LOK 6/00

METAL LATH/STEEL FRAMING ASSOCIATION (ML/SFA)
NAAMM Headquarters
8 South Michigan Avenue, Suite 1000
Chicago, IL 60603
PH: 312-332-0405
FAX: 312-332-0706
www.naamm.org/mlsfa.htm
AOK 6/01
LOK 0/00

MIDWEST INSULATION CONTRACTORS ASSOCIATION (MICA)
2017 So. 139th Cir.
Omaha, NE 68144
Ph: 402-342-3463
Fax: 402-330-9702
Internet: www.micainsulation.org
e-mail: info@micainsulation.org
AOK 5/01
LOK 6/00

MONORAIL MANUFACTURERS ASSOCIATION (MMA)
8720 Red Oak Blvd., Suite 201
Charlotte, NC 28217
PH: 704-676-1190
FAX: 704-676-1199
www.mhia.org/psc/PSC_Products_Monorail.cfm
AOK 6/01
LOK 0/00

NACE INTERNATIONAL (NACE)
1440 South Creek Drive
Houston, TX 77084-4906
Ph: 281-228-6200
Fax: 281-228-6300
Internet: www.nace.org
AOK 5/01
LOK 6/00

NATIONAL ASSOCIATION OF ARCHITECTURAL METAL MANUFACTURERS (NAAMM)
8 S. Michigan Ave, Suite 1000
Chicago, IL 60603
Ph: 312-782-4951
Fax: 312-332-0405
Internet: www.naamm.org

e-mail: naamm@gss.net
AOK 5/01
LOK 6/00

NATIONAL BOARD OF BOILER AND PRESSURE VESSEL INSPECTORS (NBBPVI)
1055 Crupper Ave.
Columbus, OH 43229-1183
Ph: 614-888-8320
Fax: 614-847-1147
Internet: www.nationalboard.org
e-mail: tbecker@nationalboard.org
LOK 5/01
AOK 12/00

NATIONAL CABLE TELEVISION ASSOCIATION (NCTA)
1724 Massachusetts Ave. NW
Washington, DC 20036-1969
Ph: 202-775-3550
Fax: 202-775-1055
Internet: www.ncta.com
AOK 5/01
LOK 6/00

NATIONAL CONCRETE MASONRY ASSOCIATION (NCMA)
2302 Horse Pen Road
Herndon, VA 20171-3499
Ph: 703-713-1900
Fax: 703-713-1910
Internet: www.ncma.org
AOK 9/01
LOK 0/00

NATIONAL COUNCIL ON RADIATION PROTECTION AND MEASUREMENTS (NCRP)
7910 Woodmont Ave., Suite 800
Bethesda, MD 20814-3095
Ph: 800-229-2652
Ph. 301-657-2652
Fax: 301-907-8768
Internet: www.ncrp.com
AOK 5/01
LOK 6/00

NATIONAL ELECTRICAL MANUFACTURERS ASSOCIATION (NEMA)
1300 N. 17th St., Suite 1847
Rosslyn, VA 22209
Ph: 703-841-3200
Fax: 703-841-3300
Internet: http//www.nema.org/
AOK 5/01
LOK 6/00

NATIONAL ENVIRONMENTAL BALANCING BUREAU (NEBB)
8575 Grovemont Circle
Gaithersburg, MD 20877-4121
Ph: 301-977-3698
Fax: 301-977-9589
Internet: www.nebb.org
AOK 5/01
LOK 6/00

NATIONAL FENESTRATION RATING COUNCIL (NFRC)
1300 Spring Street, Suite 500
Silver Spring, MD 20910
Ph: 301-589-6372
Fax: 303-588-6342
Internet: www.nfrc.org
E-Mail: nfrcusa@aol.com or info@nfrc.com
AOK 5/01
LOK 6/00

NATIONAL FIRE PROTECTION ASSOCIATION (NFPA)
1 Batterymarch Park
P.O. Box 9101
Quincy, MA 02269-9101
Ph: 617-770-3000
Fax: 617-770-0700
Internet: www.nfpa.org
AOK 5/01
LOK 8/00

NATIONAL FLUID POWER ASSOCIATION (NFLPA)
3333 N. Mayfair Rd.
Milwaukee, WI 53222-3219
Ph: 414-778-3344
Fax: 414-778-3361
Internet: www.nfpa.com
E-mail: nfpa@nfpa.com
AOK 5/01

LOK 6/00

NATIONAL HARDWOOD LUMBER ASSOCIATION (NHLA)
P.O. Box 34518
Memphis, TN 38184-0518
Ph: 901-377-1818
Fax: 901-382-6419
e-mail: info@natlhardwood.org
Internet: natlhardwood.org
AOK 5/01
LOK 6/00

NATIONAL INSTITUTE FOR CERTIFICATION IN ENGINEERING TECHNOLOGIES (NICET)
1420 King Street
Alexandria, VA 22314-2794
Ph: 888-476-4238
Internet: www.nicet.org
AOK 5/01
LOK 6/00

NATIONAL INSTITUTE FOR OCCUPATIONAL SAFETY AND HEALTH (NIOSH)
Mail Stop C-13
4676 Columbia Parkway
Cincinnati, OH 45226-1998
Ph: 800-356-4674
Fx: 513-533-8573
Internet: www.cdc.gov/niosh/homepage.html
To order pubs for which a fee is charged, order from:
Superintendent of Documents
U.S. Government Printing Office
732 North Capitol Street, NW
Mailstop: SDE
Washington, DC 20401
Ph: 202-512-1530
Fax: 202-512-1262
Internet: www.gpo.gov
AOK 5/01
LOK 6/00

NATIONAL INSTITUTE OF JUSTICE (NIJ)
National Law Enforcement and Corrections Technology Center
2277 Research Blvd. - Mailstop 1E
Rockville, MD 20850
Ph: 800-248-2742 or 301-519-5060

Fax: 301-519-5149
Internet: www.nlectc.org
e-mail: asknlectc@nlectc.org
AOK 5/01
LOK 6/00

NATIONAL INSTITUTE OF STANDARDS AND TECHNOLOGY (NIST)
100 Bureau Drive
Stop 3460
Gaithersburg, MD 20899-3460
Ph: 301-975-NIST
Internet: www.nist.gov
Order Publications From:
Superintendent of Documents
U.S. Government Printing Office
732 North Capitol Street, NW
Mailstop: SDE
Washington, DC 20401
Ph: 202-512-1530
Fax: 202-512-1262
Internet: www.gpo.gov
or
National Technical Information Services (NTIS)
5285 Port Royal Rd.
Springfield, VA 22161
Ph: 703-605-6000
Fax: 703-605-6900
Internet: www.ntis.gov
AOK 5/01
LOK 6/00

NATIONAL LIME ASSOCIATION (NLA)
200 North Glebe Road, Suite 800
Arlington, VA 22203
PH: 703-243-5463
FAX: 703-243-5489
www.lime.org
AOK 6/01
LOK 0/00

NATIONAL OAK FLOORING MANUFACTURERS ASSOCIATION (NOFMA)
P.O. Box 3009
Memphis, TN 38173-0009
Ph: 901-526-5016
Fax: 901-526-7022
Internet: www.nofma.org

AOK 5/01
LOK 6/00

NATIONAL READY-MIXED CONCRETE ASSOCIATION (NRMCA)
900 Spring St.
Silver Spring, MD 20910
Ph: 301-587-1400
Fax: 301-585-4219
Internet: www.nrmca.org
AOK 5/01
LOK 6/00

NATIONAL ROOFING CONTRACTORS ASSOCIATION (NRCA)
10255 W. higgins Rd., Suite 600
Rosemont, IL 60018
Ph: 847-299-9070
Fax: 847-299-1183
Internet: www.nrca.net
AOK 5/01
LOK 6/00

NATIONAL TERRAZZO & MOSAIC ASSOCIATION (NTMA)
110 East Market St., Suite 200 A
Leesburg, Virginia 20176
Ph: 703-779-1022 or 800-323-9736
Fax: 703-779-1026
Internet: www.ntma.com
e-mail: info@ntma.com
AOK 5/01
LOK 6/00

NATURAL RESOURCE, AGRICULTURAL AND ENGINEERING SERVICE (NRAES)
Cooperative Extension
152 Riley-Robb Hall
Ithaca, NY 14853-5701
Ph: 607-255-7654
Fax: 607-254-8770
Internet: www.nraes.org
E-mail: nraes@cornell.edu
AOK 5/01
LOK 6/00

NORTH AMERICAN INSULATION MANUFACTURERS ASSOCIATION (NAIMA)
44 Canal Center Plaza, Suite 310
Alexandria, VA 22314
Ph: 703-684-0084
Fax: 703-684-0427
Internet: www.naima.org
e-mail: insulation@naima.org
AOK 5/01
LOK 6/00

NORTHEASTERN LUMBER MANUFACTURERS ASSOCIATION (NELMA)
272 Tuttle Road
P.O. Box 87A
Cumberland Center, ME 04021
Ph: 207-829-6901
Fax: 207-829-4293
Internet: www.nelma.org
e-mail: nelma@javanet.com
AOK 5/01
LOK 6/00

NSF INTERNATIONAL (NSF)
ATTN: Publications
789 North Dixboro Rd.
P.O. Box 130140
Ann Arbor, MI 48113-0140
Ph: 734-769-8010
Fax: 734-769-0109
Toll Free: 800-NSF-MARK
Internet: www.nsf.org
AOK 5/01
LOK 6/00

PIPE FABRICATION INSTITUTE (PFI)
655 32nd Avenue, Suite 201
Lachine, QC, Canada H8T 3G6
Ph: 514-634-3434
Fax: 514-634-9736
Internet: www.pfi-institute.org
e-mail: pfi@pfi-institute.org
AOK 5/01
LOK 6/00

PLASTIC PIPE AND FITTINGS ASSOCIATION (PPFA)
800 Roosevelt Rd., Bldg C, Suite 20
Glen Ellyn, IL 60137
Ph: 630-858-6540
Fax: 630-790-3095
Internet: www.ppfahome.org
AOK 5/01
LOK 6/00

PLASTICS PIPE INSTITUTE (PPI)
1825 Connecticut Ave. NW
Washington, D. C. 20009
Ph: 202-462-9607
Fax: 202-462-9779
Internet: www.plasticpipe.org
AOK 5/01
LOK 6/00

PLUMBING AND DRAINAGE INSTITUTE (PDI)
45 Bristol Dr.
South Easton, MA 02375
Ph: 508-230-3516 or 800-589-8956
Fax: 508-230-3529
Internet: www.pdionline.org
E-Mail: info@pdionline.org
AOK 5/01
LOK 6/00

PLUMBING AND PIPING INDUSTRY COUNCIL (PPIC)
9450 SW Commerce Circle, Suite 310
Wilsonville, OR 97070-9626
Ph: 503-682-7919
AOK 5/01
LOK 0/00

PLUMBING-HEATING-COOLING CONTRACTORS NATIONAL ASSOCIATION (NAPHCC)
180 S. Washington Street
P.O. Box 6808
Falls Church, VA 22040
Ph: 800-533-7694
Fax: 703-237-7442
Internet: www.naphcc.org
AOK 5/01
LOK 6/00

PORCELAIN ENAMEL INSTITUTE (PEI)
5696 Peachtree Parkway, PO Box 920220
Norcross, GA 30092
Ph: 770-242-2632
Fax: 770-446-1452
Internet: www.porcelainenamel.com
e-mail: penamel@aol.com
AOK 5/01
LOK 6/00

PRECAST/PRESTRESSED CONCRETE INSTITUTE (PCI)
209 West Jackson Blvd.
Chicago, IL 60606-6938
Ph: 312-786-0300
Fax: 312-786-0353
Internet: www.pci.org
e-mail: info@pci.org
AOK 5/01
LOK 6/00

REDWOOD INSPECTION SERVICE (RIS)
405 Efrente Drive, Suite 200
Novato, CA 94949
Ph: 415-382-0662
Fax: 415-382-8531
Website: www.calredwood.org
E-Mail: cjjourdain@worldnet.att.net
AOK 8/01
LOK 0/00

RUBBER MANUFACTURERS ASSOCIATION (RMA)
1400 K St., NW, Suite 900
Washington, DC 20005
Ph: 202-682-4800
Fax: 202-682-4854
Internet: www.rma.org
Order Publications from:
The Mail Room
P. O. Box 3147
Medina, OH 44258
Ph: 800-325-5095 EXT 242 or 330-723-2978
Fax: 330-725-0576
AOK 5/01
LOK 6/00

SCIENTIFIC APPARATUS MAKERS ASSOCIATION (SAMA)
225 Reinekers Lane, Suite 625
Alexandria, VA 22314
Ph:703 836-1360
FAX: 703-836-6644
AOK 8/01
LOK 0/00

SCREEN MANUFACTURERS ASSOCIATION (SMA)
2850 South Ocean Boulevard, Suite 311
Palm Beach, FL 33480-5535
Ph: 561-533-0991
Fax: 561-533-7466
e-mail: fitzgeraldfscott@aol.com
Internet: www.screenmfgassociation.org
AOK 5/01
LOK 6/00

SEMICONDUCTOR EQUIPMENT AND MATERIALS INTERNATIONAL (SEMI)
3081 Zanker Road
San Jose, CA 95134
Phone: 1.408.943.6900
Fax: 1.408.428.9600
www.semi.org
E-mail: semihq@semi.org
AOK 6/01
LOK 0/00

SHEET METAL & AIR CONDITIONING CONTRACTORS' NATIONAL ASSOCIATION (SMACNA)
4201 Lafayette Center Dr.,
Chantilly, VA 20151-1209
Ph: 703-803-2980
Fax: 703-803-3732
Internet: www.smacna.org
e-mail: info@smacna.org
AOK 5/01
LOK 6/00

SINGLE PLY ROOFING INSTITUTE (SPRI)
200 Reservoir St., Suite 309A
Needham, MA 02494
Ph: 781-444-0242
Fax: 781-444-6111
Internet: www.spri.org

e-mail: spri@spri.org
AOK 5/01
LOK 6/00

SOCIETY OF AUTOMOTIVE ENGINEERS INTERNATIONAL (SAE)
400 Commonwealth Dr.
Warrendale, PA 15096-0001
Ph: 724-776-4841
Fax: 724-776-5760
Internet: www.sae.org
e-mail: custsvc@sae.org
AOK 5/01
LOK 6/00

SOCIETY FOR MOTION PICTURE & TELEVISION ENGINEERS (SMPTE)
595 West Hartsdale Avenue
WhitePlains, New York 10607
PH: 914-761-1100
FAX: 914-761-3115
www.smpte.org
AOK 6/01
LOK 0/00

SOCIETY OF THE PLASTICS INDUSTRY (SPI)
1801 K Street, NW, Suite 600K
Washington, DC 20006
PH: 202-974-5200
FX: 202-296-7005
www.socplas.org or www.plasticsindustry.org
AOK 9/01
LOK 0/00

SOLAR RATING AND CERTIFICATION CORPORATION (SRCC)
c/o FSEC, 1679 Clearlake Road
Cocoa, FL 32922-5703
PH: 321-638-1537
FAX: 321-638-1010
www.solar-rating.org
AOK 6/01
LOK 0/00

SOUTHERN BUILDING CODE CONGRESS INTERNATIONAL (SBCCI)
900 Montclair Road
Birmingham, AL 35213-1206
Ph: 205-591-1853
Fax: 205-591-0775

Internet: www.sbcci.org
AOK 5/01
LOK 6/00

SOUTHERN CYPRESS MANUFACTURERS ASSOCIATION (SCMA)
400 Penn Center Boulevard, Suite 530
Pittsburgh, PA 15235
Ph: 412-829-0770
Fax: 412-829-0844
Internet: www.cypressinfo.org
AOK 5/01
LOK 6/00

SOUTHERN PINE INSPECTION BUREAU (SPIB)
4709 Scenic Highway
Pensacola, FL 32504-9094
Ph: 850-434-2611
Fax: 850-433-5594
e-mail: spib@spib.org
Internet: www.spib.org
AOK 5/01
LOK 6/00

STATE OF [_____] DEPARTMENT OF TRANSPORTATION ([_____] DOT)

STATE OF [_____] DEPARTMENT OF TRANSPORTATION ([_____] DOT)

STATE OF [_____] HIGHWAY SPECIFICATION (SHS)

STATE OF [_____] HIGHWAY SPECIFICATION (SHS)

STATE OF [_____], DEPARTMENT OF TRANSPORTATION, [_____] STATE HIGHWAY DEPARTMENT, [_____] STATE HIGHWAY COMMISSION

STATE OF [_____], DEPARTMENT OF TRANSPORTATION, [_____] STATE HIGHWAY DEPARTMENT, [_____] STATE HIGHWAY COMMISSION

STATE OF [_____], DEPARTMENT OF [_____] [(DOT)] [(_____)] STANDARD (SSS)

STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION (CDT)
Publication Distribution Unit
1900 Royal Oaks Dr.
Sacramento, CA 95815
Ph: 916-445-3520 or 916-227-7000 (CA Transportation Lab)
Fax: 916-324-8997

Internet: www.dot.ca.gov
AOK 5/01
LOK 0/00

STATE OF MARYLAND CODE OF MARYLAND REGULATIONS (COMAR)
1700 Margaret Avenue
Annapolis, MD 21401
phone: 410-974-2486
fax: 410-974-2546
website: sos.state.md.us/sos/dsd/comar/html/comar.html
AOK 8/01
LOK 0/00

STATE OF NORTH CAROLINA ADMINISTRATIVE CODE
www.doa.state.nc.us/PandC/admcode.htm
AOK 6/01
LOK 0/00

STATE OF VIRGINIA ADMINISTRATIVE CODE (VAC)
Virginia Code Commission
General Assembly Building, 2nd Floor
910 Capitol Street
Richmond, Virginia 23219
Phone: 804-786-3591
Fax: 804-692-0625
website: legis.state.va.us/codecomm/codehome.htm
AOK 8/01
LOK 0/00

STATE OF [CALIFORNIA] [WASHINGTON] DEPARTMENT OF AGRICULTURE
AOK 0/00
LOK 0/00

STEEL DECK INSTITUTE (SDI)
P.O. Box 25
Fox River Grove, IL 60021-0025
Ph: 847-462-1930
Fax: 847-462-1940
Internet: www.sdi.org
e-mail: Steve@sdi.org
AOK 5/01
LOK 6/00

STEEL DOOR INSTITUTE (SDOI)
30200 Detroit Rd.
Cleveland, OH 44145-1967
Ph: 440-899-0010
Fax: 440-892-1404
Internet: www.steeldoor.org
AOK 5/01
LOK 6/00

STEEL JOIST INSTITUTE (SJI)
3127 Tenth Ave., North Ext.
Myrtle Beach, SC 29577-6760
Ph: 843-626-1995
Fax: 843-626-5565
Internet: www.steeljoist.org
AOK 5/01
LOK 6/00

STEEL TANK INSTITUTE (STI)
570 Oakwood Rd.
Lake Zurich, IL 60047
Ph: 847-438-8265
Fax: 847-438-8766
Internet: www.steeltank.com
AOK 5/01
LOK 6/00

STEEL WINDOW INSTITUTE (SWI)
1300 Sumner Ave.
Cleveland, OH 44115-2851
Ph: 216-241-7333
Fax: 216-241-0105
Internet: www.steelwindows.com
AOK 5/01
LOK 6/00

TECHNICAL ASSOCIATION OF THE PULP AND PAPER INDUSTRY (TAPPI)
P.O. Box 105113
Atlanta, GA 30348-5113
PH: 800-322-8686
www.tappi.org
AOK 6/01
LOK 0/00

THE ASSOCIATION OF THE WALL AND CEILING INDUSTRIES - INTERNATIONAL (AWCI)
803 West Broad Street
Falls Church, VA 22046
PH: 703-534-8300
FAX: 703-534-8307
Internet: www.awci.org
AOK 6/01
LOK 0/00

THE INSULATING GLASS MANUFACTURERS ALLIANCE (IGMA)
27 ave Goulburn Avenue
Ottawa, Ontario. CANADA
K1N 8C7
Phone: 613-233-1510
Fax: 613-233-1929
e-mail: info@igmaonline.org
Internet: www.imaonline.org
AOK 9/01
LOK 0/00

THE SOCIETY FOR PROTECTIVE COATINGS (SSPC)
40 24th Street, 6th Floor
Pittsburgh, PA 15222-4656
Ph: 412-281-2331
Fax: 412-281-9992
Internet: www.sspc.org
AOK 5/01
LOK 6/00

TILE COUNCIL OF AMERICA (TCA)
100 Clemson Research Blvd
Anderson, SC 29625
Ph: 864-646-8453
FAX: 864-646-2821
Internet: www.tileusa.com
e-mail: literature@tileusa.com
AOK 5/01
LOK 6/00

TRUSS PLATE INSTITUTE (TPI)
583 D'Onofrio Dr., Suite 200
Madison, WI 53719
Ph: 608-833-5900
Fax: 608-833-4360
AOK 5/01

LOK 6/00

TUBULAR EXCHANGER MANUFACTURERS ASSOCIATION (TEMA)
25 N. Broadway
Tarrytown, NY 10591
Ph: 914-332-0040
Fax: 914-332-1541
Internet: www.tema.org
AOK 5/01
LOK 6/00

TURFGRASS PRODUCERS INTERNATIONAL (TPI)
1855-A Hicks Road
Rolling Meadows, IL 60008
PH: 800-405-8873
FAX: 847-705-8347
Internet: www.turfgrasssod.org
AOK 6/01
LOK 0/00

UNDERWRITERS LABORATORIES (UL)
333 Pfingsten Rd.
Northbrook, IL 60062-2096
Ph: 847-272-8800
Fax: 847-272-8129
Internet: www.ul.com/
e-mail: northbrook@us.ul.com
AOK 5/01
LOK 6/00

UNI-BELL PVC PIPE ASSOCIATION (UBPPA)
2655 Villa Creek Dr., Suite 155
Dallas, TX 75234
Ph: 214-243-3902
Fax: 214-243-3907
Internet: www.uni-bell.org
e-mail: info@uni-bell.org
AOK 5/01
LOK 6/00

UNIVERSITY OF CALIFORNIA DIVISION OF AGRICULTURE AND NATURAL RESOURCES (UCDANR)
FRANKLIN BUILDING
1111 Franklin St., 6th floor
Oakland, CA 94607-5200
website: danr.ucop.edu

AOK 8/01
LOK 0/00

U.S. AIR FORCE (USAF)
website: afcesa.af.mil

U.S. ARMY (DA)
Internet: www.usace.army.mil/publications

U.S. ARMY CORPS OF ENGINEERS (USACE)
Order CRD-C DOCUMENTS from:
U.S. Army Engineer Waterways Experiment Station
ATTN: Technical Report Distribution Section, Services
Branch, TIC
3909 Halls Ferry Rd.
Vicksburg, MS 39180-6199
Ph: 601-634-2664
Fax: 601-634-2388
Internet: www.wes.army.mil/SL/MTC/handbook/handbook.htm

Order Other Documents from:
USACE Publications Depot
Attn: CEIM-SP-D
2803 52nd Avenue
Hyattsville, MD 20781-1102
Ph: 301-394-0081
Fax: 301-394-0084
Internet: www.usace.army.mil/publications
or www.hnd.usace.army.mil/techinfo/index.htm
AOK 5/01
LOK 6/00

U.S. ARMY ENVIRONMENTAL CENTER (AEC)
5179 Hoadley Road
Aberdeen Proving Ground, MD 21010-5401
Internet: www.aec.army.mil
AOK 8/00
LOK 0/00

U. S. ARMY ENVIRONMENTAL HYGIENE AGENCY (USAEHA)
Waste Disposal Engineering Division
Aberdeen Proving Ground, MD 21010-5422
Ph: 410-436-3652

U.S. BUREAU OF RECLAMATION (BOR)
Denver Federal Center
P.O. Box 25007
Denver, CO 80225
Ph: 303-445-2080
Internet: www.usbr.gov
Order from:
National Technical Information
Services (NTIS)
5285 Port Royal Rd.
Springfield, VA 22161
Ph: 703-605-6000
Fax: 703-605-6900
Internet: www.ntis.gov
AOK 5/01
LOK 6/00

U.S. DEFENSE COMMUNICATIONS AGENCY (DCA)

U.S. DEFENSE INTELLIGENCE AGENCY (DIA)
Defense Intelligence Analysis Center (DIAC)
MacDill Boulevard and Luke Avenue
Bolling AFB, MD
website: dia.mil
AOK 8/01

U.S. DEFENSE LOGISTICS AGENCY (DLA)
Andrew T. McNamara Building
8725 John J. Kingman Road
Fort Belvoir, VA 22060
website: dla.mil
AOK 8/01

U.S. DEPARTMENT OF AGRICULTURE (USDA)
Order AMS Publications from:
AGRICULTURAL MARKETING SERVICE (AMS)
Seed Regulatory and Testing Branch
USDA, AMS, LS Div.
Room 209, Bldg. 306, BARC-East
Beltsville, MD 20705-2325
Ph: 301-504-9430
Fax: 301-504-8098
Internet: www.ams.usda.gov/lsg
e-mail: jeri.irwin@usda.gov

Order Other Publications from:
U.S. Department of Agriculture
14th and Independence Ave., SW, Room 4028-S
Washington, DC 20250
Ph: 202-720-2791
Fax: 202-720-2166
Internet: www.usda.gov
AOK 5/01
LOK 6/00

U.S. DEPARTMENT OF COMMERCE (DOC)
Order Publications From:
National Technical Information Service
5285 Port Royal Road
Springfield, VA 22161
Ph: 703-605-6000
Fax: 703-605-6900
Internet: www.ntis.gov
AOK 5/01
LOK 6/00

U.S. DEPARTMENT OF DEFENSE (DOD)
Order DOD Documents from:
National Technical Information Service
5285 Port Royal Road
Springfield, VA 22161
Ph: 703-605-6000
FAX: 703-605-6900
Internet: www.ntis.gov

Order Military Specifications, Standards and Related Publications from:
Department of Defense Single Stock Point for (DODSSP)
Defense Automation and Production Service (DAPS)
Bldg 4D
700 Robbins AV
Philadelphia, PA 19111-5094
Ph: 215-697-2179
Fax: 215-697-1462
Internet: www.dodssp.daps.mil
AOK 5/01
LOK 6/00

U.S. DEPARTMENT OF HOUSING AND URBAN DEVELOPMENT (HUD)
Order from:
HUD User

P.O. Box 6091
Rockville, MD 20849
Ph: 800-245-2691
Fax: 301-519-5767
Internet: www.huduser.org
e-mail: Huduser@aspensys.com
AOK 5/01
LOK 6/00

U.S. DEPARTMENT OF STATE (SD)
ATTN: DS/PSP/SEP
SA-6, Room 804
Washington, DC 20522-0602
Ph: 703-875-6537
Internet: www.state.gov
AOK 5/01
LOK 6/00

U.S. DEPARTMENT OF TRANSPORTATION (DOT)
400 7th Street, SW
Washington, DC 20590
website: dot.gov
AOK 8/01
LOK 0/00

U.S. ENVIRONMENTAL PROTECTION AGENCY (EPA)
Ariel Rios Building
1200 Pennsylvania Avenue, N.W.
Washington, DC 20460
Ph: 202-260-2090
FAX: 202-260-6257
Internet: www.epa.gov

National Technical Information Services (NTIS)
5285 Port Royal Rd.
Springfield, VA 22161
Ph: 703-605-6000
Fax: 703-605-6900
Internet: www.ntis.gov
AOK 5/01
LOK 6/00

U.S. FEDERAL AVIATION ADMINISTRATION (FAA)
Order from:
Superintendant of Documents
U. S. Government Printing Office

732 North Capitol Street, NW
Mailstop: SDE
Washington, DC 20401
Ph: 202-512-1530
Fax: 202-512-1262
Internet: www.gpo.gov
For free documents, order from:
Federal Aviation Administration
Dept. of Transportation
ATTN: General Services Section M-45
400 Seventh St., SW
Washington, DC 20590-0001
Ph: 202-366-4000

Internet: www.dot.gov
AOK 5/01
LOK 6/00

U.S. FEDERAL COMMUNICATIONS COMMISSION (FCC)
445 12th Street SW
Washington, DC 20554
Phone: 888-CALL-FCC
Fax: 202-418-0232
website: fcc.gov
E-mail: fccinfo@fcc.gov
AOK 8/01
LOK 0/00

U.S. FEDERAL EMERGENCY MANAGEMENT AGENCY (FEMA)
500 C Street, SW
Washington, D.C. 20472
Phone: 202-646-4600
website: fema.gov
AOK 8/01
LOK 0/00

U.S. FEDERAL HIGHWAY ADMINISTRATION (FHWA)
Office of Highway Safety (HHS-31)
400 Seventh St., SW
Washington, DC 20590-0001
Ph: 202-366-0411
Fax: 202-366-2249
Internet: www.fhwa.dot.gov
Order from:

Superintendant of Documents
U. S. Government Printing Office
732 North Capitol Street, NW
Mailstop: SDE
Washington, DC 20401
Ph: 202-512-1530
Fax: 202-512-1262
Internet: www.gpo.gov
AOK 5/01
LOK 6/00

U.S. GENERAL SERVICES ADMINISTRATION (GSA)
Order from:
General Services Administration
Federal Supply Service Bureau
470 E L'Enfant Plaza, S.W., Suite 8100
Washington, DC 20407
Ph: 202-619-8925
Fx: 202-619-8978
Internet: fss.gsa.gov/pub/fed-specs.cfm
AOK 5/01
LOK 6/00

U.S. NATIONAL AERONAUTICS AND SPACE ADMINISTRATION (NASA)
website: nasa.gov

U.S. NATIONAL ARCHIVES AND RECORDS ADMINISTRATION (NARA)
700 Pennsylvania Avenue, N.W.
Washington, D.C. 20408
Phone: 800-234-8861
website: nara.gov

Order documents from:
Superintendent of Documents
U.S.Government Printing Office
732 North Capitol Street, NW
Washington, DC 20401
Mailstop: SDE
Ph: 202-512-1530
Fax: 202-512-1262
Internet: www.gpo.gov
E-mail: gpoaccess@gpo.gov
AOK 5/01

U.S. NAVAL FACILITIES ENGINEERING COMMAND (NAVFAC)
1510 Gilbert St.
Norfolk, VA 23511-2699
Ph: 757-322-4200
Fax: 757-322-4416
Internet: www.efdlant.navfac.navy.mil/LANTOPS_15
AOK 5/01
LOK 6/00

U.S. NAVAL FACILITIES ENGINEERING SERVICE CENTER (NFESC)
1100 23rd Avenue
Port Hueneme, CA 93043-4370
Ph: 805-982-4980
Internet: www.nfesc.navy.mil
AOK 5/01
LOK 6/00

WATER ENVIRONMENT FEDERATION (WEF)
601 Wythe St.
Alexandria, VA 22314-1994
Ph: 703-684-2452
Fax: 703-684-2492
Internet: www.wef.org
AOK 5/01
LOK 6/00

WATER QUALITY ASSOCIATION (WQA)
4151 Naperville Rd.
Lisle, IL 60532
Ph: 630-505-0160
Fax: 630-505-9637
Internet: www.wqa.org
e-mail: info@mail.wqa.org
AOK 5/01
LOK 6/00

WEST COAST LUMBER INSPECTION BUREAU (WCLIB)
P.O. Box 23145
Portland, OR 97281
Ph: 503-639-0651
Fax: 503-684-8928
internet: www.wclib.org
e-mail: info@wclib.org
AOK 5/01
LOK 6/00

WESTERN WOOD PRESERVERS INSTITUTE (WWPI)
7017 N.E. Highway 99 # 108
Vancover, WA 98665
Ph: 360-693-9958
Fax: 360-693-9967
Internet: www.wwpinstitute.org
e-mail: wwpi@teleport.com
AOK 5/01
LOK 6/00

WESTERN WOOD PRODUCTS ASSOCIATION (WWPA)
Yeon Bldg.
522 SW 5th Ave.
Suite 500
Portland, OR 97204-2122
Ph: 503-224-3930
Fax: 503-224-3934
Internet: www.wwpa.org
e-mail: info@wwpa.org
AOK 5/01
LOK 6/00

WINDOW AND DOOR MANUFACTURERS ASSOCIATION (WDMA)
1400 East Touhy Ave., Suite 470
Des Plaines, IL 60018
Ph: 847-299-5200 or 800-223-2301
Fax: 708-299-1286
Internet: www.wdma.com
e-mail: admin@wdma.com
AOK 5/01
LOK 6/00

WOOD MOULDING AND MILLWORK PRODUCERS ASSOCIATION (WMMPA)
507 First Street
Woodland, CA 95695
Ph: 916-661-9591
Fax: 916-661-9586
Internet: www.wmmpa.com
AOK 5/01
LOK 6/00

CEGS-01451/S (November 1999)

SECTION 01451

CONTRACTOR QUALITY CONTROL
04/97

PART 1 GENERAL

1.1 REFERENCES

The publications listed below form a part of this specification to the extent referenced. The publications are referred to in the text by basic designation only.

