US Army Corps
of Engineers
Savannah District

Hunter Army Airfield
Georgia

Solicitation Number
W912HN-04-R-0007
Physical Fitness Center
FY-04 LI 39451
March 2004

Two-Phase Design Build

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

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SOLICITATION, OFFER, AND AWARD *(Construction, Alteration, or Repair)*	1. SOLICITATION NO. W912HN-04-R-0007-0010	2. TYPE OF SOLICITATION [ ] SEALED BID (IFB) [X] NEGOTIATED *(RFP)*	3. DATE ISSUED 25-Mar-2004	PAGE OF PAGES 1 OF 227

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 W912HN	8. ADDRESS OFFER TO *(If Other Than Item 7)* CODE DACA21
US ARMY ENGINEER DISTRICT SAVANNAH 100 W OGLETHORPE AVENUE SAVANNAH GA 31401-3640	A-E & CONSTRUCTION BRANCH 100 W. OGLETHORPE AVE SAVANNAH GA 31401-3640
TEL: FAX:	TEL: (912)652-5075 FAX: (912)652-5828

9. FOR INFORMATION CALL:	A. NAME	B. TELEPHONE NO. *(Include area code)* *(NO COLLECT CALLS)*
	DONNA S KNIGHT	(912)652-5504

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):*

PHYSICAL FITNESS CENTER
HUNTER ARMY AIRFIELD, GEORGIA
PHASE ONE OF TWO-PHASE DESIGN-BUILD
LINE ITEM 39451, FY 04

Donna S. Knight, Contract Specialist
(912) 652-5504
donna.s.knight@sas02.usace.army.mil

Colleen O'Keefe, Contracting Officer
(912) 652-5075
colleen.j.okeefe@sas02.usace.army.mil

*See Section 00800, Clause 52.211-10, Commencement, Prosecution and Completion of Work

11. The Contractor shall begin performance within 10 calendar days and complete it within _____ calendar days after receiving [ ] award, [X] notice to proceed. This performance period is [X] mandatory, [ ] negotiable. *(See* 52.211-10 *.)*

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 10

13. ADDITIONAL SOLICITATION REQUIREMENTS:

A. Sealed offers in original and 5 copies to perform the work required are due at the place specified in Item 8 by 02:00 PM *(hour)* local time 21 Jul 2004 *(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 90 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

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

Proposals sent by U.S. Mail or delivered by commercial carrier must be received by mailroom personnel on the first floor of 100 West Oglethorpe Avenue 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.

FACSIMILE MODIFICATIONS OF PROPOSALS ARE NOT AUTHORIZED.

QUALITY CONTROL SYSTEM (QCS): Any contract award resulting from this solicitation will require the mandatory use of the automated Quality Control System. Please see Section 01312A for additional information.

SUPPLIES OR SERVICES AND PRICES/COSTS SCHEDULE
PHYSICAL FITNESS CENTER
HUNTER ARMY AIRFIELD, GEORGIA

TOTAL BASE BID (Items 0001 thru 0006) ---------- $_____

TOTAL BASE BID PLUS OPTIONAL WORK
(Items 0001 thru 0007) ----------$_____

ITEM NO	SUPPLIES/SERVICES	QUANTITY	UNIT	UNIT PRICE	AMOUNT
0001		1	Lump Sum	XXXX	$_____
	BASE BID Design, Effort, and Engineering Services during Construction, Complete				

ITEM NO	SUPPLIES/SERVICES	QUANTITY	UNIT	UNIT PRICE	AMOUNT
0002		1	Lump Sum	XXXX	$_____
	BASE BID Construction of Physical Fitness Center, Complete to 5 Foot Building Line				

ITEM NO	SUPPLIES/SERVICES	QUANTITY	UNIT	UNIT PRICE	AMOUNT
0003		1	Lump Sum	XXXX	$_____
	BASE BID Site Preparation and Development, Including Utilities (Everything Outside the 5 Foot Building Line), Complete				

ITEM NO	SUPPLIES/SERVICES	QUANTITY	UNIT	UNIT PRICE	AMOUNT
0004		1	Lump Sum	XXXX	$_____
	BASE BID Demolition - One Building: Building No. 925, and Capping Utilities; and other Miscellaneous Site Improvements				

ITEM NO	SUPPLIES/SERVICES	QUANTITY	UNIT	UNIT PRICE	AMOUNT
0005			Lump Sum	XXXX	$XXXXXXXXXXXXXX
	BASE BID DELETED.				

ITEM NO	SUPPLIES/SERVICES	QUANTITY	UNIT	UNIT PRICE	AMOUNT
0006					
	BASE BID Operations and Maintenance (O&M) of the Physical Fitness Center for 5 years.				

ITEM NO	SUPPLIES/SERVICES	QUANTITY	UNIT	UNIT PRICE	AMOUNT
0006AA		1	Lump Sum	XXXX	$_____
	1st Year of Facility Operations and Maintenance (O&M) of the Physical Fitness Center				

ITEM NO	SUPPLIES/SERVICES	QUANTITY	UNIT	UNIT PRICE	AMOUNT
0006AB		1	Lump Sum	XXXX	$_____
	2nd Year of Facility Operations and Maintenance (O&M) of the Physical Fitness Center				

ITEM NO	SUPPLIES/SERVICES	QUANTITY	UNIT	UNIT PRICE	AMOUNT
0006AC		1	Lump Sum	XXXX	$_____
	3rd Year of Facility Operations and Maintenance (O&M) of the Physical Fitness Center				

ITEM NO	SUPPLIES/SERVICES	QUANTITY	UNIT	UNIT PRICE	AMOUNT
0006AD		1	Lump Sum	XXXX	$_____
	4th Year of Facility Operations and Maintenance (O&M) of the Physical Fitness Center				

ITEM NO	SUPPLIES/SERVICES	QUANTITY	UNIT	UNIT PRICE	AMOUNT
0006AE		1	Lump Sum	XXXX	$_____
	5th Year of Facility Operations and Maintenance (O&M) of the Physical Fitness Center				

ITEM NO	SUPPLIES/SERVICES	QUANTITY	UNIT	UNIT PRICE	AMOUNT
0006AF		1	Lump Sum	$200,000.00	$200,000.00
	Unscheduled Maintenance of thePhysical Fitness Center for 5 Years				

ITEM NO	SUPPLIES/SERVICES	QUANTITY	UNIT	UNIT PRICE	AMOUNT
0007		1	Lump Sum	XXXX	$XXXX
	Optional Work Alternations, Modifications, and New Construction in the Physical Fitness Center during the Five-Year Operations and Maintenance of the Facility				

CLAUSES INCORPORATED BY FULL TEXT

52.232-4001 COST LIMITATION – JUNE 1999

The contract award for design, construction, and 5 years of operations and maintenance shall not exceed $15,100,000 for this project. Offerors are under no obligation to approach this amount.

(End of Clause)

NOTES TO OFFERORS

1. BID ITEM 0006: Operation and Maintenance of the Physical Fitness Center is specified in the Five-Year Maintenance Requirements (Specification Section 01785).

   Work in Bid Items 0006AA through 0006AE includes:

   a) All scheduled, unscheduled, and preventive maintenance to all facility systems and equipment of this facility. The unscheduled maintenance and repair in the case of critical systems is not limited to any dollar amount and may include complete replacement of a failed system or item or equipment at no cost to the Government as required. These items also include continuous Commissioning of all critical systems and equipment as defined in the Operations and Maintenance Statement of Work. This works starts with acceptance of the facility by the Government.

   b) Unscheduled maintenance and repair actions to non-critical systems, and damage by others shall be handled by service orders against Bid Item 0006AF.

   c) Basis for payment is monthly based on the yearly bid price divided by 12.

2. BID ITEM 0006AF: Unscheduled maintenance is specified in the Five-Year Maintenance Requirements and starts with acceptance of the facility by the Government. This line item will be funded to the amount shown on the schedule when awarded. The payment for each task accomplished by the Contractor under this bid item will be negotiated and issued by service orders.

3. BID ITEM 0007: This is an optional item of work that may be exercised when the Government identifies a requirement for additions, alternations, modifications or other new construction in the Physical Fitness Center during the five-year Operations and Maintenance of the facility. See the clause “Option for Alternations, Modifications and New Work,” for implementation of this line item.

Section 00100

PROPOSAL SUBMISSION REQUIREMENTS AND INSTRUCTIONS

1. PROPOSAL OVERVIEW. This Request for Proposal (RFP) solicits for the design and construction of the Physical Fitness Center – Hunter Army Air Field, GA. The contract will be a Firm-Fixed Price (FFP). The purpose of the Source Selection plan is to establish a uniform evaluation procedure for the evaluation of Phase 1 and Phase 2 of proposals by the Technical Evaluation Team (TET) and the Source Selection Evaluation Board (SSEB) and the development of the Best Value Decision by the Source Selection Authority (SSA) using the Two-Phase Design-Build Process (See Federal Acquisition Regulation (FAR) Subpart 36.3). 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 straightforward, concise delineation of capabilities to satisfactorily perform the contract being sought. The proposal should therefore be practical, legible, clear and coherent.

1.1 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 three of the highest rated Offerors to receive the technical requirements package and provide a technical and cost proposal for consideration by the Government at Phase 2. Selected contractors technical and cost proposal will be reviewed by the Government. The technical information contained in the Phase 2 proposal will be reviewed and evaluated by the Government in accordance with the evaluation criteria set out in this section. 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.

1.2 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.

1.3 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. 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.

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

2.4.2 Size of Printed Matter Submissions. Written materials shall be on 8-1/2" x 11" paper.

2.4.3. 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.

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, completed and signed by an authorized person from the company or team

TAB B – Section 00600 – Representations and Certifications

TAB C – PROPOSAL DATA SHEET – See format provided in this Section. Ensure to include Offeror's telephone number, FAX number, e-mail address and DUNS number. Duns number will be used to access CCASS data.

TAB D – FACTOR 1-1 PAST PERFORMANCE (PAST PERFORMANCE INFORMATION SHEETS).

TAB E – FACTOR 1-2 CORPORATE RELEVANT SPECIALIZED EXPERIENCE (CORPORATE RELEVANT SPECIALIZED EXPERIENCE SHEETS – SAMPLE PROJECTS).

TAB F – FACTOR 1-3 TECHNICAL APPROACH NARRATIVE.

TAB G - FACTOR 1-4 SUSTAINABLE DESIGN EXPERIENCE

TAB H - FACTOR 1-5 BUILDING MAINTENANCE EXPERIENCE

3. TAB D – FACTOR 1-1 PAST PERFORMANCE INFORMATION.

3.1 Submission Requirements.

3.1.1 Past Performance Questionnaires. Offeror shall identify three (3) projects completed, or substantially completed in the past five years of similar scope and complexity to this project to be used for reference and evaluation purposes and provide a questionnaire to the Point of Contact for each project listed. When completed,

these forms shall be mailed 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 as the Government may not make additional requests for past performance information from the references. The evaluation form shall be provided to the Savannah District directly from the reference.

3.1.2 If the Offeror is made up of separate design and construction companies that have combined for this project, then Past Performance Questionnaires must be completed twice (once for each company), for a total of six projects.

3.1.3 Projects from which questionnaires are received shall have been completed or substantially completed within five years of the date of the solicitation.

3.1.4 Past Performance Information Sheets. Offeror shall complete and provide a Past Performance Information Sheet on three (3) projects described above. A sample Past Performance Evaluation Questionnaire is included at the end of this section.

3.1.5 Other Sources. 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), and telephone interviews with organizations familiar with the Offeror's performance. The experience of individuals will not be credited under this factor.

3.2 Evaluation. The Government will evaluate the Offeror's past performance using the sources available to it including but not limited to: the example projects identified by the Offeror, Past Performance Evaluation Questionnaires received, ACASS, and CCASS. Offerors may be provided an opportunity to address any negative past performance information about which the Offeror has not previously had an opportunity to respond. The Government treats an Offeror's lack of past performance as having no positive or negative evaluation significance. The Government will evaluate past performance based on the elements listed below:

3.2.1 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.

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

3.2.3 Documentation. The Government will evaluate all information available with respect to the Offeror's level of meeting customer satisfaction on timeliness and quality of the documentation, reports, and other written materials completed by the Offeror on past projects.

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

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

4. TAB E – FACTOR 1-2 CORPORATE RELEVANT SPECIALIZED EXPERIENCE. Offerors shall be evaluated on construction and/or design projects successfully completed or substantially completed in the last five (5) years that demonstrate the Offeror's specialized experience in the construction of similar construction projects.

4.1 Similar construction projects completed: The number and size of contracts completed by the Offeror should demonstrate corporate experience in design and/or construction of physical fitness centers of similar type and scope (in the past five (5) years). The examples should be:

4.1.1 Physical fitness building space. These buildings may be fitness centers, gymnasiums, athletic clubs, youth activity centers, YMCAs, etc. and should reflect typical spaces for working out and indoor fitness including basketball and racquetball courts, indoor spas, pools, steam rooms, and saunas, and the structures, finishes, utility systems installations and complex HVAC systems associated with these facilities. Additional consideration will be given to projects with large indoor swimming pools or natatoriums.

4.1.2 Construction value should be at least $10 Million.

4.1.3 Single building floor plans of at least 50,000 square feet.

4.1.4 Each example does not have to include all three of the above criteria, however projects that do include all criteria will be more highly rated.

4.2 Submission Requirements. Offerors shall submit at least three Project Information Sheets for construction and/or design projects completed or substantially complete, that reflects specialized experience in the construction elements referenced in paragraph above. As a minimum, the Project Information Sheets shall provide: the Project Point of Contact with telephone number, general character, scope, location, cost, and date of completion or anticipated completion. 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 or substantially complete not later than five years prior to the date of this solicitation.

4.3 The experience of individuals will not be credited under this factor.

4.4 Evaluation. The Government will evaluate the depth and breadth of the Offeror's corporate experience on the basis of the number of times it has performed projects that were similar in nature, size, scope, and complexity as the work required by this RFP. Completed DATA SHEETS shall be used as a basis to begin the evaluation of this factor. The Government will review the example construction and/or design projects provided by the Offeror to evaluate and rate the recent relevant specialized experience of the Offeror in similar projects. The example construction and/or design projects should closely resemble the scope, size, and complexity of the project identified in this solicitation. If the Offeror cannot provide suitable relevant experience and the evaluators consider that the information provided indicates that the Offeror has no relevant experience, a determination will be made as to the risk this lack of corporate experience presents to the Government and the proposal will be evaluated accordingly.

5. TAB F – FACTOR 1-3 TECHNICAL APPROACH NARRATIVE.

5.1 Submission Requirements. Describe in general terms how the Offeror will approach the design and construction of this facility. 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:

5.1.1 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?

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

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

5.1.4 The Offeror’s Design Quality Control Program shall be briefly described.

5.1.5 What is the design team’s involvement throughout the construction period?

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

5.1.7 What are the Offeror's processes for handling construction and design problems?

5.1.8 Offeror's implementation plans to utilize "fast track" procedures on this project whereby preliminary site construction activities can begin prior to 100% completion of the design documents.

5.1.9 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.

5.2 Evaluation. The Government will evaluate the overall understanding of the design-build process being used in this solicitation including the responses to the questions in the paragraph above.

6. TAB G – FACTOR 1-4 OFFEROR SUSTAINABLE DESIGN EXPERIENCE.

6.1 Offeror's Submission Requirements. Provide examples of 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.

6.2 Evaluation. The Government will review the example construction and/or design projects provided by the Offeror to evaluate and rate the recent experience of the Offeror in incorporating LEED/SPIRIT in similar projects. The example construction and/or design projects should closely resemble the scope, size, and complexity of the project identified in this solicitation. If the Offeror cannot provide suitable relevant experience and the evaluators consider that the information provided indicates that the Offeror has no relevant experience, a determination will be made as to the risk this lack of corporate experience presents to the Government and the proposal will be evaluated accordingly.

7. TAB H – FACTOR 1-5 BUILDING MAINTENANCE EXPERIENCE. Offeror should demonstrate either corporate experience or the experience of a subcontractor in projects that reflect multi-year operation and maintenance of buildings and building systems following completion and turnover of a building to the customer.

7.1. Submission Requirements. Offerors shall submit at least three Project Information Sheets for projects that reflect specialized experience in the operation and maintenance of buildings. Janitorial and grounds maintenance are not considered operations and maintenance for this solicitation. As a minimum, the Project Information Sheets shall provide: the Project Point of Contact with telephone number, scope which includes the general character of the operations and maintenance being performed and citing an approximate number of square feet under operation and maintenance, location of the building, annual contract cost, and date of completion or anticipated completion. Example projects under this element shall either be on going in performance or have been concluded not longer than three years prior to the date of this solicitation. The experience of individuals will not be credited under this factor.

7.2 Evaluation. The Government will review the example construction and/or design projects provided by the Offeror to evaluate and rate the recent relevant specialized experience of the Offeror in similar projects. The example construction and/or design projects should closely resemble the scope, size, and complexity of the project identified in this solicitation. If the Offeror cannot provide suitable relevant experience and the evaluators consider that the information provided indicates that the Offeror has no relevant experience, a determination will be made as to the risk this lack of corporate experience presents to the Government and the proposal will be evaluated accordingly.

8. PHASE ONE COST INFORMATION. No cost information shall be included in the Phase 1 proposal package.

9. PHASE ONE OVERALL PROPOSAL RATING

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

9.2 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 Two of the solicitation. In no case will more than five (5) proposals be included in the Phase Two process.

9.3 No proposals, which receive an overall rating of Unsatisfactory or Marginal, will be forwarded to Phase Two regardless of the total number of proposals received.

9.4 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 One rating. Comments are required for all ratings.

PHASE ONE – TAB C
PROPOSAL DATA SHEET

Physical Fitness Center
Hunter Army Airfield, Georgia

1. Name of Firm:
   Address:

   Phone:

   Fax:
   E-mail:
   Duns # (used for accessing CCASS)

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:

Firm 3:

Nature of Association:

2. 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:

Negotiator’s E-mail:

Physical Fitness Center, Hunter Army Airfield, Georgia

PHASE ONE – TAB D

FACTOR 1-1 PAST PERFORMANCE INFORMATION

1. On an attached sheet, provide information for three in-progress or completed projects, preferably of similar design or features, that are being or have been constructed by the offeror to be used for reference and evaluation purposes. These should be the same projects for which questionnaires have been provided to the Procurement Point of Contact. 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 company), for a total of six projects. For each project provide the information shown. Failure to provide this minimum information may result in lower ratings.

2. For each project provide the following information:

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:

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

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

5. 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).

SAMPLE TRANSMITTAL LETTER
AND
PAST PERFORMANCE EVALUATION QUESTIONNAIRE
Physical Fitness Center, Hunter Army Airfield, Georgia

Date: _____

To: _____
_____
_____

We have listed your firm as a reference for work we have performed for you as listed below. Our firm has submitted a proposal under a project advertised by the U.S. Army Corps of Engineers, Savannah District. 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. Furthermore, a questionnaire has also been sent to _____ of your organization. Only one response from each office is required. If at all possible, we request that you individually answer this questionnaire and then coordinate your responses with that of _____, to develop a consensus on one overall response from your organization.

Please send your completed questionnaire to the following address to arrive NOT LATER THAN 27 April 2004.

U.S. Army Engineer District, Savannah
CESAS-CT-C (Donna Knight)
100 West Oglethorpe Street
Savannah, Georgia 31402

SOLICITATION NO. W912HN-04-R-0007 TITLE: Physical Fitness Center, Hunter Army Airfield, GA

The questionnaires can also be emailed to Donna.S.Knight@sas02.usace.army.mil. If you have questions regarding the attached questionnaire, or require assistance, please contact Donna Knight at 912-652-5504. Thank you for your assistance.

PAST PERFORMANCE EVALUATION QUESTIONNAIRE
SOLICITATION NO. W912HN-04-R-0007

TITLE: Physical Fitness Center, Hunter Army Airfield, Georgia

Upon completion of this form, please send directly to the US Army Corps of Engineers in the enclosed addressed envelope or email to donna.s.knight@sas02.usace.army.mil. 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. 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 Contracting Officer's Technical Representative:

Physical Fitness Center, Hunter Army Airfield, Georgia

10. QUALITY OF CONSTRUCTION:

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 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 with Minor Delays Under Extenuating Circumstances (Satisfactory)	
Completed Behind Schedule (Marginal)	
Experienced Significant Delays without Justification (Unsatisfactory)	

Remarks: _____

_____

_____

_____

Physical Fitness Center, Hunter Army Airfield, Georgia

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

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

Outstanding management and coordination of subcontractors	
Above Average management and coordination of subcontractors	
Satisfactory management and coordination of subcontractors	
Marginal management and coordination of subcontractors	
Unsatisfactory management and coordination of subcontractors	

Remarks: _____

_____

_____

Physical Fitness Center, Hunter Army Airfield, Georgia

14. DOCUMENTATION

To what extent were the contractor's reports and documentation accurate, complete and were they submitted in a timely manner?

Outstanding Documentation	
Above Average Documentation	
Satisfactory Documentation	
Marginal Documentation	
Unsatisfactory Documentation	

Remarks: _____

_____

_____

15. IF GIVEN THE OPPORTUNITY, WOULD YOU WORK WITH THIS CONTRACTOR AGAIN?

Yes _____ No _____ Not Sure _____

16. 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.

_____

_____

_____

_____

PHASE ONE – TAB E
SAMPLE

FACTOR 1-2 CORPORATE RELEVANT SPECIALIZED 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:

PHASE ONE – TAB F
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:

PHASE ONE – TAB G
SAMPLE

FACTOR 1-5 BUILDING MAINTENANCE EXPERIENCE

On an attached sheet, provide information for in-progress or completed projects that demonstrate either corporate experience or the experience of a subcontractor in projects that reflect multi-year operation and maintenance of buildings and building systems following completion and turnover of a building to the customer. Example projects under this element shall either be on going in performance or have been concluded not longer than three years prior to the date of this solicitation. These will be used for reference and evaluation.

Janitorial and grounds maintenance are not considered operations and maintenance for this solicitation.

For each project provide the following information:

Type of building:

Location:

Total annual contract cost:

Total square footage that is covered under the operations and maintenance contract:

Date that operations and maintenance services began and current contract expiration date:

General character of operations and maintenance services:

Contract number:

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

Procuring activity:

Procurement point of contact and telephone number:

Address of building(s):

Address and telephone number of owner:

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

Offeror: _____

Evaluator: _____

PROPOSAL RATING WORKSHEET

FACTOR 1-1 OFFEROR PAST PERFORMANCE

1. General: The Government will evaluate each Offeror's past performance to determine how well it satisfied its customers. Evaluators will use this factor to evaluate the success of the Offeror based on the satisfaction of previous customers and clients as illustrated on the completed questionnaires, CCASS Ratings and personal knowledge. These completed questionnaires shall be used as a basis to begin the evaluation of this factor.

Has Government Received Three Completed Questionnaires for this Offeror? __ YES __ NO

Do All the Questionnaires Received Reflect Projects Completed or substantially compete within the Last Five Years? __YES __ NO

2. CCASS Ratings: Contract Specialist shall provide CCASS Ratings for the Offeror and the principal subcontractor (design firm or construction firm) if the Offeror is not a single entity.

Evaluators shall list below the names of the firms reported on the resultant ratings.

Firm Name: _____

Number of Ratings:	Outstanding	_____
	Above Average	_____
	Satisfactory	_____
	Marginal	_____
	Unsatisfactory	_____

OVERALL RATING. Select an appropriate overall rating for the CCASS, ACASS, PAST PERFORMANCE QUESTIONNAIRES and ANY OTHER INFORMATION available:

/__/ Outstanding

/__/ Above Average

/__ / Satisfactory

/__ / Marginal

/__ / Unsatisfactory

Offeror: _____

Evaluator:_____

FACTOR 1-1 OFFEROR PAST PERFORMANCE
PROPOSAL RATING WORKSHEET (continued)

COMMENTS TO SUPPORT PAST PERFORMANCE RATING.

STRENGTHS.

WEAKNESSES.

OTHER COMMENTS.

Offeror: _____

Evaluator: _____

PROPOSAL RATING WORKSHEET

FACTOR 1-2 - CORPORATE RELEVANT SPECIALIZED EXPERIENCE

1. Has Government Received Three Completed DATA SHEETS for Corporate Relevant Specialized Experience for this Offeror?

____ YES ___ NO

Do All the DATA SHEETS Received Reflect Projects Completed Within the Last Five Years?

____YES ____NO

2. CCASS Ratings: Contract Specialist shall provide CCASS Ratings for the Offeror and the principal subcontractor (design firm or construction firm) if the Offeror is not a single entity.

Evaluators shall list below the names of the firms reported on the resultant ratings.

Construction Rating (CCASS)

Firm Name: _____

Number of Ratings:	Outstanding	_____
	Above Average	_____
	Satisfactory	_____
	Marginal	_____
	Unsatisfactory	_____

PROPOSAL RATING WORKSHEET
FACTOR 1-2 - CORPORATE RELEVANT SPECIALIZED EXPERIENCE
(Continued)

STRENGTHS.

WEAKNESSES.

OTHER COMMENTS.

Offeror: _____

Evaluator: _____

PROPOSAL RATING WORKSHEET
FACTOR 1-3 – TECHNICAL APPROACH NARRATIVE

/__/ Outstanding

/__/ Above Average

/__ / Satisfactory

/__ / Marginal

/__ / Unsatisfactory

/__ / Unknown

STRENGTHS.

WEAKNESSES.

OTHER COMMENTS.

Offeror: _____

Evaluator: _____

PROPOSAL RATING WORKSHEET
FACTOR 1-4 SUSTAINABLE DESIGN EXPERIENCE

/__/ Outstanding

/__/ Above Average

/__ / Satisfactory

/__ / Marginal

/__ / Unsatisfactory

STRENGTHS.

WEAKNESSES.

OTHER COMMENTS.

Offeror: _____

Evaluator: _____

PROPOSAL RATING WORKSHEET
FACTOR 1-5 BUILDING MAINTENACE EXPERIENCE

/__/ Outstanding

/__/ Above Average

/__ / Satisfactory

/__ / Marginal

/__ / Unsatisfactory

STRENGTHS.

WEAKNESSES.

OTHER COMMENTS.

Offeror: _____

Evaluator:_____

PHASE ONE SUMMARY AND OVERALL RATING

FACTOR	DESCRIPTION	RATING*
1-1	PAST PERFORMANCE	
1-2	CORPORATE SPECIALIZED EXPERIENCE	
1-3	TECHNICAL APPROACH NARRATIVE	
1-4	SUSTAINABLE DESIGN EXPERIENCE	
1-5	BUILDING MAINTENANCE EXPERIENCE	
OVERALL PHASE 1 RATING		
* Ratings may be either: Outstanding – Above Average – Satisfactory – Marginal – Unsatisfactory Attach additional sheets to this rating summary to provide supporting rationale for assignment of ratings.		

_____
Board Member

Offeror: _____

FACTOR	DESCRIPTION	Board Member 1	Board Member 2	Board Member 3	Board Member 4	CONSENSUS
1-1	PAST PERFORMANCE					
1-2	CORPORATE SPECIALIZED EXPERIENCE					
1-3	TECHNICAL APPROACH NARRATIVE					
1-4	SUSTAINABLE DESIGN EXPERIENCE					
1-5	BUILDING MAINTENANCE EXPERIENCE					
OVERALL PHASE ONE RATING						

_____
Board Member 1

_____
Board Member 2

_____
Board Member 3

_____
Board Member 4

_____
Board Chairperson

Offeror: _____

PHASE ONE CONSENSUS SUMMARY RATING

FACTOR 1-1 PAST PERFORMANCE

STRENGTHS:

WEAKNESSES:

OTHER COMMENTS:

Offeror: _____

PHASE ONE CONSENSUS SUMMARY RATING
(Continued)

FACTOR 1-2 CORPORATE RELEVANT SPECIALIZED EXPERIENCE

STRENGTHS:

WEAKNESSES:

OTHER COMMENTS:

Offeror: _____

PHASE ONE CONSENSUS SUMMARY RATING
(Continued)

FACTOR 1-3 TECHNICAL APPROACH NARRATIVE

STRENGTHS:

WEAKNESSES:

OTHER COMMENTS:

Offeror: _____

PHASE ONE CONSENSUS SUMMARY RATING
(Continued)

FACTOR 1-4 SUSTAINABLE DESIGN EXPERIENCE

STRENGTHS:

WEAKNESSES:

OTHER COMMENTS:

Offeror: _____

PHASE ONE CONSENSUS SUMMARY RATING
(Continued)

FACTOR 1-5 BUILDING MAINTENANCE EXPERIENCE

STRENGTHS:

WEAKNESSES:

OTHER COMMENTS:

10. PHASE TWO PROPOSAL SUBMISSION INSTRUCTIONS

10.1 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 Two of this solicitation. No more than three Offerors will compete in Phase Two under typical circumstances. The Government intends to announce the names of Offerors selected for Phase Two in the FEDBIZOPS website unless an Offeror provides written notification and explanation for not wanting this information released.

10.2 General Requirements.

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

10.2.2 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.

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

10.2.4 Size of Printed Matter Submissions. Written materials: 8-1/2" x 11" format.

10.2.5. Drawing sheets:

10.2.5.1 Offerors shall submit one set of full size drawings Size A1 (approximately 24" x 36").

10.2.5.2 Offerors shall submit five half-size sheets size A2 (approximately 16" x 23").

10.2.5.3 Drawings shall be bound.

10.2.5.4 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.

10.2.6 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 Send able 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.

10.3 PHASE TWO PROPOSAL, VOLUME I – Contract Requirements & Price Proposal

10.3.1 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."

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

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” (Section 00010 of Solicitation)

TAB C – Bid Bond

TAB D – Section 00600 of Solicitation – 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

TAB G – Subcontracting Plan - FOR LARGE BUSINESS OFFERORS ONLY. Subcontracting Plan shall be prepared in accordance with FAR 52.219-9. See Section 00800 for a sample plan and format.

NOTE: For the information of Large Business Offerors, Savannah District's assigned subcontracting goals are:

57.2% of planned subcontracting dollars placed with small business concerns
10.0% of planned subcontracting dollars placed with small disadvantaged business concerns
10.0% of planned subcontracting dollars placed with women-owned small business concerns
3.0% of planned subcontracting dollars placed with HubZone Small Business concerns
3.0% of planned subcontracting dollars placed with Service-Disabled Veteran-Owned small business concerns
While Savannah District does not have a specific target for subcontracting with Veteran-Owned small businesses, this must be addressed in the subcontracting plan.

10.4 PHASE TWO PROPOSAL, VOLUME II – Technical information.

10.4.1 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.

10.4.2 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.

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

VOLUME II – TECHNICAL INFORMATION

TAB H – BETTERMENTS

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

TAB K – FACTOR 2-2: BUILDING SYSTEMS

TAB L – FACTOR 2-3: SITE DESIGN

TAB M – FACTOR 2-4: SUSTAINABLE DESIGN CONSIDERATIONS

TAB N – FACTOR 2-5: MANAGEMENT EFFECTIVNESS

TAB P – Any other information provided by the Offeror.

DRAWINGS (Minimum drawings required are outlined in each section)

10.4.4 The technical data described in Paragraphs 11 through 16 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.

10.4.5 Manufacturers' catalog sheets that are submitted, as part of the proposal will be used to rate offers based on their qualitative features and risk to the Government. Accordingly, those products – and those manufacturers – become part of the contract between the Government and the Successful Offeror. Because all design efforts are not completed at the time of the proposal submission, it is expected that some specific models and capacities may not be indicated at the time of proposal submission. However, manufacturers, product features, product lines, and models can be proposed and qualitative and risk evaluations can and will be made by the Government. Those manufacturers, product features, product lines, and models are to be included in the final design documents and will be incorporated into the construction contract.

10.4.6 Any changes from the proposal submission after contract award, will be treated as deviations from the contract and must be identified to the Government by the Contractor and approved by the Government before incorporation into the project. The Contractor bears the burden of demonstrating to the satisfaction of the Contracting Officer that a deviation from the contract is of equal or better quality than that set out in the contractor's proposal.

10.4.7 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.

11. TAB H – BETTERMENTS

11. 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.

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

11.3 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.

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

11.4.1 Short descriptive title of the betterment and how it exceeds RFP requirements.

11.4.2 Narrative of the proposed betterment and rationale as to why it has been included.

11.4.3 Reference in the Offeror's proposal where the betterment is shown or specified.

11.4.4 Estimated value of the betterment.

12. TAB J FACTOR 2-1: BUILDING FUNCTION AND AESTHETICS

12.1 Submission Requirements.

12.1.1 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. Describe how interior space arrangement supports the processes. List all architectural deviations included in the proposal.

12.1.2 Certifications.

12.1.2.1 “U” Value Certification. Provide signed and dated certification that the final design shall meet "U" values required in the RFP for each exterior wall assembly and roof assemblies.

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

12.1.2.3 List of Specifications. Provide a list of titles of specifications proposed to use in the design. It is not necessary to include sections required in this RFP.

12.1.4 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:

12.1.4.1 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.

12.1.4.2 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.

12.1.4.3 Typical Wall Section. Provide one exterior wall section indicating the predominant 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.

12.1.4.4 Roof Plan. Roof plans for each 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.

12.1.5.5 Room Finish Schedule. Provide a room finish schedule indicating the following for all spaces: floor, wall base, wainscot, wall and ceiling finishes; wainscot height, wall base height and ceiling height.

12.2 Evaluation. This factor considers the overall functional layout and interaction of the spaces in the facilities as well as the “appeal” of the facility considering interior as well as exterior considerations. The evaluation deals with the planning and design of the spaces with respect to a physical fitness center located at Hunter Army Airfield, Savannah, Georgia. Closely associated with the functional layout of the spaces and facilities, this factor considers the aesthetics of the interior areas as well as the exterior finishes and design of the facilities, up to and including pedestrian ways and the overall environment created by the design proposed.

12.2.1 FUNCTIONAL ARRANGEMENT. The following items will be considered in the evaluation of the functional arrangement of the various facilities:

12.2.1.1 APPROPRIATE FACILITIES. From an overall perspective, does the proposal include all the required facilities as described in the Statement of Work?

12.2.1.2. MINIMUM SPACE AND FACILITY SIZE. Does the proposal include all the mandatory spaces in response to the requirements set forth in the Statement of Work? For each of the spaces with a minimum or maximum size limitation, does the proposal comply with these requirements? Insufficient information contained in the proposal to evaluate this item will be considered a "NO GO" and may represent a "FAIL" rating.

12.2.1.1 Does the building floor plan provides space arrangement well suited to the mission of the facility?

12.2.1.2 Does the building floor plan provide acceptable life safety and fire safety measures?

12.2.1.3 Is the Life Safety Analysis for the facility acceptable and in conformance with the Statement of Work requirements?

12.2.1.4 Does the Offeror's floor plan meet the functional and spatial relationship requirements established in the Statement of Work?

12.2.1.5 Does the Offeror's floor plan demonstrate compliance with the mandatory requirements for furnishings while allowing suitable space for circulation and other requirements?

12.2.1.6 Does the Offeror's floor plan allow for suitable workflow and access necessary to successfully operate this facility in accordance with its mission?

12.2.2 BUILDING AESTHETICS. The following items will be considered based on conformance with the RFP and the Installation Design Guide (Materials will be evaluated in Factor 2-2 Building Systems):

12.2.2.1 Exterior Considerations:

12.2.2.1.1 Facades, rooflines, and delineation of entrances.

12.2.2.1.2 Proportions of fenestration in relation to elevations.

12.2.2.1.3 Shadow effects, materials, and textures.

12.2.2.1.4 Proportion and scale within the structure.

12.2.2.1.5 Compliance with Installation Design Guide Recommendations.

12.2.2.1.6 Conformance to adjacent structures architectural styles.

12.2.2.1.7 Exterior color schemes proposed.

12.2.2.1.8 Other aesthetic considerations.

12.2.2.2 Interior Considerations:

12.2.2.2.1 Are the proposed colors and details conducive to the mission of the facility?

12.2.2.2.2 Do the proposed materials and finishes represent a positive working environment?

12.2.2.2.3 Do the ceiling heights, hallway widths, and other space sizes and configurations provided develop a workable solution to the facility mission?

12.2.2.2.4 Does the interior design package provide for an interesting, attractive environment?

12.2.2.2.5 Is the interior system and finishes proposed suitable for use in a facility where the primary occupants are soldiers? Are these systems suitable for a heavy usage environment?

13. TAB K - FACTOR 2-2: BUILDING SYSTEMS

13.1. 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:

13.1.1 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.

13.1.1.1 Provide a description of the framing system chosen.

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

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

13.1.1.4 Provide a list of special design features including features to be used in compliance with the AT/FP requirements.

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

13.1.3 Design Analysis. State the live loads for which the facility is to be designed. Include roof and floor loads. Provide the wind loads, lateral earth pressure loads, seismic loads, etc. as applicable. Complete analysis is not necessary, only tabulation of loads is required.

13.1.4 Outline Specifications. The offeror shall provide a list of titles of specifications he proposes to use in the design, if sections are not provided in this RFP.

13.2 MECHANICAL SUBMITTAL REQUIREMENTS.

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

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

13.2.1.2 Deleted.

13.2.1.3 Deleted.

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

13.2.1.5 Energy Budget Certification. Provide a certification that the final design will comply with Energy Budget requirements of specification Section 01010.

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

13.2.1.7 Catalog Cuts. Brief description of various items of equipment, including catalog cuts. Manufacturers, level of quality, warranties, etc. are more important to the evaluators than selections of specific sizes or capacities.

13.2.1.8 Specifications. List of specifications to be used.

13.2.2 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.

13.2.2.1 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.

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

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

13.2.2.4. 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.

13.2.2.5 Catalog Cuts. Brief description of various items of equipment, including catalog cuts. Manufacturers, level of quality, warranties, etc. are more important to the evaluators than selections of specific sizes or capacities.

13.2.2.6 Specifications. The offeror shall provide a list of titles of specifications he proposes to use in the design, if section not provided in this RFP.

13.2.3 Mechanical Drawings. Provide plan view showing the following:

13.2.3.1 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.

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

13.2.3.3 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 and maintenance capability. Mechanical equipment layouts shall comply with Section 01010.

13.3 ELECTRICAL SUBMITTAL REQUIREMENTS.

13.3.1 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.

13.3.2 Interior Lighting System. Provide an Interior Concept Lighting Schedule tabulating room names, fixture types, lighting intensities, and basis of design (e.g., IES criteria, RFP requirement).

13.3.3 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).

13.3.4 Interior Lighting Fixture Catalog Cuts. Provide a single catalog cut sheet for each fixture type. This cut sheet shall be correlated to the Concept Lighting Schedule and shall establish the aesthetic, physical, functional and photometric characteristics of the fixture and shall establish a level of quality.

13.3.5 Interior Electrical Equipment Catalog Cuts. Provide catalog cuts of electrical devices and equipment.

13.3.6 Interior Electrical Drawings. Provide lighting, power and signal plans for the proposed Barracks Typical Module Plan. 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.

13.3.7 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.

13.3.8 Exterior Lighting System. Provide an Exterior Concept Lighting Schedule tabulating areas (e.g., roadway, walkway, parking, security), fixture types, pole heights, lighting intensities, and basis of design (e.g., IES criteria, RFP requirement).

13.3.9 Exterior Lighting Fixture Catalog Cuts. Provide a single catalog cut sheet for each fixture type and pole. This cut sheet shall be correlated to the Exterior Concept Lighting Schedule and shall establish the aesthetic, physical, functional and photometric characteristics of the fixture and shall establish a level of quality.

13.3.10 Exterior Electrical Equipment Catalog Cuts. Provide catalog cuts of electrical distribution equipment. Manufacturers, level of quality, warranties, etc. are more important to the evaluators than selections of specific sizes or capacities.

13.3.11 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).

13.3.12 Specifications. Provide a list of specifications proposed for use in the design but not included in the RFP.

13.3.13 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.

13.4 FIRE PROTECTION DESIGN SUBMITTAL REQUIREMENTS.

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

13.4.1.1 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.

13.4.1.2 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

13.4.2 Life Safety Certification. Provide certification by the fire protection engineer that the building design shall comply with the life safety/fire protection provisions of the applicable criteria indicated in Section 01010.

13.4.3 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.

13.4.4 Specifications. Provide a list of all UFGS guide specifications to be used.

13.5 EVALUATION. This factor considers the materials, layout, maintainability, quality, durability, maintenance considerations, and any aspects of the proposed building systems and materials. Additional consideration will be given to all proposed systems or materials, which exceed the minimum requirements of the RFP. Offerors are encouraged to present energy, maintenance, and life cycle cost improvements, which will lead to the overall improvement in the final constructed facilities. The following elements shall be considered in evaluating this factor:

13.5.1. STRUCTURAL EVALUATION. Evaluate the structural systems and sub-systems proposed for installation in the facilities. While no detail drawings or calculations are required or desired, the narrative descriptions of the structural systems proposed will be evaluated. Consideration will be given to overall life cycle maintenance of the systems and also to considerations of materials selected with respect to the expected use by soldiers. Additional considerations will be given to proposed systems with a long expected life (greater than 25 years) versus a system requiring greater cyclical replacement.

13.5.2 MECHANICAL. The heating, air conditioning, and ventilating systems proposed will be evaluated. Evaluation will concentrate on the proposed schematic drawing information presented, the design approach narratives, and the equipment and material catalog information included in the proposals. The systems proposed must meet the minimum requirements set out in the Statement of Work and shall represent systems which are fully integrated into the building structure and are fully capable of environmental control of the spaces. The automatic temperature controls will also be considered. Where addressed in the Statement of Work, the proposed automatic temperature controls systems proposed shall be 100% compatible and integrated into the existing Installation-Wide UMCS without translators or third party interface devices. Additional considerations will be given to proposals that incorporate energy recovery systems, high efficiency systems, energy conservation considerations, thermal storage systems, and other systems and features designed to enhance the overall performance of the facility while reducing the operating and maintenance costs expected.

13.5.3. ELECTRICAL. The electrical power, lighting, grounding, and communications systems proposed for the buildings will be evaluated. Evaluation will concentrate on the proposed schematic drawing information presented, the design approach narratives, and the equipment and material catalog information included in the proposals. The systems proposed must meet the minimum requirements set forth in the Statement of Work and shall represent

systems that are fully integrated into the building structure. Additional consideration will be given to proposals, which incorporate energy saving materials, or materials, which represent a lower life cycle, cost to the Base.

13.5.4 FIRE PROTECTION. The proposed fire detection and suppression systems will be evaluated. Ensure that the design will be accomplished by a fire protection professional.

14. TAB L – FACTOR 2-3 SITE DESIGN SUBMITTAL REQUIREMENTS. The site development portion of the proposal must outline the proposed site demolition, layout, grading, storm drainage, and erosion control practices of design and construction. A topographic survey will be provided at Phase II to the Offerors in English units. The proposal shall include the following:

14.1 General Site Development Narrative. State the purpose, functional layout of all major structures in relation to parking and access drives, the extent of grading and drainage system, as well as erosion control measures in sufficient detail to delineate and characterize functional features and the desired image or visual appearance of this project. The narrative shall reflect setbacks requirements as indicated in Section 01010, as well as the visual characteristics of the surrounding topography. Include a statement addressing Force Protection Compliance, as well as a statement addressing Storm Water Management such that post development runoff does not exceed pre development runoff flows. Also include a statement of any requirements for traffic control signals and signage plans. Provide a brief statement of the exterior construction materials to be used in the project.

14.2 Erosion Control Narrative. Provide a narrative of the erosion control measures to be used in this project.

14.3 Landscape Narrative. The landscape design narrative shall include an analysis of existing site conditions, including an indication of existing trees and plant materials that are to be saved and remain on the project site. The narrative shall indicate specific site problems related to proposed development and the rationale for proposed plant selection and locations. The narrative shall also include a list of suggested types and sizes of plant materials to be used (use native plants as much as possible). It shall also discuss type of irrigation to be provided, type, quantity and location of site furniture, per Bragg Installation Design Guide's (IDG). The narrative shall discuss what materials are being included in the project that comes from recycled materials and renewable resources. It shall also indicate coordination with AT/FP requirements.

14.4 Site Utilities Narrative. Design Narrative shall include Description of the utility systems chosen.

14.5 Design Calculations. Submit calculations for the following:

14.5.1 Storm drainage pipe design calculations shall not be required for the proposal submittal. Storm drainage pipe design calculations for the final design submittal shall show that the pipes are adequately sized using the Rational Method in accordance with technical instructions.

14.5.2 Storm water detention pond calculation shall show that the pond is adequately sized such that post development runoff does not exceed pre-development runoff in accordance with Installation Design Guide requirements. Storm water detention can be designed as an underground system.

14.6 Outline Specifications. Provide a list of titles of specifications proposed for use in the design, if the section is not provided in this RFP.

14.7 Site Development Drawings. Drawings shall be shown at 1 in = 30ft scale (or 1:400 in metric units). All drawings shall have a Legend, North Arrow, and graphic bar scales. Drawings shall be provided in sufficient detail and annotated so that Government may visualize how the designer has interpreted the user's functional and operational requirements in his proposal for final design. Drawings shall include, the following:

14.7.1 Demolition Plan and Tree Removal Plan. The demolition plan shall also show the limits of tree removal.

14.7.2 Layout Plan. This plan should show the building layout in relation to parking areas, access drives, and pedestrian walkways. This plan should show overall dimensions of parking lots, minimum building setbacks (in compliance with Force Protection), minimum setback from Streets or Roads, utility pad locations (this includes dumpster, electrical and mechanical equipment pads). The Layout Plan will also show location of sidewalks, access drives, retaining walls, fencing, site steps, service vehicle drives, pedestrian bridges, sports fields, handicap parking spaces, and curb and gutter. The use of patterning shall be required to distinguish between concrete pavement and bituminous asphalt pavement. The submitted layout plan shall also show dimensions of major items such as building, parking lot rather than coordinates of corner points.