AMERICAN SOCIETY FOR TESTING AND MATERIALS (ASTM)

ASTM D 3740	(1994a) Minimum Requirements for Agencies Engaged in the Testing and/or Inspection of Soil and Rock as Used in Engineering Design and Construction
ASTM E 329	(1995b) Agencies Engaged in the Testing and/or Inspection of Materials Used in Construction

1.2 PAYMENT

Separate payment will not be made for providing and maintaining an effective Quality Control program, and all costs associated therewith shall be included in the applicable unit prices or lump-sum prices contained in the Bidding Schedule.

PART 2 PRODUCTS (NOT APPLICABLE)

PART 3 EXECUTION

3.1 GENERAL

The Contractor is responsible for quality control and shall establish and maintain an effective quality control system in compliance with the Contract Clause titled "Inspection of Construction." The quality control system shall consist of plans, procedures, and organization necessary to produce an end product that complies with the contract requirements. The system shall cover all construction operations, both onsite and offsite, and shall be keyed to the proposed construction sequence. The project superintendent will be held responsible for the quality of work on the job and is subject to removal by the Contracting Officer for non-compliance with quality requirements specified in the contract. The project superintendent in this context

shall mean the individual with the responsibility for the overall management of the project including quality and production.

3.2 QUALITY CONTROL PLAN

3.2.1 General

The Contractor shall furnish for review by the Government, not later than 5 days after receipt of notice to proceed, the Contractor Quality Control (CQC) Plan proposed to implement the requirements of the Contract Clause titled "Inspection of Construction." The plan shall identify personnel, procedures, control, instructions, test, records, and forms to be used. The Government will consider an interim plan for the first 30 days of operation. Construction will be permitted to begin only after acceptance of the CQC Plan or acceptance of an interim plan applicable to the particular feature of work to be started. Work outside of the features of work included in an accepted interim plan will not be permitted to begin until acceptance of a CQC Plan or another interim plan containing the additional features of work to be started.

3.2.2 Content of the CQC Plan

The CQC Plan shall include, as a minimum, the following to cover all construction operations, both onsite and offsite, including work by subcontractors, fabricators, suppliers, and purchasing agents:

a. A description of the quality control organization, including a chart showing lines of authority and acknowledgment that the CQC staff shall implement the three phase control system for all aspects of the work specified. The staff shall include a CQC System Manager who shall report to the project superintendent.

b. The name, qualifications (in resume format), duties, responsibilities, and authorities of each person assigned a CQC function.

c. A copy of the letter to the CQC System Manager signed by an authorized official of the firm which describes the responsibilities and delegates sufficient authorities to adequately perform the functions of the CQC System Manager, including authority to stop work which is not in compliance with the contract. The CQC System Manager shall issue letters of direction to all other various quality control representatives outlining duties, authorities, and responsibilities. Copies of these letters shall also be furnished to the Government.

d. Procedures for scheduling, reviewing, certifying, and managing submittals, including those of subcontractors, offsite fabricators, suppliers, and purchasing agents. These procedures shall be in accordance with Section 01330 SUBMITTAL PROCEDURES.

e. Control, verification, and acceptance testing procedures for each specific test to include the test name, specification paragraph requiring test, feature of work to be tested, test frequency, and person responsible for each test. (Laboratory facilities will be approved by the Contracting Officer.)

f. Procedures for tracking preparatory, initial, and follow-up control phases and control, verification, and acceptance tests including documentation.

g. Procedures for tracking construction deficiencies from identification through acceptable corrective action. These procedures shall establish verification that identified deficiencies have been corrected.

h. Reporting procedures, including proposed reporting formats.

i. A list of the definable features of work. A definable feature of work is a task which is separate and distinct from other tasks, has separate control requirements, and may be identified by different trades or disciplines, or it may be work by the same trade in a different environment. Although each section of the specifications may generally be considered as a definable feature of work, there are frequently more than one definable features under a particular section. This list will be agreed upon during the coordination meeting.

3.2.3 Acceptance of Plan

Acceptance of the Contractor's plan is required prior to the start of construction. Acceptance is conditional and will be predicated on satisfactory performance during the construction. The Government reserves the right to require the Contractor to make changes in his CQC Plan and operations including removal of personnel, as necessary, to obtain the quality specified.

3.2.4 Notification of Changes

After acceptance of the CQC Plan, the Contractor shall notify the Contracting Officer in writing of any proposed change. Proposed changes are subject to acceptance by the Contracting Officer.

3.3 COORDINATION MEETING

After the Preconstruction Conference, before start of construction, and prior to acceptance by the Government of the CQC Plan, the Contractor shall meet with the Contracting Officer or Authorized Representative and discuss the Contractor's quality control system. The CQC Plan shall be submitted for review a minimum of 7 calendar days prior to the Coordination Meeting. During the meeting, a mutual understanding of the system details shall be developed, including the forms for recording the CQC

operations, control activities, testing, administration of the system for both onsite and offsite work, and the interrelationship of Contractor's Management and control with the Government's Quality Assurance. Minutes of the meeting shall be prepared by the Government and signed by both the Contractor and the Contracting Officer. The minutes shall become a part of the contract file. There may be occasions when subsequent conferences will be called by either party to reconfirm mutual understandings and/or address deficiencies in the CQC system or procedures which may require corrective action by the Contractor.

3.4 QUALITY CONTROL ORGANIZATION

3.4.1 General

The requirements for the CQC organization are a CQC System Manager and sufficient number of additional qualified personnel to ensure contract compliance. The Contractor shall provide a CQC organization which shall be at the site at all times during progress of the work and with complete authority to take any action necessary to ensure compliance with the contract. All CQC staff members shall be subject to acceptance by the Contracting Officer.

3.4.2 CQC System Manager

The Contractor shall identify as CQC System Manager an individual within the onsite work organization who shall be responsible for overall management of CQC and have the authority to act in all CQC matters for the Contractor. The CQC System Manager shall be a graduate engineer, graduate architect, or a graduate of construction management, with a minimum of 8 years construction experience on construction similar to this contract. This CQC System Manager shall be on the site at all times during construction and shall be employed by the prime Contractor. The CQC System Manager shall be assigned no other duties. An alternate for the CQC System Manager shall be identified in the plan to serve in the event of the System Manager's absence. The requirements for the alternate shall be the same as for the designated CQC System Manager.

3.4.3 CQC Personnel

In addition to CQC personnel specified elsewhere in the contract, the Contractor shall provide as part of the CQC organization specialized personnel to assist the CQC System Manager for the following areas: electrical, mechanical, civil, submittals clerk. These individuals shall be directly employed by the prime contractor; be responsible to the CQC System Manager; be physically present at the construction site during work on their areas of responsibility; have the necessary education and/or experience in accordance with the experience matrix listed herein. These individuals shall have no other duties other than quality control and shall be physically present at the construction site during work on their areas of responsibility, or no later than 60 days after notice to proceed, whichever is earlier.

Experience Matrix

Area	Qualifications
a. Civil	Graduate Civil Engineer with 5 years' experience in the type of work being performed on this project or technician with 10 years' related experience
b. Mechanical	Graduate Mechanical Engineer with 5 years' experience or person with 10 years' related experience
c. Electrical	Graduate Electrical Engineer with 5 years' related experience or person with 10 years' related experience
d. Submittals	Submittal Clerk with 3 years' experience

3.4.4 Additional Requirement

In addition to the above experience and education requirements the CQC System Manager or the principal member of the CQC staff shall have completed the course entitled "Construction Quality Management For Contractors." This course is periodically offered on a quarterly basis within the Savannah District boundaries. CQC System Managers who have not successfully completed this course must attend the next available training session. Failure to successfully complete this training within the next available training date will be grounds for removal as CQC System Manager. There is currently a nominal fee to cover the cost of the training materials for Contractors who have current contracts with the Savannah District.

3.4.5 Organizational Changes

The Contractor shall maintain the CQC staff at full strength at all times. When it is necessary to make changes to the CQC staff, the Contractor shall revise the CQC Plan to reflect the changes and submit the changes to the Contracting Officer for acceptance.

3.5 SUBMITTALS

Submittals shall be made as specified in Section 01330 SUBMITTAL PROCEDURES. The CQC organization shall be responsible for certifying that all submittals are in compliance with the contract requirements.

3.6 CONTROL

Contractor Quality Control is the means by which the Contractor ensures that the construction, to include that of subcontractors and suppliers, complies with the requirements of the contract. At least three phases of control shall be conducted by the CQC System Manager for each definable feature of work as follows:

3.6.1 Preparatory Phase

This phase shall be performed prior to beginning work on each definable feature of work, after all required plans/documents/materials are approved/accepted, and after copies are at the work site. This phase shall include:

a. A review of each paragraph of applicable specifications.

b. A review of the contract drawings.

c. A check to assure that all materials and/or equipment have been tested, submitted, and approved.

d. Review of provisions that have been made to provide required control inspection and testing.

e. Examination of the work area to assure that all required preliminary work has been completed and is in compliance with the contract.

f. A physical examination of required materials, equipment, and sample work to assure that they are on hand, conform to approved shop drawings or submitted data, and are properly stored.

g. A review of the appropriate activity hazard analysis to assure safety requirements are met.

h. Discussion of procedures for controlling quality of the work including repetitive deficiencies. Document construction tolerances and workmanship standards for that feature of work.

i. A check to ensure that the portion of the plan for the work to be performed has been accepted by the Contracting Officer.

j. Discussion of the initial control phase.

k. The Government shall be notified at least 48 hours in advance of beginning the preparatory control phase. This phase shall include a meeting conducted by the CQC System Manager and attended by the superintendent, other CQC personnel (as applicable), and the foreman responsible for the definable feature. The results of the preparatory phase actions shall be documented by separate minutes prepared by the CQC System Manager and attached to the daily CQC report. The Contractor shall instruct applicable workers as to the acceptable level of workmanship required in order to meet contract specifications.

3.6.2 Initial Phase

This phase shall be accomplished at the beginning of a definable feature of work. The following shall be accomplished:

a. A check of work to ensure that it is in full compliance with contract requirements. Review minutes of the preparatory meeting.

b. Verify adequacy of controls to ensure full contract compliance. Verify required control inspection and testing.

c. Establish level of workmanship and verify that it meets minimum acceptable workmanship standards. Compare with required sample panels as appropriate.

d. Resolve all differences.

e. Check safety to include compliance with and upgrading of the safety plan and activity hazard analysis. Review the activity analysis with each worker.

f. The Government shall be notified at least 24 hours in advance of beginning the initial phase. Separate minutes of this phase shall be prepared by the CQC System Manager and attached to the daily CQC report. Exact location of initial phase shall be indicated for future reference and comparison with follow-up phases.

g. The initial phase should be repeated for each new crew to work onsite, or any time acceptable specified quality standards are not being met.

3.6.3 Follow-up Phase

Daily checks shall be performed to assure control activities, including control testing, are providing continued compliance with contract requirements, until completion of the particular feature of work. The checks shall be made a matter of record in the CQC

documentation. Final follow-up checks shall be conducted and all deficiencies corrected prior to the start of additional features of work which may be affected by the deficient work. The Contractor shall not build upon nor conceal non-conforming work.

3.6.4 Additional Preparatory and Initial Phases

Additional preparatory and initial phases shall be conducted on the same definable features of work if the quality of on-going work is unacceptable, if there are changes in the applicable CQC staff, onsite production supervision or work crew, if work on a definable feature is resumed after a substantial period of inactivity, or if other problems develop.

3.7 TESTS

3.7.1 Testing Procedure

The Contractor shall perform specified or required tests to verify that control measures are adequate to provide a product which conforms to contract requirements. Upon request, the Contractor shall furnish to the Government duplicate samples of test specimens for possible testing by the Government. Testing includes operation and/or acceptance tests when specified. The Contractor shall procure the services of a Corps of Engineers approved testing laboratory or establish an approved testing laboratory at the project site. The Contractor shall perform the following activities and record and provide the following data:

a. Verify that testing procedures comply with contract requirements.

b. Verify that facilities and testing equipment are available and comply with testing standards.

c. Check test instrument calibration data against certified standards.

d. Verify that recording forms and test identification control number system, including all of the test documentation requirements, have been prepared.

e. Results of all tests taken, both passing and failing tests, shall be recorded on the CQC report for the date taken. Specification paragraph reference, location where tests were taken, and the sequential control number identifying the test shall be given. If approved by the Contracting Officer, actual test reports may be submitted later with a reference to the test number and date taken. An information copy of tests performed by an offsite or commercial test facility shall be provided directly to the Contracting Officer. Failure to submit timely test reports as stated may result in nonpayment for related work performed and disapproval of the test facility for this contract.

3.7.2 Testing Laboratories

3.7.2.1 Capability Check

The Government reserves the right to check laboratory equipment in the proposed laboratory for compliance with the standards set forth in the contract specifications and to check the laboratory technician's testing procedures and techniques. Laboratories utilized for testing soils, concrete, asphalt, and steel shall meet criteria detailed in ASTM D 3740 and ASTM E 329.

3.7.2.2 Capability Recheck

If the selected laboratory fails the capability check, the Contractor will be assessed a charge to reimburse the Government for each succeeding recheck of the laboratory or the checking of a subsequently selected laboratory. Such costs will be deducted from the contract amount due the Contractor.

3.7.3 Onsite Laboratory

The Government reserves the right to utilize the Contractor's control testing laboratory and equipment to make assurance tests and to check the Contractor's testing procedures, techniques, and test results at no additional cost to the Government.

3.7.4 Furnishing or Transportation of Samples for Testing

Costs incidental to the transportation of samples or materials shall be borne by the Contractor. Samples of materials for test verification and acceptance testing by the Government shall be delivered to the following address:

US Army Engineer District, Savannah
Environmental & Materials Unit
200 North Cobb Parkway
Building 400, Suite 404
Marietta, GA 30062

3.8 COMPLETION INSPECTION

3.8.1 Punch-Out Inspection

Near the completion of all work or any increment thereof established by a completion time stated in the Special Clause entitled "Commencement, Prosecution, and Completion of Work," or stated elsewhere in the specifications, the CQC System Manager shall conduct an inspection of the work and develop a punch list of items which do not conform to the approved drawings and specifications. Such a list of deficiencies shall be included in the CQC documentation, as required by paragraph DOCUMENTATION below, and shall include the estimated date by which the

deficiencies will be corrected. The CQC System Manager or staff shall make a second inspection to ascertain that all deficiencies have been corrected. Once this is accomplished, the Contractor shall notify the Government that the facility is ready for the Government Pre-Final inspection.

3.8.2 Pre-Final Inspection

The Government will perform this inspection to verify that the facility is complete and ready to be occupied. A Government Pre-Final Punch List may be developed as a result of this inspection. The Contractor's CQC System Manager shall ensure that all items on this list have been corrected before notifying the Government so that a Final inspection with the customer can be scheduled. Any items noted on the Pre-Final inspection shall be corrected in a timely manner. These inspections and any deficiency corrections required by this paragraph shall be accomplished within the time slated for completion of the entire work or any particular increment thereof if the project is divided into increments by separate completion dates.

3.8.3 Final Acceptance Inspection

The Contractor's Quality Control Inspection personnel, plus the superintendent or other primary management person, and the Contracting Officer's Representative shall be in attendance at this inspection. Additional Government personnel including, but not limited to, those from Base/Post Civil Facility Engineer user groups, and major commands may also be in attendance. The final acceptance inspection will be formally scheduled by the Contracting Officer based upon results of the Pre-Final inspection. Notice shall be given to the Contracting Officer at least 14 days prior to the final acceptance inspection and shall include the Contractor's assurance that all specific items previously identified to the Contractor as being unacceptable, along with all remaining work performed under the contract, will be complete and acceptable by the date scheduled for the final acceptance inspection. Failure of the Contractor to have all contract work acceptably complete for this inspection will be cause for the Contracting Officer to bill the Contractor for the Government's additional inspection cost in accordance with the contract clause titled "Inspection of Construction".

3.9 DOCUMENTATION

The Contractor shall maintain current records providing factual evidence that required quality control activities and/or tests have been performed. These records shall include the work of subcontractors and suppliers and shall be on an acceptable form that includes, as a minimum, the following information:

a. Contractor/subcontractor and their area of responsibility.

b. Operating plant/equipment with hours worked, idle, or down for repair.

c. Work performed each day, giving location, description, and by whom. When Network Analysis (NAS) is used, identify each phase of work performed each day by NAS activity number.

d. Test and/or control activities performed with results and references to specifications/drawings requirements. The control phase should be identified (Preparatory, Initial, Follow-up). List deficiencies noted along with corrective action.

e. Quantity of materials received at the site with statement as to acceptability, storage, and reference to specifications/drawings requirements.

f. Submittals reviewed, with contract reference, by whom, and action taken.

g. Off-site surveillance activities, including actions taken.

h. Job safety evaluations stating what was checked, results, and instructions or corrective actions.

i. Instructions given/received and conflicts in plans and/or specifications.

j. Contractor's verification statement.

These records shall indicate a description of trades working on the project; the number of personnel working; weather conditions encountered; and any delays encountered. These records shall cover both conforming and deficient features and shall include a statement that equipment and materials incorporated in the work and workmanship comply with the contract. The original and one copy of these records in report form shall be furnished to the Government daily within 24 hours after the date covered by the report, except that reports need not be submitted for days on which no work is performed. As a minimum, one report shall be prepared and submitted for every 7 days of no work and on the last day of a no work period. All calendar days shall be accounted for throughout the life of the contract. The first report following a day of no work shall be for that day only. Reports shall be signed and dated by the CQC System Manager. The report from the CQC System Manager shall include copies of test reports and copies of reports prepared by all subordinate quality control personnel.

3.10 SAMPLE FORMS

Sample forms are enclosed at the end of Section 00800.

3.11 NOTIFICATION OF NONCOMPLIANCE

The Contracting Officer will notify the Contractor of any detected noncompliance with the foregoing requirements. The Contractor shall take immediate corrective action

after receipt of such notice. Such notice, when delivered to the Contractor at the work site, shall be deemed sufficient for the purpose of notification. If the Contractor fails or refuses to comply promptly, the Contracting Officer may issue an order stopping all or part of the work until satisfactory corrective action has been taken. No part of the time lost due to such stop orders shall be made the subject of claim for extension of time or for excess costs or damages by the Contractor.

CEGS-01500/S (February 1997)

SECTION 01500

TEMPORARY CONSTRUCTION FACILITIES
02/97

PART 1 GENERAL

1.1 GENERAL REQUIREMENTS

1.1.1 Site Plan

The Contractor shall prepare a site plan indicating the proposed location and dimensions of any area to be fenced and used by the Contractor, the number of trailers to be used, avenues of ingress/egress to the fenced area and details of the fence installation. Any areas which may have to be graveled to prevent the tracking of mud shall also be identified. The Contractor shall also indicate if the use of a supplemental or other staging area is desired.

1.1.2 Identification of Employees

The Contractor shall be responsible for furnishing to each employee, and for requiring each employee engaged on the work to display, identification as approved and directed by the Contracting Officer. Prescribed identification shall immediately be delivered to the Contracting Officer for cancellation upon release of any employee. When required, the Contractor shall obtain and provide fingerprints of persons employed on the project. Contractor and subcontractor personnel shall wear identifying markings on hard hats clearly identifying the company for whom the employee works.1.1.3 Employee Parking

Contractor employees shall park privately owned vehicles in an area designated by the Contracting Officer. This area will be within reasonable walking distance of the construction site. Contractor employee parking shall not interfere with existing and established parking requirements of the military installation.

1.2 SUBMITTALS

Government approval is required for submittals with a "G" designation; submittals not having a "G" designation are for information only. When used, a designation following the "G" designation identifies the office that will review the submittal for the Government. The following shall be submitted in accordance with Section 01330 SUBMITTAL PROCEDURES:

SD-06 Test Reports

Termiticide Application Report; G, RE

Completed Fort Bragg Termiticide Application Report (no form number) for each structure receiving termiticide treatment.

1.4 AVAILABILITY AND USE OF UTILITY SERVICES (FORT BRAGG)

1.4.1 Payment for Utility Services

The Government will make all reasonably required utilities available to the Contractor from existing outlets and supplies, as specified in the contract. Unless otherwise provided in the contract, the amount of each utility service consumed shall be charged to and paid for by the Contractor at the prevailing rates. The rates listed below are current as of September 2002 and are subject to change. The Contractor shall carefully conserve all utilities furnished.

1.4.2 Meters and Temporary Connections

The Contractor, at its expense and in a manner satisfactory to the Contracting Officer, shall provide and maintain necessary temporary connections, distribution lines, and meters required to measure the amount of each utility used for the purpose of determining charges. The Contractor shall notify the Contracting Officer's Representative, in writing, 10 working days before the temporary connection is made so that a utilities contract can be established. The Contracting Officers Representative will then provide the contractor with the name and phone number of who to contact for setting up the utility contract. For temporary electrical connections the Government or applicable utility provider will provide the meter (meter base provided by contractor) and make the final hot connection after inspection and approval of the Contractor's temporary wiring installation. The Contractor shall not make the final electrical connection. For temporary water and sewer connections the contractor will provide the meter and after inspection/approval by the Contracting Officer's Representative make the final connection at the contractor's expense.

1.4.3 Use of Permanent Building Utility Connections

Utilities consumed by the contractor from permanent building utility connections shall also be metered and paid for by the contractor. When the permanent system is activated the initial meter reading shall be recorded and reported as specified below. On building renovation projects the initial meter reading shall be recorded when the contractor is given possession of the building to perform the work. The contractor shall pay for utilities consumed through the permanent building connection until the work has been completed or the government has occupied the facility, which ever occurs first.

1.4.4 Advance Deposit

An advance deposit for utilities consisting of an estimated month's usage or a minimum of $50.00 will be required. The last monthly bills for the fiscal year will normally be offset by the deposit and adjustments will be billed or returned as appropriate. Services to be rendered for the next fiscal year, beginning 1 October, will require a new deposit. Notification of the due date for this deposit will be mailed to the Contractor prior to the end of the current fiscal year.

1.4.5 Initial Meter Readings

Upon installation of the meter, the initial reading shall be recorded (in the presence of the Contracting Officer's Representative) and forwarded to the point of contact for utility service with a copy to the Contracting Officer's Representative.

1.4.6 Final Meter Reading

Before completion of the work and final acceptance of the work by the Government, the Contractor shall notify the Contracting Officer and the applicable utility provider, in writing, 10 working days before termination is desired. The Government or applicable utility provider will take a final meter reading. Electric service will be disconnected by the provider. Water and sewer connections will be disconnected by the contractor, at his expenses and by a method approved by the Contracting Officer's Representative. The Contractor shall then remove all the temporary distribution lines, meters, meter bases, and associated paraphernalia. The Contractor shall pay all outstanding utility bills before final acceptance of the work by the Government.

1.4.7 Requirement for Backflow Prevention on Temporary/Permanent Potable Water Connections

The contractor shall install a backflow prevention device on all connections to the potable water system. The backflow prevention device shall be a reduced pressure or double check type, meeting all the State code requirements for backflow preventers on potable water. If the contractor request the use of a fire hydrant and receives approval from the Contracting Officer's Representative a backflow prevention device and meter shall be installed prior to each use.

1.4.8 Utilities Charge Rates

Water ---------- $1.70 per 1,000 gallons
Electricity ------ $0.0657 per KW hour
Sewer ---------- $10.00/month for each connected trailer up to single wide size. The rate for larger trailers will be determined by the utility provider, however, this rate will not exceed $20.00/month per trailer.

1.4 BULLETIN BOARD, PROJECT SIGN, AND PROJECT SAFETY SIGN

1.4.1 Bulletin Board

Immediately upon beginning of work, the Contractor shall provide a weatherproof glass-covered bulletin board not less than 36 by 48 inches in size for displaying the Equal Employment Opportunity poster, a copy of the wage decision contained in the contract, Wage Rate Information poster, and other information approved by the Contracting Officer. The bulletin board shall be located at the project site in a conspicuous place easily accessible to all employees, as approved by the Contracting Officer. Legible copies of the aforementioned data shall be displayed until work is completed. Upon completion of work the bulletin board shall be removed by and remain the property of the Contractor.

1.4.2 Project Signs

The Contractor shall furnish and install a project sign at the location selected by the Contracting Officer. The project sign shall be painted on 1/2 inch thick exterior grade plywood. The sign layout shall be in accordance with the graphic format shown in Attachment 1 to Section 00800.

1.5 PROTECTION AND MAINTENANCE OF TRAFFIC

During construction the Contractor shall provide access and temporary relocated roads as necessary to maintain traffic. The Contractor shall maintain and protect traffic on all affected roads during the construction period except as otherwise specifically directed by the Contracting Officer. Measures for the protection and diversion of traffic, including the provision of watchmen and flagmen, erection of barricades, placing of lights around and in front of equipment and the work, and the erection and maintenance of adequate warning, danger, and direction signs, shall be as required by the State and local authorities having jurisdiction. The traveling public shall be protected from damage to person and property. The Contractor's traffic on roads selected for hauling material to and from the site shall interfere as little as possible with public traffic. The Contractor shall investigate the adequacy of existing roads and the allowable load limit on these roads. The Contractor shall be responsible for the repair of any damage to roads caused by construction operations.

All commercial vehicles larger than a pickup, to include panel vans with no side or rear windows, are to enter Pope AFB, NC, through one of two locations (Knox Street or Longstreet Road) on Fort Bragg, NC, where the vehicles will be "scanned." Entry gates on Pope AFB will be Armistead and Reilly Road.

1.5.1 Haul Roads

The Contractor will be required to use the haul routes shown on the plans unless otherwise permitted in writing by the Contracting Officer. When haul routes are not

designated on the plans, the Contractor must obtain approval of the Contracting Officer of haul routes he intends to use. The Contractor shall maintain the haul routes and shall keep the dust problem under control by wetting the surface as needed. Sweeping and cleaning of pavements will be done as necessary to remove spillage resulting from the hauling operations. After all hauling has been completed, the Contractor shall restore the earth areas used for the haul routes to original condition by final grading, shaping, compacting, and grassing, and shall clean and sweep all paved areas as required. Any pavement damaged as a result of hauling operations under this contract for both the earth and other materials shall be promptly repaired by the Contractor, as approved by the Contracting Officer. The cost of maintenance and repair of the haul routes, as mentioned above, shall be considered as a subsidiary obligation of the Contractor. The axle load of earth hauling equipment operating on paved streets shall not exceed 18,000 pounds.

1.5.2 Barricades

The Contractor shall erect and maintain temporary barricades to limit public access to hazardous areas. Such barricades shall be required whenever safe public access to paved areas such as roads, parking areas or sidewalks is prevented by construction activities or as otherwise necessary to ensure the safety of both pedestrian and vehicular traffic. Barricades shall be securely placed, clearly visible with adequate illumination to provide sufficient visual warning of the hazard during both day and night.

1.6 CONTRACTOR'S TEMPORARY FACILITIES

1.6.1 Administrative Field Offices

The Contractor shall provide and maintain administrative field office facilities within the construction area at the designated site. Government office and warehouse facilities will not be available to the Contractor's personnel.

1.6.2 Storage Area

The Contractor shall construct a temporary 6 foot high chain link fence around trailers and materials. The fence shall include plastic strip inserts, colored brown, so that visibility through the fence is obstructed. Fence posts may be driven, in lieu of concrete bases, where soil conditions permit. Trailers, materials, or equipment shall not be placed or stored outside the fenced area unless such trailers, materials, or equipment are assigned a separate and distinct storage area by the Contracting Officer away from the vicinity of the construction site but within the military boundaries. Trailers, equipment, or materials shall not be open to public view with the exception of those items which are in support of ongoing work on any given day. Materials shall not be stockpiled outside the fence in preparation for the next day's work. Mobile equipment, such as tractors, wheeled lifting equipment, cranes, trucks,

and like equipment, shall be parked within the fenced area at the end of each workday.

1.6.3 Supplemental Storage Area

Upon Contractor's request, the Contracting Officer will designate another or supplemental area for the Contractor's use and storage of trailers, equipment, and materials. This area may not be in close proximity of the construction site but shall be within the military boundaries. Fencing of materials or equipment will not be required at this site; however, the Contractor shall be responsible for cleanliness and orderliness of the area used and for the security of any material or equipment stored in this area. Utilities will not be provided to this area by the Government.

1.6.4 Appearance of Trailers

Trailers utilized by the Contractor for administrative or material storage purposes shall present a clean and neat exterior appearance and shall be in a state of good repair. Trailers which, in the opinion of the Contracting Officer, require exterior painting or maintenance will not be allowed on the military property.

1.6.5 Maintenance of Storage Area

Fencing shall be kept in a state of good repair and proper alignment. Should the Contractor elect to traverse, with construction equipment or other vehicles, grassed or unpaved areas which are not established roadways, such areas shall be covered with a layer of gravel as necessary to prevent rutting and the tracking of mud onto paved or established roadways; gravel gradation shall be at the Contractor's discretion. Grass located within the boundaries of the construction site shall be mowed for the duration of the project. Grass and vegetation along fences, buildings, under trailers, and in areas not accessible to mowers shall be edged or trimmed neatly.

1.6.6 New Building

In the event a new building is constructed for the temporary project field office, it shall be a minimum 12 feet in width, 16 feet in length and have a minimum of 7 feet headroom. It shall be equipped with approved electrical wiring, at least one double convenience outlet and the required switches and fuses to provide 110-120 volt power. It shall be provided with a work table with stool, desk with chair, two additional chairs, and one legal size file cabinet that can be locked. The building shall be waterproof, shall be supplied with heater, shall have a minimum of two doors, electric lights, a telephone, a battery operated smoke detector alarm, a sufficient number of adjustable windows for adequate light and ventilation, and a supply of approved drinking water. Approved sanitary facilities shall be furnished. The windows and doors shall be screened and the doors provided with dead bolt type locking devices or a padlock and heavy duty hasp bolted to the door. Door hinge pins shall be non-removable. The windows shall be arranged to open and to be securely fastened from

the inside. Glass panels in windows shall be protected by bars or heavy mesh screens to prevent easy access to the building through these panels. In warm weather, air conditioning capable of maintaining the office at 50 percent relative humidity and a room temperature 20 degrees F below the outside temperature when the outside temperature is 95 degrees F, shall be furnished. Any new building erected for a temporary field office shall be maintained by the Contractor during the life of the contract and upon completion and acceptance of the work shall become the property of the Contractor and shall be removed from the site. All charges for telephone service for the temporary field office shall be borne by the Contractor, including long distance charges up to a maximum of $75.00 per month.

1.6.7 Security Provisions

Adequate outside security lighting shall be provided at the Contractor's temporary facilities. The Contractor shall be responsible for the security of its own equipment; in addition, the Contractor shall notify the appropriate law enforcement agency requesting periodic security checks of the temporary project field office.

1.7 OMITTED

1.8 PLANT COMMUNICATION

Whenever the Contractor has the individual elements of its plant so located that operation by normal voice between these elements is not satisfactory, the Contractor shall install a satisfactory means of communication, such as telephone or other suitable devices. The devices shall be made available for use by Government personnel.

1.9 TEMPORARY PROJECT SAFETY FENCING

As soon as practicable, but not later than 15 days after the date established for commencement of work, the Contractor shall furnish and erect temporary project safety fencing at the work site. The safety fencing shall be a high visibility orange colored, high density polyethylene grid or approved equal, a minimum of 42 inches high, supported and tightly secured to steel posts located on maximum 10 foot centers, constructed at the approved location. The safety fencing shall be maintained by the Contractor during the life of the contract and, upon completion and acceptance of the work, shall become the property of the Contractor and shall be removed from the work site.

1.10 OMITTED

1.11 TERMITICIDE APPLICATION REPORT

A Termiticide Application Report (no form number) shall be completed for each structure receiving termiticide treatment. The Contractor shall obtain the form from

the Fort Bragg PWBC pest management coordinator through the Contracting Officer. All requested information shall be provided in detail. The location of application shall be clearly designated, e.g., building number, name, or address. If necessary, provide a map showing location of structure with the report.

1.12 INSTALLATION REGULATIONS

The employees of the Contractor will be required to abide by all installation regulations as published by the Commanding Officer. A copy of these regulations can be obtained from the Area/Resident Engineer at the installation. All costs in connection therewith shall be included in the contract price for the work.

1.13 TESTING LABORATORIES

Testing is required to be performed by the Contractor as part of his Quality Control Program to verify contract compliance. This Quality Control Testing is to be conducted by a project or commercial laboratory which has been found adequate and qualified by a Corps of Engineers Division Laboratory Inspection Team.

1.13.1 Approved Testing Laboratories

A composite listing of approved testing laboratories within the Savannah District is available upon request. The Contractor should engage the services of a laboratory contained in the composite list. Contractors may obtain the list by calling (678) 354-0310. Fax requests can be made to number (678) 354-0330.

1.13.2 Other Laboratory Services

The Contractor may engage the services of a laboratory other than those approved by Corps of Engineers District Laboratory Inspection Team if they comply with the following:

a. The Contractor identifies and proposes the unapproved laboratory a minimum of 90 days prior to the start of testing. This time is necessary to allow for scheduling an inspection by a Corps of Engineers District Laboratory team. The time for Government inspection will not be the basis for an increase in the contract performance period.

b. All costs of Government inspection shall be the responsibility of the Contractor.

c. The Contractor may request Government inspection and approval prior to award by forwarding a written request to:

US Army Engineer District, Savannah
Environmental and Materials Unit

200 North Cobb Parkway
Building 400, Suite 404
Marietta, GA 30062

1.15 ENVIRONMENTAL EVALUATION FOR SITE CONTAMINATION - CATEGORY I

1.15.1 Site Evaluation

The job site has been evaluated for potential site contamination. The site is located in a traditionally nonhazardous location. The installation has no reason to suspect contamination.

1.15.2 Contractual Responsibilities of All Parties in the Event of Encounter with Contamination

If the Contractor encounters materials or conditions which indicate that there may be contamination on the site, the Contractor shall stop all work on the job site and report the discovery of the contaminants to the Contracting Officer's Representative (COR). The COR, will issue a written order to the Contractor to resume work or to suspend, delay, or interrupt all or any part of the work of this contract for the period of time that the Contracting Officer determines appropriate for the convenience of the Government as provided in FAR 52.242-14 - SUSPENSION OF WORK. The Government will be responsible for making an assessment of the contaminated site if this course of action is determined to be appropriate. After the assessment has been completed, the Government reserves the right to the following courses of action:

a. Direct the Contractor to resume work.

b. Clean up the contaminated site prior to directing the Contractor to resume work. The COR will determine whether the cleanup is to be accomplished by others or the Contractor.

c. Relocate the project site.

d. Terminate the contract for the convenience of the Government as provided in FAR 52.249-1 - TERMINATION FOR CONVENIENCE OF THE GOVERNMENT (FIXED-PRICE) (SHORT FORM) or FAR 52.249-2 - TERMINATION FOR CONVENIENCE OF THE GOVERNMENT (FIXED-PRICE) - ALTERNATE I as applicable.

1.20 CONSTRUCTION SCHEDULE RESTRAINTS - FORT BRAGG, NC

1.20.1 Occupancy

It is the intent of these provisions to provide for maximum coordination between construction activities pursuant to this contract and concurrent ongoing routine

activities of base personnel. Interference with and inconvenience to the occupants or routine of the facility shall be held to an absolute minimum.

1.20.2 Protection

Contractor is responsible to provide such covering, shields and barricades as are required to protect building occupants, equipment, stores, supplies, etc., from dust, debris, weather intrusion, water, moisture or other cause of damage resulting from construction.

1.20.3 Phasing and Sequence

1.20.3.1 General

In addition to the submittals required by clause SCHEDULES FOR CONSTRUCTION CONTRACTS (see SECTION 00700, FAR 52.236-15) the Contractor shall submit for approval a summary work schedule setting forth schedule dates for initiation and completion of construction in each work area. No work shall be performed prior to approval of this schedule and all work shall be performed in strict adherence thereto. If departures from this schedule appear to be required or desired, the Contracting Officer shall be promptly notified and his approval will be required prior to implementation of said departure(s).

1.20.3.2 Special Work Restraints

None.

1.20.4 Time of Performance

1.20.4.1 Access to Buildings

All work requiring access to building interiors excluding attics, crawl spaces, etc., and all other work shall be performed between 7:30 a.m. and 4 p.m. (normal working hours for base where project is located) excluding official holidays, unless otherwise indicated or approved by the Contracting Officer. Requests to work during other than these normal hours shall be made in writing at least 48 hours in advance. For example, a request to work on a Saturday shall be submitted no later than Thursday at noon.

1.20.4.2 Work Requiring Outages

Work requiring outages of utilities or building systems will be accomplished during normal working hours in accordance with prior approved schedule(s).

1.20.5 Contractor Vehicle/Equipment Access to Fort Bragg

Fort Bragg is not a closed installation, but vehicular access is controlled. Contractors are required to register each vehicle that will be traveling installation roads or streets under its own power. Each such vehicle shall have a registration decal. Registration may be accomplished at the Main Vehicle Registration Center, building 8-1078 on Randolph Street near Bragg Boulevard, 0800-1700 hours Monday through Friday. Unregistered vehicles may be stopped and delayed at any time anywhere on Fort Bragg, but permanent vehicular check-points will be located at Zabitosky and All-American Expressway (with likely closure of Reilly Road exit), Bragg Boulevard and Butner Road, Reilly Road (Canopy), and Yadkin Road. Contractors should expect possible delays in passing through these locations, even if registered.

1.20.6 Outages

Contractor's work requiring outages of utility systems or building systems will require 2 weeks' advance notice and will be subject to the approval of the Contracting Officer. Contractor will be held responsible for unauthorized utility disruptions that cause damage or loss to the Government's real property, equipment, or operations. The Contractor will be held responsible for utility disruptions that extend beyond this period.

Limits of Duration:

Water ---------- 4 hours
Sewer ---------- 4 hours
Electricity ---------- 4 hours
Natural Gas: Seasons to be determined by Fort Bragg PWBC
During heating season -- 3 hours
During cooling season -- 6 hours
LP Gas: Seasons to be determined by Fort Bragg PWBC
During heating season -- 3 hours
During cooling season -- 6 hours
#2 Fuel Oil: Seasons to be determined by Fort Bragg PWBC
During heating season -- 3 hours
During cooling season -- 6 hours
High Temperature Water (HTW): Seasons to be determined by Fort Bragg PWBC
During heating season -- 3 hours
During cooling season -- 6 hours
Steam: Seasons to be determined by Fort Bragg PWBC
During heating season -- 3 hours
During cooling season -- 6 hours
Chilled Water: Seasons to be determined by Fort Bragg PWBC
During heating season -- 3 hours
During cooling season -- 6 hours

*The cooling season at Fort Bragg is 1 May through 1 October. The heating season at Fort Bragg is 1 October through 1 May.

The Contractor shall provide temporary utilities systems for any utility outage longer than the limits of duration shown above.

1.20.7 Continuity

All tools, labor and materials required to complete any item of work within a given work area or requiring an outage of any building utility or system, shall be available at the site prior to commencement thereof. Once work has commenced on an item of work, said work shall be continuously and diligently performed to completion and acceptance. Breaks in work to be negotiated with the Contracting Officers Representative if other then Holidays.

1.20.8 Permits

1.20.8.1 Excavation Permits

An Excavation Permit, FB Form 1605, shall be presented to the Resident Engineer and approved by the Facilities Engineer 7 working days prior to any excavation that penetrates the ground by 6 or more inches. A sample of this form is included in Attachment 1 to Section 00800 or can be obtained from the Resident Office upon request. The Contractor shall contact the Resident Engineer's Office for an appointment for spotting of utility lines. A signed copy of the digging permit shall be kept on site at all times.

1.20.8.2 Disposal Permits

A permit is required to use the installation land clearing and inert debris and demolition landfills. Landfill permits shall be processed with the Environmental Branch of the PWBC Environmental and Natural Resources Division through the Contracting Officer. Permits are issued for the life of the specific contract only. Only materials produced on the project for which the permits are issued may be disposed of in the land clearing and inert debris and demolition landfills. The Contractor shall keep a copy of the completed permit with the vehicle throughout the contract disposal operation. Copies of the disposal permit forms will be provided at the Preconstruction Conference. The land clearing and inert debris and demolition debris disposal site locations are shown on the drawings.

1.20.8.3 Borrow Permits

A permit is required to use the Fort Bragg borrow material pits. Borrow pit permits shall be processed with the Environmental Branch of the PWBC Environmental and Natural Resources Division through the Contracting Officer. Permits are issued for the life of the specific contract only. Borrow materials may only be used on the

project for which the permits are issued. The Contractor shall keep a copy of the completed permit with the vehicle throughout the contract borrow operation. Copies of the borrow permit forms will be provided at the Preconstruction Conference. The borrow pit location is shown on the drawings.

1.20.9 Road and/or Railroad Closures

Road and/or railroad closures will require 2 weeks' advance written notice and be subject to the Contracting Officer's approval. Notice shall state reason for closure, date and time closure will commence and estimated duration of closure. A sketch shall be provided showing location of excavated area and placement of barricades and signs. Closures shall be limited to a maximum of 5 calendar days. Kendenburg Street, Ardennes Road, and 6th Street from Kendenberg Street to Gruber Road are closed all year round Monday through Friday between the hours of 6:30 a.m. and 7:45 a.m.

1.20.10 Landfills

1.20.10.1 Land Clearing and Inert Debris (LCID) Landfill

The land clearing and inert debris (LCID) landfill is permitted for disposal of yard waste (pine needles, limbs, trees, untreated wood, unpainted wood), inert debris (bricks, concrete, rubble, glass, concertina wire), and uncontaminated soil.

1.20.10.2 Demolition Landfill

The demolition landfill is permitted for disposal of construction and renovation debris: buildings, asphalt, painted and treated wood, incidental scrap metals, shingles, and debris incidental to construction such as cement or joint compound bags, plastic pails or metal cans or drums, insulation, and wallboard.

1.20.10.3 Transfer Station

White goods (appliances), tires, aluminum cans, and municipal solid waste (such as paper, plastic, cardboard, or household garbage) must be disposed of at the transfer station. Special arrangements must be made with the Environmental Branch of the PWBC Environmental and Natural Resources Division through the Contracting Officer to dispose of liquids, hazardous waste, and tires.

1.20.10.4 Disposal of Asbestos

Non-friable asbestos can be disposed of in the demolition landfill. Friable asbestos must be double bagged and disposed of in the section of the demolition landfill designated for that purpose.

1.20.10.5 Municipal Solid Waste (MSW)

Municipal solid waste (MSW) shall be disposed of in dumpsters (either Fort Bragg's or the contractor's) designated for MSW or at the Fort Bragg transfer station. Operating hours for the transfer station are 7:30 a.m. to 3:00 p.m. MSW shall be defined as any wastes other than those described above, to include garbage, vegetable waste and containers thereof resulting from the handling, preparation, cooking and consumption of foods, and excess quantities of paper, plastic, and cardboard (construction material packaging is acceptable).

1.20.10.6 Trash Containers

All trash containers on the job site must be covered at all times to ensure that trash does not blow around. In addition, all light/loose material will be secured such that it will not blow around during windy weather.

1.20.10.7 Construction Debris Leaving Site

All construction debris/trash that leaves the project site will be covered from the time that it leaves the construction site. Any mud or soil which leaves the project site will be cleaned up by the Contractor immediately upon discovery or notification of such an occurrence.

1.20.11 Landforms

Contractor will be required to maintain existing landforms, drainage patterns, and healthy, mature vegetation to the maximum extent possible and will replace damaged vegetation, sod, and ground cover.

1.20.12 Topsoil

Any suitable topsoil stripped from the site during the course of work will be stockpiled onsite for reuse. Any excess topsoil remaining upon completion of project will be stockpiled in the DPW compound.

1.20.13 Unforeseen Site Conditions

Any unforeseen site conditions, unmapped utility systems, or historical/archeological items encountered during site surveys, soil borings, or construction excavation will be reported to the Contracting Officer.

1.20.14 Replacement

The Contractor shall be held responsible for the replacement of any utility systems, facilities, or Government equipment damaged during the course of the contract.

1.20.15 Mowing

The Contractor will mow the grass on the construction site weekly or when the following conditions warrant: centipede grass will be maintained to a maximum height of 2 inches and a minimum height of 1 inch; all other grasses will be mowed to keep the height of the grass to a maximum of 4 inches and a minimum of 2 inches.

1.20.16 Communications Systems

The Director of Information Management will be notified through the Contracting Officer's Representative of the preparatory meeting for the communications system.

1.27 COLOR BOARDS

Five sets of color boards shall be submitted, in addition to samples required elsewhere. Such submittals shall be made not later than 60 days prior to approval date required to achieve compliance with approved project schedule. Each set of boards shall include samples of colors and finishes of all exterior and interior building surfaces such as walls, toilet partitions, floors and ceilings. The samples will be presented on 8-inch by 10-1/2-inch boards (modules) with a maximum spread of 24 inches by 31-1/2 inches for foldouts. The modules shall be designed to fit in a standard looseleaf, three-ring binder. If more space is needed, more than one board per set may be submitted. The Contractor shall certify that he has reviewed the color samples in detail and that they are in strict accordance with the contract drawings and specifications, except as may be otherwise explicitly stated. If multiple material and finish (color) schemes are required, samples shall be identified by scheme and coordinated to room names and numbers shown on the architectural floor plans and room finish and color schedule. Submittal of the color boards shall not relieve the Contractor of the responsibility to submit the samples required by technical specifications.

1.28 OMITTED

1.29 OMITTED

1.30 REQUEST FOR INFORMATION (RFI) SYSTEM

The Government has developed an electronic database, the Request for Information (RFI) System, to track and answer Contractor questions, requests for information and clarifications during construction. The use of the RFI System for all requests (the Contractor's as well as the subcontractors'/suppliers') is a contractual requirement for this project. The Contractor will enter the system over the Internet using a WEB browser such as Internet Explorer 5.0 or newer or Netscape 4.7 or newer and any Internet service provider. The Government will provide the Contractor a user identification and password for the system that will only allow the Contractor to enter and view the requests for this project. The Contractor will provide the Government

the E-mail address for the individual(s) inputting into the system in order that E-mail messages can be sent from the Government to the Contractor indicating a response to the request. The Government will provide instructions in the use of the RFI system. The Contractor must fill in seven fields in the Contractor Data portion of the RFI form, which include Date Required, Priority, Short Description, Problem Description, Recommended Action, Cost, and Time. The Government will be notified through an E-mail message that the Contractor has entered a request into the system. When the Government has answered the request, an E-mail message will be sent informing the Contractor that the answer to the request is in the system. The Contractor will enter the system to retrieve the answer using the same procedure to enter the question. The RFI System assigns a unique number to each request. The Contractor will not be reimbursed separately for the required use of this system. The Contractor shall include any costs associated with the use of this system into their bid.

1.31 PROGRESS PHOTOGRAPHS

The Contractor shall, during the progress of the project, furnish the Contracting Officer progress photographs and color slides to depict progress of construction. The photographic work shall be performed by a qualified, established, commercial photographer. The photographs and slides shall be taken between the 1st and 5th day of each month and be delivered to the Contracting Officer not later than the 20th day of the same month taken. The photographs and slides shall be taken from not less than six positions for each month as selected by the Contracting Officer. They shall show, inasmuch as practicable, work accomplished during the previous month. The photographs shall be 8-inch by 10-inch color glossy prints and the slides 35 millimeter color slides. Each photograph shall be identified showing date made, contract title and number and a brief description of work depicted and shall be sequentially numbered. The identifying data shall be placed on the back of the prints. Slides shall have a number placed on the frame corresponding to the appropriate identified print, the name of the project, the date and a brief description of work depicted. No identifying data shall appear on the face of prints or in the viewing area of slides. One copy of each photograph and the corresponding negative and slide shall be furnished to the Contracting Officer by the time stipulated above. No separate payment will be made for these services and all costs in connection therewith shall be considered incidental to costs of the overall project.

1.32 CLEANUP

Construction debris, waste materials, packaging material and the like shall be removed from the work site daily. Any dirt or mud which is tracked onto paved or surfaced roadways shall be cleaned away. Materials resulting from demolition activities which are salvageable shall be stored within the fenced area described above or at the supplemental storage area. Stored material not in trailers, whether new or salvaged, shall be neatly stacked when stored.

1.33 RESTORATION OF STORAGE AREA

Upon completion of the project and after removal of trailers, materials, and equipment from within the fenced area, the fence shall be removed and will become the property of the Contractor. Areas used by the Contractor for the storage of equipment or material, or other use, shall be restored to the original or better condition. Gravel used to traverse grassed areas shall be removed and the area restored to its original condition, including top soil and seeding as necessary.

PART 2 PRODUCTS (NOT APPLICABLE)

PART 3 EXECUTION (NOT APPLICABLE)

-- End of Section --

SECTION 01780

CLOSEOUT SUBMITTALS

PART 1 GENERAL

1.1 SUBMITTALS

Government approval is required for submittals with a "G" designation; submittals not having a "G" designation are for information only. When used, a designation following the "G" designation identifies the office that will review the submittal for the Government. The following shall be submitted in accordance with Section 01330 SUBMITTAL PROCEDURES:

SD-02 Shop Drawings

As-Built Drawings; G, RE

Drawings showing final as-built conditions of the project. The final CADD as-built drawings shall consist of two sets of electronic CADD drawing files in the specified format on CD-ROM, two copies of the plotted drawing sets, and one set of the approved working as-built drawings. Deliver to the ACO.

The ACO will then deliver one set of electronic CADD drawing files on CD-ROM to Savannah District's Engineering Division for future use.

Remaining items mentioned above will be delivered by the ACO to the installation's PWBC for future use.

In addition to the requirements outlined in this section, provide one set of electronic CADD final as-built drawing files that have been converted to Auto-Cad Version 14 for the Major Command (U.S. Army Recruiting Command). The Contractor will ensure that the converted files accurately reflect the project as-built files and that no information has been lost or changed in the conversion process.

SD-03 Product Data

As-Built Record of Equipment and Materials; G, RE

Three copies of the record listing the as-built materials and equipment incorporated into the construction of the project.

Warranty Management Plan; G, RE

Two sets of the warranty management plan containing information relevant to the warranty of materials and equipment incorporated into the construction project,

including the starting date of warranty of construction. The Contractor shall furnish with each warranty the name, address, and telephone number of each of the guarantor's representatives nearest to the project location.

Warranty Tags; G, RE

Three record copies of the warranty tags showing the layout and design.

Final Cleaning; G, RE

Three copies of the listing of completed final clean-up items.

1.2 PROJECT RECORD DOCUMENTS

1.2.1 As-Built Drawings

This paragraph covers as-built drawings complete, as a requirement of the contract. The terms "drawings," "contract drawings," "drawing files," "working as-built drawings" and "final as-built drawings" refer to contract drawings, which are revised to be used for final as-built drawings.

1.2.1.1 Government Furnished Materials

One set of electronic CADD files in the specified software and format revised to reflect all bid amendments will be provided by the Government at the prework conference for projects requiring CADD file as-built drawings.

1.2.1.2 Working As-Built and Final As-Built Drawings

The Contractor shall revise two sets of paper drawings by red-line process to show the as-built conditions during the prosecution of the project. These working as-built marked drawings shall be kept current on a weekly basis and at least one set shall be available on the jobsite at all times. Changes from the contract plans which are made in the work or additional information, which might be uncovered in the course of construction, shall be accurately and neatly recorded as they occur by means of details and notes. Final as-built drawings shall be prepared after the completion of each definable feature of work as listed in the Contractor Quality Control Plan (foundations, utilities, structural steel, etc., as appropriate for the project). The working as-built marked prints and final as-built drawings will be jointly reviewed for accuracy and completeness by the Contracting Officer and the Contractor prior to submission of each monthly pay estimate. If the Contractor fails to maintain the working and final as-built drawings as specified herein, the Contracting Officer will deduct from the monthly progress payment an amount representing the estimated cost of maintaining the as-built drawings. This monthly deduction will continue until an agreement can be reached between the Contracting Officer and the Contractor regarding the accuracy and completeness of updated drawings. The working and final as-built drawings shall show, but shall not be limited to, the following information:

a. The actual location, kinds and sizes of all sub-surface utility lines. In order that the location of these lines and appurtenances may be determined in the event the surface openings or indicators become covered over or obscured, the as-built drawings shall show, by offset dimensions to two permanently fixed surface features, the end of each run including each change in direction. Valves, splice boxes and similar appurtenances shall be located by dimensioning along the utility run from a reference point. The average depth below the surface of each run shall also be recorded.

b. The location and dimensions of any changes within the building structure.

c. Correct grade, elevations, cross section, or alignment of roads, earthwork, structures or utilities if any changes were made from contract plans.

d. Changes in details of design or additional information obtained from working drawings specified to be prepared and/or furnished by the Contractor; including but not limited to fabrication, erection, installation plans and placing details, pipe sizes, insulation material, dimensions of equipment foundations, etc.

e. The topography, invert elevations and grades of drainage installed or affected as part of the project construction.

f. Changes or modifications, which result from the final inspection.

g. Where contract drawings or specifications present options, only the option selected for construction shall be shown on the final as-built prints.

h. If borrow material for this project is from sources on Government property, or if Government property is used as a spoil area, the Contractor shall furnish a contour map of the final borrow pit/spoil area elevations.

i. Systems designed or enhanced by the Contractor, such as HVAC controls, fire alarm, fire sprinkler, and irrigation systems.

j. Modifications (change order price shall include the Contractor's cost to change working and final as-built drawings to reflect modifications) and compliance with the following procedures.

(1) Directions in the modification for posting descriptive changes shall be followed.

(2) A Modification Circle shall be placed at the location of each deletion.

(3) For new details or sections, which are added to a drawing, a Modification Circle shall be placed by the detail or section title.

(4) For minor changes, a Modification Circle shall be placed by the area changed on the drawing (each location).

(5) For major changes to a drawing, a Modification Circle shall be placed by the title of the affected plan, section, or detail at each location.

(6) For changes to schedules or drawings, a Modification Circle shall be placed either by the schedule heading or by the change in the schedule.

(7) The Modification Circle size shall be 12.7 mm 1/2 inch diameter unless the area where the circle is to be placed is crowded. Smaller size circle shall be used for crowded areas.

1.2.1.3 Drawing Preparation

The as-built drawings shall be modified as may be necessary to correctly show the features of the project as it has been constructed by bringing the contract set into agreement with approved working as-built prints, and adding such additional drawings as may be necessary. These working as-built marked prints shall be neat, legible and accurate. These drawings are part of the permanent records of this project and shall be returned to the Contracting Officer after approval by the Government. Any drawings damaged or lost by the Contractor shall be satisfactorily replaced by the Contractor at no expense to the Government.

1.2.1.4 Computer Aided Design and Drafting (CADD) Drawings

Only personnel proficient in the preparation of CADD drawings shall be employed to modify the contract drawings or prepare additional new drawings. Additions and corrections to the contract drawings shall be equal in quality and detail to that of the originals. Line colors, line weights, lettering, layering conventions, and symbols shall be the same as the original line colors, line weights, lettering, layering conventions, and symbols. If additional drawings are required, they shall be prepared using the specified electronic file format applying the same graphic standards specified for original drawings. The title block and drawing border to be used for any new final as-built drawings shall be identical to that used on the contract drawings. Additions and corrections to the contract drawings shall be accomplished using CADD files. Electronic files will be supplied on compact disc, read-only memory (CD-ROM). The Contractor shall be responsible for providing all program files and hardware necessary to prepare final as-built drawings. The Contracting Officer will review final as-built drawings for accuracy and the Contractor shall make required corrections, changes, additions, and deletions.

a. When final revisions have been completed, the cover sheet drawing shall show the wording "RECORD DRAWING AS-BUILT" followed by the name of the Contractor and the contract number in letters at least 5 mm 3/16 inch high. All other contract drawings shall be marked “RECORD DRAWING” in the vicinity of the title block with either "AS-Built" drawing denoting no revisions on the sheet or "Revised As-Built" denoting one or more revisions indicated in the revision block. Original contract drawings shall be dated in the revision block.

b. Within 20 days for contracts $5 million and above after Government approval of all of the working as-built drawings for a phase of work, the Contractor shall prepare the final CADD as-built drawings for that phase of work and submit two sets of blue-lined prints of these drawings for Government review and approval. The Government will

promptly return one set of prints annotated with any necessary corrections. Within 10 days for contracts $5-million and above the Contractor shall revise the CADD files accordingly at no additional cost and submit one set of final prints for the completed phase of work to the Government. Within 20 days for contracts $5 million and above of substantial completion of all phases of work, the Contractor shall submit the final as-built drawing package for the entire project. The submittal shall consist of one set of electronic files on compact disc, read-only memory (CD-ROM), two sets of blue-line prints and one set of the approved working as-built. They shall be complete in all details and identical in form and function to the contract drawing files supplied by the Government. Any transactions or adjustments necessary to accomplish this are the responsibility of the Contractor. The Government reserves the right to reject any drawing files it deems incompatible with the customer's CADD system. Paper prints, drawing files and storage media submitted will become the property of the Government upon final approval. Failure to submit final as-built drawing files and marked prints as specified shall be cause for withholding any payment due the Contractor under this contract. Approval and acceptance of final as-built drawings shall be accomplished before final payment is made to the Contractor.

1.2.1.5 Omitted

1.2.1.6 Payment

No separate payment will be made for as-built drawings required under this contract, and all costs accrued in connection with such drawings shall be considered a subsidiary obligation of the Contractor.

1.2.2 As-Built Record of Equipment and Materials

The Contractor shall furnish two copies of preliminary record of equipment and materials used on the project 15 days prior to final inspection. This preliminary submittal will be reviewed and returned 2 days after final inspection with Government comments. Two sets of final record of equipment and materials shall be submitted 10 days after final inspection. The designations shall be keyed to the related area depicted on the contract drawings. The record shall list the following data:

RECORD OF DESIGNATED EQUIPMENT AND MATERIALS DATA

Description	Specification and Catalog, Model, and Serial Number	Manufacturer and Size	Composition	Where Section Used

1.2.3 Final Approved Shop Drawings

The Contractor shall furnish final approved project shop drawings 30 days after transfer of the completed facility.

1.2.4 Construction Contract Specifications

The Contractor shall furnish final as-built construction contract specifications, including modifications thereto, 30 days after transfer of the completed facility.

1.2.5 Real Property Equipment

The Contractor shall furnish a list of installed equipment furnished under this contract. The list shall include all information usually listed on manufacturer's nameplate. The "EQUIPMENT-IN-PLACE LIST" shall include, as applicable, the following for each piece of equipment installed: description of item, location (by room number), model number, serial number, capacity, name and address of manufacturer, name and address of equipment supplier, condition, spare parts list, manufacturer's catalog, and warranty. A draft list shall be furnished at time of transfer. The final list shall be furnished 30 days after transfer of the completed facility.

1.2.6 Preparation of DD Form 1354, “Transfer and Acceptance of Military Real Property.”

At the conclusion of the project, the Contractor will compile and furnish to the Contracting Officer all costs and quantity data of materials and systems furnished and installed. A list of items for which the costs and quantity data is required will be furnished to the Contractor. Such information will be returned to the Contracting Officer within 10 days from the receipt of the list.

1.3 WARRANTY MANAGEMENT

1.3.1 Warranty Management Plan

The Contractor shall develop a warranty management plan, which shall contain information relevant to the clause Warranty of Construction. At least 30 days before the planned pre-warranty conference, the Contractor shall submit the warranty management plan for Government approval. The warranty management plan shall include all required actions and documents to assure that the Government receives all warranties to which it is entitled. The plan shall be in narrative form and contain sufficient detail to render it suitable for use by future maintenance and repair personnel, whether tradesmen, or of engineering background, not necessarily familiar with this contract. The term "status" as indicated below shall include due date and whether item has been submitted or was accomplished. Warranty information made available during the construction phase shall be submitted to the Contracting Officer for approval prior to each monthly pay estimate. Approved information shall be assembled in a binder and shall be turned over to the Government upon acceptance of the work. The construction warranty period shall begin on the date of project acceptance and shall continue for the full product warranty period. A joint 4-month and 9-month warranty inspection shall be conducted, measured from time of acceptance, by the Contractor, Contracting Officer and the Customer Representative. Information contained in the warranty management plan shall include, but shall not be limited to, the following:

a. Roles and responsibilities of all personnel associated with the warranty process, including points of contact and telephone numbers within the organizations of the Contractors, subcontractors, manufacturers or suppliers involved.

b. Listing and status of delivery of all Certificates of Warranty for extended warranty items, to include roofs, HVAC balancing, pumps, motors, transformers, and for all commissioned systems such as fire protection and alarm systems, sprinkler systems, lightning protection systems, etc.

c. A list for each warranted equipment, item, and feature of construction or system indicating:

1. Name of item.

2. Model and serial numbers.

3. Location where installed.

4. Name and phone numbers of manufacturers or suppliers.

5. Names, addresses and telephone numbers of sources of spare parts.

6. Warranties and terms of warranty. This shall include 1 year overall warranty of construction. Items which have extended warranties shall be indicated with separate warranty expiration dates.

7. Cross-reference to warranty certificates as applicable.

8. Starting point and duration of warranty period.

9. Summary of maintenance procedures required to continue the warranty in force.

10. Cross-reference to specific pertinent operation and maintenance manuals.

11. Organization, names and phone numbers of persons to call for warranty service.

12. Typical response time and repair time expected for various warranted equipment.

d. The Contractor's plans for attendance at the 4- and 9-month post-construction warranty inspections conducted by the Government.

e. Procedure and status of tagging of all equipment covered by extended warranties.

f. Copies of instructions to be posted near selected pieces of equipment where operation is critical for warranty and/or safety reasons.