14.7.3 Grading and Drainage Plan. This Plan should show contour elevations at 1-foot (250mm) minimum interval and critical spot elevations, as well as finish floor elevations. This plan should also show the locations of storm inlets, curb inlets, manholes, storm drainage pipes, culverts, headwalls, storm water control structure, detention pond area, and drainage ditches. Drainage ditches shall be kept to a minimum due to the highly erodable soil. Curb cuts for drainage of parking lots and access drives are prohibited.

14.7.4 Landscape Design Plan. This plan shall include existing trees and under story to be saved, new trees to be planted, screens, buffers, lawns, and mulched area for the project. Both large shade trees and small under story and ornamental trees shall be shown. Plant labels shall be provided for the plans. Also to be provided is a drawing at a larger scale of the building entrance of the project site to indicate the Landscape Architect's ideas or intent for a more detailed planting plan as used in foundation plantings including plant labels.

14.7.5 Site Utility Plan. Indicate locations of outside utilities where required to support the project. Show same scale as other site work drawings. The plan shall include a general utility layout with connection points, valve fittings and requirements for pneumatic ejector, sewage pumps and sump pumps and the relative placement of water and sanitary sewer systems. The layout plans should take into account the ease of maintenance and utility corridors.

14.8 EVALUATION. This factor considers the layout and planning of the site and various specialties that comprise a good site development plan. The goals and missions of the Physical Fitness Center 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 three elements shall be considered in evaluating this factor:

14.8.1 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.

14.8.2 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.

14.8.3 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.

15. TAB M – FACTOR 2-4. SUSTAINABLE DESIGN SUBMITTAL REQUIREMENTS.

15.1 SPIRIT Summary Table. Submit Appendix H of Section 01010 DESIGN REQUIREMENTS, “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 50 points.
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.

15.2 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.

15.3 EVALUATION. Offerors shall include a preliminary ranking of the sustainable design considerations included in the proposal. The successful proposal shall be required to complete a detailed analysis on the final design that meets or exceeds the preliminary ranking established at proposal level. The evaluation of this factor shall be based on the number of points and the narrative that supports how each point will be achieved. The evaluation of this factor shall be as follows:

15.3.1 SPIRIT points proposed: Less than 50 – Factor rating: Unsatisfactory

15.3.2 Deleted

15.3.3 SPIRIT points proposed: 50 to 59 – Factor rating: Satisfactory

15.3.4 SPIRIT points proposed: 60 to 69 – Factor rating: Above Average

15.3.5 SPIRIT points proposed: 70 and above – Factor rating: Outstanding

15.3.6 Offeror’s proposed points may be adjusted if documentation is not provided to fully validate how the point will be achieved.

16. TAB N – FACTOR 2-5 MANAGEMENT EFFECTIVNESS. The Offeror shall provide a Management Plan. This is an overall plan showing how the Offeror will control the design and construction of the project. The term "management plan" is defined as a plan that includes the following sub-plans:

16.1 KEY PERSONNEL.

16.1.1 Provide the names, 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. Include, as a minimum the following:

16.1.1.1 Project Manager

16.1.1.2 Project Architect

16.1.1.3 Construction Manager

16.1.1.4 Construction Quality Control Manager

16.1.1.5 Design Quality control Manager

16.1.2 Indicate whether each individual has had a significant part in any of the project examples cited. If reassignment of personnel is considered possible, provide the names and resumes of the alternative professionals in each assignment.

16.1.3 Provide a narrative and/or diagram that outlines the relationships and interaction between each of the key personnel above.

16.1.4 Project key personnel shall include the key construction subcontractors and the extent of their role with respect to the design phases of this project. For each subcontractor, the prime contractor's experience working with that sub should be indicated and the subs past experience in work similar in nature to the project being evaluated should be submitted. Key subcontractors shall include, but are not limited to:

Swimming Pool subcontractor(s)

Masonry subcontractor(s)

Mechanical subcontractor(s)

Site Development subcontractor(s).

16.2 SCHEDULE.

16.2.1 The Offeror shall clearly state the total performance period proposed from the contract Notice to Proceed to turnover of the facility for use by the end user's unrestricted use. This period shall be inclusive of all review period required by the Government and specified in Section 01330 SUBMITTAL PROCEDURES

16.2.2 The Government's requirement is that all design and construction on this project be completed within 720 days of Notice to Proceed, inclusive of all review periods and Government phasing requirements specified. The Offeror may propose a completion period of lesser duration. Completion periods of significantly lesser duration may be rated as more advantageous to the Government. If the Offeror proposes a completion period of lesser duration than the Government requirement, the following statement shall be completed and submitted:

Statement of Compliance

[*Insert name of the Offeror*] hereby proposes that the period of performance for all design and construction is _____calendar days from Notice to Proceed, inclusive of Government review periods and Government phasing requirements specified.

[*Insert name of the Offeror*] hereby certifies that the offer of this performance period is at no additional cost to the Government over the performance period specified as the minimum Government requirements.

16.2.3 The Offeror shall also submit a narrative explaining how the schedules will be achieved.

16.2.4 A schedule that significantly improves on the Government supplied maximum duration will be considered more favorably during evaluations.

16.3 SMALL AND SMALL DISADVANTAGED BUSINESS UTILIZATION.

16.3.1 ALL OFFERORS are required to provide a narrative discussion of their plan for utilization of small and small disadvantaged businesses. At a minimum, the narrative shall discuss:

16.3.1.1 Goals for subcontracting with small and small disadvantaged businesses in sufficient detail to allow Government evaluators to determine that these goals are realistic, justifiable, positive, and in accordance with the Government's policy to maximize opportunities for these types of businesses.

16.3.1.2 The extent to which small disadvantaged businesses, and where appropriate, historically black colleges and universities/minority institutions (HBCU/MI) have been identified for participation as part of the Offeror's team.

16.3.1.3 The Offeror's past and present commitment to providing subcontracting opportunities and encouragement to small and small disadvantaged businesses.

16.3.2 For Offerors information the following are the U.S. Army Corps of Engineers Subcontracting Targets for FY04:

16.3.2.1 57.2% of planned subcontracting dollars placed with small business concerns

16.3.2.2 10.0% of planned subcontracting dollars placed with small disadvantaged business concerns

16.3.2.3 10.0% of planned subcontracting dollars placed with women owned small business concerns

16.2.3.4 3.0% of planned subcontracting dollars with HUBZone small business

16.3.2.5 3.0% of planned subcontracting dollars placed with service-disabled veteran-owned small business concerns

16.3.2.6 0.0% of planned subcontracting dollars placed with veteran-owned small business concerns. While Savannah District does not have a specific target for subcontracting with Veteran-Owned small businesses, this must be addressed in any subcontracting plan.

16.4 EVALUATION. 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.

16.4.1 KEY PERSONNEL. The Government will evaluate and rate the Key Personnel identified. 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.

16.4.2 SCHEDULE. 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.

16.4.3 SMALL AND SMALL DISADVANTAGED BUSINESS UTILIZATION. The Government will evaluate narratives provided. Greater detail and specificity will be given greater credit than general statements and commitments.

17. EVALUATION STANDARDS. Evaluation criteria (factors) will be rated using the following adjectival descriptions. Evaluators will apply the appropriate adjective to each criterion rated. The evaluator's narrative explanation must clearly establish that the Offeror's submittal meets the definitions established below. As each criterion is evaluated an assessment of Performance Risk will be made. Performance Risk relates to the assessment of an Offeror's present and past work and accomplishments to determine the Offeror's ability to successfully perform as required.

17.1 OUTSTANDING - Information submitted demonstrates Offeror's potential to significantly exceed performance or capability standards. The Offeror has clearly demonstrated an understanding of all aspects of the requirements to the extent that timely and highest quality performance is anticipated. The Offeror possesses exceptional strengths that will significantly benefit the Government. The Offeror's qualifications meet the fullest expectations of the Government. The Offeror has convincingly demonstrated that the RFP requirements have been analyzed, evaluated, and synthesized into approaches, plans, and techniques that, when implemented, should result in highly effective and efficient performance under the contract which represents very low risk to the Government. An assigned rating of "outstanding" indicates that, in terms of the specific factor, the submittal contains no significant weaknesses, deficiencies or disadvantages. Offeror very significantly exceeds most or all solicitation requirements. Very high probability of success. Very low risk to the Government.

17.2 ABOVE AVERAGE - Information submitted demonstrates Offeror's potential to exceed performance or capability standards. Offeror possesses one or more strengths that will benefit the Government. The areas in which the Offeror exceeds the requirements are anticipated to result in a high level of efficiency, productivity, or quality. The Offeror's qualifications are responsive with minor weaknesses, but no major weaknesses noted. An assigned rating of "Above Average" indicates that, in terms of the specific factor, any weaknesses noted are minor and should not seriously affect the offeror's performance. The submittal demonstrates that the requirements of the RFP are well understood and the approach will likely result in a high quality of performance which represents low risk to the Government. A rating of "Above Average" is used when there are no indications of exceptional features or innovations that could prove to be beneficial, or conversely, weaknesses that could diminish the quality of the effort or increase the risks of failure. Disadvantages are minimal. The submittal contains excellent features that will likely produce results very beneficial to the Government. Offeror fully meets all RFP requirements and significantly exceeds many of the RFP requirements. Response exceeds a "Satisfactory" rating. High probability of success. Low risk to the Government.

17.3 SATISFACTORY (Neutral) - Information submitted demonstrates Offeror's potential to meet performance or capability standards. Offeror presents an acceptable solution and meets minimum standard requirements. Offeror possesses few or no advantages or strengths. The Offeror's proposal contains weaknesses in several areas that are offset by strengths in other areas. A rating of "Satisfactory" indicates that, in terms of the specific factor, the Offeror may satisfactorily complete the proposed tasks, but there is at least a moderate risk that it will not be successful. There is a good probability of success and that a fully acceptable level of performance will be achieved. Offeror meets all RFP requirements, presents a complete and comprehensive proposal, exemplifies an understanding of the scope and depth of the task requirements, and displays understanding of the Government's requirements. Offeror's response exceeds a "Marginal" rating. No significant advantages or disadvantages. Moderate risk to the Government. In the case of no past performance on the part of the Offeror, a SATISFACTORY rating will be assigned for Past Performance.

17.4 MARGINAL - Information submitted demonstrates Offeror's potential to marginally meet performance or capability standards necessary for minimal but acceptable contract performance. The submittal is not adequately responsive or does not address the specific factor. The assignment of a rating of "Marginal" indicates that mandatory corrective action would be required to prevent significant deficiencies from affecting the overall project. The Offeror's qualifications demonstrate an acceptable understanding of the requirements of the RFP and the

approach will likely result in an adequate quality of performance, which represents a moderate level of risk to the Government. Offeror displays low probability of success, although the submittal has a reasonable chance of becoming at least acceptable. Offeror's response exceeds an "Unsatisfactory" rating. Significant disadvantages. High risk to the Government.

17.5 UNSATISFACTORY – Information submitted fails to meet performance or capability standards necessary for acceptable contractor performance. The Offeror's interpretation of the Government's requirements is so superficial, incomplete, vague, incompatible, incomprehensible, or incorrect as to be Unsatisfactory. The submittal does not meet the minimum requirements of the RFP; requirements could only be met with major changes to the submittal. There is no reasonable expectation that acceptable performance would be achieved which represents unacceptably high risk to the Government. The Offeror's qualifications have many deficiencies and/or gross omissions; fail to provide a reasonable, logical approach to fulfilling much of the Government's requirements; and, fail to meet many of the minimum requirements. The Offeror's qualifications are so unacceptable that it would have to be completely revised in order to attempt to make them acceptable. Very significant disadvantages. Unacceptably high risk to the Government.

18. EVALUATION FACTORS and WEIGHTS

18.1 Relative Importance Definition. For the purpose of this evaluation, the following terms will be used to establish the relative importance of the factors.

18.1.1 Significantly More Important: The criterion is at least two times greater in value than another criterion.

18.1.2 More Important: The criterion is greater in value than another criterion but less than two times greater.

18.1.3 Equal: The criterion is of the same value or nearly the same as another criterion.

18.2 PRICE is equal in importance to ALL TECHNICAL FACTORS when combined.

18.3 Weight among technical factors:

FACTOR 1-1: OFFEROR PAST PERFORMANCE: This factor is significantly more important than Factors 1-2,1-3, 1-4 and 1-5.

FACTOR 1-2: CORPORATE RELEVANT SPECIALIZED EXPERIENCE: This factor is equal in importance to Factors 1-3, 1-4, and 1-5.

FACTOR 1-3: TECHNICAL APPROACH NARRATIVE: This factor is equal in importance to Factors 1-2, 1-4, and 1-5.

FACTOR 1-4: OFFEROR SUSTAINABLE DESIGN EXPERIENCE: This factor is equal in importance to Factors 1-2, 1-3, and 1-5.

FACTOR 1-5: BUILDING MAINTENANCE EXPERIENCE. This factor is equal in importance to Factors 1-2, 1-3, and 1-4.

FACTORS 1-1, 1-2, 1-3, and 1-4 together are equal in importance to Factor 2-1.

FACTOR 2-1: BUILDING FUNCTION AND AESTHETICS: This factor is more important than Factors 2-2, and 2-3 and significantly more important than factors 2-4 and 2-5.

FACTOR 2-2: BUILDING SYSTEMS: This factor is equal in importance to Factor 2-3 and more important than Factors 2-4 and 2-5.

FACTOR 2-3: SITE DESIGN: This factor is equal in importance to Factor 2-2 and more important than Factors 2-4 and 2-5.

FACTOR 2-4: SUSTAINABLE DESIGN CONSIDERATIONS: This factor is more important than Factor 2-5.

FACTOR 2-5: MANAGEMENT EFFECTIVENESS.

19 PROPOSAL EVALUATION.

191 Each member of the Government evaluation team (Source Selection Board) will independently consider all information provided in the proposal. Worksheets are provided on the following pages, which the evaluators will use to review and rate the individual proposals.

19.2 Once these individual analyses are completed, the team will meet and determine a rating for each of the evaluation factors by consensus decision.

19.3 The evaluation team will document strengths, weaknesses, and omissions to support the rating for each factor as well as the overall rating. Documentation and comments are required for all ratings.

19.4 This final overall rating, along with ratings on individual factors, will be provided to the Contracting Officer/Source Selection Authority for the best value decision.

20. EXCEPTIONS. Exceptions to the contractual terms and conditions of the solicitation (e.g., standard company terms and conditions) may result in a determination to reject a proposal.

21. RESTRICTIONS. Failure to submit all the data in the format indicated in this section may be cause for determining a proposal incomplete and, therefore, not considered for evaluation, and for subsequent award.

22. PRICE.

22.1 The Government will perform a price analysis on all proposals received. Price analysis will be performed in accordance with FAR 15.404-1, to determine completeness, reasonableness, and understanding of the work. The evaluation will determine the adequacy of the offer in fulfilling the requirements of the proposal. Completeness addresses the extent to which the elements of the price proposal are consistent with the requirements of the RFP. Reasonableness will be established using historical price information, price competition information, the IGE, and any other pricing tools necessary.

22.2 Price will not be scored, but will be a factor in establishing the competitive range prior to discussions (if held) and in making the final best value determination for award.

23. BASIS FOR AWARD

23.1 Proposals must meet the criteria stated in the RFP in order to be eligible for award, to include responsiveness, technical acceptability and responsibility.

23.2 In order to determine which proposal represents the best overall value, the Government will compare proposals to one another. The Government will award a contract to the responsible Offeror whose technical submittal and price proposal contains the combination of those criteria described in this document offering the best overall value

to the Government. Best value will be determined by a comparative assessment of proposals against all source selection criteria in this RFP.

23.3 As technical ratings and relative advantages and disadvantages become less distinct, differences in price between proposals are of increased importance in determining the most advantageous proposal. Conversely, as differences in price become less distinct, differences in scoring and relative advantages and disadvantages between proposals are of increased importance to the determination.

23.4 The Government reserves the right to accept other than the lowest priced offer. The right is also reserved to reject any and all offers. The basis of award will be a conforming offer, the price or cost of which may or may not be the lowest. If other than the lowest offer, it must be sufficiently more advantageous than the lowest offer to justify the payment of additional amounts.

23.5 Offerors are reminded to include their best technical and price terms in their initial offer and not to automatically assume that they will have an opportunity to participate in discussions or be asked to submit a revised offer. The Government may make award of a conforming proposal without discussions, if deemed to be within the best interests of the Government.

Offeror: _____

Evaluator: _____

PROPOSAL RATING WORKSHEET
FACTOR 2-1 BUILDING FUNCTION AND AESTHETICS

/__/ Outstanding

/__/ Above Average

/__ / Satisfactory

/__ / Marginal

/__ / Unsatisfactory

STRENGTHS.

WEAKNESSES.

OTHER COMMENTS.

Offeror: _____

Evaluator: _____

PROPOSAL RATING WORKSHEET
FACTOR 2-2 BUILDING SYSTEMS

/__/ Outstanding

/__/ Above Average

/__ / Satisfactory

/__ / Marginal

/__ / Unsatisfactory

STRENGTHS.

WEAKNESSES.

OTHER COMMENTS.

Offeror: _____

Evaluator: _____

PROPOSAL RATING WORKSHEET
FACTOR 2-3 SITE DESIGN

/__/ Outstanding

/__/ Above Average

/__ / Satisfactory

/__ / Marginal

/__ / Unsatisfactory

STRENGTHS.

WEAKNESSES.

OTHER COMMENTS.

Offeror: _____

Evaluator: _____

PROPOSAL RATING WORKSHEET
FACTOR 2-4 SUSTAINABLE DESIGN CONSIDERATIONS

/__/ Outstanding

/__/ Above Average

/__ / Satisfactory

/__ / Marginal

/__ / Unsatisfactory

STRENGTHS.

WEAKNESSES.

OTHER COMMENTS.

Offeror: _____

Evaluator: _____

PROPOSAL RATING WORKSHEET
FACTOR 2-5 MANAGEMENT EFFECTIVENESS

/__/ Outstanding

/__/ Above Average

/__ / Satisfactory

/__ / Marginal

/__ / Unsatisfactory

STRENGTHS.

WEAKNESSES.

OTHER COMMENTS.

Offeror: _____

Evaluator:_____

PHASE TWO SUMMARY AND OVERALL RATING

FACTOR	DESCRIPTION	RATING*
2-1	BUILDING FUNCTION AND AESTHETICS	
2-2	BUILDING SYSTEMS	
2-3	SITE DESIGN	
2-4	SUSTAINABLE DESIGN CONSIDERATIONS	
2-5	MANAGEMENT EFFECTIVENESS	
	OVERALL PHASE ONE RATING	
OVERALL RATING		
* Ratings may be either: Outstanding – Above Average – Satisfactory – Marginal – Unsatisfactory Attach additional sheets to this rating summary to provide supporting rationale for assignment of ratings.		

_____
Board Member

Offeror: _____

PHASE TWO SUMMARY AND OVERALL RATING

FACTOR	DESCRIPTION	Board Member 1	Board Member 2	Board Member 3	Board Member 4	CONSENSUS
2-1	BUILDING FUNCTION AND AESTHETICS					
2-2	BUILDING SYSTEMS					
2-3	SITE DESIGN					
2-4	SUSTAINABLE DESIGN CONSIDERATIONS					
2-5	MANAGEMENT EFFECTIVENESS					
OVERALL PHASE ONE RATING						
OVERALL RATING						

_____
Board Member 1

_____
Board Member 2

_____
Board Member 3

_____
Board Member 4

_____
Board Chairperson

Offeror: _____

PHASE TWO CONSENSUS SUMMARY RATING

FACTOR 2-1 BUILDING FUNCTION AND AESTHETICS

STRENGTHS:

WEAKNESSES:

OTHER COMMENTS:

Offeror: _____

PHASE TWO CONSENSUS SUMMARY RATING
(Continued)

FACTOR 2-2 BUILDING SYSTEMS

STRENGTHS:

WEAKNESSES:

OTHER COMMENTS:

Offeror: _____

PHASE TWO CONSENSUS SUMMARY RATING
(Continued)

FACTOR 2-3 SITE DESIGN

STRENGTHS:

WEAKNESSES:

OTHER COMMENTS:

Offeror: _____

PHASE TWO CONSENSUS SUMMARY RATING
(Continued)

FACTOR 2-4 SUSTAINABLE DESIGN CONSIDERATIONS

STRENGTHS:

WEAKNESSES:

OTHER COMMENTS:

Offeror: _____

PHASE TWO CONSENSUS SUMMARY RATING
(Continued)

FACTOR 2-5 MANAGEMENT EFFECTIVENESS

STRENGTHS:

WEAKNESSES:

OTHER COMMENTS:

CLAUSES INCORPORATED BY FULL TEXT

52.204-6 DATA UNIVERSAL NUMBERING SYSTEM (DUNS) NUMBER (OCT 2003)

(a) The offeror shall enter, in the block with its name and address on the cover page of its offer, the annotation “DUNS” or “DUNS+4” followed by the DUNS number or “DUNS+4” that identifies the offeror's name and address exactly as stated in the offer. The DUNS number is a nine-digit number assigned by Dun and Bradstreet, Inc. The DUNS+4 is the DUNS number plus a 4-character suffix that may be assigned at the discretion of the offeror to establish additional CCR records for identifying alternative Electronic Funds Transfer (EFT) accounts (see Subpart 32.11) for the same parent concern.

(b) If the offeror does not have a DUNS number, it should contact Dun and Bradstreet directly to obtain one.

(1) An offeror may obtain a DUNS number--

(i) If located within the United States, by calling Dun and Bradstreet at 1-866-705-5711 or via the Internet at http://www.dnb.com; or

(ii) If located outside the United States, by contacting the local Dun and Bradstreet office.

(2) The offeror should be prepared to provide the following information:

(i) Company legal business name.

(ii) Tradestyle, doing business, or other name by which your entity is commonly recognized.

(iii) Company physical street address, city, state and Zip Code.

(iv) Company mailing address, city, state and Zip Code (if separate from physical).

(v) Company telephone number.

(vi) Date the company was started.

(vii) Number of employees at your location.

(viii) Chief executive officer/key manager.

(ix) Line of business (industry).

(x) Company Headquarters name and address (reporting relationship within your entity).

(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 (JAN 2004)

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.dla.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) 697-2179, 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 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)

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).

(End of provision)

52.219-4001 SUBCONTRACTING PLAN FOR SMALL BUSINESS CONCERNS
(JAN 2004 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	-	10.0%
HUBZone Small Business		3.0%
Women-Owned Business	-	10.0%
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
30.6%	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 Georgia, Chatham County, Savannah.

(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)

52.225-12 NOTICE OF BUY AMERICAN ACT REQUIREMENT-- CONSTRUCTION MATERIALS UNDER TRADE AGREEMENTS (MAY 2002)

(a) Definitions. Construction material, designated country construction material, domestic construction material, foreign construction material, and NAFTA country construction material, as used in this provision, are defined in the clause of this solicitation entitled “Buy American Act --Construction Materials under Trade Agreements” (Federal Acquisition Regulation (FAR) clause 52.225-11).

(b) Requests for determination 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 FAR clause 52.225-11 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 materials, by adding to the offered price the appropriate percentage of the cost of such foreign construction material, as specified in paragraph (b)(4)(i) of FAR clause 52.225-11.

(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, other than designated country or NAFTA country construction material, that is not listed by the Government in this solicitation in paragraph (b)(3) of FAR clause 52.225-11, the offeror also may submit an alternate offer based on use of equivalent domestic, designated country, or NAFTA country 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 FAR clause 52.225-11 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 FAR clause 52.225-11 does not apply, the Government will evaluate only those offers based on use of the equivalent domestic, designated country, or NAFTA country construction material, and the offeror shall be required to furnish such domestic, designated country, or NAFTA country 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 2142050 408 8021 P100000 3200 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)

(a) 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:

US Army Corps of Engineers, Savannah District
Attn: Contracting Officer, CESAS-CT-C
100 West Oglethorpe Avenue
Savannah, Georgia 31401-3640

(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:

US Army Corps of Engineers
Attn: CESAS-CD-STH (Resident Engineer)
PB 101, Billy Mitchell Blvd
Hunter Army Airfield, Georgia 31409
Robert F. Unger
(912) 303-3800

(End of provision)

52.236-28 PREPARATION OF PROPOSALS--CONSTRUCTION (OCT 1997)

(a) Proposals must be (1) submitted on the forms furnished by the Government or on copies of those forms, and (2) manually signed. The person signing a proposal must initial each erasure or change appearing on any proposal form.

(b) The proposal form may require offerors to submit proposed prices for one or more items on various bases, including--

(1) Lump sum price;

(2) Alternate prices;

(3) Units of construction; or

(4) Any combination of paragraphs (b)(1) through (b)(3) of this provision.

(c) If the solicitation requires submission of a proposal on all items, failure to do so may result in the proposal being rejected without further consideration. If a proposal on all items is not required, offerors should insert the words “no proposal” in the space provided for any item on which no price is submitted.

(d) Alternate proposals will not be considered unless this solicitation authorizes their submission.

(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 $10,000,000 and $25,000,000.

Section 00600 - Representations & Certifications

CLAUSES INCORPORATED BY FULL TEXT

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 paragraph (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)

52.219-1 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.

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

(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)

52.219-19 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)

52.222-38 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)

52.223-4 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)

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 LISTED BELOW ONLY APPLY TO THE SERVICES PERFORMED UNDER THIS CONTRACT

52.222-41	Service Contract Act of 1965, as Amended (May 1989)
52.222-42	Statement of Equivalent Rates for Federal Hires (May 1989)
52.222-43	Fair Labor Standards Act and Service Contract Act -- Price Adjustment (Multiple Year and Option Contracts) (May 1989)
52.232-1	Payments (Apr. 1984)
52.232-8	Discounts for Prompt Payment (Feb 2002)
52.232-11	Extras (Apr 1984)
52.232-25	Prompt Payment (Oct 2003)
52.237-2	Protection of Government Buildings, Equipment, and Vegetation (Apr 1984)
52.242-15	Stop-Work Order (Aug 1989)
52.243-1 ALT 1	Changes -- Fixed Price (Aug. 1987)
52.244-6	Subcontracts for Commercial Items (Apr 2003)
52.246-4	Inspection of Services -- Fixed-Price (Aug 1996)
52.246-25	Limitation of Liability -- Services (Feb 1997)
52.249-4	Termination for Convenience of the Government (Services) (Short Form) (Apr 1984)
52.249-8	Default (Fixed-Price Supply and Service) (Apr 1984)

52.217-4001 OPTION FOR ALTERATIONS, MODIFICATIONS AND NEW WORK.

The Government may require the performance of work under CLIN 0007 of the bid schedule at any time and on multiple occasions, as the need arises, during the 5 year O&M phase of the contract. Such work will be requested by a Work Order in accordance with the O&M Statement of Work (See Chapter 1, paragraph 1.8 of the O&M Statement of Work). Work Orders will be negotiated using the R. S. Means Facilities Construction Cost Data Guide in effect at the time of the issuance of the work order, multiplied by the City Cost Index's Total Weighted Average for Atlanta, Georgia. Options will be executed by a bilateral modification to the contract citing this paragraph.

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 2003)

(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, or an outlying area 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)

52.204-7 CENTRAL CONTRACTOR REGISTRATION (OCT 2003)

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

Central Contractor Registration (CCR) database means the primary Government repository for Contractor information required for the conduct of business with the Government.

Data Universal Numbering System (DUNS) number means the 9-digit number assigned by Dun and Bradstreet, Inc. (D&B) to identify unique business entities.

Data Universal Numbering System +4 (DUNS+4) number means the DUNS number assigned by D&B plus a 4-character suffix that may be assigned by a business concern. (D&B has no affiliation with this 4-character suffix.) This 4-character suffix may be assigned at the discretion of the business concern to establish additional CCR records for identifying alternative Electronic Funds Transfer (EFT) accounts (see the FAR at Subpart 32.11) for the same parent concern.

Registered in the CCR database means that--

(1) The Contractor has entered all mandatory information, including the DUNS number or the DUNS+4 number, into the CCR database; and

(2) The Government has validated all mandatory data fields and has marked the record “Active”.

(b)(1) By submission of an offer, the offeror acknowledges the requirement that a prospective awardee shall be registered in the CCR database prior to award, during performance, and through final payment of any contract, basic agreement, basic ordering agreement, or blanket purchasing agreement resulting from this solicitation.

(2) The offeror shall enter, in the block with its name and address on the cover page of its offer, the annotation “DUNS” or “DUNS +4” followed by the DUNS or DUNS +4 number that identifies the offeror's name and address exactly as stated in the offer. The DUNS number will be used by the Contracting Officer to verify that the offeror is registered in the CCR database.

(c) If the offeror does not have a DUNS number, it should contact Dun and Bradstreet directly to obtain one.

(1) An offeror may obtain a DUNS number--

(i) If located within the United States, by calling Dun and Bradstreet at 1-866-705-5711 or via the Internet at http://www.dnb.com; or

(ii) If located outside the United States, by contacting the local Dun and Bradstreet office.

(2) The offeror should be prepared to provide the following information:

(i) Company legal business.

(ii) Tradestyle, doing business, or other name by which your entity is commonly recognized.

(iii) Company Physical Street Address, City, State, and Zip Code.

(iv) Company Mailing Address, City, State and Zip Code (if separate from physical).

(v) Company Telephone Number.

(vi) Date the company was started.

(vii) Number of employees at your location.

(viii) Chief executive officer/key manager.

(ix) Line of business (industry).

(x) Company Headquarters name and address (reporting relationship within your entity).

(d) If the Offeror does not become registered in the CCR database in the time prescribed by the Contracting Officer, the Contracting Officer will proceed to award to the next otherwise successful registered Offeror.

(e) Processing time, which normally takes 48 hours, should be taken into consideration when registering. Offerors who are not registered should consider applying for registration immediately upon receipt of this solicitation.

(f) The Contractor is responsible for the accuracy and completeness of the data within the CCR database, 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 review and update on an annual basis from the date of initial registration or subsequent updates its information in the CCR database to ensure it is current, accurate and complete. Updating information in the CCR does not alter the terms and conditions of this contract and is not a substitute for a properly executed contractual document.

(g)(1)(i) If a Contractor has legally changed its business name, “doing business as” name, or division name (whichever is shown on the contract), or has transferred the assets used in performing the contract, but has not completed the necessary requirements regarding novation and change-of-name agreements in Subpart 42.12, the Contractor shall provide the responsible Contracting Officer a minimum of one business day's written notification of its intention to (A) change the name in the CCR database; (B) comply with the requirements of Subpart 42.12 of the FAR; and (C) agree in writing to the timeline and procedures specified by the responsible Contracting Officer. The Contractor must provide with the notification sufficient documentation to support the legally changed name.

(ii) If the Contractor fails to comply with the requirements of paragraph (g)(1)(i) of this clause, or fails to perform the agreement at paragraph (g)(1)(i)(C) of this clause, and, in the absence of a properly executed novation or change-of-name agreement, the CCR information that shows the Contractor to be other than the Contractor indicated in the contract will be considered to be incorrect information within the meaning of the “Suspension of Payment” paragraph of the electronic funds transfer (EFT) clause of this contract.

(2) The Contractor shall not change the name or address for EFT payments or manual payments, as appropriate, in the CCR record to reflect an assignee for the purpose of assignment of claims (see FAR Subpart 32.8, Assignment of Claims). Assignees shall be separately registered in the CCR database. Information provided to the Contractor's CCR record that indicates payments, including those made by EFT, to an ultimate recipient other than that Contractor will be considered to be incorrect information within the meaning of the “Suspension of payment” paragraph of the EFT clause of this contract.

(h) Offerors and Contractors may obtain information on registration and annual confirmation requirements via the internet at http://www.ccr.gov or by calling 1-888-227-2423, or 269-961-5757.

(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)

52.217-7 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 construction duration is 720 calendar days. The Contracting Officer may exercise the option by written notice to the Contractor. 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)

52.217-4001 OPTION FOR ALTERATIONS, MODIFICATIONS AND NEW WORK.

The Government may require the performance of work under CLIN 0007 of the bid schedule at any time and on multiple occasions, as the need arises, during the 5 year O&M phase of the contract. Such work will be requested by a Work Order in accordance with the O&M Statement of Work (See Chapter 1, paragraph 1.8 of the O&M Statement of Work). Work Orders will be negotiated using the R. S. Means Facilities Construction Cost Data Guide in effect at the time of the issuance of the work order, multiplied by the City Cost Index's Total Weighted Average for Atlanta, Georgia. Options will be executed by a bilateral modification to the contract citing this paragraph.

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 (JUN 2003)

(a) Except as provided in paragraph (b) of this clause, the Contractor shall not employ in the performance of this contract any person undergoing a sentence of imprisonment imposed by any court of a State, the District of Columbia, Puerto Rico, the Northern Mariana Islands, American Samoa, Guam, or the U.S. Virgin Islands.

(b) The Contractor is not prohibited from employing persons--

(1) On parole or probation to work at paid employment during the term of their sentence;

(2) Who have been pardoned or who have served their terms; or

(3) Confined for violation of the laws of any of the States, the District of Columbia, Puerto Rico, the Northern Mariana Islands, American Samoa, Guam, or the U.S. Virgin Islands who are authorized to work at paid employment in the community under the laws of such jurisdiction, if--

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

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

(iii) 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;

(iv) 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

(v) 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	$ 9.58
Secretary V	$15.97
Civil Engineer Technician	$14.83
Engineering Technician I	$11.86
Cable Splicer	$19.55
Electronics Technician, Maintenance II	$18.52
Sheetmetal Worker, Maintenance	$17.30

(End of clause)

52.222-43 FAIR LABOR STANDARDS ACT AND SERVICE CONTRACT ACT--PRICE ADJUSTMENT (MULTIPLE YEAR AND OPTION CONTRACTS) (MAY 1989)

(a) This clause applies to both contracts subject to area prevailing wage determinations and contracts subject to 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 wage determination, issued under the Service Contract Act of 1965, as amended, (41 U.S.C. 351, et seq.), by the Administrator, Wage and Hour Division, Employment Standards Administration, U.S. Department of Labor, current on the anniversary date of a multiple year contract or the beginning of each renewal option period, shall apply to this contract. If no such determination has been made applicable to this contract, then the Federal minimum wage as established by section 6(a)(1) of the Fair Labor Standards Act of 1938, as amended, (29 U.S.C. 206) current on the anniversary date of a multiple year contract or the beginning of each renewal option period, shall apply to this contract.

(d) The contract price or contract unit price labor rates will be adjusted to reflect the Contractor's actual increase or

decrease in applicable wages and fringe benefits to the extent that the increase is made to comply with or the decrease is voluntarily made by the Contractor as a result of:

(1) The Department of Labor wage determination applicable on the anniversary date of the multiple year contract, or at the beginning of the renewal option period. For example, the prior year wage determination required a minimum wage rate of $4.00 per hour. The Contractor chose to pay $4.10. The new wage determination increases the minimum rate to $4.50 per hour. Even if the Contractor voluntarily increases the rate to $4.75 per hour, the allowable price adjustment is $.40 per hour;

(2) An increased or decreased wage determination otherwise applied to the contract by operation of law; or

(3) An amendment to the Fair Labor Standards Act of 1938 that is enacted after award of this contract, affects the minimum wage, and becomes applicable to this contract under law.

(e) Any adjustment will be limited to increases or decreases in wages and fringe benefits as described in paragraph (c) of this clause, and the accompanying increases or decreases in social security and unemployment taxes and workers' compensation insurance, but shall not otherwise include any amount for general and administrative costs, overhead, or profit.

(f) The Contractor shall notify the Contracting Officer of any increase claimed under this clause within 30 days after receiving a new wage determination unless this notification period is extended in writing by the Contracting Officer. 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, including payroll records, 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.

(g) The Contracting Officer or an authorized representative shall have access to and the right to examine any directly pertinent books, documents, papers and records of the Contractor until the expiration of 3 years after final payment under the contract.
(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 (AUG 2003)

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

Priority chemical means a chemical identified by the Interagency Environmental Leadership Workgroup or, alternatively, by an agency pursuant to section 503 of Executive Order 13148 of April 21, 2000, Greening the Government through Leadership in Environmental Management.

“Toxic chemical means a chemical or chemical category listed in 40 CFR 372.65.”

(b) Executive Order 13148 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).

(c) The Contractor shall provide all information needed by the Federal facility to comply with the following:

(1) The emergency planning reporting requirements of section 302 of EPCRA.

(2) The emergency notice requirements of section 304 of EPCRA.

(3) The list of Material Safety Data Sheets, required by section 311 of EPCRA.

(4) The emergency and hazardous chemical inventory forms of section 312 of EPCRA.

(5) The toxic chemical release inventory of section 313 of EPCRA, which includes the reduction and recycling information required by section 6607 of PPA.

(6) The toxic chemical, priority chemical, and hazardous substance release and use reduction goals of sections 502 and 503 of Executive Order 13148.

(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 (AUG 2003)

(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 in 40 CFR 372.65;

(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 the following Standard Industrial Classification (SIC) codes or their corresponding North American Industry Classification System sectors:

(i) Major group code 10 (except 1011, 1081, and 1094.

(ii) Major group code 12 (except 1241).

(iii) Major group codes 20 through 39.

(iv) Industry code 4911, 4931, or 4939 (limited to facilities that combust coal and/or oil for the purpose of generating power for distribution in commerce).

(v) Industry code 4953 (limited to facilities regulated under the Resource Conservation and Recovery Act, Subtitle C (42 U.S.C. 6921, et seq.)), 5169, 5171, or 7389 (limited to facilities primarily engaged in solvent recovery services on a contract or fee basis); or

(5) The facility is not located in the United States or its outlying areas.

(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 (JUN 2003) ALTERNATE I (MAY 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, Iceland, 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.

United States means the 50 States, the District of Columbia, and outlying areas.

(b) Construction materials. (1) This clause implements the Buy American Act (41 U.S.C. 10a-10d) by providing a preference for domestic construction material. In addition, the Contracting Officer has determined that the Trade Agreements Act applies to this acquisition. Therefore, the Buy American Act restrictions are waived for designated country construction materials.

(2) The Contractor shall use only domestic or designated 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 (JAN 2004)

(a) Except as authorized by the Office of Foreign Assets Control (OFAC) in the Department of the Treasury, the Contractor shall not acquire, for use in the performance of this contract, any supplies or services if any proclamation, Executive order, or statute administered by OFAC, or if OFAC's implementing regulations at 31 CFR chapter V, would prohibit such a transaction by a person subject to the jurisdiction of the United States.

(b) Except as authorized by OFAC, most transactions involving Cuba, Iran, Libya, and Sudan are prohibited, as are most imports from North Korea, into the United States or its outlying areas. Lists of entities and individuals subject to economic sanctions are included in OFAC's List of Specially Designated Nationals and Blocked Persons at TerList1.html. More information about these restrictions, as well as updates, is available in the OFAC's regulations at 31 CFR chapter V and/or on OFAC's Web site at http://www.treas.gov/ofac.

(c) The Contractor shall insert this clause, including this paragraph (c), in all subcontracts.

(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.

(c) 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 twenty (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)

52.229-3 FEDERAL, STATE, AND LOCAL TAXES (APR 2003)

(a) As used in this clause--

"Contract date" 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" 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" 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" 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.

Local taxes includes taxes imposed by a possession or territory of the United States, Puerto Rico, or the Northern Mariana Islands, if the contract is performed wholly or partly in any of those areas.

(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)

52.232-1 PAYMENTS (APR 1984)

The Government shall pay the Contractor, upon the submission of proper invoices or vouchers, the prices stipulated in this contract for supplies delivered and accepted or services rendered and accepted, less any deductions provided in this contract. Unless otherwise specified in this contract, payment shall be made on partial deliveries accepted by the Government if--

(a) The amount due on the deliveries warrants it; or

(b) The Contractor requests it and the amount due on the deliveries is at least $1,000 or 50 percent of the total contract price.

(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)

52.232-8 DISCOUNTS FOR PROMPT PAYMENT (FEB 2002)

(a) Discounts for prompt payment will not be considered in the evaluation of offers. However, any offered discount will form a part of the award, and will be taken if payment is made within the discount period indicated in the offer by the offeror. As an alternative to offering a discount for prompt payment in conjunction with the offer, offerors awarded contracts may include discounts for prompt payment on individual invoices.

(b) In connection with any discount offered for prompt payment, time shall be computed from the date of the invoice. If the Contractor has not placed a date on the invoice, the due date shall be calculated from the date the designated billing office receives a proper invoice, provided the agency annotates such invoice with the date of receipt at the time of receipt. For the purpose of computing the discount earned, payment shall be considered to have been made on the date that appears on the payment check or, for an electronic funds transfer, the specified payment date. When the discount date falls on a Saturday, Sunday, or legal holiday when Federal Government offices are closed and Government business is not expected to be conducted, payment may be made on the following business day.

(End of clause)

52.232-11 EXTRAS (APR 1984)

Except as otherwise provided in this contract, no payment for extras shall be made unless such extras and the price therefore have been authorized in writing by the Contracting Officer.

(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)

52.232-18 AVAILABILITY OF FUNDS (APR 1984)

Funds are not presently available for this contract. The Government's obligation under this contract is contingent upon the availability of appropriated funds from which payment for contract purposes can be made. No legal liability on the part of the Government for any payment may arise until funds are made available to the Contracting Officer for this contract and until the Contractor receives notice of such availability, to be confirmed in writing by the Contracting Officer.

(End of clause)

52.232-23 ASSIGNMENT OF CLAIMS (JAN 1986) - ALTERNATE I (APR 1984)

(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. Unless otherwise stated in this contract, payments to an assignee of any amounts due or to become due under this contract shall not, to the extent specified in the Act, be subject to reduction or setoff.

(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)

52.232-25 PROMPT PAYMENT (OCT 2003)

Notwithstanding any other payment clause 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 (EFT). 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)(4) of this clause concerning payments due on Saturdays, Sundays, and legal holidays.)

(a) Invoice payments--(1) Due date. (i) Except as indicated in paragraphs (a)(2) and (c) of this clause, the due date for making invoice payments by the designated payment office is the later of
the following two events:

(A) The 30th day after the designated billing office receives a proper invoice from the Contractor (except as provided in paragraph (a)(1)(ii) of this clause).

(B) The 30th day after Government acceptance of supplies delivered or services performed. For a final invoice, when the payment amount is subject to contract settlement actions, acceptance is deemed to occur on the effective date of the contract settlement.

(ii) If the designated billing office fails to annotate the invoice with the actual date of 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) Certain food products and other payments. (i) Due dates on Contractor invoices for meat, meat food products, or fish; perishable agricultural commodities; and dairy products, edible fats or oils, and food products prepared from edible fats or oils are--

(A) For meat or meat food products, as defined in section 2(a)(3) of the Packers and Stockyard Act of 1921 (7 U.S.C. 182(3)), and as further defined in Pub. L. 98-181, including any edible fresh or frozen poultry meat, any perishable poultry meat food product, fresh eggs, and any perishable egg product, as close as possible to, but not later than, the 7th day after product delivery.

(B) For fresh or frozen fish, as defined in section 204(3) of the Fish and Seafood Promotion Act of 1986 (16 U.S.C. 4003(3)), as close as possible to, but not later than, the 7th day after product delivery.

C) For perishable agricultural commodities, as defined in section 1(4) of the Perishable Agricultural Commodities Act of 1930 (7 U.S.C. 499a(4)), as close as possible to, but not later than, the 10th day after product delivery, unless another date is specified in the contract.

(D) For dairy products, as defined in section 111(e) of the Dairy Production Stabilization Act of 1983 (7 U.S.C. 4502(e)), edible fats or oils, and food products prepared from edible fats or oils, as close as possible to, but not later than, the 10th day after the date on which a proper invoice has been received. Liquid milk, cheese, certain processed cheese products, butter, yogurt, ice cream, mayonnaise, salad dressings, and other similar products, fall within this classification. Nothing in the Act limits this classification to refrigerated products. When questions arise regarding the proper classification of a specific product, prevailing industry practices will be followed in specifying a contract payment due date. The burden of proof that a classification of a specific product is, in fact, prevailing industry practice is upon the Contractor making the representation.

(ii) If the contract does not require submission of an invoice for payment (e.g., periodic lease payments), the due date will be as specified in the contract.

(3) 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)(3)(i) through (a)(3)(x) of this clause. If the invoice does not comply with these requirements, the designated billing office will return it within 7 days after receipt (3 days for meat, meat food products, or fish; 5 days for perishable agricultural commodities, dairy products, edible fats or oils, and food products prepared from edible fats or oils), with the reasons why it is not a proper invoice. The Government will take into account untimely notification when computing any interest penalty owed the Contractor.

(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 the mailing or transmission.)

(iii) Contract number or other authorization for supplies delivered or services performed (including order number and contract line item number).

(iv) Description, quantity, unit of measure, unit price, and extended price of supplies delivered or services performed.

(v) Shipping and payment terms (e.g., shipment number and date of shipment, discount for prompt payment terms). Bill of lading number and weight of shipment will be shown for shipments on Government bills of lading.

(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) Taxpayer Identification Number (TIN). The Contractor shall include its TIN on the invoice only if required elsewhere in this contract.

(ix) 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.

(x) Any other information or documentation required by the contract (e.g., evidence of shipment).

(4) 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)(4)(i) through (a)(4)(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, or Contractor compliance with any contract term or condition.

(iii) In the case of a final invoice for any balance of funds due the Contractor for supplies delivered or services performed, the amount was not subject to further contract settlement actions between the Government and the Contractor.

(5) 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, Government acceptance is deemed to occur constructively on the 7th day (unless otherwise specified in this contract) after the Contractor delivers the supplies or performs the services in accordance with the terms and conditions of the contract, unless there is a disagreement over quantity, quality, or Contractor compliance with a contract provision. If actual acceptance occurs within the constructive acceptance period, the Government will base the determination of an interest penalty on the actual date of acceptance. The constructive acceptance requirement does not, however, compel Government officials to accept supplies or services, 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.

(6) 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.

(7) 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)(7)(ii) of this clause, postmarked not later than 40 days after 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 is 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.

(iii) The additional penalty does not apply to payments regulated by other Government regulations (e.g., payments under utility contracts subject to tariffs and regulation).

(b) Contract financing payment. If this contract provides for contract financing, the Government will make contract financing payments in accordance with the applicable contract financing clause.