1.3.2 Performance Bond

The Contractor's performance bond shall remain effective throughout the construction period.

a. In the event the Contractor fails to commence and diligently pursue any construction warranty work required, the Contracting Officer will have the work performed by others, and after completion of the work, will charge the remaining construction warranty funds of expenses incurred by the Government while performing the work, including, but not limited to administrative expenses.

b. In the event sufficient funds are not available to cover the construction warranty work performed by the Government at the Contractor's expense, the Contracting Officer will have the right to recoup expenses from the bonding company.

c. Following oral or written notification of required construction warranty repair work, the Contractor shall respond in a timely manner. Written verification will follow oral instructions. Failure of the Contractor to respond will be cause for the Contracting Officer to proceed against the Contractor.

1.3.3 Pre-Warranty Conference

Prior to contract completion, and at a time designated by the Contracting Officer, the Contractor shall meet with the Contracting Officer to develop a mutual understanding with respect to the requirements of this section. Communication procedures for Contractor notification of construction warranty defects, priorities with respect to the type of defect, reasonable time required for Contractor response, and other details deemed necessary by the Contracting Officer for the execution of the construction warranty shall be established/reviewed at this meeting. In connection with these requirements and at the time of the Contractor's quality control completion inspection, the Contractor shall furnish the name, telephone number and address of a licensed and bonded company, which is authorized to initiate and pursue construction warranty work action on behalf of the Contractor. This point of contact will be located within the local service area of the warranted construction, shall be continuously available, and shall be responsive to Government inquiry on warranty work action and status. This requirement does not relieve the Contractor of any of its responsibilities in connection with other portions of this provision.

1.3.4 Contractor's Response to Construction Warranty Service Requirements

Following oral or written notification by the Contracting Officer, the Contractor shall respond to construction warranty service requirements in accordance with the "Construction Warranty Service Priority List" and the three categories of priorities listed below. The Contractor shall submit a report on any warranty item that has been repaired during the warranty period. The report shall include the cause of the problem, date reported, corrective action taken, and when the repair was completed. If the Contractor does not perform the construction warranty within the timeframes specified,

the Government will perform the work and back charge the construction warranty payment item established.

a. First Priority Code 1. Perform onsite inspection to evaluate situation, and determine course of action within 4 hours, initiate work within 6 hours and work continuously to completion or relief.

b. Second Priority Code 2. Perform onsite inspection to evaluate situation, and determine course of action within 8 hours, initiate work within 24 hours and work continuously to completion or relief.

c. Third Priority Code 3. All remaining work shall be initiated within 3 workdays and work progress shall be continuous to completion or relief.

d. The "Construction Warranty Service Priority List" is as follows:

Code 1-Air Conditioning Systems
(1) Recreational support.
(2) Air conditioning leak in part of building, if causing damage.
(3) Air conditioning system not cooling properly.

Code 1-Doors
(1) Overhead doors not operational, causing a security, fire, or safety problem.
(2) Interior, exterior personnel doors or hardware, not functioning properly, causing a security, fire, or safety problem.

Code 3-Doors
(1) Overhead doors not operational.
(2) Interior/exterior personnel doors or hardware not functioning properly.

Code 1-Electrical
(1) Power failure (entire area or any building operational after 1600 hours).
(2) Security lights
(3) Smoke detectors

Code 2-Electrical

(l) Power failure (no power to a room or part of building).

(2) Receptacle and lights (in a room or part of building).

Code 3-Electrical
Streetlights.

Code l-Gas
(l) Leaks and breaks.
(2) No gas to family housing unit or cantonment area.

Code l-Heat

(1). Area power failure affecting heat. (2). Heater in unit not working.

Code 2-Kitchen Equipment
(l) Dishwasher not operating properly.
(2) All other equipment hampering preparation of a meal.

Code 1-Plumbing
(1) Hot water heater failure.
(2) Leaking water supply pipes.

Code 2-Plumbing
(1) Flush valves not operating properly.
(2) Fixture drain, supply line to commode, or any water pipe leaking.
(3) Commode leaking at base.

Code 3-Plumbing
Leaky faucets.

Code 3-Interior
(1) Floors damaged.
(2) Paint chipping or peeling. (3) Casework.

Code 1-Roof Leaks
Temporary repairs will be made where major damage to property is occurring.

Code 2-Roof Leaks
Where major damage to property is not occurring, check for location of leak during rain and complete repairs on a Code 2 basis.

Code 2-Water (Exterior)
No water to facility.

Code 2-Water (Hot)
No hot water in portion of building listed.

Code 3-All other work not listed above.

1.3.5 Warranty Tags

At the time of installation, each warranted item shall be tagged with a durable, oil and water-resistant tag approved by the Contracting Officer. Each tag shall be attached with a copper wire and shall be sprayed with a silicone waterproof coating. The date of acceptance and the QC signature shall remain blank until project is accepted for beneficial occupancy. The tag shall show the following information.

a. Type of product/material _____.

b. Model number _____.

c. Serial number _____.

d. Contract number _____.

e. Warranty period from _____ to _____.

f. Inspector's signature _____.

g. Construction Contractor _____.

Address _____.

Telephone number _____.

h. Warranty contact _____.

Address _____.

Telephone number _____.

i. Warranty response time priority code _____.

j. WARNING - PROJECT PERSONNEL TO PERFORM ONLY OPERATIONAL MAINTENANCE
DURING THE WARRANTY PERIOD.

1.4 MECHANICAL TESTING, ADJUSTING, BALANCING, AND COMMISSIONING

Prior to final inspection and transfer of the completed facility; all reports, statements, certificates, and completed checklists for testing, adjusting, balancing, and commissioning of mechanical systems shall be submitted to and approved by the Contracting Officer as specified in applicable technical specification sections.

1.5 OPERATION AND MAINTENANCE MANUALS

Operation manuals and maintenance manuals shall be submitted as specified. Operation manuals and maintenance manuals provided in a common volume shall be clearly differentiated and shall be separately indexed.

1.6 FINAL CLEANING

The premises shall be left broom clean. Stains, foreign substances, and temporary labels shall be removed from surfaces. Carpet and soft surfaces shall be vacuumed. Equipment and fixtures shall be cleaned to a sanitary condition. Filters of operating

equipment shall be replaced. Debris shall be removed from roofs, drainage systems, gutters, and downspouts. Paved areas shall be swept and landscaped areas shall be raked clean. The site shall have waste, surplus materials, and rubbish removed. The project area shall have temporary structures, barricades, project signs, and construction facilities removed. A list of completed clean-up items shall be submitted on the day of final inspection.

PART 2 PRODUCTS (NOT USED)

PART 3 EXECUTION (NOT USED)

--End of Section --

SAVH-02013 (11/97)

SECTION 02013

ENVIRONMENTAL PROTECTION DURING CONSTRUCTION
11/97

PART 1 GENERAL

1.1 SCOPE

This section covers prevention of environmental pollution and damage to the environment as the result of construction operations under this contract and for those measures set forth in other technical provisions of these specifications. For the purpose of this specification, environmental pollution and damage to the environment is defined as the presence of chemical, physical, or biological elements or agents which adversely affect human health or welfare; unfavorably alter ecological balances of importance to human life; affect other species of importance to man; or degrade the utility of the environment for aesthetic, cultural, and/or historical purposes. The control of environmental pollution and damage requires consideration of the potential effects of an action upon air, water, and land resources, and includes management of visual aesthetics, natural and cultural resources, noise levels, solid waste, hazardous waste, toxic waste, radiant energy, and radioactive materials, as well as other pollutants.

1.2 QUALITY CONTROL

The Contractor shall establish and maintain quality control for environmental protection of all items set forth herein. The Contractor shall record on daily reports any problems in complying with laws, regulations, permit requirements, ordinances, and corrective action taken. The Contractor shall immediately inform the Contracting Officer of any environmental problem.

1.3 SUBMITTALS

The following shall be submitted in accordance with Section 01330 SUBMITTAL PROCEDURES.

1.3.1 Evironmental Protection Plan

Within 10 calendar days after the date of Notice of Award, the Contractor shall submit in writing an Environmental Protection Plan which must be approved by the Contracting Officer with input from the PWBC Environmental/Natural Resources Division prior to construction. The plan shall include, but is not limited to, the following:

1.3.2 Legal Requirements

A list of Federal, State, and local laws, regulations, and permits concerning environmental protection and pollution control and abatement that are applicable to the Contractor's proposed operations and the requirements imposed by those laws, regulations, and permits shall be included. Whenever there is a conflict between Federal, State, or local laws, regulations, and permit requirements, the more restrictive provision shall apply.

1.3.3 Protection of Features

The Contractor shall prepare a listing of methods to protect resources needing preservation within authorized work areas. These include natural vegetation such as trees, shrubs, vines, grasses, and ground cover; landscape features; air and water quality; fish and wildlife habitat; endangered species; and soil conservation, as well as historical, archaeological, and cultural resources.

1.3.4 Environmental Protection Procedures

Procedures to be implemented to provide the required environmental protection and to comply with the applicable laws and regulations shall be included. The Contractor shall set out the procedures to be followed to correct pollution of the environment due to accident, natural causes, or failure to follow the procedures set out in accordance with the Environmental Protection Plan.

1.3.5 Drawings

Drawings showing locations of any proposed temporary excavations or embankments for haul roads, stream crossings, material storage areas, temporary fuel tanks, sanitary facilities, and stockpiles of excess or spoil materials shall be included.

1.3.5.1 Work Area Plan

The drawings shall include a work area plan showing the proposed activity in each portion of the area and identifying the areas of limited use or nonuse. The plan should include measures for marking the limits of use areas.

1.3.5.2 Plan of Borrow Area(s)

The drawings shall be complete and include the site of the borrow areas.

1.3.6 Environmental Monitoring Management Plan

The Environmental Protection Plan shall include plans for monitoring environmental compliance for the job site, including land, water, air, noise, hazardous and toxic wastes, and materials and solid waste disposal.

1.3.7 Protection of Land Resources

Plan of protection for land resources as described in paragraph Protection of Land Resources of this specification shall be included.

1 3.8 PROTECTION OF SURFACE AND GROUND WATER

Methods of protecting surface and groundwater during construction activities as described in paragraph Protection of Water Resources of this specification shall be included.

1 3.9 PROTECTION OF AIR RESOURCES

Methods for protecting air resources as described in paragraph Protection of Air Resources of this specification shall be included.

1.3.10 Permit or License for Disposal

Permit or license for disposal and the location of the solid waste disposal area. See paragraph Disposal of Discarded Materials.

1.3.11 Certificate of Training

Certificate of training required by paragraph TRAINING OF CONTRACTOR PERSONNEL IN POLLUTION CONTROL.

1.3.12 Oil Spill Prevention and Contingency Plan

Oil Spill Prevention and Contingency Plan.

1.3.13 Personnel Responsible for Enviromental Plan

A statement as to the person who will be responsible for implementation of the Environmental Protection Plan. The Contractor personnel responsible shall report directly to the Contractor's top management and shall have the authority to act for the Contractor in all environmental protection matters.

1.4 IMPLEMENTATION

The Contracting Officer shall forward the Contractor's plan to the PWBC Environmental/Natural Resources Division for approval. Approval of the Contractor's plan will not relieve the Contractor of his responsibility for adequate and continuing control of pollutants and other environmental protection measures.

1.5 CONTRACTOR COMPLIANCE

1 5.1 PERMITS OBTAINED BY THE CONTRACTING OFFICER

The Contractor shall comply with all requirements under the terms and conditions set out in the following permit(s) obtained by the Contracting Officer:

State of North Carolina, Department of Environment, Health and Natural Resources.

Division of Land Resources, Land Quality Section, Erosion and Sedimentation Control Permit.

Division of Environmental Management, Sanitary Sewer Permit.

Division of Health Services, Water Supply Extension Permit.

1.5.2 Subcontractors

Assurance that subcontractors comply with the environmental protection requirements of this section will be the responsibility of the prime Contractor.

1.6 NOTIFICATION

The Contracting Officer will notify the Contractor in writing of any observed noncompliance with the aforementioned Federal, State, or local laws or regulations, permits, and other elements of the Contractor's Environmental Protection Plan. The Contractor shall, after receipt of such notice, inform the Contracting Officer of proposed corrective action and implement such action as approved. If the Contractor fails to comply promptly, the Contracting Officer may issue an order stopping all or part of the work until satisfactory corrective action has been taken. No time extensions shall be granted or costs or damages allowed to the Contractor for any such suspension.

1.7 PROTECTION OF ENVIRONMENTAL RESOURCES

The environmental resources within the project boundaries and those affected outside the limits of permanent work under this contract shall be protected during the entire period of this contract. The Contractor shall confine his activities to areas defined by the drawings and specifications. Environmental protection shall be as stated in the following subparagraphs:

1.7.1 Protection of Land Resources

Prior to the start of any construction, the Contractor shall identify all land resources to be preserved within the Contractor's work area. The Contractor shall not remove, cut,

deface, injure, or destroy land resources, including trees, shrubs, vines, grasses, topsoil, and landforms, without special permission from the Contracting Officer. No ropes, cables, or guys shall be fastened or attached to any trees for anchorage unless specifically authorized. Where such special emergency use is permitted, the Contractor shall provide effective protection for land and vegetation resources at all times.

1.7.1.1 Forest Resources

Merchantable timber and pine straw shall neither be cut nor removed from the construction site until it has been assessed by the Savannah District Timber Harvest office in conjunction with PWBC Forestry Branch. The Savannah District Timber Harvest Office will be given adequate time to arrange for the sale and removal of timber and pine straw. In the event that the Savannah District and Forestry Branch determine the amount or quality of timber or pine straw is not merchantable, they will inform the Contracting Officer. The Contracting Officer will authorize the Contractor to remove forest resources which are in the footprint of construction.

1.7.1.2 Work Area Limits

Prior to any construction, the Contractor shall mark the areas that are not required to accomplish all work to be performed under this contract. Isolated areas within the general work area which are to be saved and protected shall also be marked or fenced. Monuments and markers shall be protected before construction operations begin. Where construction operations are to be conducted during darkness, the markers shall still remain visible. The Contractor shall convey to his personnel the purpose of marking and/or protection of all necessary objects. Damage to protected areas/objects shall be repaired immediately by the Contractor at no additional cost to the Government.

1 7.1.3 PROTECTION OF LANDSCAPE

Trees, shrubs, vines, grasses, landforms, and other landscape features indicated and defined on the drawings to be preserved shall be clearly identified by marking, fencing, wrapping, or any other approved techniques.

1.7.1.4 Reduction of Exposure of Unprotected Erodible Soils

Earthwork brought to final grade shall be finished as indicated and specified. Side slopes and back slopes shall be protected as soon as practicable upon completion of rough grading. All earthwork shall be planned and conducted to minimize the duration of exposure of unprotected soils. Except in instances where the constructed feature obscures borrow areas, quarries, and waste material areas, these areas shall not initially be cleared in total. Clearing of such areas shall progress in reasonably sized increments as needed to use the areas as approved by the Contracting Officer.

1.7.1.4.1 Erosion and Sedimentation Control Plan

When the total area of land disturbed is 1 acre or more in size, an Erosion and Sedimentation Control Plan shall be prepared by the Contractor. The plan shall be prepared in accordance with North Carolina Administration Code, Title 15, Department of Natural and Economic Resources, Chapter 4, Sedimentation Control, January 1978. This plan is to be prepared, approved, and filed prior to the start of any land-disturbing activity. When the area to be disturbed is less than 1 acre, a formal plan will not be required; however, erosion and sedimentation control measures will be implemented.

1.7.1.5 Temporary Protection of Disturbed Areas

Such methods as necessary shall be utilized to effectively prevent erosion and control sedimentation at all times including, but not limited to, the following:

1.7.1.5.1 Control of Runoff

Runoff from the construction site shall be controlled by construction of diversion ditches, benches, and silt basins; by checking dams and berms to reduce the velocity and divert runoff to protected drainage courses; and by any measures required by area wide plans approved under Paragraph 208 of the Clean Water Act.

1.7.1.5.2 Sediment Basins

Sediment from construction areas shall be trapped in temporary or permanent sediment basin in accordance with basin plans shown on the drawings. They shall be constructed as approved by the Contracting Officer to prevent sedimentation of downstream or downslope areas.

1.7.1.5.3 Borrow Areas

Borrow areas on Government property shall be managed to minimize erosion and to prevent sediment from entering nearby water courses or lakes.

1.7.1.5.4 Spoil Areas

Spoil areas on Government property shall be managed and controlled to limit spoil to areas designated on the drawings and prevent erosion of soil or sediment from entering nearby water courses or lakes.

1.7.1.6 Disposal of Chemical Waste

The Contractor is responsible for the proper use, storage, and disposal of chemical material and waste in accordance with Fort Bragg Regulation 200-2. The PWBC

Environmental/Natural Resources Division has established the following requirements in order for the post to remain in compliance with hazardous waste requirements as established by both State of North Carolina and Federal environmental laws:

1.7.1.6.1 Compatible Containers

Chemical waste shall be contained and stored in aboveground compatible containers. Hazardous wastes shall not be stored underground. Any release or spill to the environment will be immediately reported to the Contracting Officer, PWBCFire Department at telephone (919) 396-3015 and to the PWNC Environmental/Natural Resources Division at telephone (919) 396-3372.

1.7.1.6.2 Recycling

The Contractor is encouraged to provide for recycling of waste through the Defense Reutilization and Marketing Office, Fort Bragg.

1.7.1.6.3 Chemical Analysis

The Contractor is responsible for obtaining chemical analysis of all chemical waste. All chemical waste shall be disposed of in accordance with Fort Bragg's Waste Analysis Plan. Sampling of suspected hazardous waste is required to determine the hazardous waste characterization of the material. The Contractor is required to notify the Contracting Officer 1 day before the samples are taken. Samples shall be delivered by the Contracting Officer to the PWBC Environmental/Natural Resources Division for transmittal to an independent analytical laboratory. The laboratory shall be listed in the Environmental Protection Plan approved by the Contracting Officer and PWBC Environmental/Natural Resources Division.

1.7.1.6.4 Nonhazardous Waste

Waste that has been certified as nonhazardous waste may be removed off the project site by the Contractor. This waste shall be disposed of in accordance with all applicable State of North Carolina requirements and U.S. Army Environmental Hygiene Agency guidance. The Contractor shall address the disposal method and location of the disposal site for each chemical waste in the Environmental Protection Plan for the project.

1.7.1.6.5 Hazardous Waste

Removal shall be performed by a licensed hazardous waste firm. The hazardous waste contractor shall prepare the hazardous waste manifest form for signature by the Environmental/Natural Resources Division before each shipment of hazardous waste.

1.7.1.6.6 Labeling

Each container of hazardous waste shall be immediately labeled with a hazardous waste label and marked with the current date once any hazardous waste is put in the container. The Contractor shall keep the containers closed and inspect them weekly for signs of rust or deterioration. Inspection results shall be documented. Additionally, the U.S. Department of Transportation shipping name shall be marked on each container before it is removed from Fort Bragg.

1.7.1.6.7 Training

The Contractor shall ensure that all of his employees who handle hazardous waste are trained in the management requirements for hazardous waste. Two hours of on-the-job training by the Fort Bragg Environmental/Natural Resources Division will be scheduled for the first Wednesday of each month. All Contractor employees physically handling or managing waste media shall receive this training.

1.7.1.7 Disposal of Discarded Materials

Discarded materials, other than those which can be included in the solid waste category, will be handled as directed by the Contracting Officer. Demolition debris shall be disposed of at the Fort Bragg Land Clearing and Inert Debris Landfill on Lamont Road, and materials contaminated by asbestos shall be contained and disposed of in the asbestos section of the Fort Bragg sanitary landfill on Longstreet Road. A permit from the PWBC Environmental/Natural Resources Division is required to dispose of materials in the landfills on post.

1.7.1.8 Disposal of Solid Wastes

Solid wastes (excluding clearing debris) shall be placed in containers which are emptied on a regular schedule. All handling and disposal shall be conducted to prevent contamination.

1.7.2 Preservation and Recovery of Historical, Archaeological, and Cultural Resources

Existing historical, archaeological, and cultural resources within the Contractor's work area will be designated by the Contracting Officer and precautions taken to preserve all significant resources as they existed at the time they were pointed out to the Contractor. The Contracting Officer's guidance shall be taken from the recommendations of the cultural resources survey produced for the project area by the Savannah District, U.S. Army Corps of Engineers. The Contractor shall install all protection for resources designated on the drawings and shall be responsible for their preservation during this contract.

1.7.2.1 Artifacts Discovered During Construction

Any unforeseen historical or archaeological finds encountered during Contractor operations shall be justification to cease all activity in the affected area. The Contracting Officer shall be promptly notified and shall notify the PWBC Environmental/Natural Resources Division. The Government will determine the significance of the findings, if necessary, after consultation with the North Carolina State Historic Preservation Officer, prior to authorizing the Contractor to resume operations in that area.

1.7.2.2 Cultural Resources Protected by Law

Cultural resources on Federal property are protected and managed by the Archaeological Resources Protection Act of 1979, and other applicable laws. Artifacts may be collected on Fort Bragg only after approval by the Contracting Officer and the PWBC Environmental/Natural Resources office as part of a controlled research design for scientific and cultural purposes. Collection for personal use is not authorized. Conviction subjects the violator to civil and criminal penalties.

1.7.3 Protection of Water Resources

The Contractor shall keep construction activities under surveillance, management, and control to avoid pollution of surface and ground waters. Special management techniques shall be implemented to control water pollution by any construction activities which are included in the performance of this contract.

1.7.3.1 Monitoring of Environmental Damage

Monitoring of water resources and wetland affected by construction activities shall be the responsibility of the Contractor. Wetland is intolerant to disturbance and will require special design and management to prevent encroachment. During construction, action will be required to maintain buffer areas and soil erosion control measures near water areas which could be adversely affected by construction activities.

1.7.3.2 Washing and Curing Water

Waste waters directly derived from construction activities shall not be allowed to enter water areas. These waste waters shall be collected and placed in retention ponds where suspended material can be settled out or the water evaporates so that pollutants are separated from the water.

1.7.3.3 Cofferdam and Diversion Operations

The Contractor shall plan his operation and perform all work necessary to minimize adverse impact or violation of the water quality standard for receiving streams - Tank

Creek. Construction operations for dewatering, removal of cofferdams, tailrace excavation, and tunnel closure shall be controlled at all times to limit the impact of water turbidity on the habitat for wildlife and impacts on water quality for downstream use.

1.7.3.4 Stream Crossings

Stream crossings shall be controlled during construction. Crossings shall provide movement of materials or equipment which do not violate water pollution control standards of the Federal, State or local government.

1.7.3.5 Monitoring of Water Areas

Monitoring of water areas affected by construction activities shall be the responsibility of the Contractor. All water areas affected by construction activities shall be monitored by the Contractor.

1 7.4 PROTECTION OF WILDLIFE AND WILDLIFE HABITAT

The Contractor shall keep construction activities under surveillance, management, and control to minimize interference with, disturbance to, and damage of wildlife. Information concerning any species that require specific attention, along with measures for their protection, will be provided by the PWBC Environmental/Natural Resources Division through the Contracting Officer to the Contractor prior to start of construction operations.

1.7.4.1 Endangered Species Act

The Federal Endangered Species Act of 1973, as amended in 1982, requires that Federal lands be assessed for impacts upon endangered species and that such species be managed and protected. Although there are a number of rare, threatened, or endangered plant and animal species on Fort Bragg which are listed by either the Federal or State Government, the species most often of concern are an endangered bird, the red-cockaded woodpecker (RCW) (Picoides borealis) and two endangered plants, the rough-leaf loosestrife (RLLS) (Lysimachia asperulaefolia) and Michaux's sumac (MS) (Rhus michauxii). Species proposed for listing under the provisions of the Federal Endangered Species Act are entitled to the same protection as those actually listed.

1.7.4.2 Red-Cockaded Woodpecker

The RCW is dependent upon large numbers of mature pine trees for its survival. The birds are not tolerant of disturbance. Their habitat is managed by the PWBC Environmental/Natural Resources Division, Endangered Species Branch. The habitat of the RCW is marked in the following manner: (1) cavity trees which are used by the birds for roosting and nesting are marked with two broad bands of red paint and (2)

each colony site is protected by a buffer area at least 200 feet in diameter around the cavity trees. Trees on the edge of the buffer area are marked with a single broad band of red paint. Fixed activity such as storage of construction materials, operation of concrete batch plants, or parking vehicles is not authorized inside the buffer area. Molesting the birds or damaging their habitat is a violation of the Endangered Species Act. Conviction can subject the violator to severe civil and criminal penalties.

1.7.4.3 Endangered Plants

Endangered plants area dependent for their survival upon specific environmental conditions such as soil type, slope aspect, moisture, and light. They are not tolerant of disturbance. Their habitat is managed by the PWBC Environmental/Natural Resources Division, Endangered Species Branch. Each colony site is protected by a buffer area at least 200 feet in diameter. Trees on the edge of the buffer area are marked with a single broad band of white paint. Fixed activity such as storage of construction materials, operation of concrete batch plants, or parking vehicles is prohibited inside the buffer area. Damaging the habitat of endangered plants is a violation of the Endangered Species Act. Conviction can subject the violator to severe civil and criminal penalties.

1.7.5 Protection of Air Resources

The Contractor shall keep construction activities under surveillance, management, and control to minimize pollution of air resources. All activities, equipment, processes, and work operated or performed by the Contractor in accomplishing the specified construction shall be in strict accordance with all State of North Carolina and Federal emission and performance laws and standards. Ambient Air Quality Standards set by the Environmental Protection Agency (EPA) shall be maintained for all construction operations and activities. The Contractor shall have sufficient functional equipment available to accomplish the task.

1.7.5.1 Particulars

Dust particles, aerosols, and gaseous byproducts from all construction activities and the processing and preparing of materials, such as from asphaltic batch plants, shall be controlled at all times.

1.7.5.2 Odors

Odors shall be controlled at all times for all construction activities, processing, and preparation of materials.

1.7.5.3 Air Quality

Monitoring of air quality shall be the responsibility of the Contractor. All air areas affected by the construction activities shall be monitored by the Contractor when directed by the Contracting Officer.

1.7.6 Reduction of Sound Intrusions

The Contractor shall keep construction activities under surveillance and control to minimize disturbances caused by excessive noise. Equipment shall have properly operating noise-muffling devices for the entire length of the contract.

1.7.7 Application of Pesticides

The Contractor shall apply all pesticides in accordance with the requirements of the Federal Insecticide, Fungicide, and Rodenticide Act, using pesticides approved by the EPA and following the instructions on the manufacturer's label. Application of termiticides during construction is addressed in paragraph SOIL TREATMENT, of Section 02221 EXCAVATION, FILLING, AND BACKFILLING FOR BUILDINGS. The PWBC Entomologist shall be the contact inspector and make recommendations to the Contracting Officer.

1.7.7.1 Licensing and Certification

All pesticide applications shall be performed by a Contractor certified in the EPA category or categories which cover the work to be performed and shall hold a valid business license. For work at Fort Bragg, the Contractor shall be certified and licensed by the State of North Carolina. The Contractor shall present evidence of such licensing and certification to the Contracting Officer for approval prior to award of the contract.

1.8 POST-CONSTRUCTION CLEANUP

The Contractor shall be responsible for cleaning up all areas affected by the construction and restore them back to at least their original condition to include landscaping; planting of trees, grass, and shrubs damaged by construction; and raking and disposal of debris such as roofing shingles, paper, nails, glass, sheet metal, bricks, and waste concrete. Backfilled areas shall be machine compacted and replanted with grass. Construction debris shall be removed and properly disposed of. Culverts and drainage ditches with sediment from the construction area shall be cleared routinely to maintain proper drainage and recleaned prior to completion of the contract.

1.9 RESTORATION OF LANDSCAPE DAMAGE

The Contractor shall restore all landscape features damaged or destroyed during construction operations outside the limits of the approved work areas. Such restoration shall be in accordance with the Environmental Protection Plan submitted for approval to the Contracting Officer. This work will be accomplished at the Contractor's expense.

1.10 MAINTENANCE OF POLLUTION CONTROL FACILITIES

The Contractor shall maintain all constructed facilities and portable pollution control devices for the duration of the contract of for the length of time construction activities produce the particular pollutant.

1.10.1 Containment Berms

The Contractor shall build a containment berm around temporary aboveground fuel storage tanks. The bermed area shall be large enough to contain 125 percent of the volume of the storage tanks if there is a leak. The Contractor shall not install any temporary underground storage tanks.

1.10.2 Erosion Control Devices

The Contractor shall immediately repair any damaged erosion control structures, such as silt fences, and remove accumulated sediment.

1.10.3 Storm Drains

The Contractor shall ensure sediment does not block storm drains. The Contractor shall be responsible for cleaning storm drains blocked due to erosion of sediment off site.

1.11 TRAINING OF CONTRACTOR PERSONNEL IN POLLUTION CONTROL

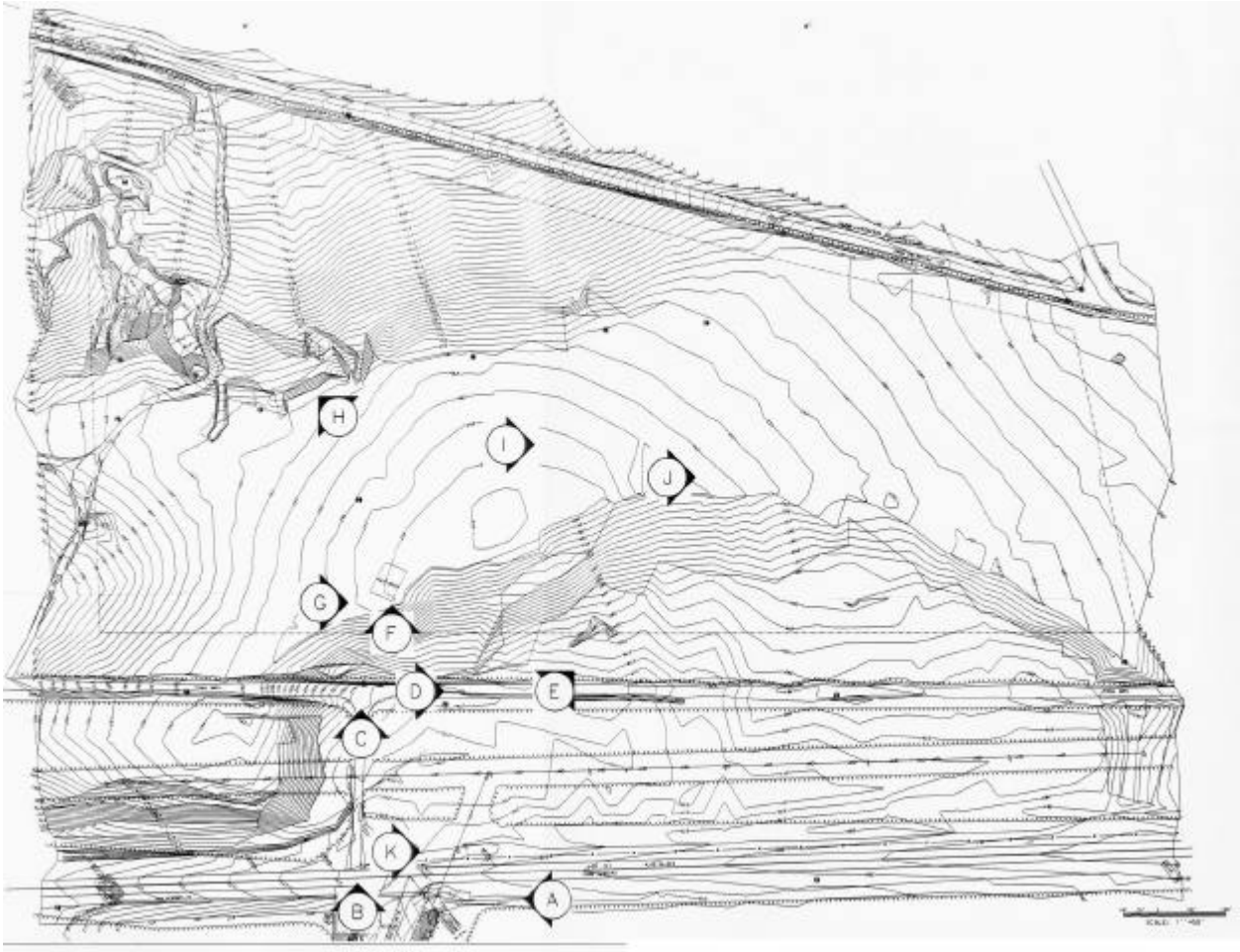
The Contractor shall train his personnel in all phases of environmental protection. The training shall include methods of detecting and avoiding pollution, familiarization with pollution standards, both statutory and contractual, and installation and care of facilities (vegetative covers and instruments required for monitoring purposes) to ensure adequate and continuous environmental pollution control. Such training shall be completed before contract work begins.