(c) Fast payment procedure due dates. If this contract contains the clause at 52.213-1, Fast Payment Procedure, payments will be made within 15 days after the date of receipt of the invoice.

(d) Overpayments. If the Contractor becomes aware of a duplicate contract financing or invoice payment or that the Government has otherwise overpaid on a contract financing or invoice payment, the Contractor shall immediately notify the Contracting Officer and request instructions for disposition of the overpayment.

(End of clause)

52.232-27 PROMPT PAYMENT FOR CONSTRUCTION CONTRACTS (OCT 2003)

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 contract financing or invoice payment or that the Government has otherwise overpaid on a contract financing or 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 (OCT 2003)

(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) 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.

(f) 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.

(g) 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 separately in the CCR database and shall be paid by EFT in accordance with the terms of this clause. Notwithstanding any other requirement of this contract, payment to an ultimate recipient other than the

Contractor, or a financial institution properly recognized under an assignment of claims pursuant to subpart 32.8, is not permitted. 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.

(h) 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.

(i) 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.

(v) 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.

(i) 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 $15,100,000.

(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 (JUN 2003)

Architects or engineers registered to practice in the particular professional field involved in a State, the District of Columbia, or an outlying area of the United States shall prepare or review and approve the design of architectural, structural, mechanical, electrical, civil, or other engineering features of the work.

(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)

52.237-2 PROTECTION OF GOVERNMENT BUILDINGS, EQUIPMENT, AND VEGETATION (APR 1984)

The Contractor shall use reasonable care to avoid damaging existing buildings, equipment, and vegetation on the Government installation. If the Contractor's failure to use reasonable care causes damage to any of this property, the Contractor shall replace or repair the damage at no expense to the Government as the Contracting Officer directs. If the Contractor fails or refuses to make such repair or replacement, the Contractor shall be liable for the cost, which may be deducted from the contract price.

(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)

52.239-4006 SECURITY CONTRACT LANGUAGE FOR ALL CORPS OF ENGINEERS' UNCLASSIFIED CONTRACTS (PIL 2003-06, 19 FEB 03)

All Contractor employees (U.S. citizens and Non- U.S. citizens) working under this contract (to include grants, cooperative agreements and task orders) who require access to Automated Information Systems (AIS), (stand alone computers, network computers/systems, e-mail) shall, at a minimum, be designated into an ADP-III position (non-sensitive) in accordance with DoD 5220-22-R, Industrial Security Regulation. The investigative requirements for an ADP-III position are a favorable National Agency Check (NAC), SF-85P, Public Trust Position. The contractor shall have each applicable employee complete a SF-85P and submit to the USACE, Savannah District Security Officer, ATTN: CESAS-SL, 100 West Oglethorpe Avenue, Savannah, GA 31401 within three (3) working days after award of any contract or task order, and shall be submitted prior to the individual being permitted access to an AIS. Contractors who have a commercial or government entity (CAGE) Code and Facility Security Clearance through the Defense Security Service shall process the NACs and forward visit requests/results of NAC to the Savannah District Security Officer (address above). For those contractors who do not have a CAGE Code or Facility Security Clearance, the Savannah District Security Office will process the investigation in coordination with the Contractor and contract employees.

In accordance with Engineering Regulation, ER 380-1-18, Section 4, foreign nationals who work on Corps of Engineers' contracts or task orders shall be approved by the HQUSACE Foreign Disclosure Officer or higher before beginning work on the contract/task order. This regulation includes subcontractor employees. (NOTE: exceptions to the above requirement include foreign nationals who perform janitorial and/or ground maintenance services.) The contractor shall submit to the Division/District Contract Office, the names of all foreign nationals proposed for performance under this contract/task order, along with documentation to verify that he/she was legally admitted into the United States and has authority to work and/or go to school in the US. Such documentation may include a US passport, Certificate of US citizenship (INS Form N-560 or N-561), Certificate of Naturalization (INS Form N-550 or N-570), foreign passport with I-551 stamp or attached INS Form I-94 indicating employment authorization, Alien Registration Receipt Card with photograph (INS Form I-151 or I-551), Temporary Resident Card (INS Form I-688), Employment Authorization Card (INS Form I-688A), Reentry Permit (INS Form I-327), Refugee Travel Document (INS Form I-571), Employment Authorization Document issued by the INS which contains a photograph (INS Form I-688B).

Classified contracts require the issuance of a DD Form 254 (Department of Defense Contract Security Classification Specification).

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)

52.242-15 STOP-WORK ORDER (AUG 1989)

(a) The Contracting Officer may, at any time, by written order to the Contractor, require the Contractor to stop all, or any part, of the work called for by this contract for a period of 90 days after the order is delivered to the Contractor, and for any further period to which the parties may agree. 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. Within a period of 90 days after a stop-work is delivered to the Contractor, or within any extension of that period to which the parties shall have agreed, 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 or the period of the order or any extension thereof expires, 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 the 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 the claim submitted 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.

(End of clause)

52.243-1 CHANGES--FIXED-PRICE (AUG 1987) - ALTERNATE I (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 any one or more of the following:

(1) Description of services to be performed.

(2) Time of performance (i.e., hours of the day, days of the week, etc.).

(3) Place of performance of the services.

(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.

(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 (APR 2003)

(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 (APR 2003) (46 U.S.C. Appx 1241 and 10 U.S.C. 2631) (flow down required in accordance with paragraph (d) of FAR clause 52.247-64).

(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)

52.246-4 INSPECTION OF SERVICES--FIXED-PRICE (AUG 1996)

(a) Definitions. "Services," as used in this clause, includes services performed, workmanship, and material furnished or utilized in the performance of services.

(b) The Contractor shall provide and maintain an inspection system acceptable to the Government covering the services under this contract. Complete records of all inspection work performed by the Contractor shall be maintained and made available to the Government during contract performance and for as long afterwards as the contract requires.

(c) The Government has the right to inspect and test all services called for by the contract, to the extent practicable at all times and places during the term of the contract. The Government shall perform inspections and tests in a manner that will not unduly delay the work.

(d) If the Government performs inspections or tests on the premises of the Contractor or a subcontractor, the Contractor shall furnish, and shall require subcontractors to furnish, at no increase in contract price, all reasonable facilities and assistance for the safe and convenient performance of these duties.

(e) If any of the services do not conform with contract requirements, the Government may require the Contractor to perform the services again in conformity with contract requirements, at no increase in contract amount. When the defects in services cannot be corrected by reperformance, the Government may (1) require the Contractor to take necessary action to ensure that future performance conforms to contract requirements and (2) reduce the contract price to reflect the reduced value of the services performed.

(f) If the Contractor fails to promptly perform the services again or to take the necessary action to ensure future performance in conformity with contract requirements, the Government may (1) by contract or otherwise, perform the services and charge to the Contractor any cost incurred by the Government that is directly related to the performance of such service or (2) terminate the contract for default.

(End of clause)

52.246-25 LIMITATION OF LIABILITY--SERVICES (FEB 1997)

(a) Except as provided in paragraphs (b) and (c) below, and except to the extent that the Contractor is expressly responsible under this contract for deficiencies in the services required to be performed under it (including any materials furnished in conjunction with those services), the Contractor shall not be liable for loss of or damage to property of the Government that (1) occurs after Government acceptance of services performed under this contract, and (2) results from any defects or deficiencies in the services performed or materials furnished.

(b) The limitation of liability under paragraph (a) above shall not apply when a defect or deficiency in, or the Government's acceptance of, services performed or materials furnished results from willful misconduct or lack of good faith on the part of any of the Contractor's managerial personnel. The term "Contractor's managerial personnel," as used in this clause, means the Contractor's directors, officers, and any of the Contractor's managers, superintendents, or equivalent representatives who have supervision or direction of--

(1) All or substantially all of the Contractor's business;

(2) All or substantially all of the Contractor's operations at any one plant, laboratory, or separate location at which the contract is being performed; or

(3) A separate and complete major industrial operation connected with the performance of this contract.

(c) If the Contractor carries insurance, or has established a reserve for self-insurance, covering liability for loss or damage suffered by the Government through the Contractor's performance of services or furnishing of materials under this contract, the Contractor shall be liable to the Government, to the extent of such insurance or reserve, for loss of or damage to property of the Government occurring after Government acceptance of, and resulting from any defects and deficiencies in, services performed or materials furnished 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)

52.249-4 TERMINATION FOR CONVENIENCE OF THE GOVERNMENT (SERVICES) (SHORT FORM) (APR 1984)

The Contracting Officer, by written notice, may terminate this contract, in whole or in part, when it is in the Government's interest. If this contract is terminated, the Government shall be liable only for payment under the payment provisions of this contract for services rendered before the effective date of termination.

(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.

(vi) 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)

52.249-8 DEFAULT (FIXED-PRICE SUPPLY AND SERVICE) (APR 1984)

(a)(1) The Government may, subject to paragraphs (c) and (d) of this clause, by written notice of default to the Contractor, terminate this contract in whole or in part if the Contractor fails to--

(i) Deliver the supplies or to perform the services within the time specified in this contract or any extension;

(ii) Make progress, so as to endanger performance of this contract (but see subparagraph (a)(2) of this clause); or

(iii) Perform any of the other provisions of this contract (but see subparagraph (a)(2) below).

(2) The Government's right to terminate this contract under subdivisions (a)(1)(ii) and (1)(iii) of this clause, may be exercised if the Contractor does not cure such failure within 10 days (or more if authorized in writing by the Contracting Officer) after receipt of the notice from the Contracting Officer specifying the failure.

(b) If the Government terminates this contract in whole or in part, it may acquire, under the terms and in the manner the Contracting Officer considers appropriate, supplies or services similar to those terminated, and the Contractor will be liable to the Government for any excess costs for those supplies or services. However, the Contractor shall continue the work not terminated.

(c) Except for defaults of subcontractors at any tier, the Contractor shall not be liable for any excess costs if the failure to perform the contract arises from causes beyond the control and without the fault or negligence of the Contractor. Examples of such causes include (1) acts of God or of the public enemy, (2) acts of the Government in either its sovereign or contractual capacity, (3) fires, (4) floods, (5) epidemics, (6) quarantine restrictions, (7) strikes, (8) freight embargoes, and (9) unusually severe weather. In each instance the failure to perform must be beyond the control and without the fault or negligence of the Contractor.

(d) If the failure to perform is caused by the default of a subcontractor at any tier, and if the cause of the default is beyond the control of both the Contractor and subcontractor, and without the fault or negligence of either, the Contractor shall not be liable for any excess costs for failure to perform, unless the subcontracted supplies or services were obtainable from other sources in sufficient time for the Contractor to meet the required delivery schedule.

(e) If this contract is terminated for default, the Government may require the Contractor to transfer title and deliver to the Government, as directed by the Contracting Officer, any (1) completed supplies, and (2) partially completed supplies and materials, parts, tools, dies, jigs, fixtures, plans, drawings, information, and contract rights (collectively referred to as "manufacturing materials" in this clause) that the Contractor has specifically produced or acquired for the terminated portion of this contract. Upon direction of the Contracting Officer, the Contractor shall also protect and preserve property in its possession in which the Government has an interest.

(f) The Government shall pay contract price for completed supplies delivered and accepted. The Contractor and Contracting Officer shall agree on the amount of payment for manufacturing materials delivered and accepted and for the protection and preservation of the property. Failure to agree will be a dispute under the Disputes clause. The Government may withhold from these amounts any sum the Contracting Officer determines to be necessary to protect the Government against loss because of outstanding liens or claims of former lien holders.

(g) If, after termination, it is determined that the Contractor was not in default, or that the default was excusable, the rights and obligations of the parties shall be the same as if the termination had been issued for the convenience of the Government.

(h) 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)

52.249-10 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 ALTERNATE A (NOV 2003)

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

“Central Contractor Registration (CCR) database” means the primary Government repository for contractor information required for the conduct of business with the Government.

“Commercial and Government Entity (CAGE) code” means--

(1) A code assigned by the Defense Logistics Information Service (DLIS) to identify a commercial or Government entity; or

(2) A code assigned by a member of the North Atlantic Treaty Organization that DLIS records and maintains in the CAGE master file. This type of code is known as an “NCAGE code.”

“Data Universal Numbering System (DUNS) number” means the 9-digit number assigned by Dun and Bradstreet, Inc. (D&B) to identify unique business entities.

“Data Universal Numbering System +4 (DUNS+4) number” means the DUNS number assigned by D&B plus a 4-character suffix that may be assigned by a business concern. (D&B has no affiliation with this 4-character suffix.) This 4-character suffix may be assigned at the discretion of the business concern to establish additional CCR records for identifying alternative Electronic Funds Transfer (EFT) accounts (see Subpart 32.11 of the Federal Acquisition Regulation) for the same parent concern.

“Registered in the CCR database” means that--

(1) The Contractor has entered all mandatory information, including the DUNS number or the DUNS+4 number, into the CCR database;

(2) The Contractor's CAGE code is in the CCR database; and

(3) The Government has validated all mandatory data fields and has marked the records “Active.”

(b)(1) By submission of an offer, the offeror acknowledges the requirement that a prospective awardee shall be registered in the CCR database prior to award, during performance, and through final payment of any contract, basic agreement, basic ordering agreement, or blanket purchasing agreement resulting from this solicitation.

(2) The offeror shall enter, in the block with its name and address on the cover page of its offer, the annotation “DUNS” or “DUNS +4” followed by the DUNS or DUNS +4 number that identifies the offeror's name and address exactly as stated in the offer. The DUNS number will be used by the Contracting Officer to verify that the offeror is registered in the CCR database.

(c) If the offeror does not have a DUNS number, it should contact Dun and Bradstreet directly to obtain one.

(1) An offeror may obtain a DUNS number--

(i) If located within the United States, by calling Dun and Bradstreet at 1-866-705-5711 or via the Internet at http://www.dnb.com; or

(ii) If located outside the United States, by contacting the local Dun and Bradstreet office.

(2) The offeror should be prepared to provide the following information:

(i) Company legal business.

(ii) Tradestyle, doing business, or other name by which your entity is commonly recognized.

(iii) Company Physical Street Address, City, State, and Zip Code.

(iv) Company Mailing Address, City, State and Zip Code (if separate from physical).

(v) Company Telephone Number.

(vi) Date the company was started.

(vii) Number of employees at your location.

(viii) Chief executive officer/key manager.

(ix) Line of business (industry).

(x) Company Headquarters name and address (reporting relationship within your entity).

(d) If the Offeror does not become registered in the CCR database in the time prescribed by the Contracting Officer, the Contracting Officer will proceed to award to the next otherwise successful registered Offeror.

(e) Processing time, which normally takes 48 hours, should be taken into consideration when registering. Offerors who are not registered should consider applying for registration immediately upon receipt of this solicitation.

(f) The Contractor is responsible for the accuracy and completeness of the data within the CCR database, 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 review and update on an annual basis from the date of initial registration or subsequent updates its information in the CCR database to ensure it is current, accurate and complete. Updating information in the CCR does not alter the terms and conditions of this contract and is not a substitute for a properly executed contractual document.

(g)(1)(i) If a Contractor has legally changed its business name, “doing business as” name, or division name (whichever is shown on the contract), or has transferred the assets used in performing the contract, but has not completed the necessary requirements regarding novation and change-of-name agreements in Subpart 42.12, the Contractor shall provide the responsible Contracting Officer a minimum of one business day's written notification of its intention to (A) change the name in the CCR database; (B) comply with the requirements of Subpart 42.12 of the FAR; and (C) agree in writing to the timeline and procedures specified by the responsible Contracting Officer. The Contractor must provide with the notification sufficient documentation to support the legally changed name.

(ii) If the Contractor fails to comply with the requirements of paragraph (g)(1)(i) of this clause, or fails to perform the agreement at paragraph (g)(1)(i)(C) of this clause, and, in the absence of a properly executed novation or change-of-name agreement, the CCR information that shows the Contractor to be other than the Contractor indicated in the contract will be considered to be incorrect information within the meaning of the “Suspension of Payment” paragraph of the electronic funds transfer (EFT) clause of this contract.

(2) The Contractor shall not change the name or address for EFT payments or manual payments, as appropriate, in the CCR record to reflect an assignee for the purpose of assignment of claims (see FAR Subpart 32.8, Assignment of Claims). Assignees shall be separately registered in the CCR database. Information provided to the Contractor's CCR record that indicates payments, including those made by EFT, to an ultimate recipient other than that Contractor will be considered to be incorrect information within the meaning of the “Suspension of payment” paragraph of the EFT clause of this contract.

(h) Offerors and Contractors may obtain information on registration and annual confirmation requirements via the internet at http://www.ccr.gov or by calling 1-888-227-2423, or 269-961-5757.

(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)

252.223-7004 DRUG-FREE WORK FORCE (SEP 1988)

(a) Definitions.

(1) "Employee in a sensitive position," as used in this clause, means an employee who has been granted access to classified information; or employees in other positions that the Contractor determines involve national security; health or safety, or functions other than the foregoing requiring a high degree of trust and confidence.

(2) "Illegal drugs," as used in this clause, means controlled substances included in Schedules I and II, as defined by section 802(6) of title 21 of the United States Code, the possession of which is unlawful under chapter 13 of that Title. The term "illegal drugs" does not mean the use of a controlled substance pursuant to a valid prescription or other uses authorized by law.

(b) The Contractor agrees to institute and maintain a program for achieving the objective of a drug-free work force. While this clause defines criteria for such a program, contractors are encouraged to implement alternative approaches comparable to the criteria in paragraph (c) that are designed to achieve the objectives of this clause.

(c) Contractor programs shall include the following, or appropriate alternatives:

(1) Employee assistance programs emphasizing high level direction, education, counseling, rehabilitation, and coordination with available community resources;

(2) Supervisory training to assist in identifying and addressing illegal drug use by Contractor employees;

(3) Provision for self-referrals as well as supervisory referrals to treatment with maximum respect for individual confidentiality consistent with safety and security issues;

(4) Provision for identifying illegal drug users, including testing on a controlled and carefully monitored basis. Employee drug testing programs shall be established taking account of the following:

(i) The Contractor shall establish a program that provides for testing for the use of illegal drugs by employees in sensitive positions. The extent of and criteria for such testing shall be determined by the Contractor based on considerations that include the nature of the work being performed under the contract, the employee's duties, and efficient use of Contractor resources, and the risks to health, safety, or national security that could result from the failure of an employee adequately to discharge his or her position.

(ii) In addition, the Contractor may establish a program for employee drug testing--

(A) When there is a reasonable suspicion that an employee uses illegal drugs; or

(B) When an employees has been involved in an accident or unsafe practice;

(C) As part of or as a follow-up to counseling or rehabilitation for illegal drug use;

(D) As part of a voluntary employee drug testing program.

(iii) The Contractor may establish a program to test applicants for employment for illegal drug use.

(iv) For the purpose of administering this clause, testing for illegal drugs may be limited to those substances for which testing is prescribed by section 2..1 of subpart B of the "Mandatory Guidelines for Federal Workplace Drug Testing Programs" (53 FR 11980 (April 11, 1988), issued by the Department of Health and Human Services.

(d) Contractors shall adopt appropriate personnel procedures to deal with employees who are found to be using drugs illegally. Contractors shall not allow any employee to remain on duty or perform in a sensitive position who is found to use illegal drugs until such times as the Contractor, in accordance with procedures established by the Contractor, determines that the employee may perform in such a position.

(e) The provisions of this clause pertaining to drug testing program shall not apply to the extent that are inconsistent with state or local law, or with an existing collective bargaining agreement; provided that with respect to the latter, the Contractor agrees those issues that are in conflict will be a subject of negotiation at the next collective bargaining session.

(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 (FEB 2003)

(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, except that this clause does apply to fish, shellfish, or seafood manufactured or processed in the United States and fish, shellfish, or seafood contained in foods manufactured or processed in the United States;

(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 (APR 2003)

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

(1) Foreign person means any person (including any individual, partnership, corporation, or other form of association) other than a United States person.

(2) United States person is defined in 50 U.S.C. App. 2415(2) and means--

(i) Any United States resident or national (other than an individual resident outside the United States who is employed by other than a United States person);

(ii) Any domestic concern (including any permanent domestic establishment of any foreign concern); and

(iii) Any foreign subsidiary or affiliate (including any permanent foreign establishment) of any domestic concern that is controlled in fact by such domestic concern.

(b) Certification. If the offeror is a foreign person, the offeror certifies, by submission of an offer, 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. 2407(a) prohibits a United States person from taking.

(End of provision)

252.226-7001 UTILIZATION OF INDIAN ORGANIZATIONS AND INDIAN-OWNED ECONOMIC ENTERPRISES, AND HAWAIIAN SMALL BUSINESS CONCERNS (OCT 2003)

(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.

Native Hawaiian small business concern means an entity that is--

(1) A small business concern as defined in section 3 of the Small Business Act (15 U.S.C. 632) and relevant implementing regulations; and

(2) Owned and controlled by a Native Hawaiian as defined in 25 U.S.C. 4221(9).

(b) The Contractor shall use its best efforts to give Indian organizations, Indian-owned economic enterprises, and Native Hawaiian small business concerns 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, Indian-owned economic enterprise, or Native Hawaiian small business concern as to its eligibility, unless an 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--

(1) For matters relating to Indian organizations or Indian-owned economic enterprises: 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.

(2) For matters relating to Native Hawaiian small business concerns: Department of Hawaiian Home Lands, PO Box 1879, Honolulu, HI 96805. The Department of Hawaiian Home Lands will determine the eligibility and will notify the Contracting Officer.

(e) No incentive payment will be made--

(1) While a challenge is pending; or

(2) If a subcontractor is determined to be an ineligible participant.

(f)(1) The Contractor, on its own behalf or on behalf of a subcontractor at any tier, may request an incentive payment in accordance with this clause.

(2) The incentive amount that may be requested is 5 percent of the estimated cost, target cost, or fixed price included in the subcontract at the time of award to the Indian organization, Indian-owned economic enterprise, or Native Hawaiian small business concern.

(3) In the case of a subcontract for commercial items, the Contractor may receive an incentive payment only if the subcontracted items are produced or manufactured in whole or in part by an Indian organization, Indian-owned economic enterprise, or Native Hawaiian small business concern.

(4) The Contractor has the burden of proving the amount claimed and shall assert its request for an incentive payment prior to completion of contract performance.

(5) 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 estimated cost, target cost, or fixed price included in the subcontract awarded to the Indian organization, Indian-owned economic enterprise, or Native Hawaiian small business concern.

(6) If the Contractor requests and receives an incentive payment on behalf of a subcontractor, the Contractor is obligated to pay the subcontractor the incentive amount.

(g) The Contractor shall insert the substance of this clause, including this paragraph (g), in all subcontracts exceeding $500,000 for which further subcontracting opportunities may exist.

(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.

252.231-7000 SUPPLEMENTAL COST PRINCIPLES (DEC 1991)

When the allowability of costs under this contract is determined in accordance with part 31 of the Federal Acquisition Regulation (FAR), allowability shall also be determined in accordance with part 231 of the Defense FAR Supplement, in effect on the date of this contract.

(End of clause)

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.

252.236-7005 AIRFIELD SAFETY PRECAUTIONS. (DEC 1991)

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

(1) "Landing areas means" --

(i) The primary surfaces, comprising the surface of the runway, runway shoulders, and lateral safety zones. The length of each primary surface is the same as the runway length. The width of each primary surface is 2,000 feet (1,000 feet on each side of the runway centerline);

(ii) The "clear zone" beyond the ends of each runway, i.e., the extension of the primary surface for a distance of 1,000 feet beyond each end of each runway;

(iii) All taxiways, plus the lateral clearance zones along each side for the length of the taxiways (the outer edge of each lateral clearance zone is laterally 250 feet from the far or opposite edge of the taxiway, e.g., a 75-foot-wide taxiway would have a combined width of taxiway and lateral clearance zones of 425 feet); and

(iv) All aircraft parking aprons, plus the area 125 feet in width extending beyond each edge all around the aprons.

(2) "Safety precaution" areas means those portions of approach-departure clearance zones and transitional zones where placement of objects incident to contract performance might result in vertical projections at or above the approach-departure clearance, or the transitional surface.

(i) "The approach-departure clearance surface" is an extension of the primary surface and the clear zone at each end of each runway, for a distance of 50,000 feet, first along an inclined (glide angle) and then along a horizontal plane, both flaring symmetrically about the runway centerline extended.

(A) The inclined plane (glide angle) begins in the clear zone 200 feet past the end of the runway (and primary surface) at the same elevation as the end of the runway. It continues upward at a slope of 50:1 (1 foot vertically for each 50 feet horizontally) to an elevation of 500 feet above the established airfield elevation. At that point the plane becomes horizontal, continuing at that same uniform elevation to a point 50,000 feet longitudinally from the beginning of the inclined plane (glide angle) and ending there.

(B) The width of the surface at the beginning of the inclined plane (glide angle) is the same as the width of the clear zone. It then flares uniformly, reaching the maximum width of 16,000 feet at the end.

(ii) The "approach-departure clearance zone" is the ground area under the approach-departure clearance surface.

(iii) The "transitional surface" is a sideways extension of all primary surfaces, clear zones, and approach-departure clearance surfaces along inclined planes.

(A) The inclined plane in each case begins at the edge of the surface.

(B) The slope of the incline plane is 7:1 (1 foot vertically for each 7 feet horizontally). It continues to the point of intersection with the --

(1) Inner horizontal surface (which is the horizontal plane 150 feet above the established airfield elevation); or

(2) Outer horizontal surface (which is the horizontal plane 500 feet above the established airfield elevation), whichever is applicable.

(iv) The "transitional zone" is the ground area under the transitional surface. (It adjoins the primary surface, clear zone, and approach-departure clearance zone.)

(b) General. (1) The Contractor shall comply with the requirements of this clause while --

(i) Operating all ground equipment (mobile or stationary);

(ii) Placing all materials; and

(iii) Performing all work, upon and around all airfields.

(2) The requirements of this clause are in addition to any other safety requirements of this contract.

(c) The Contractor shall -

(1) Report to the Contracting Officer before initiating any work;

(2) Notify the Contracting Officer of proposed changes to locations and operations;

(3) Not permit either its equipment or personnel to use any runway for purposes other than aircraft operation without permission of the Contracting Officer, unless the runway is -

(i) Closed by order of the Contracting Officer; and

(ii) Marked as provided in paragraph (d)(2) of this clause;

(4) Keep all paved surfaces, such as runways, taxiways, and hardstands, clean at all times and, specifically, free from small stones which might damage aircraft propellers or jet aircraft;

(5) Operate mobile equipment according to the safety provisions of this clause, while actually performing work on the airfield. At all other times, the Contractor shall remove all mobile equipment to locations -

(i) Approved by the Contracting Officer;

(ii) At a distance of at least 750 feet from the runway centerline, plus any additional distance; and

(iii) Necessary to ensure compliance with the other provisions of this clause; and

(6) Not open a trench unless material is on hand and ready for placing in the trench. As soon as practicable after material has been placed and work approved, the Contractor shall backfill and compact trenches as required by the contract. Meanwhile, all hazardous conditions shall be marked and lighted in accordance with the other provisions of this clause.

(d) Landing areas. The Contractor shall -

(1) Place nothing upon the landing areas without the authorization of the Contracting Officer;

(2) Outline those landing areas hazardous to aircraft, using (unless otherwise authorized by the Contracting Officer)

red flags by day, and electric, battery-operated low-intensity red flasher lights by night;

(3) Obtain, at an airfield where flying is controlled, additional permission from the control tower operator every time before entering any landing area, unless the landing area is marked as hazardous in accordance with paragraph (d)(2) of this clause;

(4) Identify all vehicles it operates in landing areas by means of a flag on a staff attached to, and flying above, the vehicle. The flag shall be three feet square, and consist of a checkered pattern of international orange and white squares of 1 foot on each side (except that the flag may vary up to ten percent from each of these dimensions);

(5) Mark all other equipment and materials in the landing areas, using the same marking devices as in paragraph (d)(2) of this clause; and

(6) Perform work so as to leave that portion of the landing area which is available to aircraft free from hazards, holes, piles of material, and projecting shoulders that might damage an airplane tire.

(e) Safety precaution areas. The Contractor shall -

(1) Place nothing upon the safety precaution areas without authorization of the Contracting Officer;

(2) Mark all equipment and materials in safety precaution areas, using (unless otherwise authorized by the Contracting Officer) red flags by day, and electric, battery-operated, low-intensity red flasher lights by night; and

(3) Provide all objects placed in safety precaution areas with a red light or red lantern at night, if the objects project above the approach-departure clearance surface or above the transitional surface.

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.

252.247-7023 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 Construction Phase in 720 calendar days. The time stated for completion shall include final cleanup of the premises.

Clin 0006 (five-year maintenance contract) is part of base bid. It is not part of 720 performance period. Fiv-year operations and maintenance portion of the Contract shall commence at acceptance of new physical fitness center building by the Government.

(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 $892.00 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)

52.219-4002 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 US Army Engineer District, Savannah
Attn: CESAS-CT-C
100 West Oglethorpe Avenue
Savannah, Georgia 31401

(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 Section 00100, Instructions, Conditions, and Notice to Bidders.

(End of clause)

52.232-4008 DESIGNATED BILLING OFFICE (APR 1989 CESAS-RM)

Invoices will be mailed to: US Army Corps of Engineers
Attn: CESAS-CD-STH (Resident Engineer)
Post Office Box 22684
Savannah, Georgia 31403

Physical Address: US Army Corps of Engineers
PB 101, Billy Mitchell Blvd
Hunter Army Airfield, Georgia 31409

(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 (2) 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 twenty (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)

52.236-4 PHYSICAL DATA (APR 1984)

Data and information furnished or referred to below is for the Contractor's information. The Government shall not be responsible for any interpretation of or conclusion drawn from the data or information by the Contractor.

The indications of physical conditions on the drawings and in the specifications are the result of site investigations by soil test borings and laboratory soil testing. Locations and logs of the explorations and results of the laboratory soils testing, cone penetrometer test (CPT) soundings, exploratory test pits are shown on the contract drawings.
(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

(a) 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.

(b) 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.

(c) The rights and remedies of the Government provided for under this contract are in addition to any other rights and remedies provided by law

(d) 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)

52.236-4009 PARTNERING – FEB 2000

In order to most effectively accomplish this contract, the Government proposes to form a partnership with the Contractor to develop a cohesive building team. It is anticipated that this partnership would involve the <NAME THE USING ORGANIZATIONS AND OTHER CRITICAL PARTIES HERE>, the Contractor, primary subcontractors and designers and the Corps of Engineers. This partnership would strive to develop a cooperative management team drawing on the strengths of each team member in an effort to achieve quality project within budget and on schedule. This partnership would be bilateral in membership and participation will be totally voluntary. Any cost associated with effectuating this partnership, excluding travel and lodging cost of Government personnel, will be borne by <<SELECT AN OPTION TO SPECIFY: The Contractor/each party/the Government>>, The partnering meetings shall be held in ……

(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

(a) 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.

(b) 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.

(c) 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.

(d) 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
6	6	5	4	5	7	9	8	5	2	3	6

(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:

(1) 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.

(2)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. 740-28-01, Sheets 1 through 28

2. Rates of Wages:

3. Formats:

   Army Project Sign

   Project Sign Legend Defined

   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

   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

   Standard Form LLL-A - Disclosure of Lobbying Activities

   Real Property Inventory

   Fort Stewart and Hunter Army Airfield Borrow Pit Excavation Permit

GENERAL DECISION: **GA20030004** 02/13/2004 GA4

Date: February 13, 2004
General Decision Number: **GA20030004** 02/13/2004

Superseded General Decision Number: GA020004

State: Georgia

Construction Type: Building

County: Chatham County in Georgia.

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	06/13/2003
1	02/13/2004

* BOIL0026-001 01/01/2004

	Rates	Fringes
Boilermaker	$ 25.18	12.67

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* ELEC0508-001 09/01/2002

	Rates	Fringes
Electricians:		
Instrumentation Technician	$ 20.00	5.20
Journeyman Wireman*	$ 18.30	5.20
Journeyman Wireman	$ 15.35	5.20
Nuclear Work	$ 21.75	5.20

*Industrial Work performed in any facility that manufactures, produces, or processes a product from raw materials to finished goods or products (e.g. chemical plants, petroleum facility, bulk loading, operators, electrical utilities, and paper mills).

IRON0709-001 01/01/2003

	Rates	Fringes
Ironworker, reinforcing and structural		
General contracts below $5,000,000	$ 17.40	5.67
General contracts of $5,000,000 or more, or work performed on a nuclear facility	$ 18.90	5.67

SUGA1988-001 03/01/1988

	Rates	Fringes
Asphalt Raker	$ 6.75	
Bricklayer	$ 11.00	
Carpenter (excluding drywall hanger & insulator)	$ 10.04	
Cement Mason	$ 9.95	
Laborer	$ 5.53	
Mason Tender	$ 5.50	
Painter (excluding drywall finisher)	$ 9.54	
Pipefitter	$ 12.78	
Plasterer	$ 9.00	
Plumber	$ 11.09	
Roofer	$ 7.03	
Sheet Metal Worker	$ 8.29	
Truck Driver	$ 6.75	

WELDERS - Receive rate prescribed for craft performing operation to which welding is incidental.

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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 (29CFR 5.5 (a) (1) (ii)).

In the listing above, the "SU" designation means that rates listed under the 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, DC 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, DC 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, DC 20210

4.) All decisions by the Administrative Review Board are final.

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END OF GENERAL DECISION

GENERAL DECISION: **GA20030031** 02/13/2004 GA31

Date: February 13, 2004
General Decision Number: **GA20030031** 02/13/2004

Superseded General Decision Number: GA020031

State: Georgia

Construction Types: Heavy (Sewer and Water Line, and Heavy)
HEAVY CONSTRUCTION PROJECTS; SEWER AND WATER LINE CONSTRUCTION PROJECTS

Counties: Chatham and Effingham Counties in Georgia.

HEAVY CONSTRUCTION PROJECTS; SEWER AND WATER LINE CONSTRUCTION PROJECTS

Modification Number	Publication Date
0	06/13/2003
1	02/13/2004

* PLUM0188-001 01/31/2004

HEAVY CONSTRUCTION (NOT APPLICABLE TO SEWER & WATER LINES):

	Rates	Fringes
Plumbers and Pipefitters	$ 19.90	6.16

FOOTNOTE: Work performed at a nuclear plant site: 20% additional.

SUGA1992-001 04/01/1992

HEAVY CONSTRUCTION (NOT APPLICABLE TO SEWER & WATER LINES):

	Rates	Fringes
Carpenters:		
All other work	$ 10.72	
Form work only	$ 12.25	.85
Cement Mason	$ 8.72	
Electrician	$ 15.56	2.80
Ironworker, reinforcing and structural	$ 13.60	1.93
Laborer	$ 6.34	.38
Millwright	$ 12.85	.85
Painter	$ 9.00	

Power equipment operators:
Backhoe.....$ 7.50
Bulldozer.....$ 10.19
Crane.....$ 12.05 1.22
Loader.....$ 10.79
Mechanic.....$ 11.66 1.22

Truck Driver.....$ 5.62 .38

SUGA1992-002 04/01/1992

SEWER & WATER LINE CONSTRUCTION ONLY:

	Rates	Fringes
Laborers:		
Pipelayer	$ 7.08	
Unskilled	$ 5.89	
Power equipment operators:		
Backhoe	$ 9.29	
Bulldozer	$ 8.83	
Loader	$ 7.98	
Truck Driver	$ 8.50	

WELDERS - Receive rate prescribed for craft performing operation to which welding is incidental.

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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 (29CFR 5.5 (a) (1) (ii)).

In the listing above, the "SU" designation means that rates listed under the 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, DC 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, DC 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, DC 20210

4.) All decisions by the Administrative Review Board are final.

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END OF GENERAL DECISION

*7 94-2141 GA,SAVANNAH

WAGE DETERMINATION NO: 94-2141 REV (29) AREA: GA,SAVANNAH

HEALTH AND WELFARE LEVEL - INSURANCE ONLY **OTHER WELFARE LEVEL WD:94-2142

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REGISTER OF WAGE DETERMINATIONS UNDER THE SERVICE CONTRACT ACT By direction of the Secretary of Labor	U.S. DEPARTMENT OF LABOR EMPLOYMENT STANDARDS ADMINISTRATION WAGE AND HOUR DIVISION WASHINGTON D.C. 20210
William W.Gross Director Division of Wage Determinations	Wage Determination No.: 1994-2141 Revision No.: 29 Date Of Revision: 06/18/2004

States: Georgia, South Carolina

Area: Georgia Counties of Appling, Bacon, Bryan, Bulloch, Candler, Chatham, Effingham, Evans, Jeff Davis, Liberty, Long, McIntosh, Screven, Tattnall, Toombs,
Wayne
South Carolina Counties of Hampton, Jasper

Fringe Benefits Required Follow the Occupational Listing

OCCUPATION CODE - TITLE	MINIMUM WAGE RATE
01000 - Administrative Support and Clerical Occupations	
01011 - Accounting Clerk I	9.43
01012 - Accounting Clerk II	11.00
01013 - Accounting Clerk III	12.56
01014 - Accounting Clerk IV	13.97
01030 - Court Reporter	12.53
01050 - Dispatcher, Motor Vehicle	12.53
01060 - Document Preparation Clerk	10.38
01070 - Messenger (Courier)	9.36
01090 - Duplicating Machine Operator	10.38
01110 - Film/Tape Librarian	11.76
01115 - General Clerk I	8.89
01116 - General Clerk II	10.00
01117 - General Clerk III	11.46
01118 - General Clerk IV	12.27
01120 - Housing Referral Assistant	13.92
01131 - Key Entry Operator I	10.20
01132 - Key Entry Operator II	12.30
01191 - Order Clerk I	9.53
01192 - Order Clerk II	11.78
01261 - Personnel Assistant (Employment) I	14.25
01262 - Personnel Assistant (Employment) II	17.24
01263 - Personnel Assistant (Employment) III	20.67
01264 - Personnel Assistant (Employment) IV	24.58
01270 - Production Control Clerk	13.87
01290 - Rental Clerk	9.26

01300 - Scheduler, Maintenance	11.30
01311 - Secretary I	11.30
01312 - Secretary II	12.54
01313 - Secretary III	13.92
01314 - Secretary IV	15.19
01315 - Secretary V	17.15
01320 - Service Order Dispatcher	11.21
01341 - Stenographer I	9.99
01342 - Stenographer II	11.21
01400 - Supply Technician	15.19
01420 - Survey Worker (Interviewer)	11.73
01460 - Switchboard Operator-Receptionist	9.54
01510 - Test Examiner	12.54
01520 - Test Proctor	12.54
01531 - Travel Clerk I	9.75
01532 - Travel Clerk II	10.42
01533 - Travel Clerk III	11.23
01611 - Word Processor I	10.42
01612 - Word Processor II	11.71
01613 - Word Processor III	13.09
03000 - Automatic Data Processing Occupations	
03010 - Computer Data Librarian	11.72
03041 - Computer Operator I	11.72
03042 - Computer Operator II	13.05
03043 - Computer Operator III	16.06
03044 - Computer Operator IV	17.87
03045 - Computer Operator V	19.77
03071 - Computer Programmer I (1)	16.16
03072 - Computer Programmer II (1)	22.04
03073 - Computer Programmer III (1)	24.07
03074 - Computer Programmer IV (1)	27.62
03101 - Computer Systems Analyst I (1)	23.22
03102 - Computer Systems Analyst II (1)	27.25
03103 - Computer Systems Analyst III (1)	27.62
03160 - Peripheral Equipment Operator	11.72
05000 - Automotive Service Occupations	
05005 - Automotive Body Repairer, Fiberglass	16.20
05010 - Automotive Glass Installer	12.53
05040 - Automotive Worker	12.78
05070 - Electrician, Automotive	13.23
05100 - Mobile Equipment Servicer	11.14
05130 - Motor Equipment Metal Mechanic	13.96
05160 - Motor Equipment Metal Worker	12.53
05190 - Motor Vehicle Mechanic	13.96
05220 - Motor Vehicle Mechanic Helper	10.45
05250 - Motor Vehicle Upholstery Worker	11.85
05280 - Motor Vehicle Wrecker	12.53
05310 - Painter, Automotive	13.23
05340 - Radiator Repair Specialist	12.53
05370 - Tire Repairer	9.87
05400 - Transmission Repair Specialist	13.96
07000 - Food Preparation and Service Occupations	
(not set) - Food Service Worker	7.41
07010 - Baker	10.61
07041 - Cook I	8.57
07042 - Cook II	9.64
07070 - Dishwasher	6.63

07130 - Meat Cutter	11.95
07250 - Waiter/Waitress	7.07
09000 - Furniture Maintenance and Repair Occupations	
09010 - Electrostatic Spray Painter	15.29
09040 - Furniture Handler	10.49
09070 - Furniture Refinisher	15.29
09100 - Furniture Refinisher Helper	12.07
09110 - Furniture Repairer, Minor	13.68
09130 - Upholsterer	16.33
11030 - General Services and Support Occupations	
11030 - Cleaner, Vehicles	8.06
11060 - Elevator Operator	7.40
11090 - Gardener	10.69
11121 - House Keeping Aid I	6.93
11122 - House Keeping Aid II	7.53
11150 - Janitor	7.59
11210 - Laborer, Grounds Maintenance	8.73
11240 - Maid or Houseman	6.93
11270 - Pest Controller	11.40
11300 - Refuse Collector	8.06
11330 - Tractor Operator	10.04
11360 - Window Cleaner	8.22
12000 - Health Occupations	
12020 - Dental Assistant	12.57
12040 - Emergency Medical Technician (EMT)/Paramedic/Ambulance Driver	12.42
12071 - Licensed Practical Nurse I	10.41
12072 - Licensed Practical Nurse II	11.67
12073 - Licensed Practical Nurse III	13.06
12100 - Medical Assistant	11.37
12130 - Medical Laboratory Technician	12.10
12160 - Medical Record Clerk	10.05
12190 - Medical Record Technician	13.54
12221 - Nursing Assistant I	8.00
12222 - Nursing Assistant II	8.99
12223 - Nursing Assistant III	9.81
12224 - Nursing Assistant IV	11.00
12250 - Pharmacy Technician	12.53
12280 - Phlebotomist	12.21
12311 - Registered Nurse I	18.99
12312 - Registered Nurse II	23.22
12313 - Registered Nurse II, Specialist	23.22
12314 - Registered Nurse III	28.09
12315 - Registered Nurse III, Anesthetist	28.09
12316 - Registered Nurse IV	32.75
13000 - Information and Arts Occupations	
13002 - Audiovisual Librarian	15.07
13011 - Exhibits Specialist I	15.56
13012 - Exhibits Specialist II	19.20
13013 - Exhibits Specialist III	23.48
13041 - Illustrator I	15.56
13042 - Illustrator II	19.20
13043 - Illustrator III	23.48
13047 - Librarian	20.86
13050 - Library Technician	14.40
13071 - Photographer I	13.85
13072 - Photographer II	15.56
13073 - Photographer III	19.13

13074 - Photographer IV	23.39
13075 - Photographer V	28.30
15000 - Laundry, Dry Cleaning, Pressing and Related Occupations	
15010 - Assembler	7.08
15030 - Counter Attendant	7.08
15040 - Dry Cleaner	8.55
15070 - Finisher, Flatwork, Machine	7.08
15090 - Presser, Hand	7.08
15100 - Presser, Machine, Drycleaning	7.08
15130 - Presser, Machine, Shirts	7.08
15160 - Presser, Machine, Wearing Apparel, Laundry	7.08
15190 - Sewing Machine Operator	9.16
15220 - Tailor	9.79
15250 - Washer, Machine	7.45
19000 - Machine Tool Operation and Repair Occupations	
19010 - Machine-Tool Operator (Toolroom)	16.47
19040 - Tool and Die Maker	19.89
21000 - Material Handling and Packing Occupations	
21010 - Fuel Distribution System Operator	12.85
21020 - Material Coordinator	15.26
21030 - Material Expediter	15.26
21040 - Material Handling Laborer	10.27
21050 - Order Filler	10.45
21071 - Forklift Operator	13.31
21080 - Production Line Worker (Food Processing)	13.31
21100 - Shipping/Receiving Clerk	11.56
21130 - Shipping Packer	11.71
21140 - Store Worker I	9.76
21150 - Stock Clerk (Shelf Stocker; Store Worker II)	13.25
21210 - Tools and Parts Attendant	13.31
21400 - Warehouse Specialist	13.31
23000 - Mechanics and Maintenance and Repair Occupations	
23010 - Aircraft Mechanic	19.32
23040 - Aircraft Mechanic Helper	14.46
23050 - Aircraft Quality Control Inspector	20.26
23060 - Aircraft Servicer	16.39
23070 - Aircraft Worker	17.33
23100 - Appliance Mechanic	15.29
23120 - Bicycle Repairer	12.42
23125 - Cable Splicer	17.89
23130 - Carpenter, Maintenance	15.38
23140 - Carpet Layer	15.54
23160 - Electrician, Maintenance	16.44
23181 - Electronics Technician, Maintenance I	18.96
23182 - Electronics Technician, Maintenance II	20.05
23183 - Electronics Technician, Maintenance III	21.14
23260 - Fabric Worker	14.68
23290 - Fire Alarm System Mechanic	16.13
23310 - Fire Extinguisher Repairer	13.78
23340 - Fuel Distribution System Mechanic	16.13
23370 - General Maintenance Worker	11.14
23400 - Heating, Refrigeration and Air Conditioning Mechanic	17.57
23430 - Heavy Equipment Mechanic	18.55
23440 - Heavy Equipment Operator	18.55
23460 - Instrument Mechanic	19.32
23470 - Laborer	8.06
23500 - Locksmith	16.43

23530 - Machinery Maintenance Mechanic	19.28
23550 - Machinist, Maintenance	19.51
23580 - Maintenance Trades Helper	12.07
23640 - Millwright	19.23
23700 - Office Appliance Repairer	16.43
23740 - Painter, Aircraft	16.82
23760 - Painter, Maintenance	17.27
23790 - Pipefitter, Maintenance	19.40
23800 - Plumber, Maintenance	18.40
23820 - Pneudraulic Systems Mechanic	17.89
23850 - Rigger	17.74
23870 - Scale Mechanic	15.51
23890 - Sheet-Metal Worker, Maintenance	16.13
23910 - Small Engine Mechanic	15.54
23930 - Telecommunication Mechanic I	17.74
23931 - Telecommunication Mechanic II	18.60
23950 - Telephone Lineman	17.74
23960 - Welder, Combination, Maintenance	16.42
23965 - Well Driller	17.89
23970 - Woodcraft Worker	17.89
23980 - Woodworker	12.85
24000 - Personal Needs Occupations	
24570 - Child Care Attendant	7.69
24580 - Child Care Center Clerk	9.58
24600 - Chore Aid	6.45
24630 - Homemaker	10.66
25000 - Plant and System Operation Occupations	
25010 - Boiler Tender	19.51
25040 - Sewage Plant Operator	15.29
25070 - Stationary Engineer	19.51
25190 - Ventilation Equipment Tender	12.07
25210 - Water Treatment Plant Operator	15.29
27000 - Protective Service Occupations	
(not set) - Police Officer	16.45
27004 - Alarm Monitor	9.32
27006 - Corrections Officer	15.20
27010 - Court Security Officer	15.40
27040 - Detention Officer	15.20
27070 - Firefighter	17.09
27101 - Guard I	7.22
27102 - Guard II	10.42
28000 - Stevedoring/Longshoremen Occupations	
28010 - Blocker and Bracer	15.98
28020 - Hatch Tender	15.98
28030 - Line Handler	15.98
28040 - Stevedore I	15.04
28050 - Stevedore II	16.91
29000 - Technical Occupations	
21150 - Graphic Artist	20.53
29010 - Air Traffic Control Specialist, Center (2)	30.50
29011 - Air Traffic Control Specialist, Station (2)	21.03
29012 - Air Traffic Control Specialist, Terminal (2)	23.16
29023 - Archeological Technician I	15.16
29024 - Archeological Technician II	17.04
29025 - Archeological Technician III	21.04
29030 - Cartographic Technician	21.16
29035 - Computer Based Training (CBT) Specialist/ Instructor	23.22

29040 - Civil Engineering Technician	19.37
29061 - Drafter I	13.53
29062 - Drafter II	15.24
29063 - Drafter III	17.12
29064 - Drafter IV	21.04
29081 - Engineering Technician I	13.75
29082 - Engineering Technician II	15.48
29083 - Engineering Technician III	17.39
29084 - Engineering Technician IV	21.38
29085 - Engineering Technician V	26.13
29086 - Engineering Technician VI	31.63
29090 - Environmental Technician	15.95
29100 - Flight Simulator/Instructor (Pilot)	25.77
29160 - Instructor	19.45
29210 - Laboratory Technician	15.77
29240 - Mathematical Technician	21.04
29361 - Paralegal/Legal Assistant I	13.87
29362 - Paralegal/Legal Assistant II	16.69
29363 - Paralegal/Legal Assistant III	18.54
29364 - Paralegal/Legal Assistant IV	22.44
29390 - Photooptics Technician	23.14
29480 - Technical Writer	20.86
29491 - Unexploded Ordnance (UXO) Technician I	19.38
29492 - Unexploded Ordnance (UXO) Technician II	23.45
29493 - Unexploded Ordnance (UXO) Technician III	28.11
29494 - Unexploded (UXO) Safety Escort	19.38
29495 - Unexploded (UXO) Sweep Personnel	19.38
29620 - Weather Observer, Senior (3)	15.95
29621 - Weather Observer, Combined Upper Air and Surface Programs (3)	14.34
29622 - Weather Observer, Upper Air (3)	14.34
31000 - Transportation/ Mobile Equipment Operation Occupations	
31030 - Bus Driver	11.61
31260 - Parking and Lot Attendant	8.37
31290 - Shuttle Bus Driver	11.31
31300 - Taxi Driver	9.87
31361 - Truckdriver, Light Truck	11.31
31362 - Truckdriver, Medium Truck	12.03
31363 - Truckdriver, Heavy Truck	14.31
31364 - Truckdriver, Tractor-Trailer	14.31
99000 - Miscellaneous Occupations	
99020 - Animal Caretaker	8.38
99030 - Cashier	7.00
99041 - Carnival Equipment Operator	9.17
99042 - Carnival Equipment Repairer	9.78
99043 - Carnival Worker	7.36
99050 - Desk Clerk	8.64
99095 - Embalmer	16.57
99300 - Lifeguard	9.54
99310 - Mortician	16.57
99350 - Park Attendant (Aide)	11.97
99400 - Photofinishing Worker (Photo Lab Tech., Darkroom Tech)	8.29
99500 - Recreation Specialist	10.66
99510 - Recycling Worker	10.04
99610 - Sales Clerk	9.28
99620 - School Crossing Guard (Crosswalk Attendant)	7.67
99630 - Sport Official	8.29
99658 - Survey Party Chief (Chief of Party)	18.50

99659	- Surveying Technician (Instr. Person/Surveyor Asst./Instr.)	15.85
99660	- Surveying Aide	11.56
99690	- Swimming Pool Operator	9.52
99720	- Vending Machine Attendant	7.94
99730	- Vending Machine Repairer	9.52
99740	- Vending Machine Repairer Helper	7.94

ALL OCCUPATIONS LISTED ABOVE RECEIVE THE FOLLOWING BENEFITS:

HEALTH & WELFARE: $2.59 an hour or $103.60 a week or $448.93 a month

VACATION: 2 weeks paid vacation after 1 year of service with a contractor or successor; 3 weeks after 8 years, and 4 weeks after 20 years. Length of service includes the whole span of continuous service with the present contractor or successor, wherever employed, and with the predecessor contractors in the performance of similar work at the same Federal facility. (Reg. 29 CFR 4.173)

HOLIDAYS: A minimum of ten paid holidays per year: New Year's Day, Martin Luther King Jr.'s Birthday, Washington's Birthday, Memorial Day, Independence Day, Labor Day, Columbus Day, Veterans' Day, Thanksgiving Day, and Christmas Day. (A contractor may substitute for any of the named holidays another day off with pay in accordance with a plan communicated to the employees involved.) (See 29 CFR 4.174)

THE OCCUPATIONS WHICH HAVE PARENTHESES AFTER THEM RECEIVE THE FOLLOWING BENEFITS (as numbered):

1) Does not apply to employees employed in a bona fide executive, administrative, or professional capacity as defined and delineated in 29 CFR 541. (See CFR 4.156)

2) APPLICABLE TO AIR TRAFFIC CONTROLLERS ONLY - NIGHT DIFFERENTIAL: An employee is entitled to pay for all work performed between the hours of 6:00 P.M. and 6:00 A.M. at the rate of basic pay plus a night pay differential amounting to 10 percent of the rate of basic pay.