PART 2 PRODUCTS (NOT APPLICABLE)
PART 3 EXECUTION (Not Applicable)

APPENDIX A

SITE PHOTOGRAPHS

The scope of work includes the design, site preparation and construction of a new one story 73,500 SF Weapons Maintenance and Training Facility and a new one story 2,500 SF Weapons Supplies Handling Facility for the Special Operations Forces on a vacant U.S. Government property at Fort Bragg, NC. The following represent the images of the project site.



Site survey with location of photographs

Photograph A: Intersection of Chicken Road and MacRidge Road.

Photograph B: Existing dirt road leading to project site.

Photograph C: Intersection of existing dirt road with tank trail.

Photograph D: Existing tank trail.

Photograph E

Photograph F: Existing cemetery

Photograph G

Photograph H

Photograph I

Photograph J

Photograph K

APPENDIX B
Facility Drawings

(INCLUDED IN THE CONTRACT DRAWINGS)

APPENDIX C

LIFE SAFETY/ FIRE PROTECTION ANALYSIS

Note To Designer: This document is a preliminary analysis used for concept development. It does not contain all requirements and does not relieve the designer of complete code and criteria review, compliances and documentation responsibilities during proposal and final design development.

References:

- Military Handbook, MIL HDBK 1008c, Fire Protection for Facilities Engineering, Design and Construction, 10 June 1997
- Engineering Circular EC 110-92, Classification of Type of Construction, 21 June 2001.
- Uniform Building Code, 1997
- NFPA 101, Life Safety Code, 2000
- NFPA 10, Standard for Portable Fire Extinguishers, 1998

Building Description:

The project includes a new one story 73,500 SF Weapons Training Facility and a new one story 2,500 SF Weapons Supplies Handling Facility. The Weapons Training Facility is a 1-story building consisting of an Armament Center and a Training Center. The Armament portion of the facility is approximately 54,000 SF. The Training portion of the facility is approximately 19,500 SF. The buildings will be fully sprinkled.

1. <u>UBC Occupancy (UBC Chapter 13; Occupancy Classification)</u>

Armament Center – Maintenance Area:	F-1
Armament Center – Test Firing Range:	B
Armament Center – Weapons Storage Vaults	S-1
Training Center – Training Areas	B
Weapons Supplies Handling Facility	F-1

2. <u>NFPA 101 Occupancy,</u>

Armament Center – Maintenance Area:	Industrial
Armament Center – Test Firing Range:	Industrial
Armament Center – Weapons Storage Vaults	Industrial
Training Center – Training Areas	Industrial
Weapons Supplies Handling Facility	Industrial

3. Exterior Wall & Opening Protection (UBC Table 5-A)

   For F-1, S-1, and B (that is, all except the firing range), the following applies:

   TYPE II, N Construction requires One-Hour, Noncombustible construction for all for exterior bearing or non-bearing walls within 20' of the property line. If more than 20' from property line, these walls will be of Non-rated, Noncombustible construction.

   Openings are not permitted less than 5' from property line and if less than 10' must be protected.

4. Construction Type (UBC Table 5-B):

   The building could be as low a construction type as II, N. N=No requirements for fire resistance. Type II has (**603.1**) structural elements of steel, concrete or masonry. Type structural elements of II-N buildings shall be of noncombustible materials.

5. Allowable Floor Area (UBC – Table 5-B Section 505.2 Unlimited Area)

   Unlimited Area: The area of any one or two story building of Groups B; F, Division 1, S, Division 1…shall not be limited if the building is provided with an approved automatic sprinkler system throughout … and entirely surrounded and adjoined by public ways or yard not less than 60 feet in width.

   Per UBC Table 5-B Section 504.3, "When a building houses more than one occupancy, the area of the building shall be such that the sum of the ratios of the actual area for each separate occupancy divided by the total allowable area for each separate occupancy shall not exceed one".

   Actual Floor Areas

Armament Center – Maintenance Area:	(35,924 SF)
Armament Center – Test Firing Range:	(1,560 SF)
Armament Center – Weapons Storage Vaults	(14,083 SF)
Training Center – Training Areas	(19,624 SF)
Weapons Supplies Handling Facility	(1,966 SF)

6. Automatic Sprinkler Systems (MIL HDBK 1008c 6.1.2a)

   Buildings over 15,000 Square Feet must have automatic sprinkler system protection.

7. Fire Resistive Ratings (UBC Table No. 6-A)

Exterior Bearing Walls	N
Interior Bearing Walls	N
Exterior Nonbearing Walls	N
Structural Frame	N
Partitions	N
Shaft Enclosures	N
Floor/Ceiling	N
Roof/Ceiling	N

N=No General Requirement for Fire Resistance

8. Occupancy Separation (UBC Table 3B)

   Required separation in buildings of mixed occupancy:

   No requirements for Fire Resistance

9. Exits Required (NFPA 7.4.1.2

   For and occupancy load more than 500 but not more than 1000, not less than 3 exits required

10. Occupant Load (NFPA 101, Table 7.3.1.2)

    NFPA 101 Chapter 40, Life Safety Code occupancy classification: Industrial.

    Per 6.1.14.2, Business occupancy (in Training area) is considered part of the Industrial occupancy).

    NFPA 101 TABLE 7.3.1.2 states occupant load for Industrial Use, General Purpose Industrial shall be calculated for 100 sq. ft. per person.

Total Armament Center Occupant Load = 516

Armament Center – Maintenance Area:	35,924 @ 100 = 359
Armament Center – Test Firing Range:	1,560 @ 100 = 16
Armament Center – Weapons Storage Vaults	14,083 @ 100 = 141

Total Training Center Occupant Load = 1004
Training Center – Training Areas/ Classrooms 18,473 @ 20 = 924
Trainign Center – Break/Conference Room 1,200 @ 15 = 80

Total Weapons Supply Facility Occupant Load = 20
Weapons Supplies Handling Facility 1,966 @ 100 = 20

Total Occupant Load = 1,520 persons

11. Egress Capacity (NFPA 101, Table 7.3.3.1)

Armament Center
Required: 516 Occupants x 0.2 = 103.2”
Proposed: 2 Doors x 36.0” = 72”
4 Doors x 48.0” = 96”
Total Proposed = 168”

Training Center
Required: 1004 Occupants x 0.2 = 200.8”
Proposed: 7 Doors x 36.0” = 256”

Weapons Supplies Handling Facility
Required: 20 Occupants x 0.2 = 4”
Proposed: 1 Door x 36.0” = 36”

12. Panic Hardware (NFPA 101, Table 12.2.2.2.3)
Required for each assemblies greater than 100 occupants

13. Maximum Dead End (NFPA 101, Table A7.6.1)
50 FT

14. Maximum Common Path of Travel (NFPA 101, Table A.7.6.1)
100 FT

15. Maximum Travel Distance (NFPA 101, Table A.7.6.1)
250 FT

16. Corridor Protection (NFPA 101, 7.1.3.1)

    Corridors used as exit access and serving an area having an occupant load exceeding 30 shall be separated from other parts of the building by walls having not less than a 1-hour fire resistance.

17. Interior Finishes (MIL HDBK 1008C 2.7.1)

    Interior finish for exits, exit passageways…shall be Class A only. (See NFPA 101 Life Safety Code for definition; in Paragraph 10.2.3.2- "Class A Interior Wall and Ceiling Finish, flame spread 0-25; smoke development 0-450…"

18. Travel Distance to Fire Extinguisher, NFPA 10)

    Maximum 75 feet

19. Cabinets for Portable Fire Extinguishers

    Cabinets for portable fire extinguishers will be provided in accordance with NFPA 10

20. Alarm and Detection System

    A fire alarm/reporting system will be provided as required in accordance by MIL HDBK 1008C

21. Protection From Hazards (NFPA 101, 12.3.2.1.3)

    Boiler Rooms (if provided) – Fire Resistive barrier of 1 hour or automatic extinguishing system

22. Fire Department Vehicle Access (MIL HDBK 1008C)

    Site selection for new facilities shall consider fire department vehicle access. New…warehouses shall be provided with suitable all weather ground access surface for aerial apparatus on a minimum of two sides of the perimeter of the structure.

APPENDIX D

FUNCTIONAL AREA/ROOM REQUIREMENTS

1. GENERAL

1.1 The purpose of this document is to (a) describe the overall Facility functional and weapons flow requirements and to (b) provide a room-by-room description summary of the specific user requirements for functions within the new facility.

1.2 This solicitation is for the design, permitting, site preparation and construction of a 73,000 SF Weapons Maintenance and Training Facility and a 3,000 SF detached Weapons Supplies Handling Facility. This project is a new multi-functional Weapons Training and Training Facility consisting of an Armament Center and a Weapons Training Center. The Weapons Supplies Handling Facility is a remote receiving/access control area that will support the Weapons Training Facility.

2. SITE FUNCTIONAL AND SITE ACCESS REQUIREMENTS

2.1 Access Drive. The access drive entrance to the facility is located at the intersection of Chicken Road and MacRidge Road. This access drive has been designed in an S-shaped (90 degree) configuration to meet vehicle deceleration requirements as stated in Antiterrorism/ Force Protection Construction Standards (See Appendix I). This access drive is a two-lane drive divided by an island median. The island median will provide protection of the existing electrical poles from vehicles.

Non-Exclusive Standoff Zone. The Weapons Training Facility and all related site amenities (i.e. parking, roads, loading docks, etc.) will be enclosed with a perimeter fence. This perimeter fence is considered the Non-Exclusive Standoff Zone and is a passive vehicle barrier consisting of chain-link fences with (2) ¾" diameter cables. This non-Exclusive Standoff Zone is the project limitations, but is to be located no closer than 100' from the perimeter of the Weapons Training Facility. This fence will have fence sensors and vision panels (black mesh). Refer to Appendix I for additional definitions and site design criteria. The cantonment will have one primary control point (labeled Control Point #1 on the site plan) or guard gate. The guard gate would have an active vehicle barrier (crash gate, retractable bollards, etc.) and would be manned by a soldier to provide access to the site and/or keep unauthorized vehicles from entering the cantonment area.

2.2 Exclusive Standoff Zone. The Weapons Training Facility will be enclosed with a secondary perimeter fence within the Non-Exclusive Standoff Zone. This secondary fence is considered the Exclusive Standoff Zone and consists of chain-link fences with

(2) ¾" diameter cables, pipe bollards, and concrete planters. This Exclusive Standoff Zone is to be located a minimum of 80' from the perimeter of the Weapons Training Facility. Refer to Appendix I for additional definitions and site design criteria. The Exclusive Standoff Zone provides for a control point (labeled Entry Control Point #2 on the site plan) with an active vehicle barrier located near the Facility loading dock to control access to the loading dock. The Exclusive Standoff Zone also provides for a control point (labeled Entry Control Point #4) with removable bollards located near the Mechanical Yard to control access to the equipment East of the Facility.

2.3 Parking.

2.3.1 Student Parking. A large vehicle parking area (labeled Student Parking on site plan) is located near the Training Center for the students and instructors. No bussing is planned for students. All personnel using this facility will drive POVs (Privately Operated Vehicles). A maximum of 90 students, 20 instructors and 5 staff personnel may be anticipated on the site at any given time. 15 visitor spaces will be required. The minimum parking spaces required for the Training Center is 130. Provide the required number of handicap parking spaces as dictated by Code.

2.3.2. Employee Parking. A smaller vehicle parking area (labeled Employee Parking on site plan) has been provided near the Armament Center for the staff and visitors. The parking is bordered on one side with pipe bollards and concrete planters to limit any overflow of vehicles from the Training Center. This parking area is accessible through a control point (labeled Entry Control Point #3 on site plan) with an active vehicle barrier. The minimum parking spaces required for the Training Center is 60. Note the adjacent cemetery requires a minimum 50-foot clear setback for any new construction. Provide the required number of handicap parking spaces as dictated by Code. The Employee parking should accommodate parking and turn-around capacity for 1 large capacity tour-bus. If no parking can be accommodated, this vehicle may be parked inside the Weapons Training Facility loading dock, and such parking area will need to be designed.

2.3.3. The Weapons Supplies Handling Facility will require a covered parking space for a 2.5-ton LMTV (Light Military Tactical Vehicle). This vehicle will allow facility personnel to transport equipment/materials to the Weapons Training Facility during "lockdown" periods. This area is required to allow for the vehicle to be parked and allow sufficient maneuvering space for the Forklift to carry equipment/material from the temporary holding area onto the LMTV. The Weapons Supplies Handling Facility will require an outdoor holding area to temporarily store supplies to be loaded onto the LMTV. This area is shown on the site plan on the East side of the building and it is to be a fenced in area.

2.3.4 Temporary and Cemetery Visitor Parking. The area immediately outside the guard gate (labeled Control Point #1 on the site plan) will require a minimum of 6 parking spaces. These parking spaces will be for temporary vehicle parking for any person(s) waiting for authorization to access the cantonment or for any person(s) visiting

the existing cemetery. A sidewalk is required from this parking area to the cemetery area.

2.4 Guard Gate (Guardhouse). This will be the primary control point to access the cantonment. The guard gate shall serve as an area of refuge in the event of an attack. The guard gate shall have windows that allow for clear view of the on-coming traffic and entry point. The guard gate will contain 1 work computer station suitable for the ID check process, either manual or via technology. There will be 2 guards. No plumbing is required for the guard gate, but it must be a conditioned space.

The guard gate must comply with the DoD Force Protection/Antiterrorism standards. The exterior envelope of the guard gate, including windows and doors must meet ballistic protection and fragmentation protection from explosive devices of N.I.J. Level III per National Institute of Justice 0108.01.

2.5 Mechanical Yard. The area located East of the Weapons Training Facility is designated for all outdoor mechanical equipment, the diesel generator, transformers, and any other outdoor storage. This area will be located inside the Exclusive Standoff Zone. Provide for concrete filled and reinforced 12” CMU wall construction around the diesel-powered generator. Design enclosure walls to be minimum 16” above height of generator and design opening of enclosure to not face building. Provide for a similar 8” CMU wall construction around acetylene and oxygen tank storage areas (see Functional Room Requirements of Welding Shop). The storage of extra acetylene and oxygen cylinders must be in two separate locations a minimum of 20 feet apart.

2.6 Mortar Pits. This area is designated for student training with non-live mortars. Students will set up in the pits and fire the non-live rounds towards the Eastern portion of the site. A minimum of 300 feet clear for direct line of sight and mobility of students is required in front of the pits. The Mortar pits will be covered and are 12' x 12' each in an undivided arrangement. An area of 12' x 108' is required for 9 pits. 10 pits are desired, but a minimum of 9 pits will be required. The vertical supports for the roof coverage must be at least 12' on center. Border of pit should be raised concrete 6" in height with 6" suitable rigid mulch or granular material with adequate drainage. The minimum vertical clearance is 8' with roof sloped to drain away from rear fence.

2.7 Combative Pit. The combative pit is to be used for training in combat techniques. The pit is to be near the training facility. One combative pit is required. The minimum size required is 100-foot diameter. The combative pit is raised border with suitable granular material and adequate drainage. The combative pit cannot be within the line of sight of the mortar pits. Base needs to be 16"-18" tall. Outside walls need to be of sturdy material (cinder blocks, or treated lumber etc.). Drainage can be spaced as needed. Request the inside be filled with sand, washed gravel and the last 6"- 8" be of chopped rubber such as recycled tires. The top of the outside walls need to be sandbags or some other material to ensure safety.

2.8 Vehicle and Personnel Access. All access to the cantonment will be thru authorized vehicles. The following are the 5 distinct vehicle and personnel access scenarios.

2.8.1 Scenario 1: Delivery of Equipment and/or Material.

(1) The delivery vehicle arrives at the site and checks in at the guard gate.
(2) If delivery vehicle is not authorized to enter cantonment, the vehicle may use the vehicle turn around area near the existing tank trail to back up vehicle and leave to pursue authorization.
(3) If vehicle is authorized to enter cantonment, the vehicle proceeds to the Weapons Supplies Handling Facility.
(4) Delivery is unloaded onto the Weapons Supplies Handling Facility loading dock and is inspected with an X-Ray machine and vapor trace equipment inside the building. The vehicle is also visually inspected for any unauthorized explosives or potentially destructive materials.
(5) If delivery is authorized, it is loaded onto delivery vehicle and delivered to the Weapons Training Facility loading dock. During a “lockdown” condition, deliveries are placed in the temporary holding area outside of the building. The equipment is then loaded onto the LMTV to be transported to the Weapons Training Facility loading dock.

2.8.2. Scenario 2: Armament Center Staff/Personnel Access:

(1) Staff/Personnel presents credentials at guard gate or uses card reader to access gate.
(2) Staff/Personnel use card reader at Entry Control Point #3 to access employee parking.
(3) Staff/Personnel use card reader to access Armament Center Main Entrance.

2.8.3 Scenario 3: Training Facility Staff/Student Access:

(1) Staff/Student presents credentials at Control Point #1 or uses card reader to access gate.
(2) Staff/Student access student parking.
(3) Staff/Student presents credentials at Training Center Main Entrance to enter building.

2.8.4 Scenario 4: Dignitary/Facility-Visitor Access:

(1) Visitor presents credential at Control Point #1 or is escorted to Weapons Training Facility.
(2) Visitor parks vehicle in designated parking area and is escorted into building facility.

2.8.5 Scenario 5: Cemetery Visitor Access:

(1) Visitor parks vehicle in visitor parking outside of guard gate.

(2) Visitor checks in at guard gate and proceeds to cemetery.

3. ARMAMENT CENTER

3.1 The Armament Center is considered the area to the left of Classroom Vault T-127 (refer to plate A-1). The Armament Center provides for the care and maintenance of F/NS (foreign/non-standard) weapons, material, and munitions. The armament mission includes the storage (Category II items that range from caliber .22-120mm), maintenance, repair, and issuing of F/NS weapons; operation and maintenance of ADA and AT Soviet simulator systems, and transport of weapons to ranges for test firing in support of SOF units. The Armament Center consists of the following 5 major sections:

1. SHOP OFFICE. The shop office is the administrative center of the facility.
2. ASL/PLL (Authorized Stocking List/ Prescribed Load List). The ASL/PLL is where weapons repair takes place.
3. WEAPONS STORAGE (Operational Load). This area takes up the most space in the facility and consists primarily of Secure Weapons Vaults.
4. SAFETY CERTIFICATION. Safety Certification is a 3-step process of analyzing and examining weapons.
5. MAINTENANCE. This is a series of separate spaces for maintaining the weapons.

3.2 The Armament Center supports the Weapons Training Center. While the two centers are collocated in the same building, there is no personnel interaction and/or access between the centers. The F/NS (foreign/non-standard) weapons and the air defense artillery (ADA) and anti-tank (AT) Soviet simulator systems are the only items that are maintained in the Armament Center and require access to the Weapons Training Center. The F/NS weapons access the Weapons Training Center thru the Classroom Vault and are used in the individual classrooms. The air defense artillery (ADA) and anti-tank (AT) Soviet simulator systems access the Weapons Training Center thru the loading dock doors and are used in the ADA/AT platform.

4. WEAPONS TRAINING CENTER

4.1 The Weapons Training Center provides weapons training for soldiers. The training mission includes conducting classroom activities, hands-on weapons maintenance, training with the ADA and AT simulators, and live firing weapons. Live firing is accomplished off-site; see weapons flow descriptions below. The Weapons Training Center consists of classrooms, instructional preparation space for instructors, instructor offices, and support spaces. The Weapons Training Center is considered the area to the right of Vault M-144 (refer to plate A-1).

5. WEAPONS SUPPLIES HANDLING FACILITY

4.1 The Weapons Supplies Handling Facility is a separate and detached building that provides screening and inspection of all deliveries and delivery vehicles to the Armament Center and Weapons Training Facility.

6. WEAPONS FLOW

6.1 The primary asset of the Weapons Training Facility are the F/NS (foreign/non-standard) weapons and their related materials. The following are the 6 distinct weapons flow phases through the facility:

6.1.1 Weapons Flow I: Issue Weapons To Classrooms

(1) Weapons are issued from within the Weapons Vault directly to the Classroom Vault.
(2) These weapons are secured in the Classroom Vault until the Weapons Vault door leading to the Classroom Vault is closed.
(3) The weapons are then accessible from within the individual classrooms for training purposes.
(4) The weapons are issued directly back to the Weapons Vault thru the Classroom Vault.

6.1.2 Weapons Flow II: Issue Weapons To Phase Students (Outgoing)

(1) Weapons are issued from the Weapons Vault to the Turn-in Vault.
(2) These weapons are taken from the vault and issued out to the outside units requesting the weapons.

6.1.3 Weapons Flow III: Receive Weapons From Phase Students (Incoming)

(1) Weapons used by the outside units are inspected at the Weapons Inspections Building.
(2) Once approved for delivery, the weapons are delivered to the Weapons Issue/ Turn-In/Clean Shop for cleaning and inspection. These weapons are first cleaned by the units, then inspected for cleanliness by the shop personnel, and are then approved and accepted by the shop personnel.
(3) Once these weapons are approved for acceptance, they are stored in the Turn-In Vault.
(4) These weapons are then issued to the Organizational Maintenance Shop for a final inspection and any minor repairs.
(5) The weapons are then issued to the either the Light or Heavy Weapons Shops for final repairs.
(6) The weapons are then issued back into the Weapons Vault.

6.1.4 Weapons Flow IV: Weapons Systems Certification for Outside Units

(1) Weapons are inspected at the Weapons Inspections Building.

(2) Once approved for delivery, the weapons are delivered to the Weapons Issue/ Turn-In/Clean Shop for receipt (procedural entrance). These weapons are only checked for the tagged identification to verify the whole delivery.
(3) Once these weapons are approved for acceptance, they are stored in the Turn-In Vault.
(4) These weapons are then delivered to the X-ray Vault in the X-ray Shop.
(5) The X-Ray Shop unpacks, x-rays, particle inspects (Magnetic Particle Inspection Shop), test fires (Test Firing Range), and repairs the weapons to complete the certification of the weapons.
(6) Once the weapons are certified they are placed in the X-ray Vault for storage and the outside unit is scheduled to pick up weapons.
(7) The weapons are then taken to the Turn-In Vault once outside unit arrives at facility to pick up weapons.

6.1.5 Weapons Flow V: Weapons Systems Certification for Internal Use

(1) Weapons are inspected at the Weapons Inspections Building.
(2) Once approved for delivery, the weapons are delivered to the Weapons Issue/ Turn-In/Clean Shop for receipt (procedural entrance). These weapons are only checked for the tagged identification to verify the whole delivery.
(3) Once these weapons are approved for acceptance, they are stored in the Turn-In Vault.
(4) These weapons are then delivered to the X-ray Vault in the X-ray Shop.
(5) The X-Ray Shop unpacks, x-rays, particle inspects (Magnetic Particle Inspection Shop), test fires (Test Firing Range), and repairs the weapons to complete the certification of the weapons.
(6) Once the weapons are certified they are placed in the X-ray Vault for storage and then scheduled for delivery to the Weapons Vault to be used in the internal system.

6.1.6 Weapons Flow VI: New Weapons Hand-Off

(1) Weapons are inspected at the Weapons Inspections Building.
(2) Once approved for delivery, the weapons are delivered to the Weapons Issue/ Turn-In/Clean Shop for receipt (procedural entrance). These weapons are only checked for the tagged identification to verify the whole delivery.
(3) Once these weapons are approved for acceptance, they are stored in the Turn-In Vault and then scheduled for delivery to the Weapons Vault.
(4) The weapons are then issued to the either the Light or Heavy Weapons Shops via its Vault for inspection upon receipt.
(5) The weapons are then delivered back to the Weapons Vault to be used in the internal system.

7. FUNCTIONAL ROOM REQUIRMENTS

The following pages describe the room-by-room summary of specific user requirements for functions within the new facility. Refer to floor plans for actual room numbers. Refer to Appendix G for Room Finish Guidelines.

Vestibule M-101

Summary: This area will serve as the main entrance point for visitors and personnel to the Armament Center of the SOF Weapons Training Facility.

Minimum Area: As shown on floor plans

Number of Occupants: None

Design Requirements:

Ceiling height should be proportional to room dimensions and entrance design.

Provide recessed grid system walk-off mat to capture dirt, particles, etc. from entering the space.

Per Force Protection Requirements (Appendix I), this area offsets the interior door from the interior and provides for masonry wall backup.

Power. Provide convenience outlets strategically located for cleaning, general-purpose use, and dedicated outlets for equipment.

Communications: Provide one device box for connection to Secure LAN and one device box for connection to unsecure LAN and telephone system. Provide one additional box outside near double-doors for connection to telephone system.

Lighting. Provide standard lighting for square footage of the room with additional lighting over the any special furniture or display cases designed in this space.

Mechanical. Provide heating and cooling as specified in Section 01010.

Graphics: Graphics should be consistent with others used throughout the facility, with the building design, and with design and color scheme of the facility with scale related to reasonable viewing distance and the size of the space. Graphics will be designed to identify room name and number and will be designed according to Fort Bragg Installation Design Guidelines (IDG).

Security M-102

Summary: This area will serve as the main entrance point for visitors and personnel to the Armament Center of the SOF Weapons Training Facility. It will also be the first security checkpoint for all person entering Armament Center.

Minimum Area: As shown on floor plans

Number of Occupants: 1

Special Equipment: All equipment is shown on equipment plans. The following represent the key equipment requiring special design considerations (refer to Appendix E for additional equipment information and line item descriptions):

- Metal Detector (line item #71)

Design Requirements:

This room needs to meet OSHA standards. The floor will be concrete and have a protective coating placed upon it so in the event of a chemical spill it will not seep into the concrete.

Power. Provide 110 outlets, 220 outlets, and 230 outlets as required by electrical equipment. Provide convenience outlets strategically located for cleaning, general-purpose use, and dedicated outlets for equipment.

Communications: Provide one device box for connection to Secure LAN and one device box for connection to unsecure LAN and telephone system. Provide one additional box outside near double-doors for connection to telephone system.

Lighting. Provide standard lighting for square footage of the room with additional lighting over the individual equipment as recommended by manufacturer.

Mechanical. Provide heating and cooling as specified in Section 01010.

Graphics: Graphics should be consistent with others used throughout the facility, with the building design, and with design and color scheme of the facility with scale related to reasonable viewing distance and the size of the space. Provide a general directory sign and map that will accommodate each building room and room number. Graphics will be designed to identify room name and number and will be designed according to Fort Bragg Installation Design Guidelines (IDG).

Lobby M-103

Summary: This area is the main intersection of main corridors in the Armament Center and is the location for the skylight tower. The designers and using agency place significant importance on the clerestory tower that defines this intersection, as indicated in the facility drawings.

Minimum Area: As shown on floor plans

Number of Occupants: None

Design Requirements:

This room needs to meet OSHA standards. The floor will be concrete and have a protective coating placed upon it so in the event of a chemical spill it will not seep into the concrete.

The lobby and all adjacent corridor corners will have protective steel bollards or similar protection system to minimize damage from forklifts, tow motors and moving carts.

Include provisions for wall space for display of pictures, display cases with lighting and convenience outlets suitable for both.

Power. Provide convenience outlets strategically located for cleaning and general-purpose use.

Lighting. Provide standard lighting for square footage of the room with additional lighting over entrances to adjacent rooms.

Mechanical. Provide heating and cooling as specified in Section 01010.

Graphics: Graphics should be consistent with others used through the facility, with the building design, and with design and color scheme of the facility with scale related to reasonable viewing distance and the size of the space. Graphics will be designed to identify room name and number and will be designed according to Fort Bragg Installation Design Guidelines (IDG).

Lobby M-104

Summary: This room is part of the Shop Office section of the Armament Center. This is the main waiting area for visitors to the facility.

Minimum Area: As shown on floor plans

Number of Occupants: None

Design Requirements:

Ceiling height should be proportional to room dimensions. Provide additional sound attenuation as required to minimize sound infiltration from adjacent shops and corridors.

The floor finish may be heavy-duty carpet tiles to emphasize the Administrative functions in this area and to aid in the sound attenuation required for the functions in the Shop Office. Provide recessed grid system walk-off mat to capture dirt, particles, etc. from entering the space.

Power. Provide convenience outlets strategically located for cleaning, general-purpose use, and dedicated outlets for equipment.

Communications: Provide one device box for connection to telephone system. Box shall be mounted at 54” aff for wall phone.

Lighting. Provide standard lighting for square footage of the room with additional lighting over the any special furniture or display cases designed in this space. Manually switched lighting control at wall adjacent to entry door.

Mechanical. Provide heating and cooling as specified in Section 01010.

Graphics: Graphics should be consistent with others used through the facility, with the building design, and with design and color scheme of the facility with scale related to reasonable viewing distance and the size of the space. Graphics will be designed to identify room name and number and will be designed according to Fort Bragg Installation Design Guidelines (IDG).

Office M-105 and Office M-106

Summary: These rooms are part of the Shop Office section of the Armament Center.

Minimum Area: As shown on floor plans

Number of Occupants: 1 plus 2 visitors in each room

Design Requirements:

Ceiling height should be proportional to room dimensions. Provide additional sound attenuation as required to minimize sound infiltration from adjacent shops and corridors.

The floor finish may be heavy-duty carpet tiles to emphasize the Administrative functions in this area and to aid in the sound attenuation required for the functions in the Shop Office.

Power. Provide convenience outlets strategically located for cleaning, general-purpose use, and dedicated outlets for equipment.

Communications: Provide two device boxes for connection to Secure LAN and two device boxes for connection to unsecure LAN and telephone system. (This requirement applies to each room.)

Lighting. Provide standard lighting for square footage of the room with additional lighting over the any special furniture or display cases designed in this space. Manually switched lighting control at wall adjacent to entry door.

Mechanical. Provide heating and cooling as specified in Section 01010.

Graphics: Graphics should be consistent with others used through the facility, with the building design, and with design and color scheme of the facility with scale related to reasonable viewing distance and the size of the space. Graphics will be designed to identify room name and number and will be designed according to Fort Bragg Installation Design Guidelines (IDG).

Storage M-107

Summary: This room is part of the Shop Office section of the Armament Center. It will be used to store office supplies and miscellaneous and non-hazardous materials.

Minimum Area: As shown on floor plans

Number of Occupants: none

Design Requirements:

Ceiling height should be proportional to room dimensions. Provide additional sound attenuation as required to minimize sound infiltration from adjacent shops and corridors.

The floor finish may be heavy-duty carpet tiles to emphasize the Administrative functions in this area and to aid in the sound attenuation required for the functions in the Shop Office.

Power. Provide convenience outlets strategically located for cleaning and general-purpose use.

Lighting. Provide standard lighting for square footage of the room. Manually switched lighting control at wall adjacent to entry door.

Mechanical. Provide heating and cooling as specified in Section 01010.