3) WEATHER OBSERVERS - NIGHT PAY & SUNDAY PAY: If you work at night as part of a regular tour of duty, you will earn a night differential and receive an additional 10% of basic pay for any hours worked between 6pm and 6am. If you are a full-time employed (40 hours a week) and Sunday is part of your regularly scheduled workweek,

you are paid at your rate of basic pay plus a Sunday premium of 25% of your basic rate for each hour of Sunday work which is not overtime (i.e. occasional work on Sunday outside the normal tour of duty is considered overtime work).

HAZARDOUS PAY DIFFERENTIAL: An 8 percent differential is applicable to employees employed in a position that represents a high degree of hazard when working with or in close proximity to ordinance, explosives, and incendiary materials. This includes work such as screening, blending, dying, mixing, and pressing of sensitive ordance, explosives, and pyrotechnic compositions such as lead azide, black powder and photoflash powder. All dry-house activities involving propellants or explosives. Demilitarization, modification, renovation, demolition, and maintenance operations on sensitive ordnance, explosives and incendiary materials. All operations involving regrading and cleaning of artillery ranges.

A 4 percent differential is applicable to employees employed in a position that represents a low degree of hazard when working with, or in close proximity to ordance, (or employees possibly adjacent to) explosives and incendiary materials which involves potential injury such as laceration of hands, face, or arms of the employee engaged in the operation, irritation of the skin, minor burns and the like; minimal damage to immediate or adjacent work area or equipment being used. All operations involving, unloading, storage, and hauling of ordance, explosive, and incendiary ordnance material other than small arms ammunition. These differentials are only applicable to work that has been specifically designated by the agency for ordance, explosives, and incendiary material differential pay.

** UNIFORM ALLOWANCE **

If employees are required to wear uniforms in the performance of this contract (either by the terms of the Government contract, by the employer, by the state or local law, etc.), the cost of furnishing such uniforms and maintaining (by laundering or dry cleaning) such uniforms is an expense that may not be borne by an employee where such cost reduces the hourly rate below that required by the wage determination. The Department of Labor will accept payment in accordance with the following standards as compliance:

The contractor or subcontractor is required to furnish all employees with an adequate number of uniforms without cost or to reimburse employees for the actual cost of the uniforms. In addition, where uniform cleaning and maintenance is made the responsibility of the employee, all contractors and subcontractors subject to this wage determination shall (in the absence of a bona fide collective bargaining

agreement providing for a different amount, or the furnishing of contrary affirmative proof as to the actual cost), reimburse all employees for such cleaning and maintenance at a rate of $3.35 per week (or $.67 cents per day). However, in those instances where the uniforms furnished are made of "wash and wear" materials, may be routinely washed and dried with other personal garments, and do not require any special treatment such as dry cleaning, daily washing, or commercial laundering in order to meet the cleanliness or appearance standards set by the terms of the Government contract, by the contractor, by law, or by the nature of the work, there is no requirement that employees be reimbursed for uniform maintenance costs.

** NOTES APPLYING TO THIS WAGE DETERMINATION **

Source of Occupational Title and Descriptions:

The duties of employees under job titles listed are those described in the "Service Contract Act Directory of Occupations," Fourth Edition, January 1993, as amended by the Third Supplement, dated March 1997, unless otherwise indicated. This publication may be obtained from the Superintendent of Documents, at 202-783-3238, or by writing to the Superintendent of Documents, U.S. Government Printing Office, Washington, D.C. 20402. Copies of specific job descriptions may also be obtained from the appropriate contracting officer.

REQUEST FOR AUTHORIZATION OF ADDITIONAL CLASSIFICATION AND WAGE RATE {Standard Form 1444 (SF 1444)}

Conformance Process:

The contracting officer shall require that any class of service employee which is not listed herein 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), be classified by the contractor 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 classes of employees shall be paid the monetary wages and furnished the fringe benefits as are determined. Such conforming process shall be initiated by the contractor prior to the performance of contract work by such unlisted class(es) of employees. The conformed classification, wage rate, and/or fringe benefits shall

be retroactive to the commencement date of the contract. {See Section 4.6 (C)(vi)}
When multiple wage determinations are included in a contract, a separate SF 1444 should be prepared for each wage determination to which a class(es) is to be conformed.

The process for preparing a conformance request is as follows:

1) When preparing the bid, the contractor identifies the need for a conformed occupation) and computes a proposed rate).

2) After contract award, the contractor prepares a written report listing in order
proposed classification title), a Federal grade equivalency (FGE) for each proposed classification), job description), and rationale for proposed wage rate), including information regarding the agreement or disagreement of the authorized representative of the employees involved, or where there is no authorized
representative, the employees themselves. This report should be submitted to the
contracting officer no later than 30 days after such unlisted class(es) of employees
performs any contract work.

3) The contracting officer reviews the proposed action and promptly submits a report
of the action, together with the agency's recommendations and pertinent information including the position of the contractor and the employees, to the Wage
and Hour Division, Employment Standards Administration, U.S. Department of Labor,
for review. (See section 4.6(b)(2) of Regulations 29 CFR Part 4).

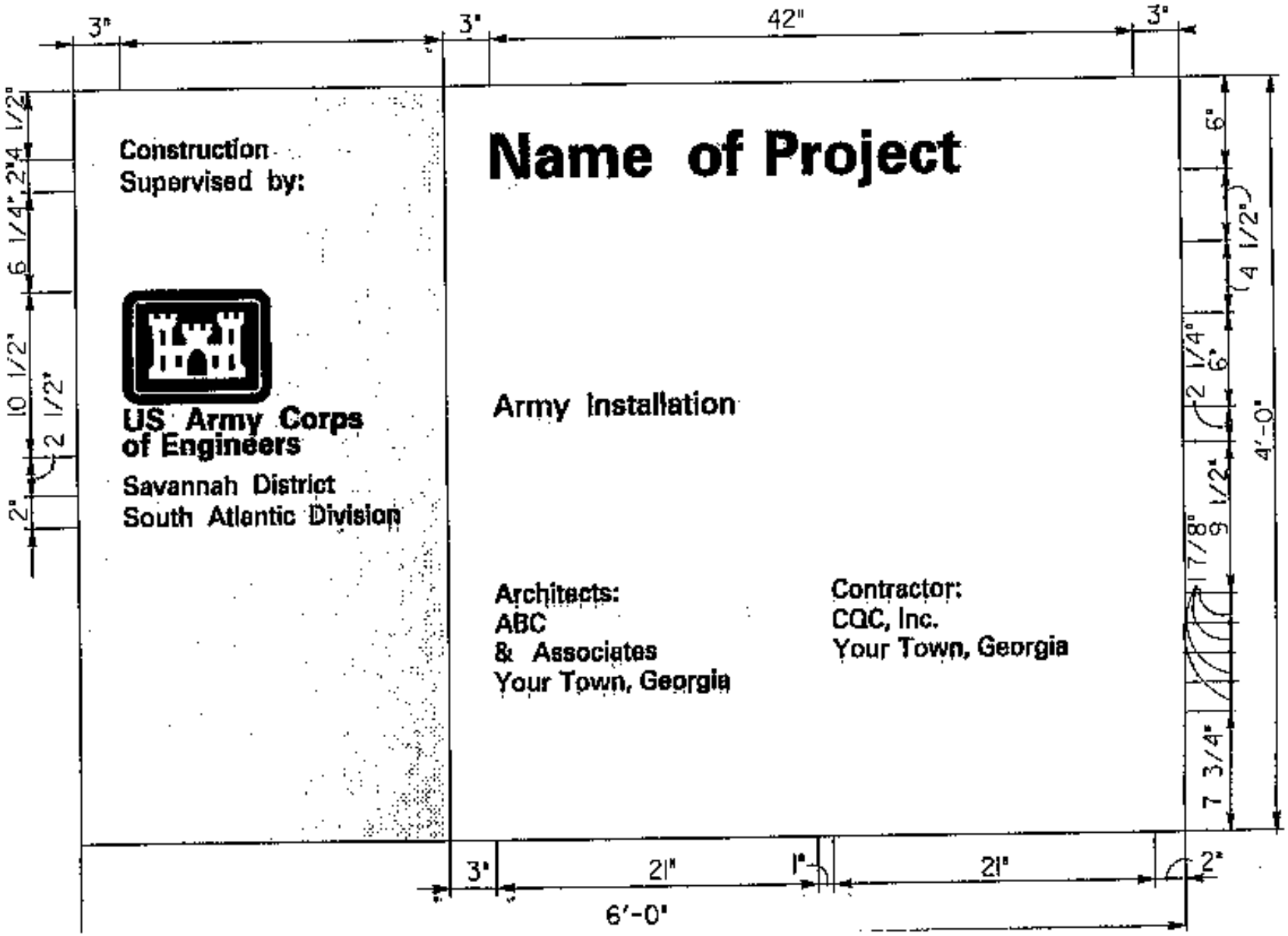
4) Within 30 days of receipt, the Wage and Hour Division approves, modifies, or disapproves the action via transmittal to the agency contracting officer, or notifies the contracting officer that additional time will be required to process the
request.

5) The contracting officer transmits the Wage and Hour decision to the contractor.

6) The contractor informs the affected employees.

Information required by the Regulations must be submitted on SF 1444 or bond paper.

When preparing a conformance request, the "Service Contract Act Directory of Occupations" (the Directory) should be used to compare job definitions to insure that duties requested are not performed by a classification already listed in the
wage determination. Remember, it is not the job title, but the required tasks that
determine whether a class is included in an established wage determination. Conformances may not be used to artificially split, combine, or subdivide classifications listed in the wage determination.


3"
3"
42"
3"
Construction
Supervised by:
US Army Corps
of Engineers
Savannah District
South Atlantic Division
Name of Project
Army Installation
Architects:
ABC
& Associates
Your Town, Georgia
Contractor:
CQC, Inc.
Your Town, Georgia
6"
4 1/2"
2 1/4"
6"
9 1/2"
7 3/4"
4'-0"
2 1/2"
10 1/2"
6 1/4"
4 1/2"
2"
3"
21"
1"
21"
2"
6'-0"

PROJECT SIGN LEGEND DEFINED

Legend Group 1: The words:

"Construction Supervised by:" or "Design and Construction Supervised by:"

shall be placed on two lines using black, 1.25" Helvetica regular typeface. Maximum line length is 19".

10.5" Reverse Signature: The Corps symbol shall be a 10.5" white reverse signature using a 6" castle on a red background. The castle and surrounding border lines shall be white. The castle windows, door, and logo background are to be red. The words "U.S. Army Corps of Engineers" shall be black.

Legend Group 2: The words:

"Savannah District
South Atlantic Division"

shall be placed on two lines below the 10.5" reverse signature, using black, 1.25" Helvetica regular typeface.

Legend Group 3: The "Name of Project" shall be placed on one to three lines using white 3" Helvetica bold typeface. Maximum line length is 42".

Legend Group 4: The "Army Installation" shall be a one or two line identification of the facility or name of the sponsoring department. Lettering is to be white, 1.5" Helvetica regular typeface. Maximum line length is 42".

NOTE: Cross-align the first line of legend group 4 with the first line of the Corps signature (U.S. Army Corps) as shown.

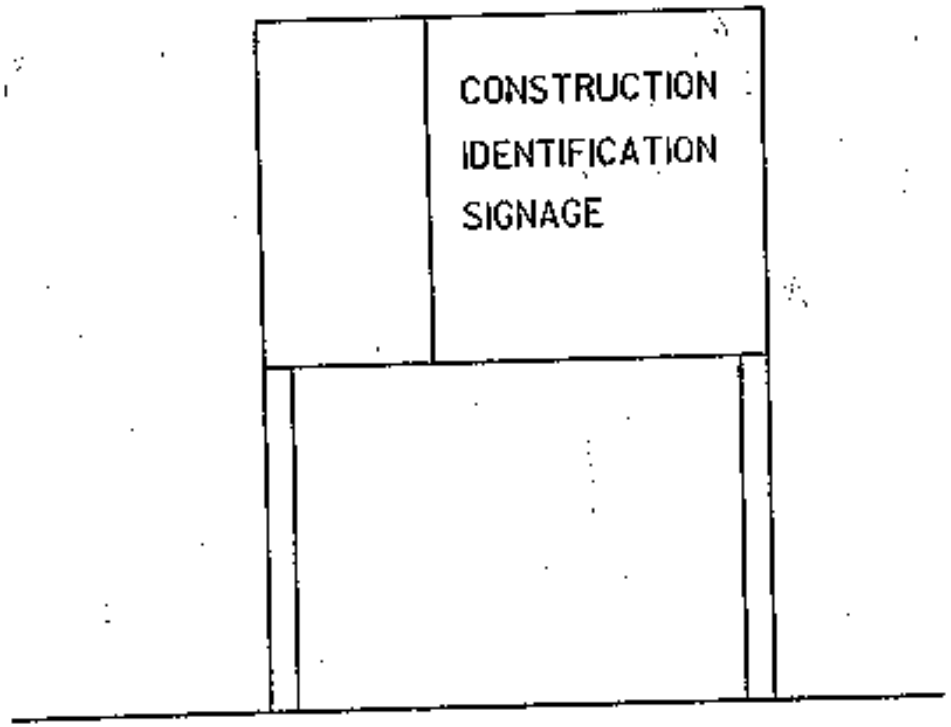
Legend Group 5a: The words:

"Architects:" or "Engineers:" or "Architect-Engineers:"

shall be a one to five line identification of the prime architect or engineering corporate or firm name, city, and State. Lettering shall be white, 1.25" Helvetica regular typeface. Maximum line length is 21".

Legend Group 5b: The "Contractor:" shall be a one to five line identification of the prime Contractor corporate or firm name, city, and State. Include type of Contractor, i.e. General Contractor, etc. Lettering shall be white, 1.25" Helvetica regular typeface. Maximum line length is 21".

NOTE: All typography shall be flush left and rag right, upper and lower case with initial capitals only as shown.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IDENTIFICATION
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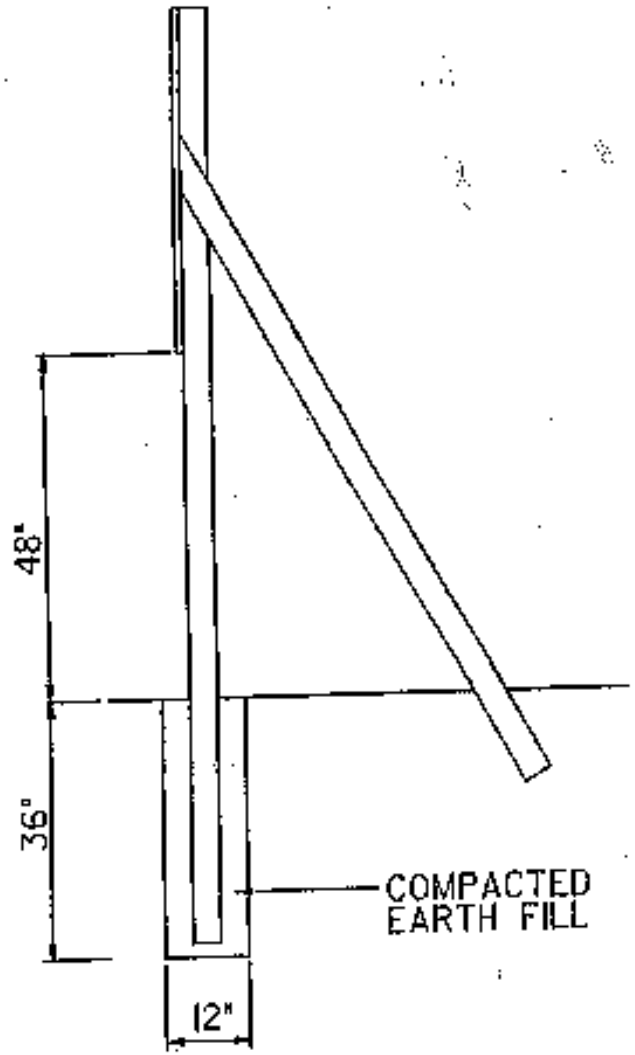
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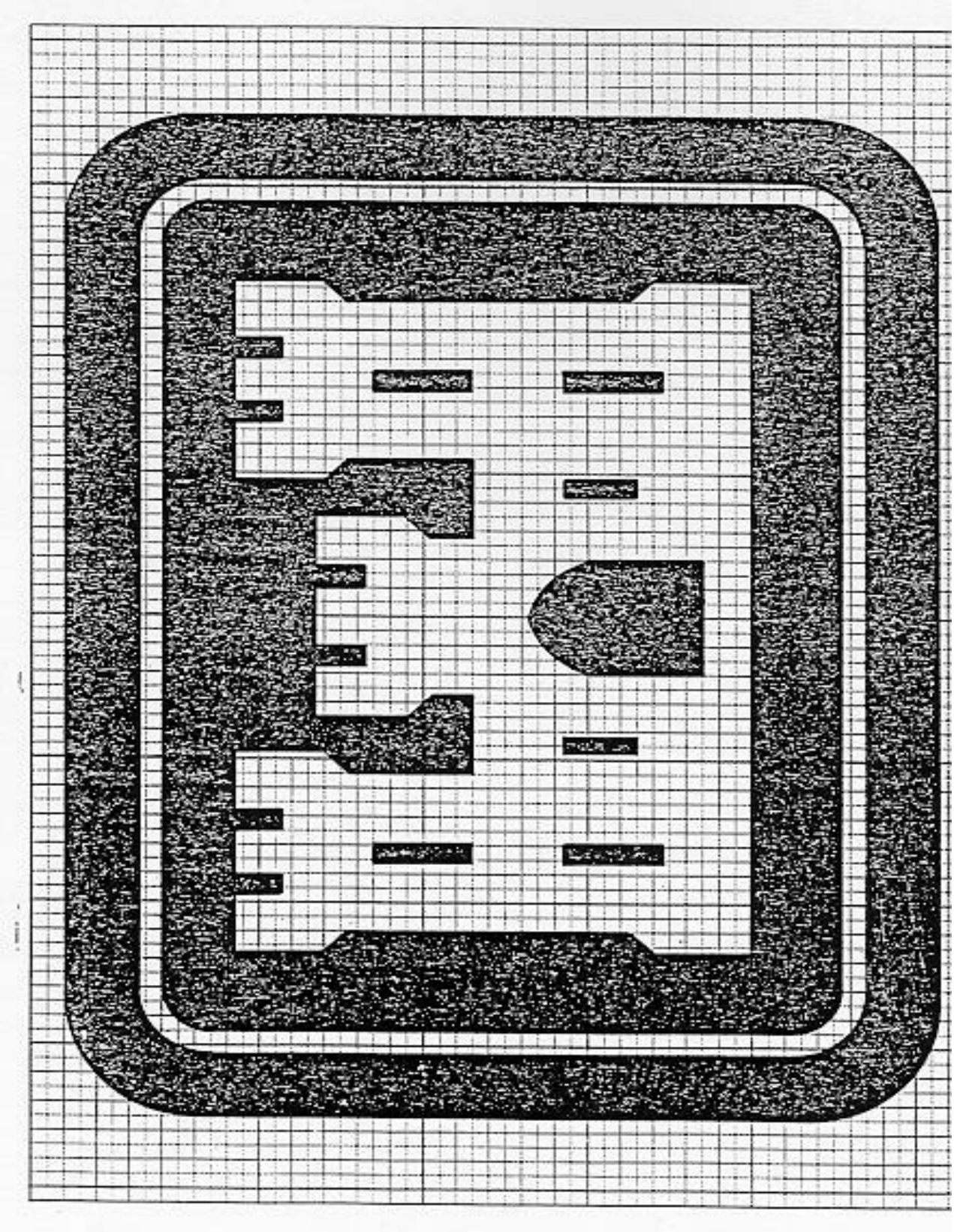

CORPS OF ENGINEERS LOGO
HALF SIZE

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.)

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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

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).

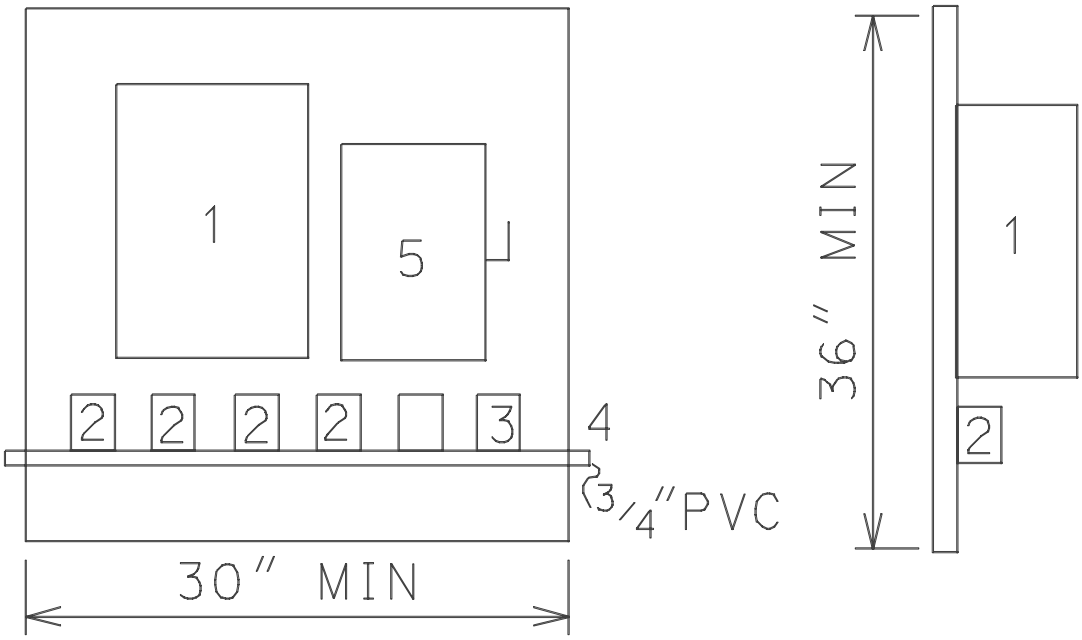
7. Extension cords (type, UL listed, insulation condition, splices, location).

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

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

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:

FORT STEWART & HUNTER ARMY AIRFIELD
BORROW PIT EXCAVATION PERMIT

*Date of Application:

*Applicant (user/unit):

*Borrow Pit Location (Pit #): *Ft. Stewart/HAAF training area,*

*Cubic Yards required:

*Type of Material:

*Final Destination:

*Date to Begin:

*Date to End:

*POC (On-site Manager):

*POC Phone Number:

_____

Below line for office use only.

_____

On-Site Manager/Operator – mobile number

_____

Government Contracting Officer Representative

_____

Approved for Borrow Pit Number

_____

Borrow Pit Management - Environmental

(*912-767-9443/fax-767-9779, George Harris or Anthony Austermann*)

Please retain a copy of this Permit, on site, with the operator and notify Range Control when entering or leaving the training area.

Borrow Pit Release/Checkout is required before leaving the borrow pit area.

_____

Release Approved by/date

Surface Mining (Borrow Pit) Standard Operating Procedure

Excavation Procedure:

1. The Operator of the borrow pit will maintain or create a rim ditch to maximize accessibility to borrow pit materials and ultimately to optimize excavation of that material.
2. The Operator will utilize a water pump, where and when appropriate allowing him access to fill materials in a manner consistent with proper surfacing mining procedures.
3. The Operator shall show a plan as to how the property will be mined, the limits of the affected acreage, the natural drainage features and water disposal, the initial mining and overburden (spoil) area(s), the erosion and sedimentation controls, the ingress/egress area(s), the direction and schedule of mining advancement, the area to be left undisturbed (buffer) where necessary, and a plan that shows projected final reclamation of the site.
4. All borrow pit design and excavation actions shall support the objective of the borrow pit eventually becoming a recreational fishpond, if soil conditions, location and ground water resources favor such development. To accomplish this objective the following procedures must be employed.
    a. Average depth, when abandoned, will be 6 feet minimum and 12 feet maximum (water depth will range from 3-8 feet).
    b. Borrow pits will be excavated in a manner, *from the beginning*, to ultimately move them to a useable recreational fishpond.

***The pit operator shall be responsible for maintaining a 4:1 slope on all pit walls/edges and marking these slopes/edges in a manner as to prevent any foot or vehicle traffic from inadvertently falling into the** pit.*

Erosion & Sedimentation Control Measures:
- Remain within the boundaries of the borrow pit, which are marked by "surrounding trees and the perimeter road", while making every effort to retain and/or create a buffer zone(s) of undisturbed/natural vegetation following all guideline within *Georgia's Best Management Practices* to prevent silts and sediments from leaving the borrow pit area and entering the waters of the State of Georgia.

Water Quality Control Measures:
- Borrow pit excavation shall not be conducted within 100 feet of the banks of any waters of the State of Georgia, nor discharges to the water or ground to ensure no adverse affects on these waters.
- No Point Source discharges shall be allowed without coordination with the Environmental Branch, and BMPs will be followed at all times.

Sensitive/Special Sites Measures:
- If historical or archaeological resources are encountered during excavation of this borrow pit. Stop working until the Environmental Branch has cleared the pit. *Immediately contact the* ***Cultural Resources Office - 767-3359/2010***
- No borrow pit may be expanded that is in the proximity of a protected cultural resource site or within the cantonment area.

Where applicable, adverse effects from audible elements (blasting), and visual elements are to be avoided near these sites so as not to diminish the integrity of the location, design, setting, materials, workmanship, or other structural details.

Fish and Wildlife Measures:
- Borrow pits or portions of the pits that are no longer suitable for further excavation for fill may be moved toward a final excavation phase that will produce a manageable fish pond.
- The following construction criteria shall strive to be incorporated during excavation for this purpose:
    1. A water depth of 3 to 8 feet
    2. An area of 3 to 10 acres
    3. *All edges sloped at 4:1, with a 5:1 entrance/exit point for gopher tortoise escape, to be converted to a boat ramp upon pond completion.*
    4. Earthen piers may be left within the excavated pond
    5. Soil and erosion controls to stabilize slope and pond margins with appropriate ground cover plants
    6. Borrow pit/pond shall be free of hazards including pilings, poles, abandoned equipment, etc.

Endangered/Protected Species Measures:
- If the borrow pit you are proposing to use is near a protected species, another borrow pit of the same type of material which is near your final destination will be assigned for your use.
- If threatened or endangered species are encountered during excavation of this borrow pit, all work is to be discontinued, and *immediately contact the* ***Fish & Wildlife Office at 767-7263/2584***.

Wetlands Measures:
- Maintain a minimum distance of 50 feet from borrow pit banks to wetlands delineation (footprints).

Solid/Hazardous Waste Measures:
- All solid and hazardous wastes shall be disposed of properly.
- No debris will be left at, in, or around the borrow pit.

Air Quality Measures:
- Where applicable, adverse effects from atmospheric elements, specifically fugitive dust, are to be prevented so as to avoid any significant deterioration of the air quality.

**** If the borrow pit you are proposing to use has been moved into this final excavation phase or has already been converted into a fishpond, another borrow pit of the same type of material which is near your final destination will be assigned for your use. Also, seasonal conditions may be such as to merit utilization of another site to offset unsafe conditions. These sites will require coordination with your POC for utilization. If necessary, another borrow pit of the same material type that is near your final destination will be assigned for your use.***

** The following pass must be obtained from the Range Control Office* ***before entering*** *any Training Area.*

POV PASS FOR FORT STEWART ROADS AND TRAINING AREAS

TO: Appropriate Range Guards and/or military police

FROM: Chief Range Division, Fort Stewart Ga. 31314 (912) 767-877/8100

The following individual(s) is/are authorized access to the following Training Area/Facilities beginning _____ thru _____ _____
(Start Date) (End Date)

_____ _____
Rank, Name (Last, First) Training Area(s) Facility

_____ _____
Organization Phone Number

_____
Reason for Access Pass

_____
Vehicle (Model) Year (License Plate Number)
(State)

Statement of understanding

I understand that I am permitted to use only the above listed training area(s) and roads leading to and from that area. I may only use that area/facility for the date and time listed below. I understand that I am using these roads at my own risk, and the Commander, 3rd infantry Division and Fort Stewart Assume no responsibility for my safety.

Permanently off limit areas- High Risk Dud Area: Artillery Impact Area, Aerial Gunnery Ranges 1-3 (AGR), EOD Area, Tank Gunnery Ranges (B9-16) and small arms impact area, Luzon Range. Abandoned Ranges located in C1 and C4 training areas.

CAUTION: DO NOT DISTURB UNEXPLODED AMMUNITION! Mark location and notify Range Control (912) 767-8777 or call the Military Police at 911.

I have been briefed and understand the OFF-LIMITS areas and the limitations of this pass. I will notify Range Control at 767-8777 prior to entering an area and upon departure.

_____ _____
Chief, Range Division Bearer's Signature

POST ON DASHBOARD OF VEHICLE

SECTION 01010

GENERAL PROJECT DESCRIPTION AND DESIGN REQUIREMENTS

1 GENERAL REQUIREMENTS

1.1 GENERAL.

1.1.1 The Contractor shall design and construct the PHYSICAL FITNESS CENTER at HUNTER ARMY AIRFIELD, GA resulting in a complete and useable facility. *5

1.1.2 The scope of work for the PHYSICAL FITNESS CENTER, HUNTER ARMY AIRFIELD, GA, includes the design, site preparation and construction of a new physical fitness center on a vacant portion of the site and the demolition of one existing structure and miscellaneous site elements. Supporting facilities will include parking, a running track and playing field, exterior bleachers, tennis courts, service yard, concrete pavement, sidewalks, pedestrian bridges, water, sewer, electrical service, fire alarm systems, storm drainage, erosion control measures, information systems, and landscaping. Interior design for furniture and finishes, and installation of finishes is included in the scope of work for the Base Bid, Installation of the furniture is included in the Base Bid. The Installation will remove and retain ownership of equipment in the existing Gymnasium. The following items will be provided by the Installation but installed by the Contractor: vending machines, washing machine, clothes dryer, ice machine, televisions to be mounted on brackets, and video projector in Office 126. Items to be provided and installed by the Contractor include but are not limited to the following: lockers, basketball goals, diving boards, swimming pool handicap lift, wood benches in Gallery 104 and locker rooms, television brackets, privacy curtain in Physical therapy 146, projection screen in Office 126, marker board in Office 126, mounting bracket for video projector in Office 126, and bleacher systems.

1.1.3 Sustainable Design. This project has a goal of achieving Gold level of sustainable design features as measured through the use of Sustainable Project Rating Tool (SPiRiT), Appendix E to Section 01010. 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 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 Gold level rating is required.

1.1.4 Site Development and Utilities. Site development will include all clearing, grading, roads, parking lots, running track, tennis courts, exterior bleachers, landscaping, sidewalks, curbs and gutters and utilities for the complex. Provide earth fill at the new building so that the first floor slab on grade is a minimum of two feet above the highest existing grade below the building footprint, and so that the final exterior grade slopes away from the building at 4% slope for 6 feet and then in an even slope for a additional distance of 74 feet minimum. Provide earth fill at the running track and exterior bleacher area so that the north end of the running track is six inches above the top of the adjacent sidewalk on Duncan Drive, the grade at the outside edge of the running track is level, the area inside the running track is crowned for drainage, and the grade below the bleachers is 6” above the outside edge of the running track.

1.1.5 Demolition. Demolition will include asbestos abatement and removal of buildings, foundations, pavement and site improvements. Underground utilities will be capped as specified.

1.1.6 Facilities. The PHYSICAL FITNESS CENTER is to include functional space for a natatorium, locker rooms, whirlpool and sauna area, racquetball courts, rock climbing room, exercise rooms, physical therapy space, basketball courts and folding bleachers, office space, storage spaces, and building support spaces. Install intrusion detection system (IDS). Provide central monitoring and control capability, fully compatible with the existing installation Direct Digital Control energy monitoring and control system (EMCS). Anti-terrorism and Force Protection measures will include laminated glass, traffic control barriers, and setbacks in accordance with the requirements of UFC 4-010-01 DoD Minimum Antiterrorism Standards for Buildings.. Access for the handicapped is required. Heating and cooling will be provided by stand-alone systems.

1.1.7 Not used.

1.1.8 Project design plans and specifications may be in English Inch-pound units or the Metric SI System of measurements but the units for the site and building must be consistent. The site survey drawings provided are in English Units, as are the Site Layout Plan and Floor Plan. The Offerors may present their plans in either English or Metric units of measure.

1.1.9. Construction vehicular access. All vehicular access to the site for construction personnel and delivery of materials shall be restricted to the Installation gate at Montgomery Dr (Gate 2). Construction related traffic shall be restricted to Duncan Drive between the Gate and the site and the portion of Billy Mitchell Drive adjacent to the site.

1.1.10. Not Used.

1.1.11 Commissioning and Warranties. Commissioning activities which include maintenance and repair of all work provided under the Contract for a period of 5 years is required in Section 01785 FIVE-YEAR MAINTENANCE REQUIREMENTS of this RFP. Warranties required in Section 01010 or at Contractor's option for a period less than 5 years shall be warranties provided from a Subcontractor to the General Contractor. Warranties required in Section 01010 for longer than 5 years shall be available to the General Contractor during the Commissioning phase, and shall be available to the Owner for the remainder of the Warranty period.

1.1.12 Mass Notification System. The project scope includes the installation of a Mass Notification System in accordance with UFC4-021-01 Design and O&M Mass Notification Systems. This system is for the Physical Fitness Facility only, not for other areas of the Installation.

*10 *11
1.2 Cost Saving Considerations. Because of the construction cost limitation of $15,100,000.00, proposers are encouraged to consider the following cost savings as part of their proposal. Proposers will be allowed to implement these measures to stay within the cost limitation.

In consideration of the Government's desire to achieve a project within the funds available, the items below have been prioritized to assist the proposer in determining which savings to incorporate into their proposal. It is up to the proposers to make the choices on which savings, if any, to incorporate. Item number 1 is the cost saving measure the Government would like to see adopted first. Item number ~~18~~ 19 is the measure that the Government would like to see adopted last (the item the Government would most like to retain as shown in the Request for Proposal documents). The listing here does not preclude the proposers from taking any other cost saving measures allowed by

this Request for Proposal. Implicit in the description of cost savings measures is the requirement to complete or modify any work affected by the execution of the cost savings measures in order to effect a workable final solution. If specifically mentioned in the description, the proposers shall substitute as directed. Otherwise the proposers are permitted to handle modifications at their discretion provided their choices fall within the parameters allowed by this Request for Proposal.

The potential cost saving measures or considerations are as follows:

1. Delete the Latrine located next to the exterior bleachers, delete associated sanitary piping, retain water supply piping and freeze proof water fountains and hose bibb, and provide concrete sidewalk where Latrine was to be located.
2. Delete the sidewalk connecting the Southeast corner of the Fitness Center to the exterior bleachers (the southernmost of the two sidewalks shown), and delete the pedestrian bridge and bollard lighting associated with this sidewalk, and provide grassing instead.
3. Delete the lighting bollards along the sidewalk connecting the Patio area to the exterior bleachers (the northernmost of the two sidewalks shown, but retain the sidewalk and pedestrian bridge.
4. Delete the new access drive at the east side of the site (which connects Duncan Drive to the existing service station), and leave this area in its undisturbed state.
5. Delete the terrazzo floor finish indicated to be in various interior rooms, and substitute VCT (vinyl composition tile).
6. Reduce the exterior bleachers from a total of 1200 seats to 600 seats total, and reconfigure new and existing asphalt parking areas and grass areas accordingly.
7. Delete the two tennis courts including pavement, striping, fencing, gates, and net posts, and substitute grassing.
8. Delete additional parking at parking lot adjacent to the exterior bleachers, but retain resurfacing and restriping of the existing asphalt parking area, and substitute grassing for the area where the new parking would have been. Note that item 6 above influences the area of the new parking.
9. Delete the lighting for the outdoor running track.
10. Delete the exterior bleacher seating at the outdoor running track, delete sand under the bleachers, and add seeded grass at this area.
11. Delete outdoor running track, delete modifications to the existing parking lot, delete grade modifications in this area, delete sidewalk and pedestrian bridge connecting Patio and bleacher area, add finish grading as required to allow surface water drainage, add seeded grass at disturbed areas.
12. Delete the demolition of the existing Gym required in the Base Bid. The intent of this is to retain the Gym and its adjacent parking in their current state if the track is not built.
13. Delete precast architectural accents, except concrete columns shall not be deleted.
14. Delete dormers on roof and associated interior ceiling treatments.
15. Delete hip roof configurations and substitute gable type roof configurations.
16. Delete solid phenolic lockers and substitute metal lockers.
17. Delete solid phenolic toilet compartments and substitute metal compartments.
18. Delete brick brick on the building exterior above 8’-6” above the finish floor level, and substitute EIFS. The EIFS shall have reveal lines and color variations to replicate the articulation of the brick.
19. Modify the reverberation times indicated in paragraph 21.1.8 as follows: Reverberation time in the Gymnasium to be 1.8 to 2.0 seconds and reverberation time in the Natatorium to be 2.0 to 2.2 seconds, both

in the 500 to 1000 Hz range. Other requirements of paragraph 21.1.8 remain unchanged.

2. DESIGN CRITERIA.

2.1 The proposal documents shall include adequate information in the form of narratives, drawings, calculations, catalog cuts, etc., to enable the Government to adequately review the proposal. 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% and final design submittal and corrected final design submittals. See Section 01300, SUBMITTAL PROCEDURES-DURING DESIGN.

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 8 software in accordance with A/E/C CADD Standards Manual which is available at: (http://tsc.wes.army.mil/). All building types or site elements will have a complete set of drawings. Common details used throughout will be copied to each set so that it can stand-alone. Stating that a set of drawings is similar to another is not acceptable.

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 his own 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. Appendix "A" is a list of reference standards and publications, Appendix "B" is Functional Room Requirements, a room-by-room summary of specific user requirements for functions within the new facility. Appendix "C" is the Life Safety/Fire Protection Analysis. Appendix "D" is the Room Finish Requirements Schedule. Appendix "E" is the SPIRIT general information. Appendix "F" is the SPIRIT Requirements and Point Summary. Appendix "G" is the Interior Design presentation format. Appendix "H" is not used. Appendix "I" is Water Flow Test information. Appendix "J" contains Geotechnical Information. Appendix "K" contains Environmental and Abatement information.

2.6 Drawings included in this RFP include a conceptual site plan, a floor plan, roof plan and elevations. The drawings represent an acceptable solution to the **functional** requirements for this facility. They have been coordinated with and approved by the using agency. Use of this design is optional.

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 01012 - 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 is defined for a specific area.

3.2 SECTION 01330 - SUBMITTAL PROCEDURES- DURING CONSTRUCTION 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://en.sas.usace.army.mil/ under Engineering Criteria.

Unified Facility Guide Specifications (UFGS) are available on the internet at:

http://www.hnd.usace.army.mil/TECHINFO/ or http://www.ccb.org/ufgs/ufgs.htm

They shall be used as the basis for format and preparation of construction documents.

6. DESIGN REQUIREMENTS

6.1 GENERAL.

6.1.1 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.

6.1.2 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 01012, DESIGN AFTER AWARD and 01330 SUBMITTAL PROCEDURES- DURING CONSTRUCTION. The Contractor's Designers of Record shall develop construction document technical specifications for all areas of work. The design documents may be provided in English units or hard metric (refer to specification section 01415 METRIC MEASUREMENTS.