Graphics: Graphics should be consistent with others used through the facility, with the building design, and with design and color scheme of the facility with scale related to reasonable viewing distance and the size of the space. Graphics will be designed to identify room name and number and will be designed according to Fort Bragg Installation Design Guidelines (IDG).

Security SGT M-109 and Security Monitoring M-108

Summary: These rooms are part of the Shop Office section of the Armament Center. The Security SGT will be the enclosed office with a workstation. The Security Monitoring will use the location of the Intrusion Detection System's (IDS) control panels, security camera monitors, and switchboard control to provide access and communications to all entry control points outside of the facility.

Minimum Area: As shown on floor plans

Number of Occupants: 2 in each room

Design Requirements:

Ceiling height should be proportional to room dimensions. Provide additional sound attenuation as required to minimize sound infiltration from adjacent shops and corridors.

The floor finish may be heavy-duty carpet tiles to emphasize the Administrative functions in this area and to aid in the sound attenuation required for the functions in the Shop Office.

Power. Provide convenience outlets strategically located for cleaning, general-purpose use, and dedicated outlets for equipment. Provide 110V outlets, 220V outlets, and 230V outlets as required by Intrusion Detection System (IDS) and other equipment.

Communications: Provide two device boxes for connection to Secure LAN and two device boxes for connection to unsecure LAN and telephone system. (This requirement applies to each room.)

Lighting. Provide standard lighting for square footage of the room with additional lighting equipment as recommended by manufacturer. Manually switched lighting control at wall adjacent to entry door.

Mechanical. Provide heating and cooling as specified in Section 01010.

Graphics: Graphics should be consistent with others used through the facility, with the building design, and with design and color scheme of the facility with scale related to reasonable viewing distance and the size of the space. Graphics will be designed to identify room name and number and will be designed according to Fort Bragg Installation Design Guidelines (IDG).

Conference M-110

Summary: This room is part of the Shop Office section of the Armament Center. This room will be set up with a large conference table and conference chairs for briefings or planning sessions.

Minimum Area: As shown on floor plans

Number of Occupants: 35 minimum at one time

Design Requirements:

Ceiling height should be proportional to room dimensions. Provide additional wall and ceiling sound attenuation as required to minimize sound infiltration from adjacent shops and corridors.

The floor finish may be heavy-duty carpet tiles to emphasize the Administrative functions in this area and to aid in the sound attenuation required for the functions in the Shop Office.

Power. Provide convenience outlets strategically located for cleaning, general-purpose use, and dedicated outlets for equipment.

Communications: Provide one device box for connection to Secure LAN and one device box for connection to unsecure LAN and telephone system.

Provide provisions for television monitors, VCRs, computers, ceiling mounted digital projectors, and retractable ceiling projection screen. Provide dry erase boards at front and sides of rooms.

Lighting. Provide standard and dimmable lighting for square footage of the room with additional lighting equipment as recommended by manufacturer. Manually switched lighting control at wall adjacent to entry door.

Provide ceiling fans in conjunction with lighting system.

Mechanical. Provide heating and cooling as specified in Section 01010.

Graphics: Graphics should be consistent with others used through the facility, with the building design, and with design and color scheme of the facility with scale related to reasonable viewing distance and the size of the space. Graphics will be designed to identify room name and number and will be designed according to Fort Bragg Installation Design Guidelines (IDG).

Chemical Refinishing Shop M-111

Summary: This shop is part of the Maintenance section of the Armament Center.

Function: The shop houses chemical vats and sandblasting machines that provide the capabilities for removing coatings and finishes from weapons and miscellaneous equipment.

Minimum Area: As shown on floor plans

Number of Occupants: 4 plus up to 10 visitors

Special Equipment: All equipment is shown on equipment plans. The following represent the key equipment requiring special design considerations (refer to Appendix E for additional equipment information and line item descriptions):

- 1 Sandblaster Cabinet (line item #43)
- 1 Dust Collector (line item #44)
- 5 Refinishing Tanks (line item #68)
- 1 Overhead Hoist (line item #69)

Design Requirements:

Contractor's Industrial Systems Engineer will coordinate with User and Manufacturers to insure that room layout provides a functional and well designed chemical refinishing shop.

This room needs to meet OSHA standards. The floor will be concrete and have a protective coating placed upon it so in the event of a chemical spill it will not seep into the concrete. It will have a reservoir placed in one corner at a lower level than the floor. This reservoir should be large enough to hold all of the chemicals and water that is stored in the vats. The reservoir will have a sub-pump to evacuate all fluids to an approved outside storage tank.

Power. Provide 110V outlets, 220V outlets, and 230V outlets as required by shop equipment. Provide convenience outlets for general-purpose use.

Communications: Provide one device box for connection to telephone system. Box shall be mounted at 54" aff for wall phone.

Vats. All vats will have a clean out plug placed two inches off the bottom, center of each vat. Clean out plug should be threaded to accept a hose pipe for drainage. Metal stands made for each vat will not bring the height more than four feet off the floor.

Heating elements. Elements will be manufactured to run off 220-volts and made to drop into the tanks with clamps that will secure the element to the tank. These elements will

be built in such a manner as to hug the tanks as close as possible going down the backside of the tank to the bottom. The bottom portion of the element should not rise off the bottom of the vat more than six inches. The elements must maintain the fluids between 205-degrees to 215-degrees. The control box of the elements will be moisture proof with a safety switch for off and on and a dial switch to maintain temperature.

Sandblasting machine with dust collector. Made out of minimum 14-gauge steel to meet OSHA standards with interlock system. Power to sandblaster shall be 230-volts, 60HZ-single phase or as required by manufacturer.

Air compressor. Provide compressed air as required by equipment in room. Air compressor tank may be housed in shop or air compressors can be located in a dedicated room (part of mechanical room) with distribution system throughout armament center.

Power hoist. Provide overhead power hoist mounted on track to run the full length of vats. Lift capability of 1500-lbs.

Lighting. Provide standard lighting for square footage of the room with additional lighting over the sandblasting machine and worktables. Manually switched lighting control at wall adjacent to entry door.

Chemicals used in refinishing room: (1) Neutralizer number-200 (2) Parcolubrite number-2 (corrosive) (3) Reageny Solution number-44 (4) Indictor number-2, 3, 8 (5) Titrating Solution number-11, 18 (6) Sulfuric Acid (7) Muriatic Acid 32-percent All chemicals mentioned above are purchased through Parker Chemical Company, 32100 Stephenson, Highway Madison Heights, Michigan 48017.

Mechanical. This area will be classified Class 1, Division 2, IAW 29 CFR 1910.399. The HVAC and electrical systems will need to meet the requirements of this classification. The ventilation system should be specifically designed to prevent the build up of any hazardous vapors. Provide individual room heating, cooling, and exhaust system. Room shall be maintained at negative pressure relative to the surrounding areas.

Plumbing: Provide one wall mounted emergency eye wash station. Provide one floor drain at each eye wash station. Coordinate location of eye wash station with final location of equipment and away from egress paths.

Graphics: Graphics should be consistent with others used through the facility, with the building design, and with design and color scheme of the facility with scale related to reasonable viewing distance and the size of the space. Graphics will be designed to identify room name and number and will be designed according to Fort Bragg Installation Design Guidelines (IDG).

Machine Shop M-112

Summary: This shop is part of the Maintenance section of the Armament Center.

Function: The shop houses a large quantity of electrical equipment to repair and maintain the weapons and machines in the facility.

Minimum Area: As shown on floor plans

Number of Occupants: 10 plus up to 10 visitors

Special Equipment: All equipment is shown on equipment plans. The following represent the key equipment requiring special design considerations (refer to Appendix E for additional equipment information and line item descriptions):

- 1 Swiss Turning Center (line item #1)
- 1 CNC Turning Center, Large (line item #2)
- 1 Vertical Machining Center (line Item #4)
- 2 Weapons Cleaning Machines (line item #63)

Design Requirements:

Contractor's Industrial Systems Engineer will coordinate with User and Manufacturers to insure that room layout provides a functional and well designed machine shop.

This room needs to meet OSHA standards. The floor will be concrete and have a protective coating placed upon it so in the event of a chemical spill it will not seep into the concrete.

Power. Provide 110V outlets, 220V outlets, and 230V outlets as required by shop equipment. Provide convenience outlets for general-purpose use.

Communications: Provide a device box near each door, at 54" aff, for connection to telephone system.

Air compressor. Provide compressed air as required by equipment in room. Air compressor tank may be housed in shop or air compressors can be located in a dedicated room (part of mechanical room) with distribution system throughout armament center.

Lighting. Provide standard lighting for square footage of the room with additional lighting over the individual equipment as recommended by manufacturer. Manually switched lighting controls at wall adjacent to each entry door.

Mechanical. This area will be classified Class 1, Division 2, IAW 29 CFR 1910.399. The HVAC and electrical systems will need to meet the requirements of this classification. The ventilation system should be specifically designed to prevent the build up of any

hazardous vapors. Provide individual room heating, cooling, and exhaust system. Room shall be maintained at negative pressure relative to the surrounding areas.

Construction. Refer to Appendix G for additional equipment specifications and manufacturer's construction recommendations. The floor of the machine shop should be designed to accommodate the weight loads of the equipment to be located in the room. Provide isolation slab construction around the Swiss Turning Center, CNC Turning Center (large), and Vertical Machining Center and other equipment as recommended by manufacturers. Contractor will coordinate with User and Manufacturers to design adequate floor construction. Coordinate perimeter construction to provide for a removable portion of the perimeter wall adjacent to the mechanical yard to allow for the removal and replacement of large equipment as needed. Some equipment weighs as much as 9240 lbs and an anticipated removal system for these large items needs to be incorporated into the building's structural design. The proposed equipment plans show the heaviest equipment located close to the wall adjacent to the Mechanical yard. This area (and the majority of the building) will be Class 1, Division 2 IAW 29 CFR Part 1910.399. The machine shop should meet the most stringent requirements between Class 2, Division 2 and Class 1, Division 2 with regard to electrical and ventilation requirements.

Plumbing: Provide two wall mounted emergency eye wash stations. Provide one floor drain at each eye wash station. Coordinate location of eye wash station with final location of equipment and away from egress paths.

Graphics: Graphics should be consistent with others used through the facility, with the building design, and with design and color scheme of the facility with scale related to reasonable viewing distance and the size of the space. Graphics will be designed to identify room name and number and will be designed according to Fort Bragg Installation Design Guidelines (IDG).

FSS (Foreign Sniper System) Shop M-113 and FSS Vault M-114

Summary: This shop is part of the Maintenance section of the Armament Center.

Function: The shop houses equipment to repair and maintain Foreign Sniper System weapons in the facility.

Minimum Area: As shown on floor plans

Number of Occupants: 5 plus up to 10 visitors

Special Equipment: All equipment is shown on equipment plans. The following represent the key equipment requiring special design considerations (refer to Appendix E for additional equipment information and line item descriptions):

- 2 Weapons Cleaning Machines (line item #63)

Design Requirements:

Contractor's Industrial Systems Engineer will coordinate with User and Manufacturers to insure that room layout provides a functional and well designed FSS shop.

This room needs to meet OSHA standards. The floor will be concrete and have a protective coating placed upon it so in the event of a chemical spill it will not seep into the concrete.

Power. Provide 110V outlets, 220V outlets, and 230V outlets as required by shop equipment. Provide convenience outlets for general-purpose use.

Communications: Provide one device box door of FSS Shop, at 54" aff, for connection to telephone system.

Air compressor. Provide compressed air as required by equipment in room. Air compressor tank may be housed in shop or air compressors can be located in a dedicated room (part of mechanical room) with distribution system throughout armament center.

Lighting. Provide standard lighting for square footage of the room with additional lighting over the individual equipment as recommended by manufacturer. Manually switched lighting controls at wall adjacent to each entry door.

Mechanical. This area will be classified Class 1, Division 2, IAW 29 CFR 1910.399. The HVAC and electrical systems will need to meet the requirements of this classification. The ventilation system should be specifically designed to prevent the build up of any hazardous vapors. Provide individual room heating, cooling, and exhaust system. Room shall be maintained at negative pressure relative to the surrounding areas.

FSS Vault (M-114). The weapons storage vault design requirements shall be in accordance with AR 380-5 Department of the Army Information Security Program Chapter 7 Storage and Physical Security Standards, Paragraph 7-13 through 7-20. Refer to Appendix I for additional force protection construction requirements. Vault must be built to standards listed in AR 190-11, Appendix G, Paragraph G-1. This standard is required of areas that will store weapons. Doors to the vaults can only be secured with either a high security padlock or a GSA approved, built-in, 3 position, changeable, combination lock. All doors leading into vaults are required to have security lighting as stipulated in Para 5-4, AR 190-11. FM 19-30 which is referenced at Para 5-4b is now FM 1-19.30, dated 8 Jan 01.

Plumbing: Provide one wall mounted emergency eye wash station. Provide one floor drain at each eye wash station. Coordinate location of eye wash station with final location of equipment and away from egress paths.

Graphics: Graphics should be consistent with others used through the facility, with the building design, and with design and color scheme of the facility with scale related to reasonable viewing distance and the size of the space. Graphics will be designed to identify room name and number and will be designed according to Fort Bragg Installation Design Guidelines (IDG).

Electrical M-115

Summary: The main electrical room provides the space for primary electrical service to enter the building. Adjacency to the emergency generator is required.

Minimum Area: As shown on floor plans

Number of Occupants: none

Design Requirements:

Ceiling may be open to structure. Provide additional sound attenuation as required to minimize sound to adjacent shops and corridors.

Provide rated construction and fire protection system as required by code.

The floor may be concrete with a protective coating placed upon it.

Power. Provide convenience outlets strategically located for general-purpose use.

Communications: Provide one device box, at 54” aff, for connection to telephone system.

Lighting. Provide standard lighting for square footage of the room. Manually switched lighting control at wall adjacent to entry door.

Mechanical. Provide ventilation as specified in Section 01010.

Graphics: Graphics should be consistent with others used through the facility, with the building design, and with design and color scheme of the facility with scale related to reasonable viewing distance and the size of the space. Graphics will be designed to identify room name and number and will be designed according to Fort Bragg Installation Design Guidelines (IDG).

Mechanical M-116

Summary: The Central Mechanical Room should be located to provide easy access for equipment and vehicles necessary to perform repairs and maintenance of equipment, and to isolate the noise and vibration of the equipment from other areas of the building. Close proximity to chillers and any other outdoor equipment is desirable. At least one exterior wall is desirable for intake of outside air.

Minimum Area: As shown on floor plans

Number of Occupants: none

Design Requirements:

Ceiling may be open to structure. Provide additional sound attenuation as required to minimize sound to adjacent shops and corridors.

Noise and vibration must be isolated from adjacent areas.

Provide rated construction and fire protection system as required by code.

The floor may be concrete with a protective coating placed upon it.

Power. Provide convenience outlets strategically located for general-purpose use.

Lighting. Provide standard lighting for square footage of the room. Manually switched lighting control at wall adjacent to entry door.

Communications: Provide one device box near door, at 54” aff, for connection to telephone system.

Mechanical. Provide ventilation as specified in Section 01010.

Provide water supply and drains as required.

Provide doors and/or louver panels of sufficient size to permit removal and replacement of equipment.

Graphics: Graphics should be consistent with others used through the facility, with the building design, and with design and color scheme of the facility with scale related to reasonable viewing distance and the size of the space. Graphics will be designed to identify room name and number and will be designed according to Fort Bragg Installation Design Guidelines (IDG).

Optical Shop M-117

Summary: This shop is part of the Maintenance section of the Armament Center.

Function: The shop houses equipment to repair and maintain Foreign Sniper System weapons in the facility.

Minimum Area: As shown on floor plans

Number of Occupants: 5 plus up to 10 visitors

Special Equipment: All equipment is shown on equipment plans. The following represent the key equipment requiring special design considerations (refer to Appendix E for additional equipment information and line item descriptions):

- Environmental Chamber (line item #41)

Design Requirements:

Contractor's Industrial Systems Engineer will coordinate with User and Manufacturers to insure that room layout provides a functional and well designed optical shop.

To meet requirements of repair on tritium optics the room must have a separate HVAC system with an emergency shut off switch near the door. The room should have an exhaust system with the capability of direct venting to the outside in case a tritium vial is broken. The exhaust switch should also be located near the door. The floors in this area should be sealed to aid in decontamination and reduce contamination of the out-gassing or breaking of tritium vials. The work area requires an air hood with direct venting to the outside. The wall area behind the optical shop workbench with hood should also be sealed to prevent tritium from leaching into the building materials.

This room needs to meet OSHA standards. The floor will be concrete and have a protective coating placed upon it so in the event of a chemical spill it will not seep into the concrete.

Power. Provide 110V outlets, 220V outlets, and 230V outlets as required by shop equipment. Provide convenience outlets for general-purpose use.

Communications: Provide one device box near door, at 54" aff, for connection to telephone system.

Air compressor. Provide compressed air as required by equipment in room. Air compressor tank may be housed in shop or air compressors can be located in a dedicated room (part of mechanical room) with distribution system throughout armament center.

Lighting. Provide standard lighting for square footage of the room with additional lighting over the individual equipment as recommended by manufacturer. Manually switched lighting controls at wall adjacent to each entry door.

Mechanical. This area will be classified Class 1, Division 2, IAW 29 CFR 1910.399. The HVAC and electrical systems will need to meet the requirements of this classification. The ventilation system should be specifically designed to prevent the build up of any hazardous vapors. Provide individual room heating, cooling, and exhaust system. Room shall be maintained at negative pressure relative to the surrounding areas.

Plumbing: Provide one wall mounted emergency eye wash station. Provide one floor drain at each eye wash station. Coordinate location of eye wash station with final location of equipment and away from egress paths.

Graphics: Graphics should be consistent with others used through the facility, with the building design, and with design and color scheme of the facility with scale related to reasonable viewing distance and the size of the space. Graphics will be designed to identify room name and number and will be designed according to Fort Bragg Installation Design Guidelines (IDG).

ADA/AT (Anti Defense Artillery/Anti Tank) Shop M-118

Summary: This shop is part of the Maintenance section of the Armament Center.

Function: The shop is set up for the storage and maintenance of the ADA/AT equipment. The ADA/AT equipment is a console unit approximately 5 feet wide x 5 feet long x 3 feet high. This unit is used in conjunction with the training classes in the Training Center of the facility. The equipment is primarily used on the roof ADA/AT platform located on the Training Center of the facility, but is stored and maintained in the Armament Center of the facility.

Minimum Area: As shown on floor plans

Number of Occupants: 5 plus up to 10 visitors

Special Equipment: All equipment is shown on equipment plans. The following represent the key equipment requiring special design considerations (refer to Appendix E for additional equipment information and line item descriptions):

- ADA/AT console

Design Requirements:

This room needs to meet OSHA standards. The floor will be concrete and have a protective coating placed upon it so in the event of a chemical spill it will not seep into the concrete.

Power. Provide 110 outlets, 220 outlets, and 230 outlets as required by shop equipment. Provide convenience outlets for general-purpose use.

Communications: Provide one device box near door, at 54” aff, for connection to telephone system.

Lighting. Provide standard lighting for square footage of the room with additional lighting over the individual equipment as recommended by manufacturer. Manually switched lighting controls at wall adjacent to each entry door.

Mechanical. Provide heating and cooling as specified in Section 01010.

Plumbing: Provide one wall mounted emergency eye wash station. Provide one floor drain at each eye wash station. Coordinate location of eye wash station with final location of equipment and away from egress paths.

Graphics: Graphics should be consistent with others used through the facility, with the building design, and with design and color scheme of the facility with scale related to reasonable viewing distance and the size of the space. Graphics will be designed to

identify room name and number and will be designed according to Fort Bragg Installation Design Guidelines (IDG).

Magnetic Particle Inspection Shop M-119

Summary: This shop is part of the Safety Certification section of the Armament Center.

Function: The shop houses Magnetic Particle Inspection equipment to inspect and decontaminate weapons prior to test firing.

Minimum Area: As shown on floor plans

Number of Occupants: none (used by X-Ray Shop personnel)

Special Equipment: All equipment is shown on equipment plans. The following represent the key equipment requiring special design considerations (refer to Appendix E for additional equipment information and line item descriptions):

- 2 Magnetic Particle Inspection (line item #34)

Design Requirements:

Contractor's Industrial Systems Engineer will coordinate with User and Manufacturers to insure that room layout provides a functional and well designed magnetic particle inspection shop.

This room needs to meet OSHA standards. The floor will be concrete and have a protective coating placed upon it so in the event of a chemical spill it will not seep into the concrete.

Power. Provide 110V outlets, 220V outlets, and 230V outlets as required by shop equipment. Provide convenience outlets for general-purpose use.

Communications: Provide one device box near door, at 54" aff, for connection to telephone system.

Lighting. Provide standard lighting for square footage of the room with additional lighting over the individual equipment as recommended by manufacturer. Manually switched lighting controls at wall adjacent to each entry door.

Mechanical. This area will be classified Class 1, Division 2, IAW 29 CFR 1910.399. The HVAC and electrical systems will need to meet the requirements of this classification. The ventilation system should be specifically designed to prevent the build up of any hazardous vapors. Provide individual room heating, cooling, and exhaust system. Room shall be maintained at negative pressure relative to the surrounding areas.

The room should be constructed to provide complete shielding from the X-ray sources. Shielding to the roof is required. References for the X-ray machine room and control area include: TM 1-1500-335-23, Nondestructive Inspection Methods, dated 1 Oct 97

ANSI N43.3, Installations using Non-medical X-ray and Sealed gamma-Ray Sources, Energies up to 10 Mev.

Plumbing: Provide one wall mounted emergency eye wash station. Provide one floor drain at each eye wash station. Coordinate location of eye wash station with final location of equipment and away from egress paths.

Graphics: Graphics should be consistent with others used through the facility, with the building design, and with design and color scheme of the facility with scale related to reasonable viewing distance and the size of the space. Graphics will be designed to identify room name and number and will be designed according to Fort Bragg Installation Design Guidelines (IDG).

Test Firing Range M-120

Summary: This indoor range is part of the Safety Certification section of the Armament Center.

Function: The range provides for controlled and indoor weapons test firing. The maximum bullet round to be fired inside the range will be a 12.7 mm Soviet bullet. Weapons will be fired one at a time. Each weapon will be manually fired and a second person will monitor the process inside the protective control room.

Minimum Area: As shown on floor plans

Number of Occupants: none (used by X-Ray Shop personnel)

Special Equipment: All equipment is shown on equipment plans. Refer to Appendix E for additional equipment information and line item descriptions.

Design Requirements:

This room is set up to simulate the existing conditions of the Caswell Road Range I-40 currently being used by the Special Operations Forces in the existing facility (Refer to Appendix H for additional information on existing system). Coordinate final design requirements with existing setup at facility, manufacturer, and User. The following represent the preliminary requirements from the manufacturer to simulate existing Road Range:

- Width: 12 ft wide clearance at firing lane. 22’ ft wide clearance at firing stations area.
- Length: 112 ft clear length including area for monitor room.
- Height: 10 ft clear
- Walls construction: 6” - 8" thick precast, cast in place concrete or 12 inch concrete filled CMU
- Ceiling: 8" precast or cast in place concrete
- Floor: 4” - 6" thick concrete 4,000PSI min. Provide a rubberized floor finish in floor area between control and firing lanes.
- Bullet trap: LE7500RX trap wall to wall and floor to 9' high
- Baffles: JA8D at trap end and JR7C for light protection
- Acoustical: AAF-2, class I on all walls and ceiling
- Door: Class V door between control room and range room
- Window: Class V window looking from control room to range room
- Target system: No target system required.
- Lane dividers: 1 lane divider to provide two firing stations.
- Control room (M-120A): Located in a room 8 ft –10 ft wide x 10 feet deep located behind firing line

- Power: 208 VAC, 3 phase, 30 amp outlet in front of trap; 120 VAC 20 amp outlets by firing line area; 120 VAC, 20 amp outlets in control room
- Lighting: Target lights at trap area (4) 150W par 38 and General lighting as required
- Ventilation: Supply unit with 7500 CFM supply (temperate heating)
- Exhaust unit with 8,250 CFM exhaust to HEPA filter system
- Finishes: Drop ceiling in firing line area at 8 ft. Seal coat on floor

Lighting. Provide standard lighting for square footage of the room with additional lighting over the individual equipment as recommended by manufacturer. Manually switched lighting controls at wall adjacent to each entry door.

Communications: Provide one device box near door, at 54" aff, for connection to telephone system. Provide direct connection to emergency personnel and provide the capability to shut down the test firing range in case of an emergency.

Mechanical. The room will have negative ventilation, heating and air conditioning.

Acoustical Requirements. The wall that separates the range from the other inside part of the building, should use an air space outside the ballistic wall and then another solid block wall. This will give a dead spot to help control the sound transfer. The exhaust and supply systems need to be soundproofed to slow down any potential sound escaping out of the two openings. The ceiling of the range area should be isolated from the rest of the building. No metal should pass from the range to any occupied area in the rest of the building unless a vibration isolator system is used to stop the transfer of sound waves through the metal.

Coordinate design of Firing Range with manufacturer to eliminate the sound transition from the range into the rest of the facility. Reference for the range: CEHND 1110-1-18, USACE Design Manual For Indoor Firing Range, dated June 1990.

Plumbing: Provide one wall mounted emergency eye wash station. Provide one floor drain at each eye wash station. Coordinate location of eye wash station with final location of equipment and away from egress paths.

Surveillance: Prove infrastructure for camera and filming equipment that will monitor and record all test fires.

Graphics: Graphics should be consistent with others used through the facility, with the building design, and with design and color scheme of the facility with scale related to reasonable viewing distance and the size of the space. Graphics will be designed to identify room name and number and will be designed according to Fort Bragg Installation Design Guidelines (IDG).

Control Room M-120A

Summary: This is part of the Test Firing Range.

Function: The room provides a secure monitoring area for test fires.

Minimum Area: As shown on floor plans

Number of Occupants: 2 plus up to 4 visitors

Design Requirements:

This room needs to meet OSHA standards. The floor will be concrete and have a protective coating placed upon it so in the event of a chemical spill it will not seep into the concrete.

Provide 6” - 8" thick precast, cast in place concrete or 12 inch concrete filled CMU wall construction similar to test firing range.

Provide AAF-2, class I acoustical panels on all walls. Ceiling height should be proportional to room dimensions. Provide additional sound attenuation as required to minimize sound infiltration from firing range.

Provide Class V door between control room and range room.

Provide Class V window looking from control room to range room.

Provide PA communication to firing lanes and test firing area.

Communications: Provide one device box, at 54” aff, for connection to telephone system.

Power. Provide convenience outlets for general-purpose use.

Lighting. Provide standard lighting for square footage of the room. Manually switched lighting controls at wall adjacent to each entry door.

Mechanical. Provide heating and cooling as specified in Section 01010 (similar to office)

Graphics: Graphics should be consistent with others used through the facility, with the building design, and with design and color scheme of the facility with scale related to reasonable viewing distance and the size of the space. Graphics will be designed to identify room name and number and will be designed according to Fort Bragg Installation Design Guidelines (IDG).

X-Ray Shop M-121

Summary: This shop is part of the Safety Certification section of the Armament Center.

Function: The shop houses X-Ray equipment to inspect and repair the weapons in the facility.

Minimum Area: As shown on floor plans

Number of Occupants: 4 plus up to 10 visitors

Special Equipment: All equipment is shown on equipment plans. The following represent the key equipment requiring special design considerations (refer to Appendix E for additional equipment information and line item descriptions):

- 1 500ktv X-ray. Digital (line item #33)

Design Requirements:

Contractor's Industrial Systems Engineer will coordinate with User and Manufacturers to insure that room layout provides a functional and well designed x-ray shop.

This room needs to meet OSHA standards. The floor will be concrete and have a protective coating placed upon it so in the event of a chemical spill it will not seep into the concrete.

Power. Provide 110V outlets, 220V outlets, and 230V outlets as required by shop equipment. Provide convenience outlets for general-purpose use.

Communications: Provide one device box for connection to Secure LAN and one device box for connection to unsecure LAN and telephone system.

Lighting. Provide standard lighting for square footage of the room with additional lighting over the individual equipment as recommended by manufacturer. Manually switched lighting controls at wall adjacent to each entry door.

Mechanical. This area will be classified Class 1, Division 2, IAW 29 CFR 1910.399. The HVAC and electrical systems will need to meet the requirements of this classification. The ventilation system should be specifically designed to prevent the build up of any hazardous vapors. Provide individual room heating, cooling, and exhaust system. Room shall be maintained at negative pressure relative to the surrounding areas.

X-Ray Vault (M-124). The weapons storage vault design requirements shall be in accordance with AR 380-5 Department of the Army Information Security Program Chapter 7 Storage and Physical Security Standards, Paragraph 7-13 through 7-20. Refer to Appendix I for additional force protection construction requirements. Vault must be built to

standards listed in AR 190-11, Appendix G, Paragraph G-1. This standard is required of areas that will store weapons. Doors to the vaults can only be secured with either a high security padlock or a GSA approved, built-in, 3 position, changeable, combination lock. All doors leading into vaults are required to have security lighting as stipulated in Para 5-4, AR 190-11. FM 19-30 which is referenced at Para 5-4b is now FM 1-19.30, dated 8 Jan 01.

X-Ray Room (M-123) and X-Ray Control Room (M-122). Within the X-Ray Shop a separate room is required for the 500ktv Digital X-Ray machine. A detached X-Ray Control room is required for the personnel to operate the X-Ray equipment. The two rooms should be constructed to provide complete shielding from the X-ray sources. Shielding to the roof is required. References for the X-ray machine room and control area include: TM 1-1500-335-23, Nondestructive Inspection Methods, dated 1 Oct 97 ANSI N43.3, Installations using Non-medical X-ray and Sealed gamma-Ray Sources, Energies up to 10 Mev.

Plumbing: Provide one wall mounted emergency eye wash station. Provide one floor drain at each eye wash station. Coordinate location of eye wash station with final location of equipment and away from egress paths.

Graphics: Graphics should be consistent with others used through the facility, with the building design, and with design and color scheme of the facility with scale related to reasonable viewing distance and the size of the space. Graphics will be designed to identify room name and number and will be designed according to Fort Bragg Installation Design Guidelines (IDG).

Communications (Black) M-125

Summary: This communications room provides the primary entry point for the non-secure data service (black net) and is the entry point for main telephone service and Cable TV for the Armament Facility. This room needs to be centrally located in the Armament Center to maintain the 300 feet maximum travel distance for data lines.

Minimum Area: As shown on floor plans

Number of Occupants: none

Design Requirements:

Ceiling height should be proportional to room dimensions.

The floor may be concrete with a protective coating placed upon it.

Provide 117 volt 20 AMP Core Gang box.

Provide dedicated ground.

Provide ¾" thick plywood backboard on all four walls. Plywood to be 4 feet tall and 2 feet above the finished floor.

Power. Provide convenience outlets strategically located for general-purpose use.

Communications: Provide one device box near door, at 54" aff, for connection to telephone system.

Lighting. Provide standard lighting for square footage of the room. Manually switched lighting control at wall adjacent to entry door.

Mechanical. Provide heating, cooling, and humidity control as specified in Section 01010.

Graphics: Graphics should be consistent with others used through the facility, with the building design, and with design and color scheme of the facility with scale related to reasonable viewing distance and the size of the space. Graphics will be designed to identify room name and number and will be designed according to Fort Bragg Installation Design Guidelines (IDG).

Communications (Red) M-126

Summary: This communications room provides the primary entry point for the secure data service (red net). This room needs to be centrally located in the Armament Center to maintain the 300 feet maximum travel distance for data lines.

Minimum Area: As shown on floor plans

Number of Occupants: none

Design Requirements:

Ceiling height should be proportional to room dimensions.

The floor may be concrete with a protective coating placed upon it.

Provide 117 volt 20 AMP Core Gang box.

Provide dedicated ground.

Provide ¾" thick plywood backboard on all four walls. Plywood to be 4 feet tall and 2 feet above the finished floor.

Power. Provide convenience outlets strategically located for general-purpose use.

Communications: Provide one device box near door, at 54" aff, for connection to telephone system.

Lighting. Provide standard lighting for square footage of the room. Manually switched lighting control at wall adjacent to entry door.

Mechanical. Provide heating, cooling, and humidity control as specified in Section 01010.

Graphics: Graphics should be consistent with others used through the facility, with the building design, and with design and color scheme of the facility with scale related to reasonable viewing distance and the size of the space. Graphics will be designed to identify room name and number and will be designed according to Fort Bragg Installation Design Guidelines (IDG).

Organization Maintenance Shop M-127

Summary: This shop is part of the Maintenance section of the Armament Center.

Function: The shop services weapons and issues weapons to the appropriate repair shops within the facility.

Minimum Area: As shown on floor plans

Number of Occupants: 8 plus up to 10 visitors

Special Equipment: All equipment is shown on equipment plans. The following represent the key equipment requiring special design considerations (refer to Appendix E for additional equipment information and line item descriptions):

- 2 Weapons Cleaning Machines (line item #63)

Design Requirements:

Contractor's Industrial Systems Engineer will coordinate with User and Manufacturers to insure that room layout provides a functional and well designed organization maintenance shop.

This room needs to meet OSHA standards. The floor will be concrete and have a protective coating placed upon it so in the event of a chemical spill it will not seep into the concrete.

Power. Provide 110V outlets, 220V outlets, and 230V outlets as required by shop equipment. Provide convenience outlets for general-purpose use.

Communications: Provide one device box near door, at 54" aff, for connection to telephone system.

Lighting. Provide standard lighting for square footage of the room with additional lighting over the individual equipment as recommended by manufacturer. Manually switched lighting controls at wall adjacent to each entry door.

Mechanical. This area will be classified Class 1, Division 2, IAW 29 CFR 1910.399. The HVAC and electrical systems will need to meet the requirements of this classification. The ventilation system should be specifically designed to prevent the build up of any hazardous vapors. Provide individual room heating, cooling, and exhaust system. Room shall be maintained at negative pressure relative to the surrounding areas.

Plumbing: Provide two wall mounted emergency eye wash stations. Provide one floor drain at each eye wash station. Coordinate location of eye wash station with final location of equipment and away from egress paths.

Graphics: Graphics should be consistent with others used through the facility, with the building design, and with design and color scheme of the facility with scale related to reasonable viewing distance and the size of the space. Graphics will be designed to identify room name and number and will be designed according to Fort Bragg Installation Design Guidelines (IDG).

Male (Latrine) M-128

Summary: The public restrooms should be located adjacent to the major public circulation. Fixture counts requirements are indicated in TI 800-01, Chapter 15. There will be a 30% Female and 70% Male mix within the facility. The male and female facilities within the common area are to be adjacent rather than splitting them into remote locations.

Function: To provide toilets and lavatories for the visiting public and the employees. The men's room will contain 3 water closets, 2 urinals, 2 lavatories, and 3 showers (verify with TI 800-01). Provide personnel lockers.

Minimum Area: As shown on floor plans

Number of Occupants: none

Design Requirements:

Ceiling height should be proportional to room dimensions.

Power. Provide convenience outlets strategically located for cleaning and general-purpose use.

Lighting. Provide standard lighting for square footage of the room. Lighting control shall be occupancy sensors.

Mechanical. Provide heating, cooling, and ventilation as specified in Section 01010.

Provide floor drain(s) are required.

Graphics: Graphics should be consistent with others used through the facility, with the building design, and with design and color scheme of the facility with scale related to reasonable viewing distance and the size of the space. Graphics will be designed to identify room name and number and will be designed according to Fort Bragg Installation Design Guidelines (IDG).

Female (Latrine) M-129

Summary: The public restrooms should be located adjacent to the major public circulation. Fixture counts requirements are indicated in TI 800-01, Chapter 15. There will be a 30% Female and 70% Male mix within the facility. The male and female facilities within the common area are to be adjacent rather than splitting them into remote locations.

Function: To provide toilets and lavatories for the visiting public and the employees. The men's room will contain 1 water closet, 1 lavatory, and 1 shower (verify with TI 800-01). Provide personnel lockers.

Minimum Area: As shown on floor plans

Number of Occupants: none

Design Requirements:

Ceiling height should be proportional to room dimensions.

Power. Provide convenience outlets strategically located for cleaning and general-purpose use.

Lighting. Provide standard lighting for square footage of the room. Lighting control shall be occupancy sensors.

Mechanical. Provide heating, cooling, and ventilation as specified in Section 01010.

Provide floor drain(s) are required.

Graphics: Graphics should be consistent with others used through the facility, with the building design, and with design and color scheme of the facility with scale related to reasonable viewing distance and the size of the space. Graphics will be designed to identify room name and number and will be designed according to Fort Bragg Installation Design Guidelines (IDG).

Break M-130

Summary: The break room should be located adjacent to the major public circulation and adjacent to the male and female facilities within the common area.

Minimum Area: As shown on floor plans

Number of Occupants: 24 minimum at one time

Design Requirements:

Ceiling height should be proportional to room dimensions.

Power. Provide convenience outlets strategically located for cleaning and general-purpose use. Provide receptacles for refrigerator, and for kitchen type appliances above countertop.

Communications: Provide one device box near door of break room, at 54” aff, for connection to telephone system.

Lighting. Provide standard lighting for square footage of the room. Manually switched lighting control at wall adjacent to entry door.

Mechanical. Provide heating, cooling, and ventilation as specified in Section 01010.

Provide floor drain(s) are required.

Graphics: Graphics should be consistent with others used through the facility, with the building design, and with design and color scheme of the facility with scale related to reasonable viewing distance and the size of the space. Graphics will be designed to identify room name and number and will be designed according to Fort Bragg Installation Design Guidelines (IDG).

Janitor M-131

Summary: Closet and mop sink with hot water and housekeeping supplies located near main restrooms.

Minimum Area: As shown on floor plans

Number of Occupants: none

Design Requirements:

Ceiling height should be proportional to room dimensions.

Power. Provide convenience outlets for general-purpose use.

Lighting. Provide standard lighting for square footage of the room. Manually switched lighting control at wall adjacent to entry door.

Mechanical. Provide ventilation as specified in Section 01010.

Graphics: Graphics should be consistent with others used through the facility, with the building design, and with design and color scheme of the facility with scale related to reasonable viewing distance and the size of the space. Graphics will be designed to identify room name and number and will be designed according to Fort Bragg Installation Design Guidelines (IDG).

Welding Shop M-132

Summary: This shop is part of the Maintenance section of the Armament Center.

Function: The shop houses welding equipment to repair and maintain the weapons and machines in the facility

Minimum Area: As shown on floor plans

Number of Occupants: 4 plus up to 10 visitors

Special Equipment: All equipment is shown on equipment plans. The following represent the key equipment requiring special design considerations (refer to Appendix E for additional equipment information and line item descriptions):

- 1 Overhead Hoist (line item #69)
- 1 Overhead Electrical Hoist (line item #91)

Design Requirements:

Contractor's Industrial Systems Engineer will coordinate with User and Manufacturers to insure that room layout provides a functional and well designed welding shop.

This room needs to meet OSHA standards. The floor will be concrete and have a protective coating placed upon it so in the event of a chemical spill it will not seep into the concrete.

Power. Provide 110V outlets, 220V outlets, and 230V outlets as required by shop equipment. Provide convenience outlets for general-purpose use.

Communications: Provide one device box near door, at 54" aff, for connection to telephone system.

Lighting. Provide standard lighting for square footage of the room with additional lighting over the individual equipment as recommended by manufacturer. Manually switched lighting controls at wall adjacent to each entry door.

Mechanical. This area will be classified Class 1, Division 2, IAW 29 CFR 1910.399. The HVAC and electrical systems will need to meet the requirements of this classification. The ventilation system should be specifically designed to prevent the build up of any hazardous vapors. Provide individual room heating, cooling, and exhaust system. Room shall be maintained at negative pressure relative to the surrounding areas.

Power hoist. Provide overhead power hoist mounted on track to run the full length of both welding tables.

Provide an appropriate curtain system or adequate protection for the surrounding equipment and users from the sparks generated from the welding.

The tanks in use for welding operations would better serve the personnel and provide for Safety if they were mounted in an area outside of the facility with built-in piping to the welding room. This area may be located outside of the facility and near the mechanical yard. This area should be designed to allow personnel to connect and disconnect the Acetylene and Oxygen cylinders for ease of use without having to move the cylinders inside the building. Provision should also be made for delivery and removal of tanks. The area for the cylinders in use should be protected from the weather with a cover or lean-to type roof. The area should be designed to allow the cylinders to be chained or fastened securely to the wall, with a locking fence to secure the area. Extra Acetylene and oxygen should not be stored within the facility. A similar lean-to covered area must be provided for storage outside the facility. The storage of extra acetylene and oxygen cylinders must be in two separate locations a minimum of 20 feet apart.

This shop will require a storage room for miscellaneous and non-hazardous materials and items.

Plumbing: Provide one wall mounted emergency eye wash station. Provide one floor drain at each eye wash station. Coordinate location of eye wash station with final location of equipment and away from egress paths.

Graphics: Graphics should be consistent with others used through the facility, with the building design, and with design and color scheme of the facility with scale related to reasonable viewing distance and the size of the space. Graphics will be designed to identify room name and number and will be designed according to Fort Bragg Installation Design Guidelines (IDG).

Heavy Weapons Shop M-133 and Heavy Weapons Vault M-134

Summary: This shop is part of the Maintenance section of the Armament Center.

Function: The shop handles the repair and maintenance of all weapons of 40mm or larger bore size.

Minimum Area: As shown on floor plans

Number of Occupants: 8 plus up to 10 visitors

Special Equipment: All equipment is shown on equipment plans. The following represent the key equipment requiring special design considerations (refer to Appendix E for additional equipment information and line item descriptions):

- 1 Ultrasonic Cleaner (line item #32)
- 2 Weapons Cleaning Machines (line item #63)

Design Requirements:

Contractor's Industrial Systems Engineer will coordinate with User and Manufacturers to insure that room layout provides a functional and well designed heavy weapons shop.

This room needs to meet OSHA standards. The floor will be concrete and have a protective coating placed upon it so in the event of a chemical spill it will not seep into the concrete.

Power. Provide 110V outlets, 220V outlets, and 230V outlets as required by shop equipment. Provide convenience outlets for general-purpose use.

Communications: Provide one device box near door of each room, at 54" aff, for connection to telephone system.

Lighting. Provide standard lighting for square footage of the room with additional lighting over the individual equipment as recommended by manufacturer. Manually switched lighting controls at wall adjacent to each entry door.

Mechanical. This area will be classified Class 1, Division 2, IAW 29 CFR 1910.399. The HVAC and electrical systems will need to meet the requirements of this classification. The ventilation system should be specifically designed to prevent the build up of any hazardous vapors. Provide individual room heating, cooling, and exhaust system. Room shall be maintained at negative pressure relative to the surrounding areas.

The largest weapon in the facility is approximately 13 feet long x 3 feet wide. This weapon will be maintained in the Heavy Weapons Shop. This weapon will require the layout of equipment in this shop to provide a clearance of 20 feet in addition to the

weapons length for its borescope inspection. The borescope is used to inspect the shaft of the weapon. A total of at least 33 feet in length is required for inspecting this weapon.

Heavy Weapons Vault (M-134). The weapons storage vault design requirements shall be in accordance with AR 380-5 Department of the Army Information Security Program Chapter 7 Storage and Physical Security Standards, Paragraph 7-13 through 7-20. Refer to Appendix I for additional force protection construction requirements. Vault must be built to standards listed in AR 190-11, Appendix G, Paragraph G-1. This standard is required of areas that will store weapons. Doors to the vaults can only be secured with either a high security padlock or a GSA approved, built-in, 3 position, changeable, combination lock. All doors leading into vaults are required to have security lighting as stipulated in Para 5-4, AR 190-11. FM 19-30 which is referenced at Para 5-4b is now FM 1-19.30, dated 8 Jan 01. This vault needs to be designed to provide direct access to the main Weapons Vault though the Heavy Weapons Shop. The vault door located in the main Weapons Vault side is to be only accessible and operable from within the main Weapons Vault. The vault door located in the Heavy Weapons Shop side is to be only accessible and operable from within the Heavy Weapons Shop.

Plumbing: Provide two wall mounted emergency eye wash stations. Provide one floor drain at each eye wash station. Coordinate location of eye wash station with final location of equipment and away from egress paths.

Graphics: Graphics should be consistent with others used through the facility, with the building design, and with design and color scheme of the facility with scale related to reasonable viewing distance and the size of the space. Graphics will be designed to identify room name and number and will be designed according to Fort Bragg Installation Design Guidelines (IDG).

Stock Room (ASL) M-135

Summary: This shop is part of the ASL/PLL (Authorized Stock List/ Prescribed Load List) section of the Armament Center.

Function: The shop stores and issues weapons repair parts to the different repair shops.

Minimum Area: As shown on floor plans

Number of Occupants: 6 plus up to 10 visitors

Special Equipment: All equipment is shown on equipment plans. The following represent the key equipment requiring special design considerations (refer to Appendix E for additional equipment information and line item descriptions):

- Modular Storage Bins (line item #37)

Design Requirements:

This room needs to meet OSHA standards. The floor will be concrete and have a protective coating placed upon it so in the event of a chemical spill it will not seep into the concrete.

Power. Provide 110V outlets, 220V outlets, and 230V outlets as required by shop equipment. Provide convenience outlets for general-purpose use.

Communications: Provide one device box for connection to Secure LAN and one device box for connection to unsecure LAN and telephone system.

Lighting. Provide standard lighting for square footage of the room with additional lighting over the individual workstations and in the modular storage bin areas. Manually switched lighting controls at wall adjacent to main entry door and modular storage bin area.

Mechanical. Provide heating and cooling as specified in Section 01010.

Coordinate the size of the Modular Storage Bin floor area with manufacturer recommended storage system area based on estimate for current parts stockage.

Coordinate ceiling construction height with required clearance for the Modular Storage Bins. Preliminary calculations require a minimum clearance of 18’-0” above finished floor. Coordinate final design of Modular Storage Bins with manufacturer to provide adequate clearances.

Provide an internal access window to the Heavy and Light Weapons Shops. This will be used for immediate requests for parts from these shops.

Plumbing: Provide one wall mounted emergency eye wash station. Provide one floor drain at each eye wash station. Coordinate location of eye wash station with final location of equipment and away from egress paths.

Graphics: Graphics should be consistent with others used through the facility, with the building design, and with design and color scheme of the facility with scale related to reasonable viewing distance and the size of the space. Graphics will be designed to identify room name and number and will be designed according to Fort Bragg Installation Design Guidelines (IDG).

Light Weapons Shop M-136 and Light Weapons Vault M-137

Summary: This shop is part of the Maintenance section of the Armament Center.

Function: The shop handles the repair and maintenance of all weapons smaller than 40mm bore size.

Minimum Area: As shown on floor plans

Number of Occupants: 8 plus up to 10 visitors

Special Equipment: All equipment is shown on equipment plans. The following represent the key equipment requiring special design considerations (refer to Appendix E for additional equipment information and line item descriptions):

- 1 Ultrasonic Cleaner (line item #32)
- 2 Weapons Cleaning Machines (line item #63)

Design Requirements:

Contractor's Industrial Systems Engineer will coordinate with User and Manufacturers to insure that room layout provides a functional and well designed light weapons shop.

This room needs to meet OSHA standards. The floor will be concrete and have a protective coating placed upon it so in the event of a chemical spill it will not seep into the concrete.

Power. Provide 110V outlets, 220V outlets, and 230V outlets as required by shop equipment. Provide convenience outlets for general-purpose use.

Communications: Provide one device box near door of Shop, at 54" aff, for connection to telephone system.

Lighting. Provide standard lighting for square footage of the room with additional lighting over the individual equipment as recommended by manufacturer. Manually switched lighting controls at wall adjacent to each entry door.

Mechanical. This area will be classified Class 1, Division 2, IAW 29 CFR 1910.399. The HVAC and electrical systems will need to meet the requirements of this classification. The ventilation system should be specifically designed to prevent the build up of any hazardous vapors. Provide individual room heating, cooling, and exhaust system. Room shall be maintained at negative pressure relative to the surrounding areas.

Light Weapons Vault. The weapons storage vault design requirements shall be in accordance with AR 380-5 Department of the Army Information Security Program Chapter 7 Storage and Physical Security Standards, Paragraph 7-13 through 7-20. Refer to Ap-

pendix I for additional force protection construction requirements. Vault must be built to standards listed in AR 190-11, Appendix G, Paragraph G-1. This standard is required of areas that will store weapons. Doors to the vaults can only be secured with either a high security padlock or a GSA approved, built-in, 3 position, changeable, combination lock. All doors leading into vaults are required to have security lighting as stipulated in Para 5-4, AR 190-11. FM 19-30 which is referenced at Para 5-4b is now FM 1-19.30, dated 8 Jan 01. This vault needs to be designed to provide direct access to the main Weapons Vault though the Light Weapons Shop. The vault door located in the main Weapons Vault side is to be only accessible and operable from within the main Weapons Vault. The vault door located in the Light Weapons Shop side is to be only accessible and operable from within the Light Weapons Shop.

Plumbing: Provide two wall mounted emergency eye wash station. Provide one floor drain at each eye wash station. Coordinate location of eye wash station with final location of equipment and away from egress paths.

Graphics: Graphics should be consistent with others used through the facility, with the building design, and with design and color scheme of the facility with scale related to reasonable viewing distance and the size of the space. Graphics will be designed to identify room name and number and will be designed according to Fort Bragg Installation Design Guidelines (IDG).

Weapons Issue/Turn-In/Clean Shop M-139 and Turn-In Vault M-138

Summary: This shop is part of the Maintenance section of the Armament Center.

Function: The shop houses a large quantity of heavy worktables and weapons cleaning machines for disassembling and cleaning weapons previously issued from facility. The shop also is the main entrance point of all weapons delivered to the facility.

Minimum Area: As shown on floor plans

Number of Occupants: 10 instructors and up to 220 students/soldiers

Special Equipment: All equipment is shown on equipment plans. The following represent the key equipment requiring special design considerations (refer to Appendix E for additional equipment information and line item descriptions):

- 28 Weapons Cleaning Machines (line item #63)

Design Requirements:

This room needs to meet OSHA standards. The floor will be concrete and have a protective coating placed upon it so in the event of a chemical spill it will not seep into the concrete.

Power. Provide 110V outlets, 220V outlets, and 230V outlets as required by shop equipment. Provide convenience outlets for general-purpose use.

Communications: Provide one device box near in Shop near the Vault , at 54” aff, for connection to telephone system.

Lighting. Provide standard lighting for square footage of the room with additional lighting over the individual worktables. Manually switched lighting control at wall adjacent to entry doors.

Mechanical. This area will be classified Class 1, Division 2, IAW 29 CFR 1910.399. The HVAC and electrical systems will need to meet the requirements of this classification. The ventilation system should be specifically designed to prevent the build up of any hazardous vapors. Provide individual room heating, cooling, and exhaust system. Room shall be maintained at negative pressure relative to the surrounding areas.

Turn-In Vault (M-138). The weapons storage vault design requirements shall be in accordance with AR 380-5 Department of the Army Information Security Program Chapter 7 Storage and Physical Security Standards, Paragraph 7-13 through 7-20. Refer to Appendix I for additional force protection construction requirements. Vault must be built to standards listed in AR 190-11, Appendix G, Paragraph G-1. This standard is required of areas that will store weapons. Doors to the vaults can only be secured with either a

high security padlock or a GSA approved, built-in, 3 position, changeable, combination lock. All doors leading into vaults are required to have security lighting as stipulated in Para 5-4, AR 190-11. FM 19-30 which is referenced at Para 5-4b is now FM 1-19.30, dated 8 Jan 01.

This shop will include a Male Latrine (M-140), a Female Latrine (M-141) and a Maintenance (Janitor's) closet. Each latrine will consist of 1 water closet and 1 lavatory. The maintenance closet will include a mop sink with hot water and housekeeping and built in storage shelves. All of these three rooms will have a floor drain.

Plumbing: Provide seven wall mounted emergency eye wash stations. Provide one floor drain at each eye wash station. Coordinate location of eye wash station with final location of equipment and away from egress paths.

Graphics: Graphics should be consistent with others used through the facility, with the building design, and with design and color scheme of the facility with scale related to reasonable viewing distance and the size of the space. Graphics will be designed to identify room name and number and will be designed according to Fort Bragg Installation Design Guidelines (IDG).

Weapons Vault M-144 and Tritium (Storage Room) M-145

Summary: This vault is part of the Weapons Storage section of the Armament Center.

Function: The area contains specialized storage systems and specific vault construction requirements to store all weapons in the facility. This vault includes an internal storage room for Tritium Materials.

Minimum Area: As shown on floor plans

Number of Occupants: none

Special Equipment: All equipment is shown on equipment plans. The following represent the key equipment requiring special design considerations (refer to Appendix E for additional equipment information and line item descriptions):

- 1 Forklift, Electric (line item #35)
- 1 Tow Motor (line item #36)
- 1 Vault Weapon Modular Storage System – STAKK (line item # 38)
- 200 Weapons Storage Units

Design Requirements:

Construction. The weapons storage vault design requirements shall be in accordance with AR 380-5 Department of the Army Information Security Program Chapter 7 Storage and Physical Security Standards, Paragraph 7-13 through 7-20. Refer to Appendix I for additional force protection construction requirements. Vault must be built to standards listed in AR 190-11, Appendix G, Paragraph G-1. This standard is required of areas that will store weapons. Doors to the vaults can only be secured with either a high security padlock or a GSA approved, built-in, 3 position, changeable, combination lock. All doors leading into vaults are required to have security lighting as stipulated in Para 5-4, AR 190-11. FM 19-30 which is referenced at Para 5-4b is now FM 1-19.30, dated 8 Jan 01. This vault needs to be designed to provide direct access to Heavy Weapons Vault, Light Weapons Vault, and Classroom Vault. The vault doors located inside of the vault are to be only accessible and operable from within the main Weapons Vault.

Power. Provide 110V outlets, 220V outlets, and 230V outlets as required by electrical equipment. Provide convenience outlets for general-purpose use. Refer to manufacturer recommendations for electrical equipment (Forklift and Tow Motor) requirements.

Communications: Provide two device boxes in the Weapons Vault, one near the Heavy Weapons Vault door, and one near the Classroom Vault door, both at 54” aff, for connection to telephone system.

Lighting. Provide standard lighting for square footage of the room with additional lighting over the individual modular storage system as recommended by manufacturer.

Manually switched lighting controls at wall adjacent to main entry door and modular storage bin area.

Coordinate vault ceiling construction height with required clearance for the Modular Storage System. Preliminary calculations require a minimum clearance of 20’-0” above finished floor. Coordinate final design of Modular Storage System with manufacturer to provide adequate clearances.

Coordinate appropriate floor construction with the estimated weight loads from the Modular Storage Systems, Weapons Storage Units, and Weapons in the Vault. Note that Weapons Storage Units (crates) have an empty weight requirement of 500 lbs.

Tritium Storage (M-145). Within the Weapons Vault a separate room is required for the storage of Tritium Fire Control Devices. The Tritium storage area should have a separate HVAC system with an emergency shut off switch near the door. The room should be located near a perimeter wall and should have an exhaust system with the capability of direct venting to the outside in case a tritium vial is broken. The exhaust switch should also be located near the door. The floors in this area should be sealed to aid in decontamination and reduce contamination of the out-gassing or breaking of tritium vials. Refer to NRC BML-12-00722-06 with application #37 for reference.

Graphics: Graphics should be consistent with others used through the facility, with the building design, and with design and color scheme of the facility with scale related to reasonable viewing distance and the size of the space. Graphics will be designed to identify room name and number and will be designed according to Fort Bragg Installation Design Guidelines (IDG).

Vestibule T-101

Summary: This area will serve as the main entrance point for visitors and personnel to the Training Center of the SOF Weapons Training Facility.

Minimum Area: As shown on floor plans

Number of Occupants: 1

Design Requirements:

Ceiling height should be proportional to room dimensions and entrance design.

Provide recessed grid system walk-off mat.

Per Force Protection Requirements (Appendix I), this area offsets the interior door(s) from the exterior door(s) and provides for masonry wall backup.

Include provisions for wall space for display of pictures, display cases with lighting and convenience outlets suitable for both.

Power. Provide convenience outlets strategically located for cleaning, general-purpose use, and dedicated outlets for equipment.

Communications: Provide one device box for connection to telephone system. Box shall be mounted at 54” aff for wall phone.

Lighting. Provide standard lighting for square footage of the room with additional lighting over any special furniture or display cases designed for this space.

Mechanical. Provide heating and cooling as specified in Section 01010.

This area will include a dedicated workstation for a Charge of Quarters (CQ) person. The CQ person will be a shift position available on site 24 hours a day and 7 days a week. This person will be responsible for administering access and providing a secure control point to the Training Center.

Graphics: Graphics should be consistent with others used through the facility, with the building design, and with design and color scheme of the facility with scale related to reasonable viewing distance and the size of the space. Graphics will be designed to identify room name and number and will be designed according to Fort Bragg Installation Design Guidelines (IDG).

Lobby T-102

Summary: This area is the main intersection of corridors in the Training Center and is the location for the elevator and stair access to the ADA/AT platform.

Minimum Area: As shown on floor plans

Number of Occupants: None

Design Requirements:

This room needs to meet OSHA standards. The floor will be concrete and have a protective coating placed upon it so in the event of a chemical spill it will not seep into the concrete.

The lobby and all adjacent corridor corners will have corner guards to minimize damage from moving carts.

Include provisions for wall space for display of pictures, display cases with lighting and convenience outlets suitable for both.

Power. Provide convenience outlets strategically located for cleaning and general-purpose use.

Lighting. Provide standard lighting for square footage of the room with additional lighting over entrances to adjacent rooms.

Mechanical. Provide heating and cooling as specified in Section 01010.

Graphics: Graphics should be consistent with others used through the facility, with the building design, and with design and color scheme of the facility with scale related to reasonable viewing distance and the size of the space. Graphics will be designed to identify room name and number and will be designed according to Fort Bragg Installation Design Guidelines (IDG).

Stair T-103

Summary: This is an access method to the ADA/AT platform.

Function: The stairs will be primarily used by the students/soldiers to access the ADA/AT platform.

Minimum Area: As shown on floor plans

Number of Occupants: None

Design Requirements:

Lighting. Provide standard lighting for square footage of the area.

Mechanical. None required.

Provide rated construction and fire protection system as required by code.

Graphics: Graphics should be consistent with others used through the facility, with the building design, and with design and color scheme of the facility with scale related to reasonable viewing distance and the size of the space. Graphics will be designed to identify room name and number and will be designed according to Fort Bragg Installation Design Guidelines (IDG).

Elevator T-104 and Maintenance (Elevator Room) T-105

Summary: The elevator is the second access method to the ADA/AT platform.

Function: The elevator will be primarily used by the ADA/AT equipment and the instructor(s) or personnel responsible for transporting the ADA/AT console unit onto the ADA/AT platform.

Minimum Area: As shown on floor plans

Number of Occupants: None

Design Requirements:

Lighting. Provide standard lighting for square footage of the area.

Power. Provide convenience outlets strategically located for cleaning and general-purpose use.

Mechanical. Provide HVAC system for the elevator equipment room in accordance with the equipment manufacture's room requirements.

Provide rated construction and fire protection system as required by code.

Graphics: Graphics should be consistent with others used through the facility, with the building design, and with design and color scheme of the facility with scale related to reasonable viewing distance and the size of the space. Graphics will be designed to identify room name and number and will be designed according to Fort Bragg Installation Design Guidelines (IDG).

Break T-106

Summary: The break room should be located adjacent to the major public circulation and near the male and female facilities within the common area.

Minimum Area: As shown on floor plans

Number of Occupants: 55 maximum at one time

Design Requirements:

Ceiling height should be proportional to room dimensions.

Provide a 4'-0" wide door for removal of vending machines.

Power. Provide convenience outlets strategically located for cleaning and general-purpose use. Provide outlets for 3 vending machines and outlets near the countertop for microwaves.

Communications: Provide one device box for connection to telephone system. Box shall be mounted at 54" aff for wall phone.

Lighting. Provide standard lighting for square footage of the room. Manually switched lighting control at wall adjacent to entry door.

Mechanical. Provide heating and cooling as specified in Section 01010.

Provide floor drain(s) as required.

Graphics: Graphics should be consistent with others used through the facility, with the building design, and with design and color scheme of the facility with scale related to reasonable viewing distance and the size of the space. Graphics will be designed to identify room name and number and will be designed according to Fort Bragg Installation Design Guidelines (IDG).

Computer Room T-107

Summary: This classroom is part of the Training Center of the SOF Weapons Training Facility.

Function: The area contains specialized simulation equipment. This classroom is one of the destinations of Weapons Flow I (Issue Weapons to Classrooms) as described in paragraph 5.1.1.

Minimum Area: As shown on floor plans

Number of Occupants: 2 instructors and up to 40 students

Special Equipment: All equipment is shown on equipment plans. The following represent the key equipment requiring special design considerations:

- 15 Simulation Machines. These are personal computers with 19” monitors.

Design Requirements:

The main floor of the computer classroom (not including corridor) is required to be a depressed slab to allow a raised floor construction to be level with the adjoining spaces (no ramps) and shall have a minimum 12” vertical clear space for cabling under the raised floor. Floor finish shall be antistatic (2.0) kV) carpet or similar.

Power. Provide convenience outlets strategically located for cleaning, general-purpose use, and dedicated outlets for equipment. Provide floor boxes in raised floor with two duplex receptacles beneath each set of student tables and at instructor’s position. Floor boxes shall be large enough to accommodate receptacles and data jacks as required in Communications section below.

Communications: Provide one device box for connection to telephone system. Box shall be mounted at 54” aff for wall phone.

Provide pathways from floor boxes to cable tray system for unsecure (black) cables. Pathways shall be sized to accommodate two jacks for each seat at table.

Provide device box on each wall for connection to secure (black) network.

Provide provisions for television monitors, VCRs, ceiling mounted digital projectors, and retractable ceiling projection screen. Provide dry erase boards at front and sides of rooms.

Lighting. Provide standard and dimmable lighting for square footage of the room with additional lighting over equipment as required manufacturer. Manually switched lighting control at wall adjacent to entry door and at front of room.

Provide ceiling fans and coordinate location of lights to not be directly above fans.

Mechanical. Provide heating and cooling as specified in Section 01010.

Provide a podium at the front of the room with data connections to electronically control the audiovisual equipment in the room.
Provide secure access to the Classroom Vault.

Graphics: Graphics should be consistent with others used through the facility, with the building design, and with design and color scheme of the facility with scale related to reasonable viewing distance and the size of the space. Graphics will be designed to identify room name and number and will be designed according to Fort Bragg Installation Design Guidelines (IDG).

Female (Latrine) T-108

Summary: The public restrooms should be located adjacent to the major public circulation. Fixture counts requirements are indicated in TI 800-01, Chapter 15. There will be a 30% Female and 70% Male mix within the facility. The male and female facilities within the common area are to be adjacent rather than splitting them into remote locations.

Function: To provide toilets and lavatories for the visiting public and students. The female latrine will contain 2 water closets and 2 lavatories (verify with TI 800-01).