6.1.3 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.
*5
6.1.4 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” 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

01010 GENERAL PROJECT DESCRIPTION AND GENERAL DESIGN REQUIRMENTS
01012 DESIGN AFTER AWARD
01090 SOURCES FOR REFERENCED PUBLICATIONS
01312A QUALITY CONTROL SYSTEM (QCS)
01322 CONTRACTOR PREPARED NETWORK ANALYSIS SYSTEM (NAS)
01330 SUBMITTAL PROCEDURES-DURING CONSTRUCTION
01335 SUSTAINABLE DESIGN AND DEVELOPMENT
01355 ENVIRONMENTAL PROTECTION
01415 METRIC MEASUREMENTS
01451 CONTRACTOR QUALITY CONTROL
01500 TEMPORARY CONSTRUCTION FACILITIES
01572 CONSTRUCTION AND DEMOLITION WASTE MANAGEMENT
01670 RECYCLED / RECOVERED MATERIALS
01780 CLOSEOUT SUBMITTALS (as-built and warranty)
01781 OPERATION AND MAITENANCE DATA
01785 FIVE YEAR MAITENANCE REQUIREMENTS

Division 02 Sitework

02013 ENVIRONMENTAL PROTECTION DURING CONSTRUCTION
02120A TRANSPORTATION & DISPOSAL OF HAZARDOUS MATERIALS
02220 DEMOLIION
02230 CLEARING AND GRUBBING
02300 EARTHWORK
02315 EXCAVATION, FILLING AND BACKFILLING FOR BUILDINGS
02316 EXCAVATION, FILLING AND BACKFILLING FOR UTILITIES SYSTEMS
02364 TERMITICIDE TREATMENT FOR SUBTERRANEAN TERMITE CONTROL
02370 SOIL SURFACE EROSION CONTROL
02510a WATER DISTRIBUTION
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
02770 CONCRETE SIDEWALKS AND CURBS AND GUTTERS
02811A UNDERGROUND SPRINKLER SYSTEMS
02821A FENCING
02870A SITE FURNISHINGS

02921 SEEDING
02922 SODDING
02930 EXTERIOR PLANTING

Division 3 Concrete

03150 EXPANSION JOINTS, CONTRACTION JOINTS, AND WATERSTOPS
03300 CAST IN PLACE STRUCTURAL CONCRETE
03413A PRECAST ARCHITECTURAL CONCRETE

Division 4 Masonry

04200A MASONRY

Division 5 Metals

05120 STRUCTURAL STEEL
05210A STEEL JOISTS
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
06650 SOLID POLYMER (SOLID SURFACING) FABRICATIONS

Division 7 Thermal and Moisture Protection

07220A ROOF INSULATION
07412 A NONSTRUCTURAL METAL ROOFING
07240A EXTERIOR INSULATION AND FINISH SYSTEM
07416A STRUCTURAL STANDING SEAM METAL ROOF (SSMR) SYSTEM
07600A SHEET METALWORK, GENERAL
07840A FIRESTOPPING
07900A JOINT SEALING

Division 8 Doors and Windows

08110 STEEL DOORS AND FRAMES
08120 ALUMINUM DOORS AND FRAMES (if used)
08210 WOOD DOORS
08520A ALUMINUM AND ENVIRONMENTAL CONTROL WINDOWS
08710 DOOR HARDWARE
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
09620A RESILIENT ATHLETIC FLOORING
09641A WOOD ATHLETIC FLOORING
09650A RESILIENT FLOORING
09680A CARPET
09900A PAINTING, GENERAL

Division 10 Specialties

10100A VISUAL COMMUNICATIONS SPECIALTIES
10160A TOILET PARTITIONS

10430A EXTERIOR SIGNAGE
10440A INTERIOR SIGNAGE
10800A TOILET ACCESSORIES
10999 FIRE EXTINGUISHER CABINETS

Division 11 Equipment

NOT USED

Division 12 Furnishings

12320A CABINETS AND COUNTERTOPS
12490A WINDOW TREATMENT
12910 ENTRANCE MATS AND FRAMES

Division 13 Special Construction

13080A SEISMIC PROTECTION FOR MISCELLANEOUS EQUIPMENT
13100A LIGHTNING PROTECTION
13280A ASBESTOS ABATEMENT
13281A LEAD HAZARD CONTROL ACTIVITIES
13851A FIRE DETECTION/ALARM SYSTEM, ADDRESSABLE SYSTEM
13930 WET PIPE SPRINKLER, FIRE PROTECTION
13935 DRY PIPE SPRINKLER SYSTEM, FIRE PROTECTION (if used)

Division 15 Mechanical

15080A 04/01 THERMAL INSULATION FOR MECHANICAL SYSTEMS
15190A 02/99 GAS PIPING SYSTEMS
15569A 05/95 WATER AND STEAM HEATING; OIL, GAS OR BOTH; UP TO 20 MBTUH
15601N 05/01 CENTRAL REFRIGERATION EQUIPMENT FOR AIR CONDITIONING
15895A 02/94 AIR SUPPLY, DISTRIBUTION, VENTILATION, AND EXHAUST SYSTEM
15951A 06/98 DIRECT DIGITAL CONTROL FOR HVAC
15990A 08/97 TESTING, ADJUSTING, AND BALANCING OF HVAC SYSTEMS
15995A 04/01 COMMISSIONING OF HVAC SYSTEMS

Division 16 Electrical

16070A SEISMIC PROTECTION FOR ELECTRICAL EQUIPMENT
16370A ELECTRICAL DISTRIBUTION SYSTEM, AERIAL
16375A ELECTRICAL DISTRIBUTION SYSTEM, UNDERGROUND
16415A ELECTRICAL WORK INTERIOR
16710A PREMISES DISTRIBUTION SYSTEM
16770A RADIO AND PUBLIC ADDRESS SYSTEM
16771 TELEPHONE SYSTEM OUTSIDE PLANT

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 in Appendix A REFERENCES.

9. ENGLISH OR METRIC DESIGN.

The design shall be developed using either the hard metric system of units or 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. The Contractor shall use ASTM E 380 and ASTM E 621 as the basis for establishing metric measurements required to be used in submittals, if the design is done in metric.

10. GENERAL CONSTRUCTION REQUIREMENTS

10.1 GOVERNMENT FURNISHED 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 FURNISHED CONTRACTOR INSTALLED EQUIPMENT (GFCI). The items to be specified in the Comprehensive Interior Design Package (modular office furniture and new loose furnishings) are GFCI equipment. See Appendix 'G' to the Specifications. The installation of these items is included in the Base Bid as indicated in the Bidding Schedule. No Contractor Installed items will be relocated from the existing Gymnasium.

11. SITE CONDITIONS AND REQUIREMENTS.

11.1 PROJECT LIMITS. The Contractor shall confine all work within the area shown on the site plan and in paragraph 12.1 below.

11.2 ENVIRONMENTAL. An environmental site assessment has been completed. It has been determined that this project does not contain any environmental hazards, except as follows. The extreme southwest corner of the site overlays former gasoline Underground Storage Tank contamination (former USTs 118x and 123x) Extensive source removal and backfill has been accomplished at this

site, however, levels of contamination still exceed clean-up levels. Coordinate any grading activities in this area with Installation Environmental personnel.

11.3 HAZARDOUS MATERIALS AND CONTAMINATION. 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. The demolition of the existing Gym (building 925) will entail removal of hazardous materials- see Appendix K Environmental and Abatement Information.

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 Hunter AAF.

11.4.2 The Contractor shall edit and submit the following UFGS as defined in Section 01012, DESIGN AFTER AWARD:

> 01410 Environmental Protection. In addition to other requirements within Specification 01410, the following SD-18 Records shall be listed requiring Government Approval: specific disposal sites, documentation (i.e., weight tickets, etc.), and compliance of disposal by resale.

11.5 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 as-built surveys of the construction. All demolition debris shall be removed to the landfill off post.

11.5.1 Trees. Removal of tree trunks is not included in the Contract. The Contractor shall identify trees to be removed by the 60% Submittal stage. The trees will be harvested and the tree trunks removed by the Installation. Included in the Contractor’s work is removal of stumps, roots, and branches and miscellaneous debris left after tree trunk removal. Removal of the items to be removed as part of the Contract shall occur during the design phase so that the site is prepared for construction by the end of the design phases.

11.6 The site is in a Well Head Protection Zone #1. There are no additional specific requirements for well head protection, however the Contractor is cautioned to take special care to avoid any contamination.
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11.7 ~~The Contractor, prior to any site or building demolition activities, shall confirm with the Contracting Officer the status of an ongoing review by the National Register of Historic Places. It is anticipated that the review will be complete and will permit demolition by the time of Notice to Proceed, however the Contractor shall proceed with any demolition prior to confirmation of approval to demolish~~Deleted.

11.8 The buildings to be demolished contain lead in quantities below regulatory limits, as well as silica, mold, dried bird droppings, fiberglass, and other hazardous materials. The Contractor shall provide protective measures against hazardous materials dusts for all workers exposed to the dusts.

12. NEW SITE DESIGN AND CONSTRUCTION. The concept site plan presents the general geometric layout for the site work. The Contractor shall design the paving, sidewalks and utilities including fire hydrants, irrigation and site lighting.

12.1 Project Limits. The Contractor shall confine all work within the area of the project limits shown on the concept site plan.

12.2.1 A Stormwater Pollution Prevention Plan (Best Management Plan) shall be designed and included in the design submittals shown in Section 01012. The approved plan shall be on site at all times for inspection by EPA, GA DENR, and Hunter AAF environmental personnel. All activities in the approved plan shall be implemented. The Contractor shall control erosion and sedimentation during construction. Sedimentation of adjacent sites or downstream ditches will not be permitted. The plan shall be approved and permitted by Georgia Environmental Protection Division (GA EPD).

12.2.2 A Site Specific Monitoring Plan per GA EPD shall be prepared and implemented. Notice of Intent and Notice of Termination shall be submitted to the Georgia Environmental protection Division. A Land Disturbing permit issued by the GA EPD or technical oversight by the NRCS is also required. The Hunter AAF contact is James Freeman.

12.3 CONSTRAINTS.

12.3.1 The new project grading and storm water system shall not impact the surrounding buildings. Construction shall not impact the existing drainage system 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.

Building Setbacks	Minimum acceptable
Building face to vehicular curb	82 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.

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. 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. Contractor shall provide traffic control signs and pavement markings. Parking stripes shall be white and handicap parking stripes shall be blue.

12.4.2 CURB AND GUTTERS. All pavement shall be bordered with 6 inch concrete curb and gutter 2 feet wide. 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. 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. Design shall include the Corps of Engineers PCASE System.

12.4.3.1 CONCRETE PAVEMENT. 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 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 be non-reinforced except for odd shaped slabs. The number of joints shall be kept to a minimum by using the greatest joint spacing which 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 DUMPSTER PAD. Provide a concrete pad under and in front of the dumpsters. The pad shall extend 20 feet in front of the gates to the dumpster pad enclosure.

12.4.4 SIDEWALKS. Sidewalks, minimum 1.83 meters (6 feet) wide, shall be provided as indicated on the concept site plan. Sidewalks shall be as indicated on the site plan. Sidewalks shall be concrete with a minimum nominal thickness of 4 inches with 3000 psi compressive strength. Contraction joints shall be spaced at 6 feet on center maximum and expansion joints shall be placed at 50 feet on center maximum and at the intersection of walks and curbs. Minimum cross slope on sidewalks shall be 2 percent. At the patio area adjacent to the Natatorium, provide integrally colored (red) concrete with a score pattern (2 feet on center maximum), or a stamped pattern.

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. Access drives to the parking lot on Billy Mitchell shall align with the existing cuts in Billy Mitchell. Handicap parking stalls shall be provided. Area lighting and landscaping shall reinforce the parking area in accordance with the Hunter AAF Installation Design Guide while meeting functional and safety requirements.

12.4.6.2 Parking areas shall be paint striped and adequately drained. Parking stalls shall be 9 feet by 18 without overhangs and 9 feet by 16 feet with overhangs. Paint markings shall be 4 inches in width. Traffic isles shall be 24 feet in width.

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 Parking areas design shall conform to TM 5-822-3. 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.

12.4.6.5 Area Lighting. The Contractor shall design parking lot area lighting and shall install dark bronze anodized poles and fixtures.

12.4.6.5 The existing parking lot to be partially retained shall be resurfaced, expanded, and restriped to create a fully functional parking lot.

12.5 Building Connection to the Site.

12.5.1 The finish floor shall be a minimum of 6 inches above finished grade at the exterior edge of the building.

12.5.2 Finished grade shall slope a minimum of 4 percent away from the new building for a distance of 6 feet.
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13. FOUNDATION AND GEOTECHNICAL DESIGN.

13.1 Government Investigation

The Government has performed geotechnical explorations at the project site. The locations of logs of soil test borings, exploratory test pits, and cone penetrometer (CPT) soundings are shown on the drawings included with this RFP. A report of the explorations and analysis is included in Appendix J. The "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 additional investigations as deemed necessary by the consulting geotechnical engineer. Subsurface exploration may include soil test borings, cone penetrometer test (CPT) soundings, dilatometer 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 ASTM D6151. 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 can be performed every 5 feet and at each change in soil stratification or soil consistency. 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 four 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. Dilatometer soundings shall be in accordance with ASTM D6635. Undisturbed soil sampling shall be in accordance with ASTM D 1586.

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 30 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 (Georgia 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. Additionally, 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. A commercial testing laboratory that has been validated by the Engineer Research and Development Center Materials Testing Center (MTC) under the Corps of Engineers laboratory inspection and validation program shall perform all laboratory testing. 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.

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, 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 materials to be excavated at the project sites that will be reused as structural fill and of proposed borrow material (both on and/or off the installation). Testing shall be as specified in subparagraph 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 60 percent design submittal. If revisions are made to the 60 percent design submittal, a new certification shall be provided with the final design submittal.

13.4 Foundation Design

13.4.1 General

The soil test borings and CPT Soundings performed in the area of the fitness center indicated very loose to loose sands and soft clays within the upper 4 to 8 feet of the soil profile. Based on anticipated loadings from the proposed structure, these soils are unsuitable for foundation support as excessive settlements are expected. Therefore, the loose and soft soils shall be excavated over a major portion of the fitness center and replaced with compacted structural fill. The required areal and vertical extent and the procedures for the excavation and replacement are indicated on Plate B-01 of the drawings included with this RFP. Provided the loose and soft soils are excavated and replaced in compacted layers as specified, it is anticipated the structure can be supported on shallow spread footings, in lieu of the excavation and replacement of the loose and soft soils, some form of engineered ground modification or ground improvement system; or a combination of these could be utilized for support of the proposed structure. The use of ground modification and/or ground improvement method(s) in lieu of the described excavation and replacement shall be at the option of the successful proposer and shall be at no additional cost to the Government.

13.4.2 Allowable Bearing Pressure

The consulting geotechnical engineer shall determine allowable soil bearing pressure. 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 Footings Over Utility Lines

No footing shall be constructed over existing or new water, sewer, steam, natural gas, chilled water, industrial waste and foundation drain lines. All footings shall be stepped down to an elevation below the pipe invert elevation and sleeved through the foundation or the utility line relocated.

13.4.5 Foundations for Walls and Partitions

Thickened slabs shall be required for walls and partitions that 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 Seismic Design

Seismic loads shall be computed in accordance with IBC 2003, except as modified by UFC 1-200-01 and these specifications. The project site shall be classified as Site Class D for the purpose of determining maximum considered earthquake spectral response accelerations.

13.6 Slabs on Grade

All interior slabs on grade, including storage and mechanical 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	92 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 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 to be excavated and reused as structural fill, 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 7 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 5000 square feet
Fill, embankment and backfill	Beneath paved areas	One test per lift per each increment, or fraction, of 5,000 square feet
Fill, embankment and backfill	All other areas	One test per lift per each increment, or fraction, of 7,500 square feet
Subgrade	Under building slabs	One test per each increment, or fraction, of 3000 square feet
Subgrade	Under paved areas, excluding roads	One test per each increment, or fraction, of 3500 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 that 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 UFC 3-490-04A.

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.

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 approved borrow areas off the installation, either private or public. The Contractor shall obtain from the owners the right to procure material, pay royalties and other charges involved, and bear the expense of developing the sources, including rights-of-way for hauling. 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. A registered landscape architect shall do the landscape design. The landscape shall be designed using the Hunter AAF Installation Design Guide as modified here. Graded and scarred areas shall be solid sodded. Existing sod not affected during construction shall be protected. Landscaping shall be absolutely minimum maintenance. Planting shall consist predominantly of shade trees. Shade 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. Large shrubs are required in selected areas outside the Antiterrorism setbacks, and a combination of sod, turf and ground cover will be used in other areas. The Designer shall refer to the latest edition DoD Minimum Antiterrorism Standards for Buildings.

14.1 TURF. Solid Bermuda sod, springs or seeding 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 and native species. Mulch shall be shredded cypress 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 24” stakes shall be used to stabilize newly planted trees. Landscaping shall be in accordance with the Hunter AAF 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. Provide large trees and small shrubs as defined in the Hunter AAF Installation Design Guide consistent with adjacent existing trees and plants. The minimum size for all shade trees shall be 2.5 to 3.0 caliper and a minimum size for all large shrubs will be 7 gallons.

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14.4 FOUNDATION PLANTINGS: Foundation plantings will be required for a ~~10~~six foot wide minimum area around the building. Use low type ground covers appropriate to the sun orientation of each building and in accordance with the Anti-terrorism standard.

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15. IRRIGATION SYSTEM. The project shall include a complete operating lawn and landscape irrigation system designed to cover an area extending 30 feet in all directions from the building and the entire area between the main parking area and the building. The irrigation system shall be a residential grade system designed to operate until the landscape plants are established- it is assumed the system will cease to operate after two years.

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. No fire hydrants or manholes shall be located in sidewalk areas.

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 mm. 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 1 meter deep. 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 inch 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. Metering is required by the Installation. Refer to Commissioning requirements elsewhere in this RFP for metering requirements related to Commissioning.

17. PERMITS.

17.1 GENERAL. The Contractor shall determine permit requirements as part of the design process and shall submit permit draft applications as part of the submittal process.

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 5 feet per second with outlet erosion protection. The minimum pipe size for an open pipe system shall be 18 inch and 15 inch 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 corrugated and high density polyethylene pipe precast concrete. Metal grates or manholes 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. Alternate approaches will be allowed only with the approval of the Contracting Officer.

19. WATER AND WASTE WATER.

19.1 The Contractor shall design and construct the new water supply with meter and appurtenances 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, new sewage mains (as required) and connection to the existing sanitary sewerage system. 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 inch, except for fire water supply lines where the minimum cover shall be 30 inch. Contractor shall refer to the Savannah District Design Manual, Chapter A-8 and TM 5-813-5. Water distribution shall be designed in accordance with TM 5-813-5.

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, installed, and disinfected 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 The water distribution system in the fire truck parking or servicing area shall provide a fire hydrant dedicated to the fire truck water refilling operations. Fire hydrant hose outlet shall not be less than 18 inches above finish grade.

19.6 Water Supply for Fire Protection.

19.6.1 Interior and outside fire protection shall be designed in accordance withUFC 3-600-1. Provide new exterior fire hydrants as required. Do not locate hydrants in sidewalks or other paved areas. Fire flow test data dated 6/24/2000 from two hydrants in the vicinity of the site areas follows:

Hydrant No. H-262 at Duncan and Billy Mitchell

Static pressure = 45 psig
Residual pressure = 35 psig
Flow = 1116 gpm at test, 1775 gpm available at 20 PSI

Hydrant No. H-103 at Duncan between existing Gym and parking lot

Static pressure = 55 psig
Residual pressure = 45 psig
Flow = 1116 gpm at test, 2100 gpm available at 20 PSI

From the data obtained from the flow test and the specific fire protection requirements, the Contractor shall 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).

19.6.2 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.

19.6.3 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. Locate the

post indicator valve outside the Force Protection setback. If a Siamese connection is required, locate it outside the Force Protection setback.
19.7 Provide a 1 1/2 inch diameter water supply line to the latrine location adjacent to the exterior bleachers and provide a drinking fountain at the bleachers as part of the Base Bid.

19.8 Not used.
19.9 Wastewater.

19.9.1 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, TM 5-814-1 and TM 5-814-2, and No. FD-5, Gravity Sanitary Sewer Design and Construction. In addition, the designer shall comply with specific state and local regulations that apply.

19.9.2 If a sewage pump station is necessary, the Contractor shall provide (as a minimum requirement) a duplex submersible sewage pump station with a 5 foot minimum diameter reinforced concrete wet well, with aluminum cover. All electrical components and controls shall be included. If a sewage pump station is required, it shall be in accordance with TM 5-814-1 and TM 5-814-2.

19.9.3 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.

20. GAS DISTRIBUTION SYSTEM. Natural gas (6”) is available along Duncan Street adjacent to the project site, which has adequate capacity to serve this project. Contractor shall confirm system pressure. Connection to the line is to be made with the line under full pressure—no outage of service to existing facilities. Provide a gas distribution system complete with master meter, connected to the existing system and designed in accordance with local codes, utility company requirements, and installation requirements. Gas distribution system shall comply with the requirements of NFPA 54, National Fuel Gas Code. Unless otherwise indicated by the Contracting Officer, a hot-tap connection to existing gas distribution system shall be made at the location shown on the Utility Plan drawings provided within the RFP. Where new structures are located above existing gas mains, existing gas mains shall be relocated. The Contractor shall bear the cost of installation and relocation of all utilities. When connecting to existing steel piping system, provision shall be made to ensure that the integrity of the cathodic protection is not compromised. Plastic gas shutoff valves and valve boxes shall not be used. Gas valves shall be provided in a valve box at the tie-in point to the existing gas distribution system. A gas regulator and meter assembly shall be provided, located at least 15 feet from the air intakes. The building service entrance shall be installed at a height sufficient to allow for installation of the gas meter. Installation of gas piping shall be in accordance with manufacturer’s recommendations and applicable sections of ASME B31.8, and the AGA Manual. UFGS Specification Section 02556 GAS DISTRIBUTION SYSTEM, shall be the basis for the gas distribution system specifications. Metallic underground gas piping shall not be used. Aboveground gas piping shall be steel. Gas mains and service lines shall be graded. Mains and service lines shall have 24-inch minimum cover; and both mains and service lines shall be placed on firmly compacted select material for the full length. Where under roadways or parking lots, gas piping shall be encased or designed to withstand any anticipated external loads as specified in ASME B31.8. Jack-and-bore method shall be used for routing gas piping under all existing streets. Saw-cutting of streets is not allowed, unless otherwise approved by the Contracting Officer.

20.1 DRIPS. Drips shall be installed at the low points, immediately following reduction from high pressure to medium pressure (at supply points) and at occasional low points throughout the system to provide for blowing out the lines.

20.2 VALVES. Plug valves shall be installed so that interruptions to service can be confined to the building.

20.3 SERVICE LINES. Lines shall not be placed under any buildings. Lines shall be placed with a minimum of 2 feet of earth cover. Protective casings shall be provided to protect lines from superimposed street or heavy traffic loads. Tracer wire shall be installed with polyethylene piping. Tracer wire shall be terminated in valve box and at riser. The Contractor shall relocate any portion of the existing gas main required to construct the new facility to comply with the directives found in this paragraph.

20.4 MATERIALS. Materials and appurtenances shall be free of defects and suitable to accomplish the stated objectives of gas distribution systems. Pipe shall be polyethylene conforming to ASTM D2513 and ASTM D3350, Thermoplastic gas pressure pipe, Tubing, and Fittings, or with fitting complying with either ASTM D2513, ASTM D3350, or ASTM D2683, Socket-type Polyethylene Fittings for outside diameter-controlled Polyethylene Pipe and Tubing. Connections to metal pipe shall comply with American National Standards Institute (ANSI) B16.5, Pipe Flanges and Flanged Fittings, or manufacturer's recommended standards.

20.5 TESTING. Prove that the entire system of gas mains and service lines is gas-tight by an air test, in accordance with ASME B31.8, Gas Transmission and Distribution Piping Systems. The test shall continue for at least 24 hours between initial and final readings of pressure and temperature with the initial reading at least one hour after full test pressure.

21. ARCHITECTURAL DESIGN REQUIREMENTS.

21.1 GENERAL. The Physical Fitness Center shall meet the functional requirements with a simple layout that allows for future changes in use. The building aesthetics shall reflect a welcoming, human scale modern facility that embraces the principles of sustainable design. The facility shall comply with the Hunter Army Airfield Installation Design Guide, which includes red brick walls, light colored trim, and green metal roofing. The exterior shall be designed for durability and attractiveness with minimal required maintenance. The Physical Fitness Center is to be located at the intersection of two major streets on the Installation- Duncan Drive and Billy Mitchell Boulevard and will be an important factor in establishing the overall character of Hunter AAF. Accordingly, it is desired to present a top quality image and utilize materials that reflect the highest standards on the Installation.
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21.1.1 SITE DESIGN. Parking is to be located in a way that allows access from Billy Mitchell Boulevard. The Installation Master Plan calls for the extension of streets through the site in the future (shown dotted in on the Site Plan)- all site elements shall be located so that they do not require demolition or movement when the streets are extended. All Force Protection setbacks required by the DoD Antiterrorism Standard for the building shall be maintained. ~~A site for a future fenced-in two court tennis facility shall be provided in the site plan, and stub-outs for future lighting and power shall be provided.~~ An exterior concrete paved patio (minimum ~~3600~~1500 square feet) is required adjacent to the Natatorium. Provide exterior power to the Patio area. Provide

a concrete paved sidewalk between the main entry and Duncan Drive. Exterior chillers, electrical transformers and generators, fuel tanks, recycling containers and trash dumpsters shall be set outside of the Force Protection setbacks and enclosed inside a masonry screen wall high enough to completely conceal the equipment and containers inside and finished on the exterior in brick matching the main building. On the site of the existing Gym, a 400 meter running track and a 1200 seat bleachers are required (these items are considerations for cost reductions in paragraph 1.2); refer to TM 5-803-10. ~~The interior of the running track shall be graded and grassed as a playing field, however, no striping or athletic equipment is required for the field area.~~ Site lighting for the track area is required (included in consideration in paragraph 1.2), and shall be on a programmable timer system. The existing parking area at the existing Gym shall be retained, reutilized, and expanded to the maximum extent possible. Two 8 foot wide pedestrian bridges are required over the existing drainage ditch which separates the building from the running track area (this site element will require demolition when the street is extended). NOTE: One of these two bridges is a consideration which may be deleted if CCL cannot be reached. See paragraph 01010-1.2, item #2 for more information.

21.1.2 PHASING. Construction shall be phased so that the new Physical Fitness Center building and the associated parking is built and occupied prior to demolition of the existing Gym building, with construction of the track and exterior bleachers following demolition.

21.1.3 FUNCTIONAL RELATIONSHIPS. The Service Desk should be immediately visible from the main entry. The Rock Climbing Room should be near the Service Desk. The Locker Rooms should be near the main entry. The exit from the Locker Rooms to the Natatorium should be controlled by the Pool Office (for paying customers). The Natatorium should have doors leading to an exterior patio. The exercise rooms should be grouped together. The Gymnasium should have direct access to the exterior. There should be doors in the corridors which allow the Gymnasium and associated toilets to be operated after hours with the rest of the facility locked off. Refer to Appendix A Functional Room Requirements for additional requirements.

21.1.4 USERS. The facility users are any military personnel on the Installation and their families, civilian employees, and military retirees. Children under 13 are not allowed in the facility without a parent. Peak usage times are morning PT, lunchtime, and during intramural events.

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21.1.5 NATURAL LIGHT. Natural light should be introduced into spaces as much as possible. High windows in the Natatorium and Gymnasium, glazing at the main entry, windows into the Weight Room, a clerestory window into the Weight and Selectorized Weight Rooms (this item is a consideration for cost reduction in paragraph 1.2), and ~~glazed walls~~windows in exercise rooms allowing views to windows are required features.

21.1.6 EQUIPMENT LAYOUTS. As part of the Base Bid, the General Contractor shall prepare and submit for approval equipment layout plans for all spaces in the building, to include athletic and exercise equipment. The final design shall incorporate comments from the Corp of Engineers and the Installation.

21.1.7 ROOF TOP EQUIPMENT. HVAC equipment shall not be mounted above the roof. Vents penetrating the roof shall be located so as to minimize visibility. Air intake shall be accomplished through the use of louvers located in dormer enclosures.

21.1.8 ACOUSTICAL DESIGN. The Contractor shall, as part of the Base Bid, have an acoustical analysis and design prepared by a qualified Acoustical Engineer with recommendations concerning the Natatorium and the Gymnasium spaces. The report shall be submitted to the Installation for review and comments from the Installation shall be incorporated into a final design for the two spaces. The Gymnasium shall be designed so that reverberation time is 1.4 to 1.6 seconds maximum in the 500 to 1000 Hz range, and the Natatorium shall be designed so that reverberation time is 1.6 t0 1.8 seconds maximum in the 500 to 1000 Hz range. The selection of materials or design features to control reverberation is at the option of the Contractor, but shall be selected to maximize durability and long term maintenance. The proposed reverberation control measures shall be included in the report submitted to the Installation and comments from the Installation incorporated into the final design. Upon completion of construction, a field test of both spaces shall be performed, a report on the results of the field test prepared and submitted to the Installation. If either space fails to achieve the required maximum reverberation time, remedial measures shall be taken by the Contractor at no additional costs to reduce the reverberation time to be required maximum.

21.2 APPLICABLE CODES AND STANDARDS. Applicable codes and standards are listed in Appendix A. Comply with the requirements of TI 800-1 appendix H except as superceded by requirements contained in this RFP.

21.3 FUNCTIONAL LAYOUT. The floor plan included in this solicitation represents an acceptable solution to the functional requirements for this facility. Use of this floor plan is optional. Functional requirements are described in the Functional Room Requirements document at Appendix B. Arrange spaces in an efficient, functional manner with simple circulation. Provide flexibility that allows future modifications.

21.4 ACCESSIBILITY. This facility shall be handicapped-accessible.

21.5 SUSTAINABLE DESIGN. This facility has a goal of achieving at least 50 points using the SPIRIT Project Rating Tool for Sustainable Design. Architectural contributions include building envelope characteristics, solar control and daylighting, views, indoor air quality, environmentally preferable materials selections, waste reduction, and close collaboration with all team members and User to synthesize successful sustainable design solutions.

21.6 CONSTRUCTION TYPE, FIRE PROTECTION AND LIFE SAFETY. This facility shall comply withUFC 3-600-1, including EC1110-1-92 dated 21 June 2000. UFC 3-600-1 requires compliance with IBC 2003 and UFC 1-200-01 for construction type, occupancy separation and features related to location on property and compliance with NFPA 101 2003 for egress and life safety. It also contains specific requirements contained in the document itself. Construction Type for this facility shall be any allowed by the Code for the size and use of the facility. The facility shall be fully sprinklered. See Appendix C for additional code analysis information.

21.7 GROSS AREA. The gross area of this facility shall not exceed 70,797 square feet gross area, 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.

21.7.1 ENCLOSED SPACE. The gross area includes the total area including all enclosed spaces as determined by the outside dimensions of the building.

21.7.2 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.

21.7.3 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.

21.8 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.
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21.8.1 EXTERIOR WALLS. Primary exterior wall finish shall be common red face brick matching Taylor Brick "Pink" to height as shown on drawing. A consideration for cost reduction listed in paragraph 1.2 is to substitute EIFS for brick above 8'-6" above the finish floor level. Accent finish may be light colored stucco, EIFS (Exterior Insulation and Finish system), or precast concrete/cast stone. Single wythe masonry walls are not permitted. Composite wall construction (grout-filled cavity between wythes) is not permitted. A 2" minimum air space is required between masonry veneer and backup walls. Brick shall not be sealed. Wood trim is not permitted. Exterior back-up walls shall be Concrete Masonry Units due to the requirement for CMU interior walls. A sample masonry panel per UFGS Section 04200 MASONRY is required. Louvers shall be storm-resistant profile and shall have enclosed drainable sill pan and bird screen. Joint sealants used at building exterior shall have a service life for the exposure condition of at least ten years, retaining elasticity and seal.
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21.8.2 ROOF. Roof shall be pitched minimum ~~3:12~~4:12 slope. Roof covering shall be Structural Standing Seam Metal roof (SSMR) system or Architectural Standing Seam (Nonstructural) Metal roof system. The color of the roof shall match Berridge Forest Green as specified in the IDG. Standing seam metal roof shall have concealed clip fastening system and be warranted per UFGS 07416 or 07412, except manufacturer's 20 year weathertightness warranty is not required. Exposed fasteners are not permitted at roofing system. Painted wood is not permitted for eaves, fasciae 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. The roof insulation membrane shall be located contiguous with the roof, not at the ceiling line.

21.8.3 Joint sealants used at building exterior shall have a service life for the exposure condition of at least ten years, retaining elasticity and seal.

21.8.4 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.

21.8.5 SCREEN WALLS. Composite wall construction (grout-filled cavity between wythes) is not permitted.

21.8.6 EXTERIOR SIGNAGE. Provide exterior signage in accordance with the Hunter AAF Installation Design Guide. Use brown colored sign, not green. Signs shall include, but not be limited to, a building identification sign (IDG Type D2), a building entrance sign (IDG Type D5), traffic control signs, and handicap parking signs. The building identification sign shall be a lighted marquee sign worded "Hunter Army Airfield Physical Fitness Center" and provided with an changeable lettering. Submit all signage at the 60% submittal phase for review and approval.

21.8.7 DOORS AND WINDOWS. All exterior glass must be treated for fragment retention. All window glazing shall be insulated glass units- the inner pane

shall be a minimum of 1/4 inch annealed laminated glass. Single glazed doors shall be a minimum of 1/4 inch tempered glass. Windows and storefront shall have prefinished commercial grade aluminum frames with high-performance organic coating finish in a white or off-white color and thermal breaks. Windows shall be Performance Class HC. Windows with anodized finish are not permitted. Entry 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, galvanized, shop primed, and factory finish painted. All windows and fixed exterior glass (except in doors) shall have operable window treatments for solar control. Reflective (mirror) glass finish is not permitted. Provide removable center mullions at double doors. Glazing in doors and windows located at the end of a corridor at ground level shall be translucent for Force Protection reasons. See 21.10 below for hardware requirements.

21.8.8 FIREMAN'S LOCK BOX. Provide and install a Fireman's lock box at the main building entry. The box shall be Knox Box #4434 with flush mounting kit #4470.

21.8.9 PRECAST CONCRETE COLUMNS. Provide precast concrete columns in as indicated on Plate A201. Columns shall be concrete- no wood or fiberglass is allowed. Columns shall be Tuscan or Doric style. Column shafts shall have entasis.

21.9 INTERIOR CONSTRUCTION. The following paragraphs are an overview of the interior construction.

21.9.1 ROOM SIZES. Room sizes shown on the concept floor plan and in Appendix B are approximate clear space. Adjustments to room sizes may be acceptable if furnishing and functioning of the rooms are unaffected.

21.9.2 SOUND CONTROL. Spaces requiring sound control shall have STC-50 ratings. This includes all door and ceiling treatments as needed to achieve this performance for the entire space.

21.9.3 DOORS AND FRAMES. Interior doors may be metal or solid core wood. Door frames shall be hollow metal, welded, galvanized, shop primed, and factory finished painted. Provide removable center mullions at double doors. Typical door size shall be 3'-0" wide, but provide 3'-8" wide minimum door at janitor closets and Laundry Room.

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21.9.3.1 INTERIOR WINDOWS. Interior windows at spaces 137, 139, 140, 146, and 150 shall be 48" x 48" in size with the bottom of the sill at 3'-4" above the floor.

21.9.4 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. Interior partitions shall be Concrete Masonry Units. CMU for partitions shall be 8" nominal thickness minimum, except where thicker CMU is required for height or other reasons. Use bullnose CMU at all outside corners of interior partitions. Apply masonry fill to all exposed CMU prior to painting. Sustainable design considerations shall be incorporated into finish selections and building aesthetics. See Appendix D Room Finish Requirements Schedule for additional information.

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21.9.4.1 CERAMIC TILE AND QUARRY TILE. 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. Floor tile shall be thick or thin set.

21.9.4.2 ACOUSTIC TILE CEILING. Acoustic units shall be no larger than 24" by 24". Provide moisture resistant tiles as indicated in Appendix D.

21.9.4.3 TERRAZZO. Terrazzo shall be monolithic type, 5/8" minimum thickness, with zinc alloy divider strips set in accordance with National Terrazzo Institute recommendations. Install all terrazzo in recesses in concrete fill or slab so that terrazzo is flush with top of adjacent floor finishes. Avoid extremely bright colors, and extremely light colors.

21.9.4.4 WOOD ATHLETIC FLOORING. Floors indicated to be wood shall be wood athletic flooring and shall be manufactured by a company specializing in athletic flooring. Installation of the flooring shall be by an Installer experienced with athletic flooring and shall be in accordance with the published installation recommendations of the manufacturer. A 1 year warranty covering defects in materials, workmanship, and installation shall be provided. All wood floors shall be installed in a recess in the concrete floor slab so that the top of the wood floor aligns with the floor finish in the space leading to the space containing the wood floor. Three wood flooring systems are required, each selected for it's specific use and installed in the appropriate space (basketball/volleyball, exercise, and racquetball) and each shall meet or exceed the performance requirements established by international standard DIN 18032 part 2. Flooring for racquetball courts shall provide good shock absorption (53% minimum), good ball rebound (90% minimum), and low area deflection (15% maximum). Flooring for the Exercise room shall provide high shock absorption (70% minimum) and moderate area deflection (20% maximum). Flooring for basketball shall provide good shock absorption (53% minimum), good ball rebound (90% minimum), and good vertical deflection (2.3 mm minimum). Wood flooring in the Gymnasium shall provide rolling load resistance as required by the bleacher system. All wood flooring shall be finished with an urethane-oil type finish system consisting of a wood sealer and a minimum of three coats of urethane oil finish.

21.9.4.5 RUBBER FLOORING. Rubber flooring shall be flooring specifically intended for weight and exercise rooms, capable of withstanding weight room impact loads without denting, rubber or EPDM, 3/8" minimum thickness, roll or tile. Install flooring in accordance with manufacturer's recommendations.

21.9.5 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.

21.10 DOOR HARDWARE. All hardware shall be Grade 1. All hardware shall be compliant with ADA requirements. Hinges shall be ball-bearing type and brass or stainless steel. Exit devices at the four main entries shall be mortise-type devices with concealed vertical rods and have architectural grade push panels. All other doors requiring exit devices shall have mortise-type devices with concealed vertical rods and touch bars. All other hardware sets not requiring exit devices shall be mortised locksets with cylinders. Handsets shall be the highest quality lever handles. Use removable mullions where possible at pairs of doors. Cylinders and cores shall have seven pin tumblers. Cylinders shall have interchangeable cores- coordinate type and manufacturer with the Installation to insure compatibility with other key systems on the Installation. All storage room doors shall have locks. All exterior doors shall open out and shall have hinge locking studs or non-removable pins. All exterior doors shall have dead bolt type locks.

21.11 TV BRACKETS. Provide ceiling or wall mounted TV brackets capable of supporting a minimum 27" television monitor. Bracket shall have 0 to 20 degree adjustable vertical positioning in a 360 degree range. The top of the TV shall be at 11'-0" above the floor or 6" below ceiling, whichever is greater. The bottom of the support tray shall allow 3" of fore and aft movement.

21.12 TOILET ACCESSORIES. Provide toilet accessories for all toilet and shower areas. Finish shall be No. 4 satin stainless steel. All items shall be by the same manufacturer and in the same style to the maximum extent possible. Accessories to be provided include but are not limited to: grab bars in accordance with ADAAG, tilt mirrors in accordance with ADAAG, mirrors over each lavatory, trash receptacles, electric hand dryers, soap dispensers between every two lavatories, one double roll toilet paper dispensers at each toilet, one clothes hook in each toilet stall, one sanitary napkin disposal in each women's toilet stall, one 4" by 12" shelf in each shower, one cloths hook in each shower.

21.13 ATHLETIC EQUIPMENT AND ACCESSORIES.

21.13.1 BASKETBALL BACKBOARDS. Backboards, supports, rims, and nets shall conform to NCAA and NFSHSA standards.

21.13.1.1. Backboards shall be fully tempered plate glass with unitized steel frame with a pro-style center mount. Marking shall be "fired" onto glass. Backstops for center court shall be rectangular 72" by 48" by ½ " thick and shall be equipped with a 2" channel cushion edge/backboard padding. Backboards for the two side courts shall be fan-shaped 54" by 39" by ½" thick. Backboard supports shall be welded steel and power-operated retractable. Rims shall be designed to absorb shock loads due to slam dunking or hanging on rim by means of a hinge which is designed to minimize force applied to backboard and to return rim to position and to protect against finger entrapment. Nets shall be nylon and fit selected rim.

21.13.2 WAINSCOTS. Wall wainscot padding shall be a minimum of 6 feet high, constructed with 6 lb. density foam minimum 1.5" thick cemented to a minimum 3/8" thick backer board and covered with polyester reinforced vinyl fabric. The fabric shall be folded and stapled securely to the back side of the board. All attachments shall be concealed. Fabric shall be 14 ounce per square yard minimum and shall be rated as self-extinguishing and registered and approved by NFPA. The material shall contain anti-bacterial and fungi resistant compounds to prevent mildew and rot. Fabric shall be abrasion and puncture resistant.

21.13.3 VOLLEYBALL STANDARDS. Provide two volleyball standards and net systems for the Gym. Floor plate and sleeves for volleyball standards shall feature a steel sleeve cast into concrete floor (9" minimum) and a flush cover plate attached to wood flooring to allow wood floor to move separately from the concrete slab.

21.13.4 SCOREBOARDS. Three electronic scoreboards shall be provided- one large for the center court and two smaller for the side courts. The large scoreboard shall be approximately 60 square feet in face area and feature readouts for time, scores, period, player, fouls, bonus points, and possession. Numbers for time and score shall be 13" high minimum. The smaller scoreboards shall be approximately 24 to 26 square feet in surface area and feature readouts for time, scores, and period. Numbers for time and score shall be 13" minimum. Provide connection to three separate floor mounted control console connection points- each connection point shall be housed in a recessed box with a flush mounted cover plate and shall also contain a electrical power supply for the console. Provide one console capable of controlling two smaller scoreboards

simultaneously and also large scoreboard. All scoreboards shall feature microprocessor controls, 1/10 second timing, and LED displays. The larger scoreboard shall also feature a automatic and manual loud horn. The console shall feature LED displays. Provide a complete and operating system with all required cables and a carrying case for the console. Provide manufacturer's five year warranty on complete system.

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21.14 INTERIOR BLEACHERS. Provide two motor operated folding and telescoping bleacher systems each with a ~~1250~~625 seat capacity, totaling ~~2500~~1250 seats. Allow 20" per occupant minimum. Bleachers shall have wood seats and riser panels and 24" on center minimum row spacing. Minimum rise per row shall be 11 5/8". Bleachers shall comply with the requirements of NFPA 102 Standard for Assembly Seating, Tents, and Membrane Structures, specifically with Chapter 5, "Folding and Telescopic Seating". Bleachers shall be manufactured by a company specializing in telescopic bleacher systems, and the manufacturer shall provide shop drawings stamped by an Engineer registered in Georgia indicating structural acceptability and compliance with building code requirements and criteria. Provide a one year warranty covering defects in materials, workmanship, and installation.

21.14.1 Wood for seats shall be 5/4" thickness by 11" minimum. Riser boards shall be ¾" thickness minimum. All wood shall be finger jointed Southern Pine Grade "C and Better". All wood shall receive a moisture repellant sealer on all sides, and wear surfaces shall receive two coats of clear polyurethane sealer.

21.14.2 Provide panels to enclose the ends of the bleacher systems when in both open and closed positions. Provide trim where the systems meet the walls to prevent trash from entering. Provide telescoping guardrails and handrails as required for a complete code compliant system.

21.14.3 Provide motors as required to operate system. Provide separate lockable control station for each bleacher system. Reinforce walls as required to resist forces applied when bleacher system is opened or closed.

21.15 SAUNA. Sauna shall be a complete and operating system manufactured and installed by a manufacturer specializing in Saunas. Sauna shall be warranted by manufacturer for a period of one year for materials, workmanship, and installation. Sauna system shall consist, at a minimum, of prefabricated insulated wall and ceiling panels, vapor-proof lighting fixtures, sauna heater, heater guard rail, heater controls, emergency panic button, R11 insulation minimum, pre-assembled wood seating and backrests, interior wood wall finish and trim, 3'-0" by 6'-8" wood finished door with sealed tempered double glazing, and a 5'-0" long by 4'-0" high minimum wood finished window with sealed tempered double glazing. All wood shall be clear Western Red Cedar or clear all-heart Redwood. Provide a non-slip ceramic tile floor, floor drain, and removable wood duckboards at walking surfaces. Provide, as accessories, a thermometer, wood bucket, wood ladle, and head rests. The sauna shall be 147 square feet minimum, and accommodate approximately 18 people.

21.16 WHIRLPOOL BATHS. Provide two whirlpool baths each capable of seating 8 persons, and manufactured by a company specializing in the manufacture of whirlpool baths. Each pool shall be furnished and installed complete with pumps, filtration systems, disinfecting systems, piping, water and electrical connections, hot water, all other items required to provide a complete and operational system. Each whirlpool shall be approximately 92" by 92", contain a minimum of 460 gallons of water, and have a minimum of 12 jets, built-in seating and built-in steps. Comply with the National Sanitation Foundation standards.

21.17 SWIMMING POOL. See Appendix B for additional requirements. Provide swimming pool complete with all systems required for complete operation, electrical and water connections, piping, drainage system, finishes, and accessories. Provide the services of a Consultant specializing in the design of swimming pool and swimming pool systems to prepare and submit to the Installation for approval a preliminary design report with recommended pool and systems designs and equipment. The report shall also outline recommended operational procedures for the recommended systems. The Consultant shall also complete the final pool and system design incorporating all comments from the Installation. The disinfectant system shall be an ozone type system with chlorine usage kept to a minimum. Other disinfectant systems may be considered only with the approval of the Contracting Officer. Comply with National Sanitation Foundation standard Number 50. Pool shall be designed to be able to be drained through the use of pumps. Pool shall be designed to resist uplift due to hydrostatic pressure, or shall be designed in a way that prevents drainage when the ground water level is high enough to apply upward pressure and to refill the pool should the ground water level rise while the pool is empty of water. Design pool in accordance with ANSI/NSPI-1 1991.

21.18 EXTERIOR ATHLETIC ITEMS

21.18.1 RUNNING TRACK. The running track material shall be a one half inch minimum thickness poured in place system consisting a black or red wearing surface of SBR resin, a black EPDM wearing layer rubber, a black SBR resin base layer, SBR resin or EPDM base layer rubber. Striping shall be integral with wearing surface. Materials and installation shall be by a company specializing in running tracks. Substrate, edge conditions, and installation methods shall be in accordance with manufacturer’s recommendations. Test soil in track area to determine appropriate measures to stabilize soil to prevent settling after construction and modify soil as required. Track shall meet NCAA and NFSHSA requirements as modified herein. Track shall be 400 meter length, 8 lanes wide with a minimum lane width of 48”, maximum lateral inclination of 1:100, and maximum inclination in direction of running 1:1000. Provide a concrete curb at all edges of the track. Design track in accordance with TM5 803-10, except as modified herein.

21.18.2 EXTERIOR BLEACHERS. The exterior bleachers shall provide seating for 1200 occupants and shall be a manufactured type metal system. Allow 20” per occupant minimum. Risers and deck shall form a closed system with no gaps. Row spacing shall be 26” minimum, and rise per row shall be 10” minimum. Seats shall be 10” minimum width plank type (individual seats and backrests are not required). Deck, risers and seats shall be aluminum. Provide guardrails, handrails, steps, structure, and other required items in accordance with applicable codes. Provide cast in place concrete foundations. The entire system shall be designed and stamped by an Engineer registered in the state of Georgia.

21.19 FIRE EXTINGUISHER CABINETS. Provide fully recessed fire extinguisher cabinets in accordance with NFPA 10. Cabinets shall accommodate a 10 pound ABC extinguisher to be provided by the Installation.

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.

22.1.1.1 Predefinition Conference. The Contractor shall lead a predefinition conference at Hunter Army Airfield, GA. This meeting shall be attended by Government personnel responsible for this project to include facility user representatives, Hunter AAF 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 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.

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 Hunter AAF 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 feet above the finish floor and 6″ 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″ wide and 6″ 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 Hunter AAF 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.

23. COMPREHENSIVE INTERIOR DESIGN.

*9
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 will be accomplished separate from this contract. ~~The installation of these items is included in the Base Bid as indicated in the Bidding Schedule.~~ 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, and with the function and mission of the facility occupants considered. All furniture/furnishings shall be selected under the guidance of the National Defense Authorization Act - FY 2002, S1438, Title VIII, Subtitle B, Sec 811, Para 2410 which states UNICOR is no longer a mandatory source for furniture and a waiver is not required from UNICOR on items before selecting from GSA Schedules. However, UNICOR shall be considered as a vendor to determine if UNICOR offers the "Best available" product in terms of quality, price, and timeliness. If a UNICOR product is not the "best value," then GSA schedules shall be used for selection of furniture/furnishings. Three GSA vendors shall be considered but only one selected for the prepared Order Form. A Best Value Determination Guideline Sheet shall be filled out for each vendor whose furniture has been specified and the sheet provided in the CID binder. (This is an addition to the requirements under 23.4 Format). All furniture/furnishings shall be selected form GSA Schedules or UNICOR. The GSA web site is: www.gsa.gov. The UNICOR web site is: www.unicor.gov. The UNICOR

regional sales representative for the Savannah District is Joe McCormick @ 803-802-0189.

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 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:

Artwork
Bookcases
Bulletin Board, Porcelain Marker Boards
Chairs-all kinds, including stools
Desks-freestanding Technical support and Executive Level Quality
Files-all kinds
Lamps-all kinds
Storage-all kinds
Tables-all kinds
Waste cans-various sizes
All specific/special items as required by the government/user

23.7.1 Coordinate all freestanding athletic equipment and accessories, which will be provided under the CID, with the user. (excluding those provided under 21.13)

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. EQUIPMENT IN EXISTING GYMNASIUM

24.1 The Installation will remove and retain ownership of equipment in the existing Gymnasium including free weights, all exercise machines, mats, all miscellaneous athletic equipment, floor and wall fans, TVs and TV brackets, all loose equipment, window mounted air conditioners, all communication switches and loose equipment, all computer equipment, and all basketball backstops and nets. The bleachers, ceiling fans, wood flooring, basketball backstop supports, communication and computer wiring runs, and lockers will not be removed by the Installation and should be considered either salvage or demolition items by the General contractor.

25. STRUCTURAL DESIGN REQUIREMENTS

25.1 General
*5

The following criteria shall be used for loading, design and installation of all structural systems, including manufacturing, erection, supervision, testing and quality assurance. The completed structural design shall include all elements for foundations, walls, roof framing and diaphragms. It shall also include lateral load stability analyses as well as support for architectural features, mechanical and electrical equipment. All calculations shall be performed by a registered engineer, checked by an engineer other than the design engineer, and shall be in accordance with the guidance provided in the U.S. Army Corps of Engineers, Savannah District "Design Manual for Military Construction." The primary code used for structural design shall be the ~~2000~~ 2003 International Building Code (IBC) and those codes referenced therein, except as modified by the DoD Unified Facilities Criteria UFC 1-200-01, dated 31 July 2002 and the following paragraphs.

25.2 Design Loads: Dead loads, live loads, and load combinations shall be in accordance with the requirements of the IBC 2003.
*7
25.2.1 Wind Load shall be in accordance with the IBC 2003 .

Wind Velocity: 120 mph
Exposure: C
Category: II
Importance Factor: ~~1.0~~1.15

25.2.2 Seismic Load shall be in accordance with IBC 2003 except as modified by UFC 1-200-01 :
*7
Spectral Response
Ss: .41
S1: .15
Seismic Use Group: ~~I~~II
Site Classification: D
Seismic Design Category: C

Occupancy Importance Factor, I = ~~1.0~~1.25

25.2.3 Snow Load shall be in accordance with IBC 2003.

25.2.4 Anti-terrorism/Force Protection

Anti-terrorism/force protection systems must be included for this project and shall conform to the Unified Facilities Criteria (UFC) "DoD Minimum Antiterrorism Standards for Buildings" UFC 4-010-01, dated 31 July 2002. Manuals are available from U.S. Army Engineer District, Omaha, ATTN: CENWO-ED-ST, 12565 West Center Road, Omaha, NE 68144-3869.

25.2.5 Special Loads

Floor Live Loading:

Gymnasium and Rec Areas	100 psf	
Offices:	50 psf	
Corridors:		
Ground Floor:	100 psf	
Second Floor:	80 psf	
Mechanical:	125 psf	(or equipment weight, whichever is greater)
Storage:	125 psf	

Roof Live Loading:

Typical Areas:	20 psf
Over Mechanical Mezzanine	60 psf

25.3 Drawings

25.3.1 Design drawings shall have General Structural Notes containing design loading criteria, strengths of engineering materials used, design soil values and any other data that would be pertinent to remodeling and/or future additions since design analyses and specifications often become separated from the contract drawings and lost after a project is completed.

25.3.2 Walls mostly below grade that are supported laterally by diaphragms at or near the top and bottom, shall be designed using loadings based on at rest soil pressures. All masonry walls below grade (below first floor finish floor) shall be solid grouted.

25.3.3 Diaphragms shall have continuous chord members on all edges and shall have a direct positive connection for transferring load to all members of the main lateral force resisting system.

25.3.4 Structural standing seam metal roofs (SSMR) shall be attached to 16 gage minimum thickness steel to allow sufficient screw thread engagement. This shall include the attachment of the clip as well as the subpurlin.

25.3.5 References and Design Criteria

25.3.6 References:

a. Minimum Design Loads for Buildings and Other Structures - ANSI/ASCE 7-98.

b. MBMA-01 Low Rise Building Systems Manual (latest edition).

c. National Concrete Masonry Association (NCMA), Specifications for the Design and Construction of Load Bearing Concrete Masonry.

d. ACI-ASCE 530, Building Code Requirements for Concrete Masonry (1995)

e. American Institute Of Steel Construction (AISC), Manual of Steel Construction, 9th edition

f. Manual of Steel Construction, LRFD 3rd edition

g. Steel Deck Institute (SDI) Diaphragm Design Manual (latest edition)

h. American Welding Society, Welding Handbook

i. Steel Joist Institute (SJI) Standard Specifications, Load Tables and Weight Tables for Steel Joists and Joist Girders

j. FEMA 302, NEHRP Recommended Provisions for Seismic Regulations for New Buildings and Other Structures, Parts 1 and 2

k. ACI 315-99, Details and Detailing of Concrete Reinforcement

l. ACI 318-99, Building Code Requirements for Structural Concrete

m. SDI Design Manual for Composite Decks, Form Decks, Roof Decks, and Cellular Decks

n. UNIFIED FACILITIES CRITERIA UFC 4-010-01 DoD Minimum Antiterrorism Standards for Buildings.

25.3.7 Design Guidance

Design Manual for Military Construction, Corps of Engineers, Savannah District

25.3.8 Design Criteria (Except as noted otherwise, the more stringent of the following documents shall govern:)

International Building Code 2000

As modified by Unified Facilities Criteria UFC 1-200-1

TI 809-04, Seismic Design Criteria for Buildings (Only as referenced by UFC 1-200-1)

TI 809-07, Design of Loadbearing Cold-Formed Steel Systems

TI 809-30, Metal Building Systems

TM 5-809-3, Masonry Structural Design for Buildings

TM 5-809-12, Concrete Floor Slabs on Grade Subjected to Heavy Loads

25.4 Foundations

Foundations shall be reinforced concrete continuous spread footings, isolated spread footings, grade beams, piles, drilled piers or other as required by geotechnical investigation. Ground floor slab systems shall be slab-on-grade or supported by piles as recommended by geotechnical investigation. Bottom of foundations shall be located a minimum of 2 feet below grade.

25.5 Serviceability

25.5.1 Vertical deflection ratios of suspended horizontal framing members for dead plus live loads shall not be less than:

a. L/240 at roofs
b. L/600 at masonry lintels

25.5.2 Horizontal deflections caused by seismic or wind loads shall not exceed the limits set forth in the Savannah District "Design Manual for Military Construction".

25.6 Concrete Design

f'c shall be no less than 3000 psi.

25.6.1 Concrete Materials:

a. Cement: ASTM C 150, Type I-II Portland cement
b. Fly Ash: ASTM C 618, Class "F"
c. Ground Granulated Blast-Furnace Slag: ASTM C 989, Grade 120

d. Fine Aggregate: ASTM C 33
e. Coarse Aggregate: ASTM C 33
f. Air-Entraining Admixture: ASTM C 260
g. Accelerating, retarding and water-reducing admixtures: ASTM C 494
h. Flowing Concrete Admixture: ASTM C 1017, Type 1 or 2
i. Calcium Chloride shall not be permitted

25.6.2 Slabs

25.6.2.1 Slabs-on-grade shall be a minimum thickness of 4 inches and reinforced with Fiber Reinforcing. All slab on grades shall have minimum shrinkage reinforcement and mesh reinforcement is preferred over wire fabric. "Mud slabs" in crawl spaces do not have to be reinforced and shall be 2-inches thick.

25.6.2.2 Slabs shall be placed in lane fashion. Area of sections bounded by crack control joints shall not exceed 600 square feet, and distance between crack control joints shall not exceed 25 feet. Joints should define a square area as much as practical.

25.6.2.3 Vapor Barrier
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Provide vapor barrier under all interior floor slabs. Polyethylene sheet not be less than 6 mils thick. Provide 4 inch capillary water barrier under the vapor barrier ~~when directed by soils report~~.

25.6.2.4 Crack control joints shall be as shown in the Savannah District "Design Manual for Military Construction", Chapter A-2, Exhibit A-2-15. Reinforcement when required will be interrupted (2 inches clear each side) at sawed or pre-placed crack control joints. Bars shall be mid-depth, and starting 2 inches from edge of slab. The ends of crack control and corners of isolation joints will meet at a common point so far as practical. Floor slab isolation joint shall be 3/16-inch felt. Re-entrant corners shall be reinforced with a minimum of one #4 diagonal bar.

25.6.2.5 Vertical and horizontal runs of conduits and pipes in slabs shall conform to ACI 318. Elevated slabs shall additionally meet the ratings of UL floor assemblies where required. Aluminum conduit and pipes will not be embedded in any concrete.

25.6.2.6 Expansion Joints: Stop reinforcing at joint and provide smooth slip dowels across joint. Provide a bond breaker isolation joint where all concrete slabs abut a vertical surface (foundation walls).

25.6.2.7 Where thickened slabs are employed under column bases or partitions, crack control joints shall be offset from the thickened areas.

25.7 Masonry Design

25.7.1 Concrete Masonry units shall have a minimum compressive strength of 2000 psi on gross area and 1000 psi on net area at 28 days.

25.7.2 Concrete Masonry Materials:

a. Hollow Concrete Masonry Units: ASTM C90, Grade N, Type I or II
b. Mortar for Masonry: …… ASTM C 270, Type S
c. Grout for Masonry:…… ASTM C 476
d. Horizontal Joint Reinforcement:……9-gage deformed wire, ladder-type

25.7.3 Provide solid brick where cores in cored brick might be exposed.

25.7.4 Joints shall be 3/8-inch, tooled concave.

25.7.5 Brick veneer ties shall be corrugated galvanized steel spaced 16-inches on center both vertically and horizontally.

25.7.6 Brickwork shall comply with latest edition of the Brick Institute of American Technical Notes No.28, Brick Veneer, New Construction.

25.7.7 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
f. At other locations where cracks are likely to occur

25.8 Structural Steel Design

25.8.1 Detailing of structural steel framing, including connections, shall be complete. All weld types, bolting layouts, bolt sizes, connection plates and member sizes and locations and stiffener plate sizes and locations shall be shown.

25.8.2 All members, elements and connections that are a part of the main vertical and/or lateral force resisting system must be completely detailed.

25.8.3 All connections other than standard AISC pre-designed shear connections shall be designed by the engineer of record and detailed on the drawings.

25.8.4 If braced frames are used for all or part of the main lateral force resisting system, the stability of 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 or by using bracing members that are capable of both tension and compression if bracing is placed in a single bay.

25.9 Steel Joist Design

25.9.1 Joists shall be anchored to steel supports by field welding. Provide erection bolts as recommended by SJI. Provide embedded steel bearing plates in concrete and masonry work. Where top chords are extended provide required section modulus of extensions on the drawings.

25.9.2 Provide special joist seats for sloped roof as required. Modifications or adjustments to joist seats made to accommodate supplier’s fabrication process shall be coordinated with affected trades.

25.9.3 Provide bridging and cross bridging at bottom chords of joist per SJI recommendations.

25.9.4 Design joists for additional gravity loads and uplift loads as required by analysis.

25.9.5 Provide additional web members at concentrated loads indicated, which do not occur at a panel point. Joists shall not support vertical loads greater than 50 pounds on the bottom chord between panel points without reinforcing. Do not support loads from bridging.

25.10 Steel Decking Design

25.10.1 Form deck shall be galvanized. Metal form material shall be minimum 28 gage.

25.10.2 Steel roof deck material shall be galvanized and be 22 gage minimum. A structural steel roof deck shall be provided under all nonstructural metal roofs. If SSMR will be attached directly to steel roof deck then minimum thickness shall be 16 gage. (Structural SSMR only.)

25.10.3 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 deck.

25.11 Cold Formed Steel Design

25.11.1 Cold Formed Steel Materials:

a. Galvanized Structural Framing Members 16 gage and heavier…ASTM A 653, Grade D, 50 ksi
b. Galvanized Structural Framing Members 18 gage and lighter….ASTM A 653, Grade B, 36 ksi

25.11.2 Trusses fabricated from cold-formed steel members shall be designed and the drawings stamped by an engineer registered in Georgia.

25.11.3 Cold-formed steel members, their components, and connection material shall have G60 galvanized coating.

25.11.4 Top chords of cold-formed roof members shall be 16 gage, minimum, where standing seam roof clips are connected with screws. (Structural SSMR only.)

25.12 Wood

25.12.1 Retardant Treatment, when required. Recommendations regarding the use of fire retardant treatment are provided in USDA Wood Handbook and National Protection Handbook. Pressure impregnation is the preferred treatment method.

25.12.2 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.

25.12.3 Use of oriented strand board (OSB) for floor sheathing is not permitted. Only APA structural rated plywood shall be used for floors.

25.13 Other Materials

25.13.1 There are no restrictions on proposing other materials to be used in the structural systems of this project if their strengths and durability can be substantiated by ASTM or other approved laboratory tests, and they satisfy the requirements of the design codes and criteria specified in this document.

25.13.2 All design, manufacture, fabrication, and assembly of other construction materials to be used in structural framing systems shall conform to the applicable design standards and meet specific industry standards as required for each subject material.

26. PLUMBING REQUIREMENTS.

26.1 Plumbing Design References, Codes, and Standards.

26.1.1 The design and construction of the plumbing systems for the Hunter Army Airfield shall be in compliance with design criteria listed below, latest editions; as required herein; and the referenced Unified Facility Guide Specifications (UFGS). 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, standards, and references shall be used for project 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.

Design Criteria List:
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- Savannah District Design Manual for Military Construction, ~~dated May 2000~~Eleventh Edition.
- Savannah District Drafting Standards.
- International Building Code
- International Plumbing Code
- Army Technical Manuals
  TM 5-800-1 Design Criteria
  TM 5-810-5 Plumbing
  TM 5-810-6 Nonindustrial Gas Piping System

- National Fire Protection Association (NFPA) Standards.

  NFPA 54 Natural Fuel Gas Code

  NFPA 101 Life Safety Code

- Provide services or systems for items listed in Appendix B - Functional Room Requirement Sheets.

- All other codes and standards listed in Appendix A.

26.1.2 Toilet areas and plumbing fixtures shall be handicapped accessible as required by Accessibility Guidelines for Buildings and Facilities.

26.2 Provide plumbing systems for the project as follows:

26.2.1 Domestic Water Systems.

Water Supply. Provide domestic water service to the mechanical room from 5 feet outside the building. Service entrance inside the mechanical room shall include main shut-off, RPZ backflow preventer, and water meter with remote readout capability from UMCS.

Water Distribution. Water shall be supplied to restrooms, mechanical equipment, pool equipment/systems, and any other items requiring water. All piping shall be labeled, color coded, titled, and indicate direction of flow. Shutoff/isolation valves, water hammer arrestors, shower control valves, trap primer valves, and all other control components and equipment requiring adjustment and/or maintenance shall be readily accessible through the use of

lay-in ceilings and/or appropriately sized access doors. A pressure-reducing valve assembly (with valved bypass) shall be provided in the cold water main where system pressures exceed 80 psi. Routing of water piping below floor slabs shall be minimized, and limited to the building entrance penetration. Water hammer arrestors shall be provided for all plumbing fixtures with flush valves for shock suppression. The placement of water hammer arrestors shall be as referenced in International Plumbing Code. Appropriate means shall be provided within the plumbing system design to insure that all fixture trap water seals susceptible to loss of water seal by evaporation are replenished. Trap primers shall be provided for all floor and mechanical room drain traps to prevent loss of water seal by evaporation.

26.2.2 Domestic Hot Water.

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26.2.2.1 Domestic hot water shall be provided for plumbing fixtures and laundry equipment requiring hot water. The heater shall be sized, based on all showers running continuously for ~~2~~1-1/2 hours plus laundry and fixture loads. Water to be supplied from a circulated system to maintain hot water at all times. Domestic hot water to be generated and stored at 140 degrees F. minimum and delivered to plumbing fixtures at 110 degrees F. Mixing valves to be provided to allow delivery of water at required temperature.

26.2.2.2 Domestic hot water shall be provided for pool usage, based on pool system design criteria. Heater to provide capacity and temperature required to support pool systems.

26.2.2.3 Domestic water heating systems will be gas.

26.2.3 Drainage System.

Sanitary, waste, and vent system shall be provided for restrooms, fixtures, and floor drains located in mechanical equipment rooms.

Sanitary drain waste and vent systems shall extend from 5 feet outside the building to all fixtures and equipment requiring service. The exit location of the building waste and sanitary sewer main shall be coordinated with existing site conditions shown on utility drawings. The system shall be provided with traps, vents, cleanouts, and all other components as required by code.

Floor drains shall be provided in all toilet locations, janitor’s closets, and mechanical equipment rooms.

26.2.4 Swimming Pool. Provide water connections and drainage for pool equipment. Pool will require pumping for drainage versus gravity drain. Pool deck drains to be collected and connected to building drainage system per plumbing code.

26.2.5 Storm Drainage System. Refer to Architectural design.

26.2.6 Natural Gas System. Natural gas for the project shall be provided with meter, regulators and a complete piping system. Gas meter to be provided with remote readout capability from UMCS.

26.2.7 Plumbing Materials, Equipment and Fixture Requirements.

26.2.7.1 Routing and 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, except for

service entrance piping. 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 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. Floor drains shall be provided in all toilet rooms, mechanical rooms and for equipment requiring drainage. All floor drain traps shall be automatically primed by single trap primers or where appropriate distribution unit type trap primers. All vents shall be routed so that roof penetrations occur on the least public side of the building.

26.2.7.2 Each fixture and piece of equipment requiring connections to the drainage system shall be equipped with a trap, and all fixtures shall be vented. Surface or wall cleanouts shall be provided for each drainage main. Cleanouts shall be provided at each change in direction of sanitary sewer lines, at the intervals specified in the Plumbing Code, and at the building service entrance. All cleanouts shall be permanently accessible. Ground cleanouts shall be installed in a 12 inches by 12 inches, 4 inches thick concrete pad, flush with grade. Pipes passing through elevated slab shall pass through a pipe sleeve and be installed in accordance with UFGS 15400, Plumbing General Purpose.

26.2.7.3 Piping Distribution System (Below Grade)

Provide materials listed below. Verify with Base for alternate materials allowed.

Domestic water service is copper with no lead solder joints.

Sanitary sewer, waste, and vent systems are cast iron.

26.2.7.4 Piping Distribution System (Above Grade)

Provide materials listed below. Verify with Base for alternate materials allowed.

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Domestic water piping is copper~~, Type "K",~~ with "no lead" solder joints. All domestic water piping is insulated with fiberglass insulation meeting the flame and smoke rating of NFPA. Verify with Base for areas where insulation can be deleted.

Sanitary, waste, and vent piping is no-hub cast iron (PVC if allowed by Code) pipe and fittings.

Natural gas piping is black steel with welded fittings.

26.2.8 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.

26.2.8.1 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 2.3 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, janitor’s closets, mechanical rooms 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. Floor drains shall have 1/4 drain opening, maximum. Floor drains receiving condensate drainage shall be oversized to prevent water splashing onto floor while providing required air gap connection.

e. Fixture descriptions shall be a described by the American Society of Mechanical Engineers, ASME A112.19.

26.2.8.2 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 2-1/2 inches at the point where the diaphragm is sealed between the upper and lower chambers. The maximum water use shall be 1.6 gallons 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.

26.2.8.3 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 2-1/2 inches at the point where the diaphragm is sealed between the upper and lower chambers. The maximum water use shall be 1 gallon per flush. Urinal trim shall conform to ANSI A112.19.5, Trim for Water-Closet Bowls, Tanks, and Urinals (Dimensional Standards).

26.2.8.4 Lavatories. Manufacturer's standard sink depth, vitreous china ASME A112.19.2M, counter mount oval lavatory as shown on the Conceptual Floor Plans.

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 2.3 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.

26.2.8.5 Standard Shower.

a. Shower valve shall be single lever, pressure-balancing, anti-scale 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. Provide handicap accessible showers in accordance with the Americans with Disabilities Act Accessibility Guidelines.

b. Drain - stainless steel.

26.2.8.6 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.

26.2.8.7 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 degrees F. with an inlet water temperature of 80 degrees F. while residing in a room environment of 90 degrees 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 inches high so as to allow the insertion of a cup or glass under the flow of water.

26.2.8.8 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 a integral vacuum breaker/backflow preventer. Hydrants shall have 3/4” hose connections.

26.2.8.9 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.

26.2.9 Testing.

a. Where piping is installed below floor, such piping shall be tested before slab is poured.
b. All testing to be done while piping is exposed to view.
c. Entire plumbing system shall be tested in accordance with project specifications, and International Plumbing Code.
26.3 Provide exterior freezeproof water fountain and hose bibb near the proposed latrine at the Running Track. See Civil Drawings for location. Water fountain and hose bibb will be required if latrine is not provided.

27. FIRE PROTECTION.

27.1 Fire Protection Design References, Codes, and Standards.

27.1.1 The design and construction of the fire protection systems for the Physical Fitness Center, shall be in compliance with design criteria (latest edition) listed below, as required herein, and the referenced Unified Facility Guide Specifications (UFGS). 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, standards, and references shall be used for project 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.

Design Criteria List:
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- Savannah District Design Manual for Military Construction, ~~dated May 2000~~Eleventh Edition.
- Savannah District Drafting Standards.
- International Building Code 2000
- Army Technical Instructions (TI)
  TI 800-01 Technical Instructions, Design Criteria
-
- National Fire Protection Association (NFPA) Standards.

  NFPA 13 Installation of Sprinkler Systems

  NFPA 20 Installation of Stationary Pumps (if required)

  NFPA 24 Private Fire Service Mains

  NFPA 72 National Fire Alarm Code

  NFPA 101 Life Safety Code

  NFPA 241 Construction, Alteration and Demolition Operations

- Unified Facilities Criteria (UFC)
  UFC 3-600-01 Fire Protection Engineering for Facilities

- All other codes and standards listed in Section 01020.

27.2 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 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.

27.3 Fire Suppression System. Automatic wet pipe sprinkler protection shall be provided for the building. A complete detailed design is required. The requirements indicated below shall be incorporated into the design.

27.4 Sprinkler System. The facility shall be fully protected with an automatic wet pipe sprinkler systems. All floors and all areas of the facilities shall be protected. The sprinkler system designs shall be in accordance with UFC 3-600-01, NFPA 13, 24, 72 and 241, and UFGS Specification Section 13930, Wet Pipe Sprinkler System. The sprinkler hazard classifications shall be in accordance with UFC 3-600-01, NFPA 13. Design densities, design areas and exterior hose streams shall be in accordance with UFC 3-600-01. 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 60% and 100% Design Drawings.

The sprinkler service main shall be a dedicated line. Sprinkler service and domestic service shall not be combined. 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 and a wall hydrant for testing of backflow preventer. Fire department connection for building shall be located outside force protection boundary. 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.

The Contractor shall edit UFGS Specification Section 13930, Wet Pipe Sprinkler System, 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.

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.

27.5 Exterior Hose Stream. Exterior hose stream demand shall be in accordance with UFC 3-600-01. This shall be 250 GPM for light hazard and 500 GPM for ordinary hazard. Exterior hose stream demand shall be included in the sprinkler system hydraulic calculations.

27.6 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 1999, 5-15.4.6.1.
*6
27.7 Fire Department Connection. A fire department connection shall be provided for the facility. The FDC shall be located ~~outside Force Protection boundary~~on the building and be accessible to the fire department.

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 20. 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 Seismic Protection shall be provided for this project. 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.

Water shall be supplied by mains of appropriate capacity and pressure to provide the building fire water demand in accordance withUFC 3-600-01. The fire water demand is equal to the sum of the sprinkler demand, the hose demand and one-half of the domestic water demand. Exterior hose demand shall be in accordance with UFC 3-600-01, 5.1.3. Water pressure and flow test data has been provided and is in Appendix I. If necessary to meet the fire flow requirements for this project, the proposer shall include in their proposal means to increase the available fire flow, such as increased water main line sizes or a complete fire pump installation.

If a fire pump installation is provided, it shall be designed in accordance with NFPA 20 and UFGS 13920, Fire Pumps. During design after award, the Contractor shall use and edit Section 13920. The installation shall include the fire pump and all appurtenances necessary to provide a complete system. This shall include a pump bypass line. The Contractor shall submit fire pump sizing and selection calculations, fire pump installation shop drawings, and catalog data for all piping and components of the fire pump installation to the Contracting Officer for review and approval.

After contract award, the Contractor shall perform a fire hydrant water flow test at the site to confirm that the resulting available fire flow is adequate to support the fire protection requirements of this project. During fire flow demands, the exterior water distribution system shall not be drawn down below 20 psi.

Refer to Civil Design for additional 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.

28. HEATING, VENTILATING, AND AIR CONDITIONING REQUIREMENTS.

28.1 Mechanical Design References, Codes, and Standards.

28.1.1 The design and construction of the mechanical systems for the Physical Fitness Center, shall be in compliance with design criteria (latest edition) listed below, as required herein, and the referenced Unified Facility Guide Specifications (UFGS). 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, standards, and references shall be used for project 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.

Design Criteria List:
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- Savannah District Design Manual for Military Construction, ~~dated May 2000~~Eleventh Edition.
- Savannah District Drafting Standards.

- Uniform Building Code
- Uniform Mechanical Code
- Army Technical Instructions (TI)
  TI 800-01 Technical Instructions, Design Criteria
  TI 809-04 Seismic Design for Buildings
- Army Technical Manuals

  TM 5-815-2 Energy Monitoring & Control Systems

- Engineer Technical Letters (ETL)
  ETL 94-4 Energy Usage Criteria for Facilities in the Military Construction Program

- American Society of Mechanical Engineers (ASME).

  B31.1 Power Piping

- Air Conditioning & Refrigeration Institute (ARI).

  Std. 410 Forced-Circulation Air-Cooling & Air-Heating Coils
  Std. 550 Centrifugal or Rotary Screw Water-Chilling Packages

- American Society of Heating, Refrigeration & Air Conditioning Engineers (ASHRAE), Inc. Standards (Latest Edition).

  HVAC Applications
  HVAC Systems & Equipment
  Fundamentals
  Refrigeration

  ASHRAE Standard 62-1999 Ventilation for Acceptable Indoor Air Quality

  ASHRAE Standard 90.1 Energy Efficient Design of New Buildings Except Low-Rise Residential Buildings

- Sheet Metal and Air Conditioning Contractors' National Association (SMACNA), Inc. (Latest Edition).

  06 HVAC Duct Construction Standards - Metal & Flexible

- National Fire Protection Association (NFPA) Standards.

  NFPA 90A Installation of Air Conditioning & Ventilating Systems

  NFPA 90B Installation of Warm Air Heating & Air Conditioning Systems

  NFPA 101 Life Safety Code

- Unified Facilities Criteria (UFC)

  UFC 3-400-01 Design: Energy Conservation
  UFC 3-410-01FA Design: Heating, Ventilating, and Air Conditioning
  UFC 3-410-02 Design: Heating, Ventilating, and Air Conditioning (HVAC) Control Systems
  UFC 3-450-01 Design: Noise and Vibration Control

- All other codes and standards listed in Section 01010.

28.2 General. The mechanical systems design for this project shall be in accordance with ASHRAE Handbooks, TI 800-01 Design Criteria Technical Instructions, 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. Mechanical equipment room(s) shall be ventilated for heat dissipation and shall be designed to minimize interior temperatures from exceeding 10 degrees F above outside design ambient temperature. 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. Toilet rooms shall be directly heated, cooled, and exhausted. 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. Refrigeration equipment provided shall be equipped with low-ambient controls to allow equipment operation down to 20 degrees F. Roof penetrations required by HVAC design shall be located on the least public sides of the building.

28.3 HVAC Design Conditions.

28.3.1 Outside Design Conditions.

Location:	Hunter Army Airfield, Savannah, GA 32.02° North Latitude 81.15° West Latitude 43 Ft. Above Sea Level
Heating Degree-Days (basis 65° F):	2,029
Cooling Degree-Days (basis 65° C):	2,372
Heating Design Conditions:	27 degrees F DB
Cooling Design Conditions:	91 degrees F DB / 77 degrees F WB
Air Cooled Condensing Design Conditions:	92 degrees F DB

28.3.2 General Inside Design Conditions (unless otherwise indicated).

Heating (Comfort Applications)	68 degrees F DB, no humidity control
Heating (Freeze Protection, Mech Rms)	45 degrees F DB
Cooling (Comfort Application)	78 degrees F DB/50% Relative Humidity

28.3.2.1 Areas requiring special inside design conditions are as follows:

- The Pool shall be designed for 78° F. and 60 percent relative humidity.

28.3.2.2 Humid Area: Hunter Army Airfield is a humid area and the design shall comply with Chapter 13 of TI 800-01.

28.3.3 Room HVAC Functional Requirements. All interior spaces shall be heated, ventilated and air conditioned, except as noted herein. Interior conditions as indicated above, unless otherwise stated.

28.4 Cooling Systems Design.

28.4.1 District generated chilled water is not available at this site.

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28.4.2 Air cooled chillers are recommended to provide cooling for the facility. The actual system type, size(s) and usage provided will be based on the Life Cycle Cost Analysis (LCCA). The chilled water system shall include two (2) chillers, each sized for not less than 50% of the calculated total load, ~~(not~~ including the Swimming Pool area load~~)~~ if a separate fluid cooler is not used. Two (2) constant volume pumps shall be provided to circulate water between the chillers and cooling coils. Each pump shall be sized at 50% load to match the chillers.

28.4.3 A summer design cooling water temperature of 44 degrees F will be circulated to cooling coils. The system chilled water temperature will be automatically reset upwards, based on the greatest AHU coil demand.

28.4.4 Piping will extend to the AHU's. Sectional shutoff and balancing valves will be provided in the main piping systems. The piping will be installed above ceilings and in partition spaces within the building. The above ground piping is proposed to be black steel with malleable steel fittings. Seamless copper, hard drawn tubing with wrought copper joints is proposed for pipe sizes 2 inches and smaller. Air conditioning condensate piping will be constructed of seamless copper, hard drawn tubing with wrought copper joints and insulation.

28.4.5 Below ground chilled water piping will be a double wall factory fabricated system consisting of Schedule 40 PVC carrier piping, cellular insulation and high density polyethylene (HDPE) exterior jacket. Reinforced concrete thrust blocks will be provided at changes in direction. The piping can enter the building from the chillers or fluid cooler and extend overhead to the pump room.

28.4.6 Freeze protection shall be a propylene glycol solution in the chilled water system. The volume of glycol in the chilled water system required for the winter design ambient conditions is approximately 20 percent.

28.5 Heating System Design.

28.5.1 District hot water is not available at this site. Two natural gas-fired hot water boilers are recommended at this point in the design process. Each boiler, sized at approximately 50 percent of the calculated load, will provide heat for space heating, and heat/reheat for the pool area. Provide heat exchangers and pumps as required for the above. The actual system type provided will be based on the results of the Life Cycle Cost Analysis (LCCA). The LCCA shall also determine if it is cost effective for the boilers to provide heat for domestic hot water and heat for the swimming pool water.

Hot water will be generated through two cast-iron sectional boilers or two copper fin boilers with forced draft burners. Each boiler shall be sized for a minimum of 50 percent of the calculated load. Each boiler will be equipped with an in-line circulating pump. The water will be distributed to heat transfer elements within the building by two constant volume pumps. A winter

design heating water temperature of 180 degrees F will be circulated to heating coils within the variable volume air terminal valves, and other heating devices.

Secure the construction permits as required by the boiler capacity input as per Title V air permit.

Factory fabricated double wall flue system with barometric damper will be provided for the boilers.

Hot water piping will extend to the AHU's and to terminal heating devices. Sectional shutoff and balancing valves will be provided in the piping mains. The piping will be installed above ceilings and in partition spaces within the building. The piping is proposed to be black steel with malleable steel fittings. Seamless copper, hard drawn tubing with wrought copper joints is proposed for pipe sizes 2 inches and smaller.

Emergency boiler shut-off switch(es) will be installed near the exit door(s) in accordance with ANSI/ASME CSD-1a, Control and Safety Devices for Automatically Fired Boilers.

Carbon monoxide sensors with visual and audible alarms shall be installed in each space containing a fuel burning device, such as boiler or water heater.

Carbon monoxide sensors with alarm shall be located in each space containing a fuel burning device, such as boiler or water heater.

28.6 Air Conditioning System Design. (Swimming Pool Area)

28.6.1 The Pool area shall be conditioned by a dehumidifying unit specially designed and manufactured for pool applications. The air conditioning system shall be designed utilizing recognized proper design practices for swimming pool facilities. The unit shall be indoor type and shall reject heat to the pool water and to the air stream for reheat. Heat shall be rejected to a remote fluid cooler utilizing a propylene glycol and water solution (approximately 20 percent glycol by volume) when heat is not required for pool heat or reheat. Heat and reheat shall be provided by boilers noted above.

*10
As an option the pool unit can be arranged to not reject heat for heating of the pool water.

28.6.2 The unit shall deliver outdoor ventilation air as required by code and shall ensure that a negative pressure is maintained in the Pool area relative to the adjacent building spaces. Heat shall be from the building hot water boiler system. Ventilation air shall be introduced into the building by a wall louver.

28.6.3 A means of providing an air purge of the Pool area for an emergency air exhaust during times the pool chemical treatment, etc. creates undesirable conditions in the space shall be incorporated. This mode of operation can be incorporated with the pool dehumidification unit if an outside air "economizer" is utilized.

*10
28.6.4 The fluid cooler shall be located remote from the building. The connecting piping shall extend from the cooler underground to the equipment mezzanine where the fluid pump and dehumidifying unit is located. The building chilled water system~~ shall not be connected to this system~~may provide cooling for this system.

28.6.5 Ductwork in this area is to be double wall exposed round spiral type with internal insulation.

28.7 Air System Design and Zoning. (All Buildings)

28.7.1 Air handling systems shall be selected and zoned by functional requirements, operation schedules, environmental control conditions, and load characteristics. Each Communications Room shall be conditioned by a separate split system DX unit.

28.8 Ventilation Systems Design.

28.8.1 Ventilation for building occupants shall be provided in accordance with ASHRAE Standard 62-99. Ventilation air shall be injected into the building at each air handling unit upstream of the coils. Each unit shall maintain a constant minimum outside air flow by electronic airflow measurement station as required. The outside air intake shall be located away from fumes including vehicle exhaust, toilet exhaust, etc., and shall comply with Force Protection requirements. Exhaust systems shall be provided for all toilet rooms, copier rooms, bathrooms, locker room, laundry rooms, janitor's closets, and other spaces as required. Rooms requiring exhaust systems shall be at a negative pressure relative to adjacent spaces.

28.8.2 Clothes dryers shall have sheet metal ducted vents to the outdoors.

28.9 Utility Metering: Gas, Potable Water.

28.9.1 Potable water and gas shall be metered as required to properly confirm commissioning of the facility and continued monitoring of energy usage by the User. Meters shall all have pulse outputs, data collection/communication capability and shall be compatible with existing installation-wide utility management and control system. All meters shall be monitored by the installation’s DDC system. Meters shall determine consumption, and not rate-of-consumption. Electric meters shall monitor consumption and demand. Each meter shall be clearly marked showing applicable multiplier.

28.10 Electrical Rooms And Mechanical Rooms.

28.10.1 Mechanical rooms and electrical rooms shall be heated and ventilated. Ventilation rate of 10 and 20 air changes per hour minimum shall be used. A two-speed, thermostatically-controlled fan shall be provided to accomplish the 10 ac/hr and 20 ac/hr rates. The space shall be maintained at 45 degrees F in winter and maximum of 10 degrees above outside design ambient in summer. Ventilation shall be positively introduced within the mechanical room.

28.11 Systems Room.

28.11.1 The Systems Room shall be air conditioned by an independent air cooled DX split system. The unit shall provide cooling 24 hours per day, 7 days per week. The unit shall maintain a space temperature of 72 degrees F plus or minus 2 degrees. The unit shall be sized to dissipate the heat generated by internal equipment and the building structure loads. Provide a space temperature high temperature alarm to report to the building temperature controls system. The condensing unit shall be located indoors on the mezzanine and air to and from the condenser shall be ducted to the outdoors via louvers.

28.12 System Maintainability.

28.12.1 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.

28.13 Commissioning.

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28.13.1 The Mechanical system commissioning shall be in accordance with UFGS Specification Section 15995A COMMISSIONING OF HVAC SYSTEMS. Commissioning requirements shall be clearly detailed on the design drawings and shall be clearly stated in the construction specifications to ensure the HVAC systems are properly installed, balanced and calibrated prior to building occupancy. Commissioning procedures shall be in accordance with ASHRAE Standards. Meters for gas, electricity and domestic water shall be provided and installed.

28.14 Direct Digital Controls.

28.14.1 It is proposed to use electronic direct digital control (DDC) controls for all equipment. Individual microprocessor based digital equipment controllers will be interconnected to a central local area network for building global communications from a central location. However, all controllers will have stand alone capability, with the respective equipment in each system served form a dedicated control panel. Controllers will be specified with battery backup and surge protection.

*10
~~The Installation DPW has advised that the installation wide energy management and control system (EMCS) is manufactured by Williams. The project shall require the installation of a Williams system.~~

The DDC system for this facility will consist of a central building controller connected to lower level application specific equipment controllers through a local area network cable system. A central host computer currently installed will be utilized for global system monitoring and remote system setpoint adjustment. The central building controller in this facility will interface to the existing operator's workstation through a phone modem. However, the DDC controllers will have stand alone operational capability, with the respective equipment related to each system served from a dedicated control panel. The central building controller will be equipped to connect to a laptop computer for local setpoint adjustment.

Based on the light torque duty requirements of the control damper and valve operators, it is recommended to provide electric operators. Control valves on all new heat transfer equipment will be three-way.

Individual room temperature control is proposed to be provided through air handling units, air terminal valves and reheat coils within the supply ductwork system. An application specific controller and room sensor, with local timed override, will be indicated/specified for each air terminal valve. Certain spaces will be indicated to receive unit heaters. Local thermostatic control will be provided for each.

Individual DDC controllers are indicated for each central station AHU. Monitoring and adjustment of all DDC points will be available from the workstation computer.

Mechanical energy using devices will be provided with metering to monitor energy consumption. Totalizing flow measuring meters will be provided on utility services.

DDC design shall be in accordance with CESAS Standards.

28.14.2 Stand alone equipment, such as chillers and pool AC unit supplied with packaged controls, shall be installed with all necessary additional communications support equipment for interface with the installation-wide DDC system.

*10
28.14.3 As an option provide the minimum control, monitoring points, and system graphics needed for the DDC system.

28.15 Acoustical Criteria.

28.15.1 Systems shall be designed to meet the following noise criteria:

Area	NC Level
Offices, Physical Therapy	35
Lobbies and Corridors	40
Conference Room	30
Pool, Exercise Areas	40
*Gym	35

Acoustical treatments such as duct lining and sound attenuators shall be used to achieve these levels. Any spaces not specifically listed above shall be coordinated with the user. Vibration transmission from equipment shall be controlled with the use of vibration isolation equipment as required.

*Coordinate the mechanical system with the acoustics engineer.

28.16 Controls System Specifications.

28.16.1 Automatic temperature controls shall be designed in accordance with specification Section 15951 Direct Digital Control for HVAC. All control devices shall be labeled with laminated plastic tags using unique identifiers, which are cross referenced to the control drawings.

28.17 Energy Conservation.

28.17.1 Public Law 100-615 and Federal Regulations 10 CFR 435 Subpart B, require Federal buildings to be designed and constructed to reduce energy consumption in a life-cycle, cost-effective manner using renewable energy sources when economical. See Unified Facilities Criteria (UFC 3-400-01) Design: Energy Conservation. Submittals from the successful bidder shall be in compliance with above and address energy conservation features such as variable frequency drives, etc. System configuration and major equipment selection shall optimize life cycle costs. The Contractor shall compare a minimum of three (3) system types in the Life Cycle Cost Analysis.

28.18 HVAC Calculations.

28.18.1 Design Criteria. Design calculations for determining capacities of all equipment, mechanical systems and components shall be performed by the Contractor, and shall be supported with a complete design analysis. Capacity of all mechanical system components shall be coordinated with the electrical designer. The Design Analysis shall contain all explanatory material giving the design rationale for any decisions that would not be obvious to an engineer reviewing final drawings and specifications. Except as indicated herein, calculations for sizing HVAC systems shall be in accordance with ASHRAE Handbooks, TI 800-01 Design Criteria Technical Instructions, ASHRAE Standard 62 - Ventilation for Acceptable Indoor Air Quality, and Savannah District Design Manual for Military Construction, Volume II of II, NFPA Standards. ASHRAE-based computer generated loads shall be provided and must be submitted with complete input and output data summaries. The design shall reflect heating and cooling capacities based on the design conditions indicated herein. The space (airflow) pressure relationships shall be maintained. The overall building pressurization shall be positive to minimize effects of infiltration. Energy conservation shall be as per UFC 3-400-01, Design: Energy Conservation, available at:

hhtp://65.204.17.188//report/doc_ufc.html.

28.18.2 Internal Loads and Heat Gains.

28.18.2.1 The successful proposer is required and responsible for determining all miscellaneous internal loads (i.e. exercise equipment, electronic equipment, equipment layout and locations, etc.) for all areas. Coordination and consultation with the User is required in assessing miscellaneous internal load requirements. Computers, instruments, communication equipment, exercise equipment, and miscellaneous equipment are located throughout the facility. Documentation and miscellaneous internal load requirements shall be provided within Design Analysis.

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28.18.2.2 The normal peak occupancy for the facility, excluding the pool area, is 700 people. The ultimate peak occupancy, excluding the pool area, when a special event occurs in the Gymnasium and the ~~2,500~~1,250 seats are utilized, is ~~3,000~~1,750 people.

28.19 Energy Budget Calculations.

28.19.1 Energy calculations shall be as required in UFC 3-400-01, which includes compliance with ASHRAE 90.1.

28.20 Energy Conscious Design Features Summary - Mechanical

28.20.1 High efficiency motors and motor controllers.

28.20.2 Direct digital controls (DDC) will be utilized. This type of system will enable precise control and energy monitoring of mechanical environmental systems.