Minimum Area: As shown on floor plans

Number of Occupants: none

Design Requirements:

Ceiling height should be proportional to room dimensions.

Power. Provide convenience outlets strategically located for cleaning and general-purpose use.

Lighting. Provide standard lighting for square footage of the room. Lighting control shall be occupancy sensors.

Mechanical. Provide heating and cooling as specified in Section 01010.

Provide floor drain(s) as required.

Graphics: Graphics should be consistent with others used through the facility, with the building design, and with design and color scheme of the facility with scale related to reasonable viewing distance and the size of the space. Graphics will be designed to identify room name and number and will be designed according to Fort Bragg Installation Design Guidelines (IDG).

Janitor T-109

Summary: Closet and mop sink with hot water and housekeeping supplies located near main restrooms.

Minimum Area: As shown on floor plans

Number of Occupants: none

Design Requirements:

Ceiling height should be proportional to room dimensions.

Power. Provide convenience outlets for general-purpose use.

Lighting. Provide standard lighting for square footage of the room. Manually switched lighting control at wall adjacent to entry door.

Mechanical. Provide ventilation as specified in Section 01010.

Provide floor drain(s) as required.

Graphics: Graphics should be consistent with others used through the facility, with the building design, and with design and color scheme of the facility with scale related to reasonable viewing distance and the size of the space. Graphics will be designed to identify room name and number and will be designed according to Fort Bragg Installation Design Guidelines (IDG).

Male (Latrine) T-110

Summary: The public restrooms should be located adjacent to the major public circulation. Fixture counts requirements are indicated in TI 800-01, Chapter 15. There will be a 30% Female and 70% Male mix within the facility. The male and female facilities within the common area are to be adjacent rather than splitting them into remote locations.

Function: To provide toilets and lavatories for the visiting public and students. The men's room will contain 3 water closets, 3 urinals, and 3 lavatories (verify with TI 800-01). Provide personnel lockers.

Minimum Area: As shown on floor plans

Number of Occupants: none

Design Requirements:

Ceiling height should be proportional to room dimensions.

Power. Provide convenience outlets strategically located for cleaning and general-purpose use.

Lighting. Provide standard lighting for square footage of the room. Lighting control shall be occupancy sensors.

Mechanical. Provide heating, cooling, and ventilation as specified in Section 01010.

Provide floor drain(s) as required.

Graphics: Graphics should be consistent with others used through the facility, with the building design, and with design and color scheme of the facility with scale related to reasonable viewing distance and the size of the space. Graphics will be designed to identify room name and number and will be designed according to Fort Bragg Installation Design Guidelines (IDG).

Male (Latrine) T-111

Summary: The public restrooms should be located adjacent to the major public circulation. Fixture counts requirements are indicated in TI 800-01, Chapter 15.

Function: To provide toilets and lavatories for the instructors. The men's room will contain 3 water closets, 1 urinal, 6 lavatories, and 3 showers (verify with TI 800-01).

Minimum Area: As shown on floor plans

Number of Occupants: none

Design Requirements:

Ceiling height should be proportional to room dimensions.

Power. Provide convenience outlets strategically located for cleaning and general-purpose use.

Lighting. Provide standard lighting for square footage of the room. Lighting control shall be occupancy sensors. Provide sensors at each shower stall.

Mechanical. Provide heating, cooling, and ventilation as specified in Section 01010.

Provide floor drain(s) as required.

Graphics: Graphics should be consistent with others used through the facility, with the building design, and with design and color scheme of the facility with scale related to reasonable viewing distance and the size of the space. Graphics will be designed to identify room name and number and will be designed according to Fort Bragg Installation Design Guidelines (IDG).

Conference T-112

Summary: This room is part of the Training Center. This room will be set up with a large conference table and conference chairs for briefings or planning sessions.

Minimum Area: As shown on floor plans

Number of Occupants: 25 minimum at one time

Design Requirements:

Ceiling height should be proportional to room dimensions. Provide additional wall and ceiling sound attenuation as required to minimize sound infiltration from adjacent rooms and corridors.

The floor finish may be heavy-duty carpet tiles to aid in the sound attenuation requirements.

Communications: Provide two device boxes for connection to Secure LAN and two device boxes for connection to unsecure LAN and telephone system.

Power. Provide convenience outlets strategically located for cleaning, general-purpose use, and dedicated outlets for equipment. Provide secure and non-secure telephone and data connections.

Provide provisions for television monitors, VCRs, computers, ceiling mounted digital projectors, and retractable ceiling projection screen. Provide dry erase boards at front and sides of rooms.

Lighting. Provide standard and dimmable lighting for square footage of the room with additional lighting over equipment as recommended by manufacturer. Manually switched lighting control at wall adjacent to entry door.

Provide ceiling fans and coordinate location of lights to not be directly above fans.

Mechanical. Provide heating and cooling as specified in Section 01010.

Provide a data connection point to electronically control the audiovisual equipment in the room.

Graphics: Graphics should be consistent with others used through the facility, with the building design, and with design and color scheme of the facility with scale related to reasonable viewing distance and the size of the space. Graphics will be designed to identify room name and number and will be designed according to Fort Bragg Installation Design Guidelines (IDG).

Storage T-113

Summary: This is an enclosed room to store miscellaneous equipment.

Minimum Area: As shown on floor plans

Number of Occupants: none

Design Requirements:

Ceiling height should be proportional to room dimensions. Provide additional sound attenuation as required to minimize sound infiltration from adjacent shops and corridors.

The floor may be concrete with a protective coating placed upon it.

Communications: Provide one device box near door, at 54" aff, for connection to telephone system.

Power. Provide convenience outlets strategically located for cleaning and general-purpose use.

Lighting. Provide standard lighting for square footage of the room. Manually switched lighting control at wall adjacent to entry door.

Mechanical. Provide heating and cooling as specified in Section 01010.

Graphics: Graphics should be consistent with others used through the facility, with the building design, and with design and color scheme of the facility with scale related to reasonable viewing distance and the size of the space. Graphics will be designed to identify room name and number and will be designed according to Fort Bragg Installation Design Guidelines (IDG).

Instructor Admin Area T-114

Summary: This is an open area with modular workstations for Instructors.

Minimum Area: As shown on floor plans

Number of Occupants: 17 plus up to 25 visitors

Design Requirements:

Ceiling height should be proportional to room dimensions. Provide additional sound attenuation as required to minimize sound infiltration from adjacent shops and corridors.

The floor finish may be heavy-duty carpet tiles to emphasize the Administrative functions in this area and to aid in the sound attenuation requirements.

Power. Provide convenience outlets strategically located for cleaning, general-purpose use, and dedicated outlets for equipment. Provide two duplex receptacles at each workstation and conference table. Where workstations are not against wall, provide floorboxes rated for slab installation under each workstation. Provide floorboxes rated for slab installation under conference table. Floor boxes shall be large enough to accommodate receptacles and data jacks as required in Communications section below.

Communications:
Provide a device box at each workstation and conference table for connection to telephone and unsecure LAN.

Provide pathways from floor boxes to cable tray system for unsecure (black) cables. Pathways shall be sized to accommodate two jacks for each seat at table.

Provide device box on each wall for connection to secure (black) network.

Provide provisions for television monitors, VCRs, computers, ceiling mounted digital projectors, and retractable ceiling projection screen. Provide dry erase boards at front wall at conference table.

Provide device box on each wall for connection to secure (black) network.

Lighting. Provide standard lighting for square footage of the room with additional lighting over the any special furniture or display cases designed in this space. Manually switched lighting control at wall adjacent to entry door.

Mechanical. Provide heating and cooling as specified in Section 01010.

Graphics: Graphics should be consistent with others used through the facility, with the building design, and with design and color scheme of the facility with scale related to reasonable viewing distance and the size of the space. Graphics will be designed to identify room name and number and will be designed according to Fort Bragg Installation Design Guidelines (IDG).

Office T-115

Summary: This is an enclosed room with a workstation

Minimum Area: As shown on floor plans

Number of Occupants: 1 plus 2 visitors

Design Requirements:

Ceiling height should be proportional to room dimensions. Provide additional sound attenuation as required to minimize sound infiltration from adjacent shops and corridors.

The floor finish may be heavy-duty carpet tiles to emphasize the Administrative functions in this area and to aid in the sound attenuation required for the functions in the Shop Office.

Communications: Provide two device boxes for connection to Secure LAN and two device boxes for connection to unsecure LAN and telephone system.

Power. Provide convenience outlets strategically located for cleaning, general-purpose use, and dedicated outlets for equipment.

Lighting. Provide standard lighting for square footage of the room with additional lighting over any special furniture or display cases designed in this space. Manually switched lighting control at wall adjacent to entry door.

Mechanical. Provide heating and cooling as specified in Section 01010.

Graphics: Graphics should be consistent with others used through the facility, with the building design, and with design and color scheme of the facility with scale related to reasonable viewing distance and the size of the space. Graphics will be designed to identify room name and number and will be designed according to Fort Bragg Installation Design Guidelines (IDG).

Office T-116

Summary: This is an enclosed room with a workstation

Minimum Area: As shown on floor plans

Number of Occupants: 1 plus 2 visitors

Design Requirements:

Ceiling height should be proportional to room dimensions. Provide additional sound attenuation as required to minimize sound infiltration from adjacent shops and corridors.

The floor finish may be heavy-duty carpet tiles to emphasize the Administrative functions in this area and to aid in the sound attenuation required for the functions in the Shop Office.

Communications: Provide two device boxes for connection to Secure LAN and two device boxes for connection to unsecure LAN and telephone system.

Power. Provide convenience outlets strategically located for cleaning, general-purpose use, and dedicated outlets for equipment.

Lighting. Provide standard lighting for square footage of the room with additional lighting over any special furniture or display cases designed in this space. Manually switched lighting control at wall adjacent to entry door.

Mechanical. Provide heating and cooling as specified in Section 01010.

Graphics: Graphics should be consistent with others used through the facility, with the building design, and with design and color scheme of the facility with scale related to reasonable viewing distance and the size of the space. Graphics will be designed to identify room name and number and will be designed according to Fort Bragg Installation Design Guidelines (IDG).

Office T-117

Summary: This is an enclosed room with a workstation

Minimum Area: As shown on floor plans

Number of Occupants: 1 plus 2 visitors

Design Requirements:

Ceiling height should be proportional to room dimensions. Provide additional sound attenuation as required to minimize sound infiltration from adjacent shops and corridors.

The floor finish may be heavy-duty carpet tiles to emphasize the Administrative functions in this area and to aid in the sound attenuation required for the functions in the Shop Office.

Communications: Provide two device boxes for connection to Secure LAN and two device boxes for connection to unsecure LAN and telephone system.

Power. Provide convenience outlets strategically located for cleaning, general-purpose use, and dedicated outlets for equipment.

Lighting. Provide standard lighting for square footage of the room with additional lighting over any special furniture or display cases designed in this space. Manually switched lighting control at wall adjacent to entry door.

Mechanical. Provide heating and cooling as specified in Section 01010.

Graphics: Graphics should be consistent with others used through the facility, with the building design, and with design and color scheme of the facility with scale related to reasonable viewing distance and the size of the space. Graphics will be designed to identify room name and number and will be designed according to Fort Bragg Installation Design Guidelines (IDG).

Office T-118

Summary: This is an enclosed room with a workstation

Minimum Area: As shown on floor plans

Number of Occupants: 1 plus 2 visitors

Design Requirements:

Ceiling height should be proportional to room dimensions. Provide additional sound attenuation as required to minimize sound infiltration from adjacent shops and corridors.

The floor finish may be heavy-duty carpet tiles to emphasize the Administrative functions in this area and to aid in the sound attenuation required for the functions in the Shop Office.

Communications: Provide two device boxes for connection to Secure LAN and two device boxes for connection to unsecure LAN and telephone system.

Power. Provide convenience outlets strategically located for cleaning, general-purpose use, and dedicated outlets for equipment.

Lighting. Provide standard lighting for square footage of the room with additional lighting over any special furniture or display cases designed in this space. Manually switched lighting control at wall adjacent to entry door.

Mechanical. Provide heating and cooling as specified in Section 01010.

Graphics: Graphics should be consistent with others used through the facility, with the building design, and with design and color scheme of the facility with scale related to reasonable viewing distance and the size of the space. Graphics will be designed to identify room name and number and will be designed according to Fort Bragg Installation Design Guidelines (IDG).

Simulator Storage T-119

Summary: This is an enclosed room to store the Call for Fire Simulator Equipment. Note, this equipment is not the Simulators to be located in the Computer Classroom (T-107).

Function: The Call for Fire Simulator is a portable device requiring overhead projection capability to a classroom sized screen. This system will go on a mobile cart of about 3' by 6'. This equipment will be utilized in each classroom (including Training Classroom) and will be connected to the classroom's overhead projector.

Minimum Area: As shown on floor plans

Number of Occupants: none

Design Requirements:

Ceiling height should be proportional to room dimensions. Provide additional sound attenuation as required to minimize sound infiltration from adjacent shops and corridors.

The floor may be concrete with a protective coating placed upon it.

Communications: Provide one device box near door, at 54" aff, for connection to telephone system.

Power. Provide convenience outlets strategically located for cleaning and general-purpose use.

Lighting. Provide standard lighting for square footage of the room. Manually switched lighting control at wall adjacent to entry door.

Mechanical. Provide heating and cooling as specified in Section 01010.

Graphics: Graphics should be consistent with others used through the facility, with the building design, and with design and color scheme of the facility with scale related to reasonable viewing distance and the size of the space. Graphics will be designed to identify room name and number and will be designed according to Fort Bragg Installation Design Guidelines (IDG).

Training Classroom T-120 and Training Classroom T-121

Summary: These classrooms are part of the Training Center of the SOF Weapons Training Facility.

Function: These classrooms are set up with tables (Similar to functions in Weapons Turn-In Shop) and chairs to train students in weapon disassembly, assembly, and usage. The two classrooms are divided by a demountable (accordion style) partition to allow both classrooms to be combined into one larger classroom. These classrooms are two of the destinations of Weapons Flow I (Issue Weapons to Classrooms) as described in paragraph 5.1.1.

Minimum Area: As shown on floor plans

Number of Occupants: 2 instructors and up to 40 students in each classroom

Special Equipment: All equipment is shown on equipment plans.

Design Requirements:

The floor may be concrete with a protective coating placed upon it.

Provide a demountable partition to separate the two classrooms.

Power. Provide convenience outlets strategically located for cleaning, general-purpose use, and dedicated outlets for equipment. Provide two duplex receptacles at each group of desks. Where workstations are not against wall, provide floorboxes rated for slab installation under each workstation. Floor boxes shall be large enough to accommodate receptacles and data jacks as required in Communications section below.

Communications: Provide a device box at each workstation for connection to telephone and unsecure LAN.

Provide pathways from floor boxes to cable tray system for unsecure (black) cables. Pathways shall be sized to accommodate two jacks for each seat at table.

Provide device box on each wall for connection to secure (black) network.

Provide provisions for television monitors, VCRs, computers, ceiling mounted digital projectors, and retractable ceiling projection screen. Provide dry erase boards at front and sides of rooms.

Lighting. Provide standard and dimmable lighting for square footage of the room with additional lighting over equipment as required manufacturer. Manually switched lighting control at wall adjacent to entry door and at front of room.

Provide ceiling fans and coordinate location of lights to not be directly above fans.

Mechanical. Provide heating and cooling as specified in Section 01010.

Provide a podium at the front of the room with data connections to electronically control the audiovisual equipment in the room.

Provide secure access to the Classroom Vault. Both classrooms will share one dedicated access to the Classroom Vault. This access door needs to be located adjacent to the demountable partition to minimize traffic into classroom T-121.

Graphics: Graphics should be consistent with others used through the facility, with the building design, and with design and color scheme of the facility with scale related to reasonable viewing distance and the size of the space. Graphics will be designed to identify room name and number and will be designed according to Fort Bragg Installation Design Guidelines (IDG).

Training Classroom T-122

Summary: This classroom is part of the Training Center of the SOF Weapons Training Facility.

Function: This classroom is set up with tables (Similar to functions in Weapons Turn-In Shop) and chairs to train students in weapon disassembly, assembly, and usage. This classroom is one of the destinations of Weapons Flow I (Issue Weapons to Classrooms) as described in paragraph 5.1.1.

Minimum Area: As shown on floor plans

Number of Occupants: 2 instructors and up to 40 students

Special Equipment: All equipment is shown on equipment plans.

Design Requirements:

The floor may be concrete with a protective coating placed upon it.

Power. Provide convenience outlets strategically located for cleaning, general-purpose use, and dedicated outlets for equipment. Provide two duplex receptacles at each workstation. Where workstations are not against wall, provide floorboxes rated for slab installation under each workstation. Floor boxes shall be large enough to accommodate receptacles and data jacks as required in Communications section below.

Communications:
Provide a device box at each workstation for connection to telephone and unsecure LAN.

Provide pathways from floor boxes to cable tray system for unsecure (black) cables. Pathways shall be sized to accommodate two jacks for each seat at table.

Provide device box on each wall for connection to secure (black) network.

Provide provisions for television monitors, VCRs, computers, ceiling mounted digital projectors, and retractable ceiling projection screen. Provide dry erase boards at front and sides of rooms.

Lighting. Provide standard and dimmable lighting for square footage of the room with additional lighting over equipment as required manufacturer. Manually switched lighting control at wall adjacent to entry door and at front of room.

Provide ceiling fans and coordinate location of lights to not be directly above fans.

Mechanical. Provide heating and cooling as specified in Section 01010.

Provide a podium at the front of the room with data connections to electronically control the audiovisual equipment in the room.

Provide secure access to the Classroom Vault. Both classrooms will share one dedicated access to the Classroom Vault.

Graphics: Graphics should be consistent with others used through the facility, with the building design, and with design and color scheme of the facility with scale related to reasonable viewing distance and the size of the space. Graphics will be designed to identify room name and number and will be designed according to Fort Bragg Installation Design Guidelines (IDG).

Communications (Black) T-123

Summary: This communications room provides the primary entry point for the non-secure data service (black data network) and is the entry point for main telephone service and Cable TV for the Training Facility. This room needs to be located in the Training Center to maintain the 300 feet maximum cable run distance.

Minimum Area: As shown on floor plans

Number of Occupants: none

Design Requirements:

Ceiling height should be proportional to room dimensions.

The floor may be concrete with a protective coating placed upon it.

Communications: Provide one device box near door, at 54" aff, for connection to telephone system.

Provide 117 volt 20 AMP Core Gang box.

Provide dedicated ground.

Provide ¾" thick plywood backboard on all four walls. Plywood to be 4 feet tall and 2 feet above the finished floor.

Power. Provide convenience outlets strategically located for general-purpose use.

Lighting. Provide standard lighting for square footage of the room. Manually switched lighting control at wall adjacent to entry door.

Mechanical. Provide heating, cooling, and humidity control as specified in Section 01010.

Graphics: Graphics should be consistent with others used through the facility, with the building design, and with design and color scheme of the facility with scale related to reasonable viewing distance and the size of the space. Graphics will be designed to identify room name and number and will be designed according to Fort Bragg Installation Design Guidelines (IDG).

Communications (Red) T-124

Summary: This communications room provides the primary entry point for the secure data service (red data network). This room needs to be located in the Training Center to maintain the 300 feet maximum cable run distance.

Minimum Area: As shown on floor plans

Number of Occupants: none

Design Requirements:

Ceiling height should be proportional to room dimensions.

The floor may be concrete with a protective coating placed upon it.

Communications: Provide one device box near door, at 54" aff, for connection to telephone system.

Provide 117 volt 20 AMP Core Gang box.

Provide dedicated ground.

Provide ¾" thick plywood backboard on all four walls. Plywood to be 4 feet tall and 2 feet above the finished floor.

Power. Provide convenience outlets strategically located for general-purpose use.

Lighting. Provide standard lighting for square footage of the room. Manually switched lighting control at wall adjacent to entry door.

Mechanical. Provide heating, cooling, and humidity control as specified in Section 01010.

Graphics: Graphics should be consistent with others used through the facility, with the building design, and with design and color scheme of the facility with scale related to reasonable viewing distance and the size of the space. Graphics will be designed to identify room name and number and will be designed according to Fort Bragg Installation Design Guidelines (IDG).

Electrical T-125

Summary: The main electrical room provides the space for primary electrical service to enter the building and is the entry point for main telephone service and Cable TV.

Minimum Area: As shown on floor plans

Number of Occupants: none

Design Requirements:

Ceiling may be open to structure. Provide additional sound attenuation as required to minimize sound to adjacent shops and corridors.

Provide rated construction and fire protection system as required by code.

Communications: Provide one device box near door, at 54” aff, for connection to telephone system.

The floor may be concrete with a protective coating placed upon it.

Power. Provide convenience outlets strategically located for general-purpose use.

Lighting. Provide standard lighting for square footage of the room. Manually switched lighting control at wall adjacent to entry door.

Mechanical. Provide ventilation as specified in Section 01010.

Graphics: Graphics should be consistent with others used through the facility, with the building design, and with design and color scheme of the facility with scale related to reasonable viewing distance and the size of the space. Graphics will be designed to identify room name and number and will be designed according to Fort Bragg Installation Design Guidelines (IDG).

Mechanical T-126

Summary: The Mechanical Room should be located to provide easy access for equipment and vehicles necessary to perform repairs and maintenance of equipment, and to isolate the noise and vibration of the equipment, from other areas of the building. Close proximity to chillers and any other outdoor equipment is desirable. At least one exterior wall is desirable for intake of outside air.

Minimum Area: As shown on floor plans

Number of Occupants: none

Design Requirements:

Ceiling may be open to structure. Provide additional sound attenuation as required to minimize sound to adjacent shops and corridors.

Noise and vibration must be isolated from adjacent areas.

Communications: Provide one device box near door, at 54” aff, for connection to telephone system.

Provide rated construction and fire protection system as required by code.

The floor may be concrete with a protective coating placed upon it.

Power. Provide convenience outlets strategically located for general-purpose use.

Lighting. Provide standard lighting for square footage of the room. Manually switched lighting control at wall adjacent to entry door.

Mechanical. Provide heating and ventilation as specified in Section 01010.

Provide water supply and drains as required.

Provide doors and/or louver panels of sufficient size to permit removal and replacement of equipment.

Graphics: Graphics should be consistent with others used through the facility, with the building design, and with design and color scheme of the facility with scale related to reasonable viewing distance and the size of the space. Graphics will be designed to identify room name and number and will be designed according to Fort Bragg Installation Design Guidelines (IDG).

Classroom Vault T-127

Summary: This vault is part of the Weapons Storage section of the Armament Center and is the secure transfer location of weapons between the Armament Facility and the Training Facility.

Function: The area contains specialized storage systems and specific vault construction requirements to temporarily store weapons in the facility.

Minimum Area: As shown on floor plans

Number of Occupants: none

- **Special Equipment:** All equipment is shown on equipment plans.

Design Requirements:

Construction. The weapons storage vault design requirements shall be in accordance with AR 380-5 Department o the Army Information Security Program Chapter 7 Storage and Physical Security Standards, Paragraph 7-13 through 7-20. Refer to Appendix I for additional force protection construction requirements. Vault must be built to standards listed in AR 190-11, Appendix G, Paragraph G-1. This standard is required of areas that will store weapons. Doors to the vaults can only be secured with either a high security padlock or a GSA approved, built-in, 3 position, changeable, combination lock. All doors leading into vaults are required to have security lighting as stipulated in Para 5-4, AR 190-11. FM 19-30 which is referenced at Para 5-4b is now FM 1-19.30, dated 8 Jan 01. This vault needs to be designed to provide direct access to Heavy Weapons Vault, Light Weapons Vault, and Classroom Vault. The vault doors located inside of the vault are to be only accessible and operable from within the main Weapons Vault.

Power. Provide 110V outlets, 220V outlets, and 230V outlets as required by electrical equipment. Provide convenience outlets for general-purpose use. Refer to manufacturer recommendations for electrical equipment (Forklift and Tow Motor) requirements.

Communications: Provide one device box in the Weapons Vault, near the Weapons Vault M-144 door, to be located at 54” aff for connection to telephone system.

Lighting. Provide standard lighting for square footage of the room with additional lighting over the individual modular storage system as recommended by manufacturer. Manually switched lighting controls at wall adjacent to main entry door and modular storage bin area.

Mechanical. Provide heating, cooling, and humidity control as specified in Section 01010.

Coordinate vault ceiling construction height with required clearance for the Modular Storage System. Preliminary calculations require a minimum clearance of 20’-0” above finished floor.

Coordinate appropriate floor construction with the estimated weight loads from the Modular Storage Systems, Weapons Storage Units, and Weapons in the Vault. Note that Weapons Storage Units (crates) have an empty weight requirement of 500 lbs.

Graphics: Graphics should be consistent with others used through the facility, with the building design, and with design and color scheme of the facility with scale related to reasonable viewing distance and the size of the space. Graphics will be designed to identify room name and number and will be designed according to Fort Bragg Installation Design Guidelines (IDG).

Storage T-128

Summary: This is an enclosed room to store miscellaneous equipment.

Minimum Area: As shown on floor plans

Number of Occupants: none

Design Requirements:

Ceiling height should be proportional to room dimensions. Provide additional sound attenuation as required to minimize sound infiltration from adjacent shops and corridors.

The floor may be concrete with a protective coating placed upon it.

Provide built-in steel storage shelves at each side wall and one built-in steel shelf in middle of room (see floor plan). Each shelf system will include a minimum 4 sets of 3'-0" deep adjustable shelves. These storage shelves will be bolted to structure and walls.

Communications: Provide one device box near door, at 54" aff, for connection to telephone system.

Power. Provide convenience outlets strategically located for cleaning and general-purpose use.

Lighting. Provide standard lighting for square footage of the room. Manually switched lighting control at wall adjacent to entry door.

Mechanical. Provide heating and cooling as specified in Section 01010.

Graphics: Graphics should be consistent with others used through the facility, with the building design, and with design and color scheme of the facility with scale related to reasonable viewing distance and the size of the space. Graphics will be designed to identify room name and number and will be designed according to Fort Bragg Installation Design Guidelines (IDG).

ADA/AT (Air Defense Artillery and Anti-Tank) Platform

Summary: This area is a roof platform located at the Training Center. This area is for the Training of airplane tracking with the ADA/AT Simulator Systems.

Minimum Area: As shown on floor plans

Number of Occupants: 2 instructors and up to 40 students

Design Requirements:

Access to this area will be with stairs and elevator. Per Army TM 5-853-1 Security Engineering Project Development, provide a screen CMU wall to shield elevator and stair doors from any ballistic threats. Locate wall to provide setback for easy transfer of ADA/AT Simulator Systems.

Provide a designated roof covered area for ADA/AT Simulator Systems.

Lighting. Provide exterior lights near the covered area for the Simulator Systems and throughout the platform area as necessary.

Power. Provide weatherproof convenience outlets located near the covered area for the Simulator Systems and strategically located for general-purpose use.

The floor will be designed to provide for a traffic topping or walkable surface while maintaining a waterproof surface. The building's insulation and thermal envelope will also have to be maintained for this area.

Graphics: Graphics should be consistent with others used through the facility, with the building design, and with design and color scheme of the facility with scale related to reasonable viewing distance and the size of the space. Graphics will be designed to identify room name and number and will be designed according to Fort Bragg Installation Design Guidelines (IDG).

Weapons Supplies handling Facility I-101

Summary: This area provides screening and inspection of all deliveries and delivery vehicles to the Armament Center and Weapons Training Facility.

Minimum Area: As shown on floor plans

Number of Occupants: 2 - 20

Special Equipment: All equipment is shown on equipment plans. The following represent the key equipment requiring special design considerations (refer to Appendix E for additional equipment information and line item descriptions):

- Package Scan X-Ray (line item #70)
- Metal Detector (line item #71)

Design Requirements:

This room needs to meet OSHA standards. The floor will be concrete and have a protective coating placed upon it so in the event of a chemical spill it will not seep into the concrete.

Power. Provide 110 outlets, 220 outlets, and 230 outlets as required by electrical equipment. Provide convenience outlets strategically located for cleaning, general-purpose use, and dedicated outlets for equipment.

Communications: Provide one device box near the office door, to be located at 54” aff for connection to telephone system.

Lighting. Provide standard lighting for square footage of the room with additional lighting over the individual equipment as recommended by manufacturer.

Mechanical. Provide summer ventilation at a rate of 12 air changes per hour. Space shall be heated to 55 degrees F.

Graphics: Graphics should be consistent with others used through the facility, with the building design, and with design and color scheme of the facility with scale related to reasonable viewing distance and the size of the space. Graphics will be designed to identify room name and number and will be designed according to Fort Bragg Installation Design Guidelines (IDG).

Office I-102

Summary: This is an enclosed room with a workstation

Minimum Area: As shown on floor plans

Number of Occupants: 1 plus 2 visitors

Design Requirements:

Ceiling height should be proportional to room dimensions. Provide additional sound attenuation as required to minimize sound infiltration from adjacent shops and corridors.

The floor finish may be heavy-duty carpet tiles to emphasize the Administrative functions in this area and to aid in the sound attenuation required for the functions in the office.

Communications: Provide two device boxes for connection to unsecure LAN and telephone system.

Power. Provide convenience outlets strategically located for cleaning, general-purpose use, and dedicated outlets for equipment. Provide secure and non-secure telephone and data connections.

Lighting. Provide standard lighting for square footage of the room with additional lighting over any special furniture or display cases designed in this space. Manually switched lighting control at wall adjacent to entry door.

Mechanical. Provide heating and cooling as specified in Section 01010.

Graphics: Graphics should be consistent with others used through the facility, with the building design, and with design and color scheme of the facility with scale related to reasonable viewing distance and the size of the space. Graphics will be designed to identify room name and number and will be designed according to Fort Bragg Installation Design Guidelines (IDG).

Storage I-103

Summary: This is an enclosed room to store miscellaneous equipment.

Minimum Area: As shown on floor plans

Number of Occupants: none

Design Requirements:

Ceiling height should be proportional to room dimensions.

The floor may be concrete with a protective coating placed upon it.

Provide built-in steel storage shelves (see floor plan). Each shelf system will include a minimum 4 sets of 2'-0" deep adjustable shelves. These storage shelves will be bolted to structure and walls.

Communications: Provide one device box near door, at 54" aff, for connection to telephone system.

Power. Provide convenience outlets strategically located for cleaning and general-purpose use.

Lighting. Provide standard lighting for square footage of the room. Manually switched lighting control at wall adjacent to entry door.

Mechanical. Provide summer ventilation.

Graphics: Graphics should be consistent with others used through the facility, with the building design, and with design and color scheme of the facility with scale related to reasonable viewing distance and the size of the space. Graphics will be designed to identify room name and number and will be designed according to Fort Bragg Installation Design Guidelines (IDG).

Toilet I-104

Summary: The public restroom should be located adjacent to the major public circulation. Fixture counts requirements are indicated in TI 800-01, Chapter 15.

Function: To provide toilets and lavatories for the visiting public and the employees. The toilet will contain 1 water closet and 1 lavatory (verify with TI 800-01). Provide personnel lockers.

Minimum Area: As shown on floor plans

Number of Occupants: none

Design Requirements:

Ceiling height should be proportional to room dimensions.

Power. Provide convenience outlets strategically located for cleaning and general-purpose use.

Lighting. Provide standard lighting for square footage of the room. Lighting control shall be occupancy sensors.

Mechanical. Provide summer ventilation.

Provide floor drain(s) are required.

Graphics: Graphics should be consistent with others used through the facility, with the building design, and with design and color scheme of the facility with scale related to reasonable viewing distance and the size of the space. Graphics will be designed to identify room name and number and will be designed according to Fort Bragg Installation Design Guidelines (IDG).