28.21 Energy Sources.

28.21.1 Electricity is provided to the site from Savannah Power and natural gas is also available on the Installation. Central district heating and cooling utilities are not available from a Central Energy Plant for this site.

28.21.2 Rate structures for all available utilities will need to be confirmed with the DPW energy personnel.

28.22 U-Values.

The building construction shall be as required by UFC 3-400-01, Design: Energy Conservation. This shall include compliance with ASHRAE 90.1.

28.23 Mechanical Equipment.

28.23.1 Mechanical equipment shall be designed in accordance UFGS guide specifications listed in this section of mechanical design and included in the appendix volumes. The equipment described below is a minimum. 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.

28.23.2 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. Install do well pins into floor slab prior to pouring equipment pad. All suspended equipment shall be properly supported from the building structure 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.

28.23.3 Each piece of motorized equipment shall be provided with vibration isolators. Nominal deflection and natural frequency of isolation equipment shall be selected based upon equipment size and structural attachment details.

28.23.4 All strainers and air separators are to be equipped with blowdown valves and piped to a floor drain.

28.23.5 The mechanical room shall be separate from the electrical utility room and be accessible from an exterior door. The mechanical room shall house any central equipment for facility comfort conditioning.

28.23.6 Fans or other equipment (except boiler flue) is not acceptable on the metal roof. Exhaust fans will be provided for areas that require 100 percent exhaust directly to the outside. These areas include toilet rooms, janitor closets, copier rooms, and other areas as required by the design criteria. Ducted exhaust air systems are proposed; from room inlets to the exhaust fan locations. Vent sets are proposed; located on enclosed accessible mechanical mezzanine structures within the ceiling/roof space, ducted to exterior louvers in architectural elements. All of the exhaust ductwork shall be specified to be sealed.

28.23.7 Mechanical components shall be installed and mounted in accordance with TI 809-04 “Seismic Design for Buildings” for Seismic Use Group I.

28.24 Air Handling Units.

28.24.1 Central station air handling units are proposed to supply a mixture of return and outside air for climate control and ventilation of the spaces in the building. Each air handling unit will be furnished with chilled water coils to cool and dehumidify the circulated air. The units will contain

supply air fans, and return air fans where necessary. Each variable air volume (VAV) fan will be controlled by a variable speed motor controller.

28.24.2 The AHU casings will be double wall steel construction with internal insulation. The casing and components will be installed on a structural steel frame. The AHU's are indicated to be equipped with demount seams in the casing sections to facilitate installation and removal of the equipment; dimensions will not exceed the space available for removal from the building.

28.24.3 Supply fan section shall be equipped with non-overloading centrifugal fan mounted on a steel base frame. Fan base shall be isolated from air handling unit base rails by the use of housed spring isolators. Fans shall be V-belt driven by belt drives sized for 150% of design power requirement. Provide adjustable sheaves for fans up to 20 Hp.

28.24.4 The drain pans and coil casings will be constructed of galvanized steel. Cooling coils will be specified to be constructed of aluminum fins and copper tubing.

28.24.5 Maximum coil face velocities shall be limited to 500 feet per minute. Mixing boxes shall be factory or field fabricated and configured with dampers to promote mixing of return air and outdoor air streams. Control dampers shall be constructed to provide no more than 10 CFM/ft^2 air leakage at 4" water column. Angled filter section may be included as part of the mixing box.

28.24.6 AHU's will be provided with access to all internal components: fans, coils, filters, and controls. Where required for rigging, the AHU coils will be vertically split for removal from both sides of the units.

28.24.7 Outdoor air will be obtained through exterior louver elements. Electronic airflow measuring stations will be indicated in the outdoor air ducts, and at the supply and return fan inlets for airflow control. Outdoor air requirements will be based on occupancy in accordance with ASHRAE Standard 62-1999.

28.24.8 The Weight Room, Exercise Room, Cardio, Selectorized Weight Room, Physical Therapy Room, each Racquetball Court, the Locker Rooms, and the Rock Climbing Room shall each be served by a separate zone from the air unit. The presently proposed air unit shall be a two-deck multi-zone type with the hot water heating coils in the reheat position. The actual system type will be based on the results of the Life Cycle Cost Analysis (LCCA).

28.24.9 The Office areas, Corridors, Physical Therapy Office, Systems Room, Laundry, Storage, Toilets, Pool Office, Reception, etc. shall be served by a presently proposed variable air volume unit. The zoning shall be provided by variable volume terminals with hot water heating coils for areas requiring heat and variable volume terminals for interior spaces. The supply air fan speed of the air unit shall be controlled by a variable speed controller. The actual system type will be based on the results of the Life Cycle Cost Analysis (LCCA).

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As an option all areas, except the Gymnasium and Natatorium, may be served vy variable air volume systems. Utilize VAV boxes without reheat for interior spaces and VAV boxes with electric reheat for exterior spaces. Serve these areas with two (2) 15,000 CFM air units.

As another option serve all areas, except the Gymnasium and Natatorium, with water source heat pump system using horizontal recessed units. Replace

chillers with cooling towers (use closed loop fluid coolers or heat exchangers), replace chilled water piping with loop piping, use air handling units with enthalpy wheels to pretreat outside air and deliver to heat pumps or provide outside air directly to each heat pump.

28.24.10 The Gymnasium is proposed to be conditioned by two constant volume air units. The control and air distribution of the units shall be arranged to accommodate the broad swing of loads created by the varying occupancy. An alternative method which complies with ASHRAE Standard 62-1999, such as the "Indoor Air Quality Procedure" shall be applied to vary the ventilation rate within the space and reduce it to 50 percent for intermittent occupancy. This rate variation will allow energy conservation during times of light people loading. A possible method to be employed is to vary the outside air ventilation rate by sensing the carbon dioxide level in the space from multiple sensors. During peak occupancy loads and peak ventilation introduction, a means to relieve the ventilation air shall be provided in the Gymnasium. This is required to prevent over pressurization relative to the adjacent areas. The ductwork is to be exposed, double wall, internally insulated, round, spiral type. Maintain required clearance from floor. The actual system type will be based on the results of the Life Cycle Cost Analysis (LCCA).

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As an option these two air units may be fitted with enthalpy wheels and reduce the installed chiller capacity from 370 tons to 300 tons.

28.25 Air Distribution.

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28.25.1 Ductwork shall be constructed of sheet metal to SMACNA HVAC Duct Construction Standards, latest edition. Medium pressure high velocity supply ductwork is proposed for the main supply duct runs between variable air units and terminal air valves. The supply ductwork connects to a series of air terminal valves equipped with inlet control dampers, velocity sensors, controllers, and hydronic hot water heating coils. The terminal units serve low velocity fiberglass ductwork to the ceiling supply air outlets. The air terminal valves will be factory fabricated, single wall steel construction with internal lining. The hot water heating coils will be aluminum fin and copper tube construction. The variable volume air terminal valves will be equipped with minimum ventilation airflow set points. The ceiling diffuser layout and performance will be assessed at the turndown air quantity to assure adequate distribution at low airflows. Louvered face ceiling supply air diffusers will be provided with a minimum of four concentric elements located within the face. Flexible supply ductwork runouts to terminal devices shall be limited to 5 feet in length, and shall be pre-insulated. Fiberglass duct shall not be used. Each duct branch shall be fitted with a manual balancing damper. All ductwork shall be located above ceiling, supported from roof structures, unless specifically noted exposed. Ceiling return air plenums shall not be used. Ducted return air systems shall be sheet metal and will be utilized from room return registers to the AHU return inlets. The high velocity ductwork is to be sealed and leak tested, except that duct downstream of air terminal valves will not require leak testing. Ductwork leak tests will not be required for 2 inch w.g. and below pressure classes.

28.25.2 Low pressure distribution ductwork, including that associated with constant volume air handling units, shall be installed to SMACNA pressure class 2" wg, seal class C, and leakage class 24 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.

28.25.3 Provide systems with filters, plenums, and all safety controls. Filtration will be provided at the air handling unit in accordance with the requirements of UFC 3-410-01FA and ASHRAE Test Standard 52-76. The pre-filters will consist of a 4" thick pleated filter to provide 30% efficient filtration; located on the inlet side of the air handling unit. Intermediate stage filters of 80% efficiency will also be provided in the AHU downstream of the pre-filter. In the event of smoke, duct mounted smoke detectors shall shut down the fan per NFPA 90A requirements.

28.26 Duct Insulation.

28.26.1 All supply, return, and outside air ductwork shall be insulated, and shall include vapor barrier. Exposed heating only or exposed return air ductwork shall not be insulated.

28.27 Miscellaneous Fans.

28.27.1 Exhaust fans shall be cabinet type, inline or wall mounted. Roof mounted fans are not acceptable on the metal roof. Fans shall be V-belt driven by belt drives sized for 150% of design power requirement. Provide adjustable sheaves for fans up to 20 Hp. Small fans not available with V-belt drive may be directly driven. Motor selection shall permit non-overloading operation at all conditions. All fans shall be provided with vibration isolators to decouple the motor assembly from the fan housing. Suspend fans with vibration isolators from building structure. Fans shall be located on service platforms, readily accessible, and shall discharge air to the outdoors via wall louvers.

28.28 Heating Equipment.

28.28.1 The hot water heating systems shall include gas-fired hot water boilers and circulation pumps. Manufacturer's standard packaged operation controls shall be provided to handle all aspects capacity modulation and safeguarding. Pumps shall be base mounted or in-line type and selected for non-overloading operation at all conditions. Provide hot water bypass feeder, expansion tanks and air separator tank.

28.29 Piping and Accessories.

28.29.1 Heating water piping shall be Type L copper or ASTM A53 SCH 40 black steel. Ball valves shall be utilized for sizes up to 3", larger piping shall be equipped with gate valves. Butterfly valves are not acceptable. Piping supports shall be in accordance with MSS SP-59 and MSS SP-69. System shall include an air separator, expansion tank, chemical bypass feeder and makeup water connections. Equip circulation pumps with strainers, check valve, balance valve, flexible couplings and isolation valves to permit pump maintenance. Pipe pump body drain and air vents from expansion tank to nearest floor drain. Provide pressure gages arranged such that pump differential pressure may be witnessed. Entire pump assembly shall be mounted on a structural steel frame equipped with housed spring vibration isolators. Provide manual or automatic waterflow control valves at each coil and balancing valve in each loop of piping branch.

28.29.2 Heating hot water piping shall be insulated with 1-1/2" glass fiber insulation. Piping passing through hangers shall be supported on insulation shields.

28.30 Chiller Equipment.

28.30.1 The chilled water system shall include exterior and interior mounted equipment. Chiller components exterior to the building shall be protected from freezing through the use of a glycol solution. Manufacturer's standard packaged controls shall be provided to handle all aspects of compressor staging and safeguarding. Pumps shall be base mounted and selected for non-overloading operation at all conditions. Close coupled pumps are not acceptable.

28.31 Chilled Water Piping.

28.31.1 Chilled water piping system shall include an air separator, expansion tank, chemical bypass feeder, makeup water connections, chemical treatment systems, surge tank if system volume is not adequate, temperature and pressure ports, temperature and pressure gages, flow switch, and all other required appurtenances. Circulation pumps shall be equipped with strainers, check valve, balance valve, flexible couplings and isolation valves to permit pump maintenance. Pipe pump body drain and air vents from expansion tank to nearest floor drain. Provide pressure gages arranged such that pump differential pressure may be witnessed. Piping and valves shall be similar to that described above for heating water.

28.31.2 All chilled water piping and exterior chilled water piping shall be insulated with 1-1/2" cellular glass. Piping passing through hangers shall be supported on insulation shields.

28.31.3 Piping for condensate drainage from air unit connections to the drain receptacle may be PVC. All piping shall be 3/4" minimum and full size of unit connection minimum. Piping shall be insulated with 1" cellular glass.

28.32 Thermostats.

28.32.1 A Thermostat shall be provided for each constant volume air unit, each zone, each VAV terminal unit, and split system air unit. Small rooms with similar load profiles, may be grouped together on a single thermostat. Thermostat shall not be located in location subject to unrepresentative temperatures. Large spaces may require multiple sensing points. Each special use area or room and conference room shall have a separate comfort zone.

28.33 Unified Facility Guide Specifications (UFGS).

28.33.1 The project specifications shall be prepared using Unified Facility Guide Specifications (UFGS). The guide specifications shall 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. Major deviations (such as use of a non-UFGS specification, or significant re-writing of a USGS specification) will not be allowed without prior approval from the Savannah District. 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. 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".

28.34 Seismic Protection.

28.34.1 Seismic protection (based on the seismic zone and geographical location of project; Hunter Army Airfield is located in Seismic Design Category C) shall be provided for this project. Design requirements shall be in accordance with Army Technical Instructions TI 809-04, Seismic Design for Buildings, 31 Dec 1998. Detailed narrative and documentation shall be provided in Design Analysis to support the seismic protection design.

28.35 Cathodic Protection.

28.35.1 Cathodic protection and protective coatings shall be provided for the following buried or submerged ferrous metallic structures regardless of soil or water resistivity in compliance with the National Association of Corrosions Engineers (NACE) criteria and standards.

(1) Natural gas piping
(2) Fire protection piping
(3) Ductile or cast iron pressurized piping under floor (slab on grade) in soil
(4) Underground heat distribution, glycol/water solution piping, and chilled or condenser water piping in ferrous metallic conduit in soils with resistivity of 30,000 ohm-cm or less.
(5) Steel casing for underground hydraulic elevator jack
(6) All fire hydrants and materials subject to corrosion.

28.36 Quality and Workmanship of Mechanical Equipment, Piping systems, Materials and System Components.

28.36.1 The project specifications form the basis for the required level of workmanship and quality of all equipment, piping systems, materials, and system components provided for this project. 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. All products shall be supported by a service organization. All mechanical system components shall be environmentally suitable for the intended application. Roof mounted equipment shall not be used on this project. All floor-mounted equipment shall be installed on concrete equipment pads. Equipment pads shall extend a minimum of 6 inches beyond the footprint of the equipment on all sides. All suspended equipment shall be properly supported according to the manufacturer's instructions. Vibration isolation devices shall be provided for all equipment which house rotating components, and shall be in accordance with equipment manufacturer’s recommendation.

28.37 Mechanical Systems Maintainability and Accessibility.

28.37.1 Accessibility features (i.e. doors, access panels, etc.) shall be designed and included in this project as required to allow complete access to all mechanical systems and system components which are concealed, or require adjustment, inspection, maintenance, and replacement. Provide adequate clearance around all pieces of equipment for periodic maintenance, inspection and cleaning. Service of one piece of equipment shall not require disturbance of adjacent equipment.

28.38 Work Coordination.

28.38.1 The contractor is responsible for insuring that the installation of all mechanical features required is coordinated with the work of all other trades.

28.39 Testing, Adjusting, and Balancing (TAB) of HVAC Systems.

28.39.1 All HVAC systems shall be tested, adjusted, and balanced in accordance with the requirements of AABC or NEBB Procedural Standards. UFGS Specification Section 15990A TESTING, ADJUSTING, AND BALANCING OF HVAC SYSTEMS forms the basis for HVAC system TAB. The TAB Firm shall be either a member of AABC or certified by NEBB, and certified in all mechanical system categories applicable to this project. The TAB Standard shall be used for all aspects of TAB.

28.39.2 A comprehensive test and balance (TABS) effort of the entire facility will be required.

28.39.3 All new airside systems require TABS in order to validate space pressure relationships, pressure relationships between departments, and the pressure relationships between interior and exterior spaces.

28.39.4 Air quantities will be indicated for each distribution device. Operating conditions of all air moving equipment will be scheduled. Outdoor air dampers will be adjusted to correspond to the building exhaust air quantities.

28.39.5 All new waterside equipment requires TABS in order to verify energy distribution and consumption. Water quantities will be indicated for each heat transfer element and pump.

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28.39.6 Commissioning of all new mechanical equipment will be conducted. The commissioning effort will verify that system components are adequately installed, are operating within the tolerances of the design, control components are calibrated, and that the TABS work was conducted effectively. Commissioning shall be done in accordance with the requirements of UFGS 15995, COMMISSIONING OF HVAC SYSTEMS. All meters for utilities and other measurements shall be provided and installed to verify commissioning requirement. Metering shall not be required at each mechanical device. Meters are only required at building service entrances for gas, electricity, and water.

29. ELECTRICAL DESIGN

29.1 Codes and Standards

29.1.1 The design and construction of the electrical systems shall be in compliance with: (1) National Fire Protection Association Standards, (2) the rules and recommendations of ANSI C2, (3) as required herein, and (4) the referenced Unified Facility Guide Specifications (UFGS). 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.

29.2 Site Electrical.

29.2.1 Primary cable shall be rated 15 KV EPR, 133%, MV-90, 3#1 copper conductors. Provide cable terminators, fused cutouts, lightning arrestors and all necessary hardware. Pad mounted transformers shall have liquid level gauge, liquid temperature gauge, drain valve, bayonet fusing, loop feed, pressure relief valve, tap changer, KWH digital demand metering package at the

pad mounted transformer in accordance with TI 800-1 (compatible with the Installation's EMCS system), rated 15 kilo-volt delta, (secondary voltage as determined by design), dead front, bolted tank cover, corrugated cooling fins, steel divider, RTE bushing wells, ground pads, 4-position sectionalizing load break switch, 65 degree rise, R-temp filled (non-PCB), 95 KV BIL, green color, six hole spade secondary lugs, parking stands, filling plug, pressure-vacuum gauge, C.T.'s grounding lug, and lifting lugs.

29.2.2 A minimum two-way 4-inch duct-bank (one conduit for the phase conductors, the other for a spare) shall be provided from the riser pole to the pad mounted transformer. The point of connection to the Installation 13.8/7.9 kV, 3 phase, 4 wire overhead distribution can be had south of Barron Loop and north of Building 128. Use next pole in succession from the existing riser poles for primary service riser for this facility. The duct bank shall be a minimum 30 inches below grade. Provide manholes as required.

29.2.3 Manholes shall have the following dimensions: 8 ft X 8 ft X 7 ft high. Minimum cover opening shall be 32 inches. All manholes shall have sumps. Primary manholes shall have four 5-inch cast in terminators with end bells on each side of the manhole. Precast-concrete manholes shall have the required strength established by ASTM C 478. Frames and covers shall be made of gray cast iron and a machine-finished seat shall be provided to ensure a matching joint between frame and cover. All frames and covers shall be rated for H20 wheel loading. Cast iron shall comply with ASTM A 48, Class 30B, minimum.

29.2.4 The construction of the new facility may require the removal of a portion of the existing overhead power distribution system and installation of a new underground duct-bank and manhole system. Provide manhole(s) and 15 KV 4-way switch(es) as required. System continuity shall be maintained. Refer to the 08 April 2002 version of the anti-terrorism codes for additional criteria.

29.2.5 Any outages on the existing systems shall be scheduled for an off peak time (night, weekend, holiday) to be determined by the Hunter AAF DPW. 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 the Hunter AAF DPW shall be done through the Contracting Officer's Representative.

29.2.6 The landscape architect shall be consulted to provide appropriate screening of the pad-mounted transformer and 15 kV switch(es). Pad-mounted transformer and 15 kV switch(s) protection and location shall be in accordance with UFC 3-600-1.

29.3 Site Communications

29.3.1 All outside cabling plant shall be provided by the DOIM. Two 4-inch encased duct banks will be provided from the Systems Room, extended to existing telecommunications manhole, MH103, located on the north side of Duncan Drive, approximately 400 feet away. One of the 4-inch ducts will be provided with four 1-inch innerducts. The DOIM will extend copper and fiber optic cable plants to the Systems Room and make final terminations on the building entrance terminals. The successful Design/Build Contractor shall coordinate work with COMCAST, the local CATV supplier, to ensure that CATV cable plants are extended to the building. One 4-inch concrete encased duct bank for CATV will be provided from the Systems Room and stubbed five feet outside the building. Duct banks shall be a minimum 24 inches below grade. A pull wire shall be provided in all empty ducts.

29.3.2 The Design/Build Contractor shall exercise care when working around the existing cables in the existing manhole. Any cables damaged by the Design/Build Contractor shall be repaired or replaced by the Design/Build Contractor immediately and at no additional cost to the Government.

29.3.3 Coordinate the tie-in of new ducts with the Hunter AAF DOIM through the Contracting Officer's Representative. The ducts shall be placed in the lowest terminators. No conduit crossovers in the telecommunications manhole will be allowed.

29.3.4 Manhole and ductbank systems must be completed (to include pumped out and clean), inspected and accepted by the DOIM at least six (6) months prior to the BOD (Beneficiary Occupancy Date) for the project.

29.3.5 For additional criteria, See Installation Information Infrastructure Architecture (I3A) Design and Implementation Guide and Outside Plant Performance Requirements.

29.4 Utility Routing

29.4.1 All power and telecommunications 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 with galvanized rigid steel conduits.

29.4.2 Coordinate the installation of the underground electric and tele communication lines with all other new utilities which shall include but not be limited to: power, telecommunications, 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 telecommunication lines and other utility lines shall be 36 inches vertically and 36 inches horizontally when running adjacent. If utilities are crossing minimum separation shall be 12 inches 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.

29.4.3 Prior to commencing work on any new underground power or telecommunication 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 Installation’s DPW and DOIM, and by the Contracting Officer's Representative.

29.4.4 The routing of the secondary and telecommunications service duct lines into the buildings shall be coordinated with the structural footings to avoid any conflicts.

29.4.5 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.

29.5 Grounding

29.5.1 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.

29.5.2 The Premises Distribution System shall be grounded in accordance with TIA/EIA 607 and I3A. Provide a #6 ground wire in the Systems Room for bonding of equipment mounted on the telephone terminal backboard and equipment rack.

29.5.3 A grounding counterpoise shall be provided around the transformer pad, chiller and around the 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 telecommunications 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.

29.5.4 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. Chemical or other similar designs, which calls for the user to maintain, will not be used. Documentation of test results will be provided to the Contracting Officer’s Representative.

29.5.5 Grounding conductors shall be copper. Driven grounding electrodes shall be 3/4 inch diameter solid rods of the following materials: copper or copper-clad steel. Rods over 10 feet long may be sectional built-up type.

29.5.6 Grounding and bonding shall conform to UL 467.

29.6 Exterior Lighting

29.6.1 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 be of sharp cut-off construction and utilize color corrected metal halide (MH) lamps. Parking lots and street lighting shall be photocell and time clock controlled and fed from separate branch circuits. All site lighting (parking lots, street lighting, walkways) shall be zoned and shall have a separate photocell and time clock 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 0.5 footcandles with bollards of a Southern Coastal Georgia motif. Parking areas shall be illuminated to 0.5 footcandles and utilize high cut-off type fixtures mounted on 30 foot 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 in height above the ground. Facility entrances/exits shall be illuminated with wall mounted fixtures of a Southern Coastal Georgia motif or recessed fixtures mounted in the soffit or surface mounted fixtures under the canopies, if applicable. All exterior fixtures shall be dark bronze anodized aluminum.

29.6.2 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 mph 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.

29.6.3 A lighted marquee sign, worded "Hunter Army Airfield Physical Fitness Center" shall be provided in accordance with Installation guidelines at the corner of Billy Mitchell and Duncan, and at the location of the existing and enlarged parking lot.

29.6.4 The Running Track lighting will be controlled by a local one hour timer control, time clock signal off set at 11:00 p.m. via lighting contactors. The lighting contactors will be provided with an override feature and an off position for manual operation.

29.6.5 The Running Track lighting will be accomplished with metal halide lamped fixtures mounted on poles. Fixture quantities, lamp wattages and pole heights shall be based on setback distances and footcandle levels as recommended by the IES for recreational activities. Ensure proper aiming of and inclusion of design features to limit light pollution.

29.6.6 Provide new lighting standards at the existing and enlarged parking lot adjacent to the running track and associated wiring and control as noted in paragraphs 29.6.1 and 29.6.2.

29.7 Lighting

29.7.1 Lighting shall be provided in all rooms in the building. Average maintained horizontal illumination levels at 30 inches 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 (uniformity, etc). Design should be based on the middle of the ranges; not the high values. Energy conservation methods shall be in accordance with ASHRAE 90.1. Interior lighting calculations for rectangular rooms shall be based on Zonal Cavity method. Irregularly shaped rooms will utilize the point-by-point method for lighting calculations. Lighting calculations shall be submitted to the Energy Office for review.

29.7.2 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. Metal Halide lighting will be used for the high bays areas. As an option, multi-lamp compact fluorescent high bay lighting fixtures could be utilized in lieu of metal-halide lamped fixtures. Fluorescent lamps for general purpose lighting will be cool white, 4100 degrees Kelvin with a minimum CRI of 80. Lighting in the Gym shall be designed to avoid direct views to lamps or reflectors from the bleacher seating.

29.7.3 Occupancy sensors shall be used in offices, conference rooms, workrooms, file rooms, storage rooms, janitor closets and public restrooms. Private restrooms are to have light switches. Occupancy sensors may also be used in other areas for energy savings.

29.7.4 Fluorescent lamps shall be T8 or compact. The usage of U-lamps is not recommended due to higher initial cost. Fluorescent ballast shall be the energy efficient, 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.

29.7.5 Wall switches shall be located on the strike side of a door, 6 inches from the door opening, unless otherwise functionally required. Multiple switching will be provided for rooms as directed by the user, where indicated on standard room guide plates, and in large rooms and areas. Multiple switching through the same light fixtures will be achieved by providing these fixtures with two ballasts. One switch/ballast combination will control the inner lamps, while the second switch/ballast combination will control the outer lamps.

29.7.6 Emergency Lighting

29.7.6.1 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. All electrical, telecommunications and mechanical rooms shall also be provided with emergency lighting. Emergency battery ballasts in fluorescent fixtures will serve as emergency lights. Exit fixtures shall be LED (red) with built-in battery backup capability.

29.7.6.2 Upon loss of power the emergency lamp shall light regardless of the light switch position.

29.7.7 General offices and corridors will be illuminated using 2 foot by 4-foot static troffers with virgin acrylic lenses. Offices and all other areas with a large number of personal computer workstations will have low glare and low brightness fixtures such as indirect or fluorescent troffers with parabolic louvers. Small storage rooms, mechanical rooms, and electrical spaces will be provided with one foot by four foot fluorescent fixtures with wrap around virgin acrylic lenses. Compact fluorescent type down lighting fixtures and other types of lighting fixtures will be used in areas where special attention must be given to the aesthetics.

29.7.8 Incandescent lighting fixtures may be utilized only in small, infrequently used areas, such as janitor closets.

29.7.9 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.

29.7.10 Provide dimming of linear type and compact fluorescent lamps in the Conference room. Also provide a ceiling fan with control at the room entrance. Dimming of fluorescent lighting fixtures, where practical, shall take into account daylighting through the use of photo sensors.

29.7.11 Security lighting shall be provided at service entrances and at utility rooms (i.e. mechanical, electrical, systems, 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.

29.7.12 Wall mounted light fixtures at main entrances and other high visibility areas shall be selected for aesthetics and compatibility with the building architecture.

29.7.13 Lighting shall be provided for specialty items such as display cases, accent lighting and other items as necessary.

29.7.14 Basketball and Racquetball Courts and Swimming Pool shall be based on the Class of Play Type II per IES. Lamps shall be metal halide. Swimming Pool lighting fixtures shall be of the indirect type located around the perimeter of the pool. Wattages and layout will be determined by the Design/Build Contractor. Each racquetball court, basketball court and swimming pool shall be controlled individually from the Service Desk with duplicate controls at the pool office. A low voltage switching panel with pilot lights and keyed lockout shall be installed at the service desk and pool office for the purpose of lighting control.

29.7.15 A low voltage switching relay panel shall be installed adjacent to the panelboard serving the pool, basketball and racquetball court lighting.

29.8 Receptacles

29.8.1 Provide a minimum of one general-purpose 120 volt, 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. 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.

29.8.2 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 extension cord. Floor receptacles shall not be used.

29.8.3 An overhead projector system will be used in the Conference Room. Provide the necessary conduits, wiring, outlets, etc. for the User to connect a laptop computer to operate with this projector. Location of these outlet will be coordinated with the User after contract award. Also coordinate location with overhead ceiling fan if provided.

29.8.4 Each computer workstation shall be provided with a duplex receptacle outlet adjacent to the combination voice/data outlet. All receptacles serving computer equipment shall be labeled and served from dedicated branch circuits with no more than four receptacles per circuit. Each branch circuit will be provided with a separate neutral conductor.

29.8.5 Special Function Receptacles

29.8.5.1 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.

29.8.5.2 Dedicated outlets shall be provided for the telephone terminal backboard, copying machines, FAX machines and laser printers. The user may adjust locations after the Final Review stage.

29.8.5.3 Special purpose 100 Ampere, 208Y/120 Volt, 3 phase, 4 wire receptacle outlets, three each, one per each basketball court, shall be provided behind a lockable cover for special events. Coordinate locations with User after contract award.

29.8.6 Ground fault circuit interrupter type receptacles in weatherproof enclosures shall be provided on the outside areas at entrances to the facility.

29.8.7 Ground Fault Circuit Interrupter (GFCI) Outlets

29.8.7.1 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. GFI receptacles are to be wired such that the loss of power on one receptacle does not affect downstream receptacles.

29.8.7.2 Provide a dedicated GFCI duplex receptacle outlet for the ice machine, one commercial washer and one dryer in the Laundry Room.

29.9 Premises Distribution System (PDS)

29.9.1 A completely operational cabling system including, but not limited to, all necessary raceway, cabling, terminations, jacks, patch panels, and faceplates shall be provided in accordance with TIA/EIA 568-B. All combination outlets (voice/data) and cable TV (CATV) outlets will be 18 inches above finish floor (AFF), except wall voice outlets will be 54 inches AFF. One voice and one data port will be in the same outlet. The cable for the outlet will be 4 pair, 24 AWG solid unshielded twisted pair (Category 6), copper, white in color for voice and a 4 pair, 24 AWG solid unshielded twisted pair (Category 6), blue in color for data. Termination of copper at instrument end will be in a eight position connector (Category 6) for voice and eight position connector (Category 6) for data. Termination at the Systems Room will be a 110 type block (Category 6) mounted on a 4 foot by 8 foot by 3/4 inch telephone terminal backboard for voice and 110 type surge protected patch panels (Category 6) for data, 568B configured. Patch panels shall be mounted in 19 inch equipment racks.

29.9.1.1 The cable for the CATV shall be RG-6 and the connector shall be a "F" type and terminated on splitters. All CATV headend equipment, incoming service, etc. shall be furnished and installed by the local Cable TV Company. Outlets will be located in the Exercise, Cardio, Lounge, Sauna, Weight Room and other selected spaces as directed by the User.

29.9.1.2 DOIM will install the building entrance terminals, patch cords, and fiber optics patch panels for the building. DOIM will extend a fiber optics cable to and install a new fiber optics hub in the Systems Room. Design Build Contractor to provide space for DOIM's equipment.

29.9.1.3 All combination voice and data jacks shall be installed in a 4-1/2 inch x 2-1/8 inch deep square box with a single gang plaster ring with 1 inch conduit stubbed out into the corridor cable tray system. The single gang plaster ring will allow a four-position single gang faceplate to be installed and the box will be sized to accommodate the slack cable.

29.9.2 Backbone distribution will consist of multi-pair copper cable for voice and 24-strand multi-mode fiber optic cable for data. The fiber optic data cable will be terminated on fiber optic patch panels mounted in the equipment rack. The fiber optic cable will be terminated using SC connectors.

29.9.3 Outlet Density. For planning purposes, when actual voice/data outlet locations are not known and cannot be determined with available information, reasonably accurate total voice/data outlet count estimations can be obtained based on the size and dedicated usage of the space. Calculations are based on gross square footage (overall building footprint without deducting for

hallways, equipment rooms, restrooms, etc.), and the average outlet density for that specific category of facility space. Currently, eight categories of facility space are identified, each with its own average voice/data outlet density. The factors fall within the ranges given in TIA/EIA 569A.

	Facility Space Category	Area (SF) per Outlet
a.	Administrative Space	80
b.	Laboratory/Technical Space	50
c.	Barracks Space	315
d.	Medical/Clinic Space	80
e.	Classroom Space	80
f.	Warehouse Space	1000

29.9.4 Copper and Fiber Optic Cable Testing. The Contractor shall utilize the equipment manufacturer's standard commercial/quality assurance practices during system installation. The Contractor shall document all results. Contractor will test all copper and fiber optic cable IAW TIA/EIA standards and provide test results.

29.9.5 For additional criteria, see Installation Information Infrastructure Architecture (I3A) Design and Implementation Guide.

29.9.6 Conduit from telephone or CATV outlets shall be a minimum of 1 inch electrical metallic tubing (EMT) conduit. 1 inch EMT conduits shall be installed as a "home run" between the Systems Room telephone backboard or patch panel to 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. An optimal fill ration of 40% should be the design plan. A working space of 12 inches minimum above the cable tray shall be provided. The EMT conduit shall be physically strapped to the cable tray and an anti-chaffing grommet attached. All empty conduit 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).

29.10 Fire Alarm System

29.10.1 The building will have an automatic fire sprinkler system. The fire alarm system will consist of a control panel located in the Main Electrical Room, 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, smoke and heat detectors, and remote annunciator located in the Front Lobby. Fire Alarm system for this building shall comply with the Americans with Disabilities Act (ADA).

29.10.2 Manual pull stations will be provided at all exits, exterior entrances, and in all electrical, mechanical, systems rooms. Manual pull stations shall be of the keyed type. Glass rod type is not allowed. In addition to the horns/strobes throughout the facility, provide them also in all electrical, mechanical and communications rooms.

29.10.3 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. Strobe lights shall meet Underwriter's Laboratories (UL) Standard 1971 and shall be synchronized.

29.10.4 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 which are not inherently addressable (i.e. tamper, flow switches etc.) shall be equipped with addressable monitor and control modules.

29.10.5 Coordinate with the other disciplines to provide tamper switches on all fire alarm system control valves and the Post Indicator Valve (PIV).

29.10.6 Conduit and wiring shall be installed in accordance with Specifications Section 13851A. System shall be a Class 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.

29.10.7 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.

29.10.8 Provide a Monaco D-500 Fire Alarm Transmitter with integral MOV based surge protection to match Installation standards. Locate the Fire Alarm Control Panel (FACP) in the Electrical Rooms. Coordinate with Fire Marshal for additional requirements.

29.10.9 Provide a smoke detector at the FACP location per NFPA 72, para. 1-5.6.

29.10.10 Coordinate fire alarm system with the requirements of the Mass Notification System required elsewhere in the RFP. Mass Notification system shall be in accordance with UFC4-021-01.

29.11 Service Equipment.

29.11.1 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.

29.11.2 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.

29.11.3 A short-circuit and overcurrent protective device coordination study shall be provided for the complete electrical distribution system.

29.11.4 All interior cables will be copper. No aluminum conductors will be used in the construction of this facility. The use of 75 or 90 degrees C terminals and insulated conductors are required.

29.12 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.

29.13 Lightning Protection

Lightning protection shall be provided for the 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.

29.14 Transient Voltage Surge Protection (TVSP)

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.

29.15 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.

29.16 Cathodic Protection.

29.16.1 The Contractor shall perform all pH tests, salinity tests, resistivity measures, etc., required to design the corrosion control and grounding systems.

Cathodic protection and protective coatings shall be provided for the following buried or submerged ferrous metallic structures regardless of soil or water resistivity in compliance with the National Association of Corrosions Engineers (NACE) criteria and standards.

(1) Natural gas piping.
(2) Fire protection piping.
(3) Ductile or cast iron pressurized piping under floor (slab on grade) in soil.
(4) Underground heat distribution, glycol/water solution, and chilled or condenser water piping in ferrous metallic conduit in soils with resistivity of 11,800 ohm-in or less.

29.17 The electrical system shall comply with the Americans with Disabilities Act (ADA) for buildings identified in the RFP with this requirement.

29.18 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, 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).

29.18.1 The design of the electrical distribution system shall include twenty-five percent future load growth in all cable and equipment. Twenty-five percent spares shall be provided in all lighting and receptacle panelboards.

29.18.2 Panelboards shall not be located in corridors or any other open places. Panelboards and switchboards shall only be located in electrical/utility rooms. Series rated breakers shall not be used.

29.19 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 the building. These loads generate harmonics, which can overload conventionally-sized conductors or equipment causing safety hazards and premature failures. ETL 1110-3-403, IEEE Std. 1100 and IEEE Std. 519 shall be used as design guides.

29.19.1 ETL 1110-3-412 shall be used in the selection and application of transformers and dielectrics. K-rated transformers shall be supplied to serve nonlinear loads. "K" factor ratings shall be scheduled. Panelboards serving nonlinear loads shall have double-rated neutral buses. Motors connected to the same power source as nonlinear loads shall also be upgraded in size similarly. True RMS sensing meters, relays, and circuit breaker trip elements shall be used with nonlinear loads.

29.20 For additional electrical criteria, See TI-800-01 Design Criteria).

29.21 Public Address (PA) System

*10
29.21.1 A prewired public address system, including cabling and raceways, will be provided for the entire facility. Provide slack cable in outlet boxes located at 18 foot intervals in corridors and at 12 foot intervals in waiting rooms for connection to speakers. System headend equipment, components, speakers, back-boxes, final connections, etc. will be provided by the Design/Build Contractor. Broadcast of voice messages will be via the telephone system. Coordinate the PA system and possible integration with the ~~requirements for the~~ Mass Notification System required elsewhere in this RFP. The Mass Notification System shall be in accordance with UFC4-021-01.

29.22 Sound System

29.22.1 A high quality, low-level distributed sound system suitable for voice and music transmission will be provided throughout the facility.

*10
29.22.2 The sound system will include cabling, raceways, amplifier, tape deck, CD player, speakers, back-boxes, volume control, final connections, etc. provided by the Design/Build Contractor. The system shall have the capability of selectively turning the music off in any room. Coordinate the Sound System and possible integration with the Mass Notification System required elsewhere in this RFP. The Mass Notification System shall be in accordance with UFC 4-021-01.

29.22.3 Provide the services of an acoustics engineer for the design and installation of the sound system with special emphasis given to the Gymnasium and Swimming Pool acoustics.

29.23 CCTV System

29.23.1 Design/Build Contractor shall install conduit and pull-cords for future closed circuit TV system. MCA project will provide the conduit for the system, but DCAS would be responsible for providing future wiring and control equipment. The system needs to cover all areas of the Gym, excluding the

bathrooms, locker rooms, sauna, and whirlpool areas. All areas will be viewed from the checkout area and from the manager's office.

29.24 Sauna Alarm System

29.24.1 An emergency panel shall be located behind the Service Desk or in the Admin. Area as directed by the Government. Panel shall have 4 zones with a LED red light for each zone. The red light shall light whenever the zone is activated. The panel shall have an audible tone to signal whenever the sauna emergency manual switch has been activated. The panel shall have the capability of being silenced at each zone. A new zone in alarm shall override the silence button and activate an audible tone and signal the zone red in alarm. Wiring shall be supervised with a yellow light at each zone to indicate trouble.

29.24.2 System trouble shall be provided in the panel to indicate panel problem or a problem within any zone. The panel shall be configured as follows:

1. Zone 1 – Sauna Room
2. Zone 2 – Future
3. Zone 3 – Future
4. Zone 4 - Future

29.25 Card Access System

29.25.1 The Card Access System will consist of empty conduit with pull string and outlet boxes for future installation of equipment and devices. Two outlet boxes fitted with blank cover plates will be located at entrances to the facility, one adjacent to the door mounted on the exterior wall and the other mounted above the door, inside the facility. Provide an empty conduit from the outlet box located inside the facility, routed to and stubbed up at the control desk. An empty conduit from the control desk to the Systems Room will be provided.

29.26 Unified Facility Guide Specifications (UFGS)

29.26.1 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.

29.26.2 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.

29.26.3 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 and Alarm System, Addressable System
16070A Seismic Protection for Electrical Equipment
16370A Electrical Distribution, Aerial

16375A Electrical Distribution System, Underground
16415A Electrical Work Interior
16528A Exterior Lighting Including Security and CCTV Application
16710A Premises Distribution System
16751A Closed Circuit Television Systems
16768A Fiber Optic Data Transmission System
16770A Radio and Public Address System

29.27 Location of Documents referenced in Section 29.

29.27.1 TI-800-01 & TI-800-04 - http://www.hnd.usace.army.mil/techinfo/ti.htm

29.27.2 Specifications Sections - http://www.ccb.org/ufgs/ufgs.htm

29.27.3 Installation Information Infrastructure Architecture (I3A) Design and Implementation Guide - http://arch-odisc4.army.mil/I3A/i3a.htm

29.27.4 TM 5 803-7 Civil Engineering Programming Airfield and Heliport Planning Criteria - http://www.hnd.usace.army.mil/techinfo/engpubs.htm

30. SUSTAINABLE DESIGN

30.1 Sustainable Design Goal. The goal for this project is to achieve at least 50 points using SPIRIT, the Army's project rating tool for sustainable design, for each building type. SPIRIT is a modified version of the US Green Building Council's LEED project rating tool. The Contractor shall edit UFGS guide specification 01335 Sustainable Design and Development, and adhere to the requirements and submittal procedures contained therein. The spreadsheet for Recycled Content required by Section 01335 is attached to the solicitation CD in the Notes folder. The Contractor shall submit at each submittal phase the spreadsheet which indicates which SPIRIT points are to be achieved.

30.2 Mandatory Requirements. The SPIRIT Points Summary Table, Appendix F, 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 E. 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.

30.3 Prohibited Solutions. The following will not be accepted as proposed features to earn SPIRIT points: 1.C3 Brownfield, 1.C4 Proximity to transit system, 1.C7 Reduce ROOF Heat Islands, 1.C10 Cluster Facilities, 1.C10 Mitigate Offsite Impacts, 3.C6 Green Power, 4.C1 Building Reuse, 5.C6 Operable windows, and 5.C6 Non-perimeter Controls.

- End of Section -

APPENDIX A
REFERENCES

APPENDIX A

REFERENCES

GOVERNMENT PUBLICATIONS

CODE OF FEDERAL REGULATIONS
Government Printing Office
Washington, DC 20402

49 CFR 192	Transportation of Natural and other Gas by Pipeline: Minimum Federal Safety Standards
40 CFR 280	Owners and Operators of Underground Storage Tanks
49 CFR 195	Transportation of Hazardous Liquids by Pipeline
10 CFR 430	Energy Conservation Program for Consumer Products

Department of the Navy

Standardization Documents Order Desk
700 Robbins Avenue, Bldg. 4D
Philadelphia, PA 19111-5094

Unified Facilities Criteria (UFC)

UFC 3-600-01	Fire Protection Engineering for Facilities

U.S. Government Printing Office

Superintendent of Documents
U.S. Government Printing Office
Washington, DC 20402

U.S. Government Printing Office (GPO) Style Manual

NON-GOVERNMENT PUBLICATIONS

AIR MOVEMENT AND CONTROL ASSOCIATION
30 W. University Drive
Arlington Heights, IL 60004-1893

AMCA 210	(1985) Laboratory Methods of Testing Fans for Rating

AIR CONDITIONING AND REFRIGERATION INSTITUTE
4301 North Fairfax Drive
Arlington, VA 22203

ARI 310/380	(1993) Packaged Terminal Air-Conditioners and Heat Pumps
ARI 440	(1998) Room Fan-Coil and Unit Ventilator
ARI 445	(1987; R 1993) Room Air-Induction Units
ARI 880	(1998) Air Terminals

AMERICAN ARCHITECTURAL MANUFACTURERS ASSOCIATION (AAMA)
1827 Walden Office Square, Suite 104
Schaumburg, IL 60173-4268

AAMA 101	Voluntary Specifications for Aluminum, Vinyl and Wood Windows and Glass Doors
AAMA 605	Voluntary Specification Performance Requirements and Test Procedures for High Performance Organic Coatings on Aluminum Extrusions and Panels
AAMA 607.1	Voluntary Guide Specifications and Inspection Methods for Clear Anodic Finishes for Architectural Aluminum
AAMA 1503	Voluntary Test Method for Thermal Transmittance and Condensation Resistance of Windows, Doors, and Glazed Wall Sections

AMERICAN BEARING MANUFACTURERS ASSOCIATION
1200 19th Street, NW
Washington, DC 20036-4303

AFBMA Std 9	(1990) Load Ratings and Fatigue Life for Ball Bearings
AFBMA Std 11	(1990) Load Ratings and Fatigue Life for Roller Bearings

AMERICAN BOILER MANUFACTURERS ASSOCIATION (ABMA)
950 N. Glebe Rd, Suite 160
Arlington, VA 22203-1824

ABMA ISEI	Industry Standards and Engineering Information

ACI INTERNATIONAL (ACI)
P.O. Box 9094 Farmington Hills, MI 48333-9094
Ph: 248-848-3800
Fax: 248-848-3801
Internet: http://www.aci-int.org

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
11 West 42 Street
New York, NY 10036

ANSI B16.5	Pipe Flanges and Flanged Fittings
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1801 Alexander Bell Drive
Reston, VA 20190-4400
Ph: 800-548-2723
Fax: 703-295-6333
Internet: www.pubs.asce.org
e-mail: marketing@asce.org

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100 Bar Harbor Drive
West Conshohocken, PA 19428-2959

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ASTM C 591	(1994) Unfaced Preformed Rigid Cellular Polyisocyanurate Thermal Insulation
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ASTM D 2310	(1997) Machine-Made "Fiberglass" (Glass-Fiber-Reinforced Thermosetting-Resin) Pipe
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AMERICAN SOCIETY OF HEATING, REFRIGERATING AND AIR CONDITIONING ENGINEERS
1791 Tully Circle. NE
Atlanta, GA 30329-2305

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Three Park Place
New York, NY 10016-5990

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ASME (1996) Pipe Flanges and Flanged Fittings NPS 1/2 Through NPS 24

ARCHITECTURAL WOODWORK INSTITUTE
1952 Isaac Newton Square W.
Reston, VA 20190

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ASSOCIATED AIR BALANCE COUNCIL
1518 K Street NW, Suite 708
Washington, DC 20005

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COUNCIL OF AMERICAN BUILDING OFFICIALS
5203 Leesburg Pike, Suite 708
Falls Church, VA 22041

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TELECOMMUNICATIONS INDUSTRY ASSOCIATION/ELECTRONIC INDUSTRIES ASSOCIATION (TIA/EIA)
2500 Wilson Blvd
Arlington, VA 22201-3834

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120 Wall Street, 17th Floor
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INSTITUTE OF ELECTRICAL AND ELECTRONICS ENGINEERS INC. (IEEE)
445 Hoes Lane, P.O. Box 1331
Piscataway, NJ 08855-1331

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8501 E. Pleasant Valley Rd
Cleveland, OH 44131

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INTERNATIONAL ASSOCIATION OF PLUMBING AND MECHANICAL OFFICIALS
20001 Walnut Drive South
Walnut, CA 91789-2825

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INTERNATIONAL CODE COUNCIL, INC
5203 Leesburg Pike, Suite 708
Falls Church, VA 22041-3401

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INTERNATIONAL CONFERENCE OF BUILDING OFFICIALS
5360 Workman Mill Road
Whittier, CA 90601-2298

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NATIONAL ASSOCIATION OF CORROSION ENGINEERS INTERNATIONAL
1440 South Creek Drive
Houston, TX 77084-4906

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180 S. Washington Street
Falls Church, VA 22046

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1300 N 17th Street, Suite 1847
Rosslyn, VA 22209

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NATIONAL ENVIRONMENTAL BALANCING BUREAU
8575 Grovemont Circle
Gaithersburg, MD 20877-4121

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NATIONAL FIRE PROTECTION ASSOCIATION
One Batterymarch Park
Quincy, MA 02269-9101

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PLUMBING AND DRAINAGE INSTITUTE
45 Bristol Drive, Suite 101
South Easton, MA 02375

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PO Box 221230
Chantilly, VA 20153-1230

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STEEL DOOR INSTITUTE (SDI)
30200 Detroit Road
Cleveland, OH 44145-1967

ANSI A250.8/SDI 100 Standard Steel Doors and Frames

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

AMERICAN ASSOCIATION OF STATE HIGHWAY AND TRANSPORTATION OFFICIALS (AASHTO)
444 N. Capital St., NW, Suite 249
Washington, DC 20001
Ph: 800-231-3475
Fax: 800-525-5562
Internet: www.aashto.org

ARMY TECHNICAL INSTRUCTIONS (TI)

Internet: http://www.hnd.usace.army.mil/techinfo/

TI 800-01	Design Criteria
TI 804-01	Area Planning, Site Planning and Design
TI 804-11	POV Site Circulation and Parking
TI 809-02	Structural Design Criteria for Buildings
TI 809-04	Seismic Design for Buildings
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TI 809-30	Metal Building Systems
TI 811-16	Lighting Design
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TM 5-803-13	Site Planning and Design
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TM 5-822-2	General Provisions and Geometric Design for Roads, Streets, Walks and Open Storage Areas
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 5-809-12	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
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ETL 91-6	Cathodic Protection
ETL 1110-3-403	Electrical Power Systems for Nonlinear Loads
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INSTITUTE OF ELECTRICAL AND ELECTRONIC ENGINEERS (IEEE)

IEEE STD 144 IEEE Recommended Practice for Grounding of Industrial and Commercial Power Systems

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29 CFR Occupational Safety 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

SAVANNAH DISTRICT DESIGN MANUAL
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Design Manual for Military Construction, ~~June 2000~~Eleventh Edition

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STEEL DECK INSTITUTE (SDI)

STEEL DECK INSTITUTE DIAPHRAGM DESIGN MANUAL (Latest Edition)

STEEL JOIST INSTITUTE

STANDARD PLUMBING CODE (SBCC)

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*5
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BUILDERS HARDWARE MANUFACTURERS ASSOCIATION (BHMA)

BHMA A156.1 (1997) Butts and Hinges

BHMA A156.10 (1991) Power Operated Pedestrian Doors

BHMA A156.11 (1991) Cabinet Locks

BHMA A156.12 (1992) Interconnected Locks/Latches

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BHMA A156.14 (1997) Sliding and Folding Door Hardware

BHMA A156.15 (1995) Life Safety Closer/Holder Release Devices

BHMA A156.16 (1997) Auxiliary Hardware

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BHMA A156.18 (1993) Materials and Finishes

BHMA A156.19 (1997) Power Assist and Low Energy Power Operated Doors

BHMA A156.2 (1996) Bored and Preassembled Locks and Latches

BHMA A156.20 (1996) Strap and Tee Hinges and Hasps

BHMA A156.21 (1996) Thresholds

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BHMA A156.23 (1992) Electromagnetic Locks

BHMA A156.24 (1992) Delayed Egress Locks

BHMA A156.3 (1994) Exit Devices

BHMA A156.4 (1992) Door Controls - Closers

BHMA A156.5 (1992) Auxiliary Locks & Associated Products

BHMA A156.6 (1994) Architectural Door Trim

BHMA A156.7 (1997) Template Hinge Dimensions

BHMA A156.8 (1994) Door Controls - Overhead Stops and Holders

BHMA A156.9 (1994) Cabinet Hardware

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BHMA Exit Devices Directory (Effective thru Aug 1998) Directory of Certified Exit Devices

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APPENDIX B
FUNCTIONAL ROOM REQUIREMENTS

APPENDIX B

This room by room summary of specific user requirements for functions within the facility represents the minimum quantity and quality of user desired features and functional relationships. Where there is a conflict between the functional room requirements and other sections in this RFP, applicable building codes, standards or installation design guidelines, the most stringent condition shall apply.

FUNCTIONAL ROOM REQUIREMENTS

SPACE: 101 VESTIBULE
DESCRIPTION: main entry vestibule
AREA: 206 SF
NUMBER OF OCCUPANTS: 0
HOURS OF OPERATION: 0600 to 2300
ADJACENCY REQUIREMENTS: parking, lobby
FEATURES: Walk off mat

SPACE: 102 LOBBY
DESCRIPTION: main entry lobby
AREA: 703 SF
NUMBER OF OCCUPANTS: 0
HOURS OF OPERATION: 0600 to 2300
ADJACENCY REQUIREMENTS: vestibule, corridors, service desk, locker rooms, exercise rooms
FEATURES: high ceiling, direct visibility to service desk, two 4’ x 8’ bulletin boards

SPACE: 103 CORRIDOR
DESCRIPTION: corridor
AREA: 775 SF
NUMBER OF OCCUPANTS: 8 per code
HOURS OF OPERATION: 0600 to 2300
ADJACENCY REQUIREMENTS: lobby, locker rooms, gallery
FEATURES: high ceiling to allow access to mechanical mezzanine and align with racquetball courts

SPACE: 104 GALLERY
DESCRIPTION: viewing area for racquetball courts and rock climbing room
AREA: 719 SF
NUMBER OF OCCUPANTS: 16
HOURS OF OPERATION: 0600 to 2300
ADJACENCY REQUIREMENTS: corridor, racquetball courts, rock climbing room
FEATURES: high ceiling to align with racquetball courts, eight fixed six foot long benches with wood seats

SPACE: 105 RACQUETBALL COURT 1
DESCRIPTION: regulation racquetball court

AREA: 800 SF
NUMBER OF OCCUPANTS: 4
HOURS OF OPERATION: 0600 to 2300
ADJACENCY REQUIREMENTS: gallery
FEATURES: racquetball court shall be in accordance with the court specifications and marking rules of the United States Racquetball Association (www.usra.org), 20' wide by 40' long by 20' high, 20' high by 20' wide tempered glass back wall with tempered glass door, door hinges flush with interior wall, high density plaster (or manufactured racquetball wall system) side and front walls, hardwood strip wood flooring in recessed concrete slab, two recessed storage compartments with flush doors, lighting levels the same on both sides of glass wall.

SPACE: 106 RACQUETBALL COURT 2
DESCRIPTION: regulation racquetball court
AREA: 800 SF
NUMBER OF OCCUPANTS: 4
HOURS OF OPERATION: 0600 to 2300
ADJACENCY REQUIREMENTS: gallery
FEATURES: racquetball court shall be in accordance with the court specifications and marking rules of the United States Racquetball Association (www.usra.org), 20' wide by 40' long by 20' high, 20' high by 20' wide tempered glass back wall with tempered glass door, door hinges flush with interior wall, high density plaster (or manufactured racquetball wall system) side and front walls, hardwood strip wood flooring in recessed concrete slab, two recessed storage compartments with flush doors, lighting levels the same on both sides of glass wall.

SPACE: 107 RACQUETBALL COURT 3
DESCRIPTION: regulation racquetball court
AREA: 800 SF
NUMBER OF OCCUPANTS: 4
HOURS OF OPERATION: 0600 to 2300
ADJACENCY REQUIREMENTS: gallery
FEATURES: racquetball court shall be in accordance with the court specifications and marking rules of the United States Racquetball Association (www.usra.org), 20' wide by 40' long by 20' high, 20' high by 20' wide tempered glass back wall with tempered glass door, door hinges flush with interior wall, high density plaster (or manufactured racquetball wall system) side and front walls, hardwood strip wood flooring in recessed concrete slab, two recessed storage compartments with flush doors, lighting levels the same on both sides of glass wall.

SPACE: 108 ROCK CLIMBING
DESCRIPTION: room with indoor rock climbing wall
AREA: 253 SF
NUMBER OF OCCUPANTS: 2
HOURS OF OPERATION: 0600 to 2300
ADJACENCY REQUIREMENTS: gallery, racquetball courts
FEATURES: custom designed climbing wall, 24' high by 20' wide, made from fiber reinforced polymer concrete with integral hand holds and attachment points, fabricated by company specializing in climbing walls, rigging at top or in ceiling, 20' high by 20' wide tempered

glass wall and door to match glass walls at racquetball courts, lighting to match racquetball court lighting

SPACE: 109 STAIR 1
DESCRIPTION: service stair to mechanical mezzanine
AREA: 145 SF
NUMBER OF OCCUPANTS: 0
HOURS OF OPERATION: 0600 to 2300
ADJACENCY REQUIREMENTS: corridor, mechanical mezzanine
FEATURES: 42" wide steel or concrete service stair

SPACE: 110 JANITOR
DESCRIPTION: janitor closet
AREA: 63 SF
NUMBER OF OCCUPANTS: 0
HOURS OF OPERATION: 0600 to 2300
ADJACENCY REQUIREMENTS: corridor
FEATURES: floor mounted janitor sink, mop rack, floor drain

SPACE: 111 MEN'S LOCKERS
DESCRIPTION: men's locker room
AREA: 1600 SF
NUMBER OF OCCUPANTS: 180
HOURS OF OPERATION: 0600 to 2300
ADJACENCY REQUIREMENTS: corridor, natatorium, men's showers, men's toilet
FEATURES: 534 half height "z type" solid phenolic lockers (two lockers stacked vertically occupy 12" by 12" in plan by 72" height), four ceiling TV mounts with cable connection and power, benches with wood seats (44' minimum total length, moisture resistant finishes, floor drains

SPACE: 112 MEN'S TOILET
DESCRIPTION: toilet room
AREA: 455 SF
NUMBER OF OCCUPANTS: 22
HOURS OF OPERATION: 0600 to 2300
ADJACENCY REQUIREMENTS: men's locker room
FEATURES: six toilets minimum, six urinals minimum, 12 lavatory sinks minimum, solid phenolic toilet partitions and urinal screens, solid acrylic lavatory countertop, complete toilet accessories, moisture resistant finishes, floor drains

SPACE: 113 MEN'S SHOWERS
DESCRIPTION: men's shower room
AREA: 488 SF
NUMBER OF OCCUPANTS: 20
HOURS OF OPERATION: 0600 to 2300
ADJACENCY REQUIREMENTS: men's locker room
FEATURES: 20 solid phenolic shower stalls with doors (each stall to have shower head, clothes hook, floor drain), moisture resistant

finishes, floor drains, door and sidelite to locker room to be tempered glass

*10 ***11**

SPACE: 114 NATATORIUM
DESCRIPTION: swimming pool room
AREA: 10,418 SF
NUMBER OF OCCUPANTS: 701
HOURS OF OPERATION: 0600 to 2300
ADJACENCY REQUIREMENTS: locker rooms, pool office, corridor, exterior door, pool storage
FEATURES: 51' wide by 82'-2" long concrete swimming pool (do not use stainless steel); four stainless steel ladders; one push button operated handicap lift; six ceramic tile lane markers; ceramic tile depth signage; ceramic tile "no dive" signage as required; complete pool equipment; underwater lighting; seven lane dividers; two perpendicular dividers; two pace clocks; two drinking fountains; two 1 meter high diving boards; 1 lifeguard stand; removable stainless steel ramp meeting ADA requirements at shallow end of pool; public address system connected to pool office; 18 floor drains on apron; non-slip ceramic tile finish on apron (sealed concrete is acceptable as an alternate); exposed roof structure, roof deck, ducting, piping, conduits, and electrical devices with special chlorine and moisture resistant finish; color of exposed structure and other elements to be light color; 25' clear height in space; see section 01010 for additional requirements.
SPECIAL FEATURES: the pool will used to train soldiers- up to 150 soldiers in full gear will jump into the pool at the same time, the pool shall have a special surge tank to allow the displacement of water caused by this activity, the filtration system of the pool shall be designed to remove within 8 hours the particles left in the pool by dusty clothing and muddy boots
POOL PROFILE / DEPTH: At diving well, the pool shall be a constant 12'-0" deep, then shall transition up to a 6'-0" depth, then slope evenly up to a depth of ~~3'~~4'-0" at the shallow end. The dimensions and depths shall meet or exceed the minimum dimensions established by the rules of the National Collegiate Athletic Association for swimming pools designed for diving.
SPECIAL FINISH: As an acceptable alternate to ceramic tile on the pool deck and associated areas, a Special Coating may be substituted. The Special Coating shall be equal to "Keystone Cool Deck" by Mortex, Inc. Apply product in accordance with manufacturer recommendations. Product shall provide a durable, low maintenance, stain resistant, chlorine resistant, non-skid, cool to the touch finish.

SPACE: 115 POOL STORAGE
DESCRIPTION: storage room
AREA: 102 SF
NUMBER OF OCCUPANTS: 0
HOURS OF OPERATION: 0600 to 2300
ADJACENCY REQUIREMENTS: natatorium
FEATURES: moisture resistant and washable finishes

SPACE: 116 POOL OFFICE

DESCRIPTION: pool office
AREA: 106 SF
NUMBER OF OCCUPANTS: 2
HOURS OF OPERATION: 0600 to 2300
ADJACENCY REQUIREMENTS: natatorium, locker rooms
FEATURES: one 4'-0" long horizontally sliding window into Natatorium, public address system connected to natatorium, solid acrylic work surface (4' long by 2'-6" deep, power for cash register at work surface, 1 data connection, moisture resistant finishes, one 4' by 4' bulletin board, one wall mounted lockable portable defibrillator station

SPACE: 117A MEN'S WHIRLPOOL
DESCRIPTION: whirlpool room
AREA: 174 SF
NUMBER OF OCCUPANTS: 10
HOURS OF OPERATION: 0600 to 2300
ADJACENCY REQUIREMENTS: locker rooms, sauna
FEATURES: large whirlpool tub (approximately 92" x 92"), two ceiling TV mounts with cable connection and power, moisture resistant finishes, floor drain, see section 01010 for additional requirements.

SPACE: 117B MEN'S SAUNA
DESCRIPTION: manufactured dry type sauna
AREA: 149 SF
NUMBER OF OCCUPANTS: 18
HOURS OF OPERATION: 0600 to 2300
ADJACENCY REQUIREMENTS: whirlpool, locker rooms
FEATURES: manufactured sauna system complete with all equipment and accessories, window and glazed door opening into whirlpool area, see section 01010 for additional requirements

SPACE: 118A WOMEN'S WHIRLPOOL
DESCRIPTION: whirlpool room
AREA: 174 SF
NUMBER OF OCCUPANTS: 10
HOURS OF OPERATION: 0600 to 2300
ADJACENCY REQUIREMENTS: locker rooms, sauna
FEATURES: large whirlpool tub (approximately 92" x 92"), two ceiling TV mounts with cable connection and power, moisture resistant finishes, floor drain, see section 01010 for additional requirements.

SPACE: 118B WOMEN'S SAUNA
DESCRIPTION: manufactured dry type sauna
AREA: 149 SF
NUMBER OF OCCUPANTS: 18
HOURS OF OPERATION: 0600 to 2300
ADJACENCY REQUIREMENTS: whirlpool, locker rooms
FEATURES: manufactured sauna system complete with all equipment and accessories, window and glazed door opening into whirlpool area, see section 01010 for additional requirements

SPACE: 119 WOMEN'S LOCKERS
DESCRIPTION: women's locker room
AREA: 1231 SF
NUMBER OF OCCUPANTS: 94
HOURS OF OPERATION: 0600 to 2300
ADJACENCY REQUIREMENTS: corridor, natatorium, women's showers, women's toilet
FEATURES: 280 half height "z type" solid phenolic lockers (two lockers stacked vertically occupy 12" by 12" in plan by 72" height), three ceiling TV mounts with cable connection and power, benches with wood seats (30' minimum total length, moisture resistant finishes, floor drains

SPACE: 120 WOMEN'S SHOWERS
DESCRIPTION: women's shower room
AREA: 251 SF
NUMBER OF OCCUPANTS: 10
HOURS OF OPERATION: 0600 to 2300
ADJACENCY REQUIREMENTS: women's locker room
FEATURES: 10 solid phenolic shower stalls with doors (each stall to have shower head, clothes hook, floor drain), moisture resistant finishes, floor drains, door and sidelite to locker room to be tempered glass

SPACE: 121 MECHANICAL
DESCRIPTION: mechanical room for sauna
AREA: 37 SF estimated, size as required for equipment
NUMBER OF OCCUPANTS: 0
HOURS OF OPERATION: 0600 to 2300
ADJACENCY REQUIREMENTS: sauna
FEATURES: moisture resistant finishes, sound control

SPACE: 122 WOMEN'S TOILET
DESCRIPTION: toilet room
AREA: 238 SF
NUMBER OF OCCUPANTS: 10
HOURS OF OPERATION: 0600 to 2300
ADJACENCY REQUIREMENTS: women's locker room
FEATURES: five toilets minimum, 6 lavatory sinks minimum, solid phenolic toilet partitions, solid acrylic lavatory countertop, complete toilet accessories, moisture resistant finishes, floor drains

SPACE: 123 LOUNGE
DESCRIPTION: lounge with vending machines
AREA: 338 SF
NUMBER OF OCCUPANTS: 8
HOURS OF OPERATION: 0600 to 2300
ADJACENCY REQUIREMENTS: corridor, service desk
FEATURES: space and utility connections for 5 vending machines, four tables with four chairs per table, one ceiling TV mount with cable and power connections, glazed wall to corridor

SPACE: 124 SERVICE DESK

DESCRIPTION: main control and service desk
AREA: 190 SF
NUMBER OF OCCUPANTS: 2
HOURS OF OPERATION: 0600 to 2300
ADJACENCY REQUIREMENTS: lobby, equipment storage, office, laundry, lounge
FEATURES: casework counter with plastic laminate finish with two work stations and storage and drawers below counter, one phone and one data connection and one quad power outlet at each workstation, security camera monitors (12 screen array minimum), public address system controls, two 4’ by 4’ bulletin boards, one wall mounted lockable portable defibrillator station

SPACE: 125 EQUIPMENT STORAGE
DESCRIPTION: storage for athletic equipment
AREA: 207 SF
NUMBER OF OCCUPANTS: 0
HOURS OF OPERATION: 0600 to 2300
ADJACENCY REQUIREMENTS: service desk
FEATURES: metal shelving, door directly to service desk

SPACE: 126 OFFICE
DESCRIPTION: office
AREA: 192 SF
NUMBER OF OCCUPANTS: 2
HOURS OF OPERATION: 0600 to 2300
ADJACENCY REQUIREMENTS: service desk, conference room, corridor
FEATURES: two work areas each with one phone and data connection and one quad power outlet, power for fax and copy machine, security system controls, security camera monitors (12 screen array minimum), sound control, one 4’ by 4’ bulletin board

SPACE: 127 CONFERENCE
DESCRIPTION: conference room
AREA: 312 SF
NUMBER OF OCCUPANTS: 20
HOURS OF OPERATION: 0600 to 2300
ADJACENCY REQUIREMENTS: office, service desk
FEATURES: one 4’ by 12’ white marker board, one 4’ by 4’ bulletin board, one 4’ by 8’ power operated roll down projection screen, one ceiling video projector mount with cable and power connections and connection to room data outlet, two data outlets with adjacent power outlets, sound control, dimmable lighting

SPACE: 128 SYSTEMS
DESCRIPTION: room for phone and data systems
AREA: 180 SF estimated, size as required for equipment
NUMBER OF OCCUPANTS: 0
HOURS OF OPERATION: 0600 to 2300
ADJACENCY REQUIREMENTS: office, corridor
FEATURES: plywood back boards

SPACE: 129 LAUNDRY
DESCRIPTION: laundry room
AREA: 285 SF
NUMBER OF OCCUPANTS: 2
HOURS OF OPERATION: 0600 to 2300
ADJACENCY REQUIREMENTS: locker rooms, service desk, corridor
FEATURES: commercial washer, commercial electric dryer, ice machine, one hand washing sink, moisture resistant finishes, floor drains, sound control, door to corridor 48” wide, metal shelving

SPACE: 130 STAIR 2
DESCRIPTION: service stair to mechanical mezzanine
AREA: 93 SF
NUMBER OF OCCUPANTS: 0
HOURS OF OPERATION: 0600 to 2300
ADJACENCY REQUIREMENTS: corridor, mechanical mezzanine
FEATURES: 42” wide steel or concrete service stair

SPACE: 131 CORRIDOR
DESCRIPTION: corridor
AREA: 1405 SF
NUMBER OF OCCUPANTS: 14 per code
HOURS OF OPERATION: 0600 to 2300
ADJACENCY REQUIREMENTS: lobby, various rooms
FEATURES: 12’ width

SPACE: 132 EQUIPMENT STORAGE
DESCRIPTION: miscellaneous equipment storage room
AREA: 377 SF
NUMBER OF OCCUPANTS: 0
HOURS OF OPERATION: 0600 to 2300
ADJACENCY REQUIREMENTS: corridor, pool, exercise rooms
FEATURES: metal shelving

SPACE: 133 POOL EQUIPMENT
DESCRIPTION: mechanical and plumbing equipment room
AREA: 396 SF estimated, size as required for equipment
NUMBER OF OCCUPANTS: 0
HOURS OF OPERATION: 0600 to 2300
ADJACENCY REQUIREMENTS: natatorium, exterior wall
FEATURES: utilities as required, sound control

SPACE: 134 MAIN ELECTRICAL
DESCRIPTION: main electrical room
AREA: 396 SF estimated, size as required for equipment
NUMBER OF OCCUPANTS: 0
HOURS OF OPERATION: 0600 to 2300
ADJACENCY REQUIREMENTS: exterior wall
FEATURES: utilities as required

SPACE: 135 BOILER

DESCRIPTION: boiler room
AREA: 593 SF estimated, size as required for equipment
NUMBER OF OCCUPANTS: 0
HOURS OF OPERATION: 0600 to 2300
ADJACENCY REQUIREMENTS: exterior wall
FEATURES: utilities as required, sound control, fireproofing

SPACE: 136 GYM STORAGE
DESCRIPTION: storage room for gym equipment
AREA: 196 SF
NUMBER OF OCCUPANTS: 0
HOURS OF OPERATION: 0600 to 2300
ADJACENCY REQUIREMENTS: gymnasium
FEATURES: n/a

*10
SPACE: 137 SELECTORIZED WEIGHT MACHINES
DESCRIPTION: exercise room (6' by 6' per machine)
AREA: 2983 SF
NUMBER OF OCCUPANTS: 85
HOURS OF OPERATION: 0600 to 2300
ADJACENCY REQUIREMENTS: other exercise rooms, corridor
FEATURES: ~~glazed wall~~windows to corridor, impact resistant rubber flooring,
one double door for equipment access, mirrors (from 1' above floor to 7' above floor) on 50% of solid wall surfaces, minimum 20 wall TV mounts with cable and power connections, 12' minimum ceiling height, clerestory window, flush floor power outlets for equipment, one wall mounted lockable portable defibrillator station

SPACE: 138 CORRIDOR
DESCRIPTION: corridor
AREA: 708 SF
NUMBER OF OCCUPANTS: 7 by code
HOURS OF OPERATION: 0600 to 2300
ADJACENCY REQUIREMENTS: other corridors, various rooms
FEATURES: 8' width

*10
SPACE: 139 CARDIO
DESCRIPTION: cardio exercise room for 80 machines
AREA: 2450 SF
NUMBER OF OCCUPANTS: 80
HOURS OF OPERATION: 0600 to 2300
ADJACENCY REQUIREMENTS: other exercise rooms, corridor
FEATURES: ~~glazed wall~~windows to corridors, impact resistant rubber flooring,
one double door for equipment access, mirrors (from 1' above floor to 7' above floor) on 50% of solid wall surfaces, minimum 40 wall TV mounts with cable and power connections, 12' minimum ceiling height, flush floor power outlets for equipment, one wall mounted lockable portable defibrillator station

***10**
SPACE: 140 EXERCISE

DESCRIPTION: exercise room with wood floor
AREA: 1522 SF
NUMBER OF OCCUPANTS: 100
HOURS OF OPERATION: 0600 to 2300
ADJACENCY REQUIREMENTS: physical therapy, other exercise rooms, corridor
FEATURES: ~~glazed wall~~windows to corridor, wood flooring in recessed concrete slab, mirrors (from 1' above floor to 7' above floor) on 50% of solid wall surfaces, minimum 8 wall TV mounts with cable and power connections, 12' minimum ceiling height, flush floor power outlets for equipment, one wall mounted lockable portable defibrillator station

SPACE: 141 WOMEN'S TOILET
DESCRIPTION: women's toilet
AREA: 656 SF
NUMBER OF OCCUPANTS: 20
HOURS OF OPERATION: 0600 to 2300
ADJACENCY REQUIREMENTS: gym, exercise rooms
FEATURES: fifteen toilets minimum, 7 lavatory sinks minimum, solid phenolic toilet partitions, solid acrylic lavatory countertop, complete toilet accessories, moisture resistant finishes, floor drains

SPACE: 142 MEN'S TOILET
DESCRIPTION: men's toilet
AREA: 493 SF
NUMBER OF OCCUPANTS: 15
HOURS OF OPERATION: 0600 to 2300
ADJACENCY REQUIREMENTS: gym, exercise rooms
FEATURES: six toilets minimum, four urinals minimum, 7 lavatory sinks minimum, solid phenolic toilet partitions, solid acrylic lavatory countertop, complete toilet accessories, moisture resistant finishes, floor drains

SPACE: 143 JANITOR
DESCRIPTION: janitor closet
AREA: 80 SF
NUMBER OF OCCUPANTS: 0
HOURS OF OPERATION: 0600 to 2300
ADJACENCY REQUIREMENTS: gym, corridor, men and women's toilets
FEATURES: floor mounted janitor sink, mop rack, floor drain

SPACE: 144 STORAGE
DESCRIPTION: general storage
AREA: 123 SF
NUMBER OF OCCUPANTS: o
HOURS OF OPERATION: 0600 to 2300
ADJACENCY REQUIREMENTS: exercise rooms, corridor
FEATURES: n/a

SPACE: 145 ELECTRICAL
DESCRIPTION: electrical closet
AREA: 106 SF estimated, size as required for equipment

NUMBER OF OCCUPANTS: 0
HOURS OF OPERATION: 0600 to 2300
ADJACENCY REQUIREMENTS: corridor, gym
FEATURES: plywood backboards

***10**

SPACE: 146 PHYSICAL THERAPY
DESCRIPTION: physical therapy room
AREA: ~~918~~1064 SF
NUMBER OF OCCUPANTS: ~~60~~NA
HOURS OF OPERATION: ~~0600 to 2300~~NA
ADJACENCY REQUIREMENTS: 140 exercise, other exercise rooms~~, physical therapy office and storage~~, corridor
FEATURES: 6' wide window and double doors opening onto room 140 Exercise, 6' wide window with one-way mirror glass into room 139 Cardio (mirror on Cardio side), ~~glazed wall~~windows to corridor, double door for equipment access, ~~mirrors (from 1' above floor to 7' above floor) on 50% of solid wall surfaces, minimum 4 wall TV mounts with cable and power connections,~~ 12' minimum future ceiling height, underfloor plumbing stubout for one future~~ one~~ wall mounted hand wash sink, ~~utility connections and~~ floor drain for future ice machine,~~ wall power outlets at 6' on center around room, flush floor power outlets for equipment as required, hospital type cubicle curtain to enclose approximately 8' by 8' area, one wall mounted lockable portable defibrillator station, one phone outlet, one 4' by 4' bulletin board~~ space left unfinished for future completion, provide safety lighting and 2 electrical outlets.

*10

SPACE: 147 ~~OFFICE~~NOT USED
~~**DESCRIPTION:** office for physical therapy~~
~~**AREA:** 1020 SF~~
~~**NUMBER OF OCCUPANTS:** 2~~
~~**HOURS OF OPERATION:** 0600 to 2300~~
~~**ADJACENCY REQUIREMENTS:** physical therapy, physical therapy storage~~
~~**FEATURES:** 6' wide window and single door to 146 Physical Therapy, 2 phone outlets, 2 data outlets, sound control~~

***10**

SPACE: 148 ~~STORAGE~~NOT USED
~~**DESCRIPTION:** lockable storage room for physical therapy records~~
~~**AREA:** 46 SF~~
~~**NUMBER OF OCCUPANTS:** 0~~
~~**HOURS OF OPERATION:** 0600 to 2300~~
~~**ADJACENCY REQUIREMENTS:** 147 Office~~
~~**FEATURES:** lockable door, intrusion resistant ceiling~~

SPACE: 149 CORRIDOR
DESCRIPTION: corridor
AREA: 1002 SF
NUMBER OF OCCUPANTS: 10 by code
HOURS OF OPERATION: 0600 to 2300
ADJACENCY REQUIREMENTS: other corridors, various rooms
FEATURES: 12' width

***10**

SPACE: 150 FREE WEIGHTS
DESCRIPTION: free weight exercise room
AREA: 2855 SF
NUMBER OF OCCUPANTS: 60
HOURS OF OPERATION: 0600 to 2300
ADJACENCY REQUIREMENTS: other exercise rooms, corridor
FEATURES: ~~glazed wall~~windows to corridor, impact resistant rubber flooring,
one double door for equipment access, mirrors (from 1' above floor to 7' above floor) on 50% of solid wall surfaces, minimum 20 wall TV mounts with cable and power connections, 12' minimum ceiling height, one wall mounted lockable portable defibrillator station

SPACE: 151 CORRIDOR
DESCRIPTION: corridor
AREA: 2632 SF
NUMBER OF OCCUPANTS: 29 per code
HOURS OF OPERATION: 0600 to 2300
ADJACENCY REQUIREMENTS: gym, other corridors, various rooms
FEATURES: 16' width, five drinking fountains for gym use

*10
SPACE: 152 GYMNASIUM
DESCRIPTION: gym
AREA: 18,677 SF
NUMBER OF OCCUPANTS: 3,961 by code
HOURS OF OPERATION: 0600 to 2300
ADJACENCY REQUIREMENTS: corridor, exterior doors, men and women's toilets
FEATURES: power operated retractable wood gym bleachers to seat ~~2500~~1200 people at 20" per occupant minimum (bleachers to have handrails, guardrails and side protectors), striping for three regulation size 94' by 50' basketball courts (two side by side plus one overlapping in center for use when bleachers are extended), striping in contrasting color for two volleyball courts in same locations as side by side basketball courts, 10' minimum space between end of courts and side walls, recessed attachments in floor with cover plates for volleyball net standards at each volleyball court, three sets of power operated retractable basketball goals, one large basketball scoreboard plus two smaller basketball scoreboards, hardwood gym athletic flooring in recessed concrete slab (wood floor to cover all areas exposed when bleachers are in retracted, closed position), six 100 amp 3 phase electric power outlets distributed around gym for musical performances, clear ceiling height of 25', provide wall pads on walls behind basketball goals for full width of courts, two drinking fountains, one wall mounted lockable portable defibrillator station, lighting with impact resistant covers, acoustic treatment on walls.

SPACE: 153 CLOSET
DESCRIPTION: storage closet
AREA: 46 SF
NUMBER OF OCCUPANTS: 0
HOURS OF OPERATION: 0600 to 2300
ADJACENCY REQUIREMENTS: gym
FEATURES: n/a

SPACE: 154 CLOSET
DESCRIPTION: storage closet
AREA: 49 SF
NUMBER OF OCCUPANTS: 0
HOURS OF OPERATION: 0600 to 2300
ADJACENCY REQUIREMENTS: gym
FEATURES: n/a

SPACE: 155 CLOSET
DESCRIPTION: storage closet
AREA: 49 SF
NUMBER OF OCCUPANTS: 0
HOURS OF OPERATION: 0600 to 2300
ADJACENCY REQUIREMENTS: gym
FEATURES: n/a

SPACE: 156 CLOSET
DESCRIPTION: storage closet
AREA: 46 SF
NUMBER OF OCCUPANTS: 0
HOURS OF OPERATION: 0600 to 2300
ADJACENCY REQUIREMENTS: gym
FEATURES: n/a

SPACE: 201 STAIR 1
DESCRIPTION: service stair
AREA: 37 SF (top landing)
NUMBER OF OCCUPANTS: 0
HOURS OF OPERATION: 0600 to 2300
ADJACENCY REQUIREMENTS: corridor, mechanical
FEATURES: 42” wide steel or concrete service stair

SPACE: 202 MECHANICAL
DESCRIPTION: main mechanical room
AREA: 4243 SF estimated, size as required for equipment
NUMBER OF OCCUPANTS: 0
HOURS OF OPERATION: 0600 to 2300
ADJACENCY REQUIREMENTS: service stairs
FEATURES: sound control

SPACE: 203 ELECTRICAL
DESCRIPTION: electrical closet
AREA: 180 SF estimated, size as required for equipment
NUMBER OF OCCUPANTS: 0
HOURS OF OPERATION: 0600 to 2300
ADJACENCY REQUIREMENTS: mechanical
FEATURES: plywood backboards

SPACE: 204 STAIR 2
DESCRIPTION: service stair
AREA: 84 SF (top landing)
NUMBER OF OCCUPANTS: 0

HOURS OF OPERATION: 0600 to 2300
ADJACENCY REQUIREMENTS: corridor, mechanical
FEATURES: 42″ wide steel or concrete service stair

APPENDIX C
FIRE PROTECTION / LIFE SAFETY CODE ANALYSIS

APPENDIX C
FIRE PROTECTION/LIFE SAFETY CODE 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, compliance and documentation responsibilities during proposal preparation and final design development.

REFERENCES:
UFC 3-600-01 Fire Protection Engineering for Facilities 17 April 2003
Engineering Circular EC 1110-1-92, Classification of Type of Construction, 21 June 2000
*5
International Building Code(IBC) ~~2000~~ 2003 as modified by UFC 1-200-01
NFPA 101, Life Safety Code, 2003
NFPA 10, Standard for Portable Fire Extinguishers, 2002

BUILDING DESCRIPTION:
Two-Story Building, Approximately 70,797 Gross Square Feet total

AUTOMATIC SPRINKLER SYSTEM: Fully Sprinklered

IBC OCCUPANCY: A-3 Assembly (Section 303)

NFPA 101 OCCUPANCY: Assembly (Chapter 12)

CONSTRUCTION TYPE (IBC Table 503):
Construction may be of any materials allowed by IBC Chapters 5 and 6.

EXTERIOR WALL AND OPENING PROTECTION (IBC Table 602):
Unlimited area of unprotected openings permitted with fire separation distance greater than 30 feet.

FIRE RATED SEPARATIONS:
Boiler Room, Mechanical Mezzanine: One Hour (NFPA 101 12.3.2.1.1).
Records, Storage: One Hour (UFC 3-600-01 6-10.5).

ATTIC DRAFT STOPS :
Unsprinklered attic spaces at combustible roof construction: Draft stops of gypsum board on wood or metal framing required to divide space into areas not exceeding 3,000 square feet.

DESIGN OCCUPANT LOAD (NFPA 101, Table 7.1.3.2, IBC Table 1003.2.2.2):
Gross floor area includes exterior walls, and includes exterior covered entries at one their actual square footage. The difference between the total floor area and the sum of the measured areas below represents the areas of bleacher seating, exterior areas, and walls.

Occupancy	SF	Occ Factor	Occ	Total Occ
Natatorium				531
Pool	5,586 SF	50 SF/Occ	118	
Deck	4,433 SF	15 SF/Occ	296	
Seating	175 LF	18”/Occ	117	

Whirlpool, Sauna	701 SF	15 SF/Occ		47
Locker Rooms, Toilets	5,402 SF	50 SF/Occ		108
Racquetball, Climbing	2,653 SF	50 SF/Occ		53
Gallery, Lounge	1,148 SF	15 SF/Occ		77
Offices	901 SF	100 SF/Occ		9
Corridors, Lobby	7,867 SF	100 SF/Occ		77
Exercise Rooms	10,596 SF	50 SF/Occ		212
Storage, HVAC (1st Fl)	3,534 SF	300 SF/Occ		12
Gymnasium				3,961
Bleachers	4,275 LF	18”/Occ	2,850	
Floor area	1,118 SF	7 SF/Occ	1,111	
TOTAL FIRST FLOOR				5,075
HVAC (2nd Fl)	4,548 SF	300 SF/Occ		15
TOTAL BUILDING				5,090

EGRESS REQUIREMENTS (NFPA 101)

CAPACITY (Table 7.3.3.1): Level Components and Ramps (Min.):

Natatorium	531(0.2) = 106.2”
Whirlpool	47(0.2) = 9.4”
Locker Rooms, Toilets	108(0.2) = 21.6”
Racquetball, Climbing	53(0.2) = 10.6”
Gallery, Lounge	77(0.2) = 15.4”
Offices	9(0.2) = 1.8”
Corridors, Lobby	77(0.2) = 15.4”
Exercise Rooms	212(0.2) = 42.4”
Storage, HVAC (1st Fl)	12(0.2) = 2.4”
Gymnasium	3,961(0.2) = 792.2”
HVAC (2nd Fl)	15(0.2) = 3.0”
TOTAL BUILDING	1,017.4”

MINIMUM CORRIDOR WIDTH (NFPA 101 38.2.3.2): 44 inches

NUMBER OF EXITS (NFPA 101 7.4.1.1, IBC 1004.2.1):
Two required at Assembly with greater than 50 occupants

MAXIMUM DEAD END (NFPA 101 38.2.5.2, IBC 1004.3.2.3):
20 feet at Assembly

MAXIMUM COMMON PATH OF TRAVEL (NFPA 101 38.2.5.3, IBC 1004.2.5):
75 feet

MAXIMUM TRAVEL DISTANCE (NFPA 101 38.2.6, IBC Table 1004.2.4):
250 feet at Assembly

INTERIOR FINISHES:
WALL AND CEILING FINISHES (MIL HDBK 1008c 2.7.1):
Class A in Exits and Exit Passageways.
Class A, B or C all other areas.
Class A materials shall not exceed FS 25 and SD 50.
Class B materials shall not exceed FS 75 and SD 100.
Class C materials shall not exceed FS 200 and SD 200.
Cellular Plastics not permitted.

FLOOR FINISHES (NFPA 101 Table A 10.2.2, 10.2.8.2):
Class I or Class II in Corridors and Exits.

PORTABLE FIRE EXTINGUISHERS (NFPA 10):
Contractor to provide number and type meeting specifications of Hunter AAF Fire Prevention Office.
Maximum travel to fire extinguisher: 75 feet
Multi-purpose fire extinguishers shall be of the following type:
ABC 10 lb Dry Chemical Minimum
4A: 8-B:C Minimum rating
Recessed or semi-recessed fire extinguisher cabinets shall be provided in occupied space. They shall be constructed of metal treated to prevent rust or corrosion. They shall be white in color and not be lockable type. Fire extinguisher shall be provided for each mechanical room, electrical room and communications room and shall be installed within the room as close to the exit as possible.

End of FIRE PROTECTION/LIFE SAFETY CODE ANALYSIS

APPENDIX D
FINISH SCHEDULE

SPACE	FLOOR	BASE	WALLS	CEILING	MIN CLG HT	REMARKS
101 VESTIBULE	WM	NA	BK	PGWB	20'-0"	
102 LOBBY	TRZ	RB	PCMU/BK	PGWB/ ATCMR	20'-0"	
103 CORRIDOR	TRZ	RB	PCMU	ACTMR	20'-0"	
104 GALLERY	TRZ	RB	PCMU	ACTMR	20'-0"	
105 RACQUETBALL 1	WD	SEE NOTE	SEE NOTE	SEE NOTE	20'-0"	NOTE: PLASTER OR MANUFACTURED SYSTEM
106 RACQUETBALL 2	WD	SEE NOTE	SEE NOTE	SEE NOTE	20'-0"	NOTE: PLASTER OR MANUFACTURED SYSTEM
107 RACQUETBALL 3	WD	SEE NOTE	SEE NOTE	SEE NOTE	20'-0"	NOTE: PLASTER OR MANUFACTURED SYSTEM
108 ROCK CLIMBING	WD	RB	PCMU	SEE NOTE	24'-0"	NOTE: PGWB ON LAYER OF 3/4" PLYWOOD
109 STAIR 1	CONC	RB	PCMU	NA	NA	
110 JANITOR	VCT	RB	PCMU	ACTMR	9'-0"	
111 MEN'S LOCKERS	QT	QT	ECMU	ACTMR	9'-0"	
112 MEN'S TOILET	CT	CT	CT	ACTMR	9'-0"	
113 MEN'S SHOWER	QT	QT	ECMU	EGWB	9'-0"	
114 NATATORIUM	CT	CT	ECMU	ESMR	25'-0"	*11 SPECIAL COATING ON FLOOR PERMITTED
115 EQUIP STORAGE	CT	CT	ECMU	ACTMR	9'-0"	*11 SPECIAL COATING ON FLOOR PERMITTED
116 POOL OFFICE	CT	CT	ECMU	ACTMR	9'-0"	*10 *11 SPECIAL COATING ON FLOOR PERMITTED
117 WHIRLPOOL	QT	QT	ECMU	ACTMR	10'-0"	
118 SAUNA	SEE NOTE	SEE NOTE	SEE NOTE	SEE NOTE	SEE NOTE	NOTE: MANUFACTURED SYSTEM
119 WOMEN'S LOCKERS	QT	QT	ECMU	ACTMR	9'-0"	
120 WOMEN'S SHOWERS	QT	QT	ECMU	EGWB	9'-0"	
121 MECHANICAL	CONC	RB	ECMU	ATCMR	9'-0"	
122 WOMEN'S TOILET	CT	CT	CT	ACTMR	9'-0"	
123 LOUNGE	VCT	RB	PCMU	ACTMR	9'-0"	
124 SERVICE DESK	TRZ	RB	PCMU	ACTMR	9'-0"	
125 EQUIP STORAGE	TRZ	RB	PCMU	ACTMR	9'-0"	
126 OFFICE	TRZ	RB	PCMU	ACTMR	9'-0"	
127 CONFERENCE	TRZ	RB	PCMU	ACTMR	9'-0"	
128 SYSTEMS	CONC	RB	PCMU	ES	NA	
129 LAUNDRY	VCT	RB	ECMU	ATCMR	9'-0"	
130 STAIR 2	CONC	RB	PCMU	NA	NA	
131 CORRIDOR	TRZ	RB	PCMU	ACTMR	10'-0"	
132 EQUIP STORAGE	VCT	RB	PCMU	ACTMR	10'-0"	

SPACE	FLOOR	BASE	WALLS	CEILING	MIN CLG HT	REMARKS
133 POOL EQUIPMENT	CONC	NA	ECMU	ESMR	NA	
134 MAIN ELECTRICAL	CONC	NA	PCMU	ES	NA	
135 BOILER	CONC	NA	PCMU	ES	NA	
136 GYM STORAGE	VCT	RB	PCMU	ACTMR	9'-0"	
137 SELECT WT MACH	RF	RB	PCMU	ACTMR	12'-0"	
138 CORRIDOR	TRZ	RB	PCMU	ACTMR	10'-0"	
139 CARDIO	RF	RB	PCMU	ACTMR	12'-0"	
140 EXERCISE	WD	RB	PCMU	ACTMR	12'-0"	
141 WOMEN'S TOILET	CT	CT	CT	ACTMR	9'-0"	
142 MEN'S TOILET	CT	CT	CT	ACTMR	9'-0"	
143 JANITOR	VCT	RB	PCMU	ACTMR	9'-0"	
144 STORAGE	VCT	RB	PCMU	ACTMR	9'-0"	
145 ELECTRIC	CONC	RB	PCMU	ACTMR	9'-0"	
146 PHYSICAL THERAPY	TRZ	RB	PCMU	ACTMR	12'-0"	
147 OFFICE	TRZ	RB	PCMU	ACTMR	9'-0"	
148 STORAGE	TRZ	RB	PCMU	ACTMR	9'-0"	
149 CORRIDOR	TRZ	RB	PCMU	ACTMR	10'-0"	
150 FREE WEIGHTS	RF	RB	PCMU	ACTMR	12'-0"	
151 CORRIDOR	TRZ	RB	PCMU	ACTMR	10'-0"	
152 GYMNASIUM	WD	RB	PACMU	ES	25'-0"	
153 CLOSET	VCT	RB	PGWB	ACTMR	12'-0"	
154 CLOSET	VCT	RB	PGWB	ACTMR	12'-0"	
155 CLOSET	VCT	RB	PGWB	ACTMR	12'-0"	
156 CLOSET	VCT	RB	PGWB	ACTMR	12'-0"	
201 STAIR 1	CONC	RB	PCMU	ACTMR	9'-0"	
202 MECHANICAL	CONC	NA	PCMU	ES	11'-0"	
203 ELECTRICAL	CONC	NA	PCMU	ES	11'-0"	
204 STAIR 2	CONC	RB	PGWB	ACTMR	9'-0"	

LEGEND:	
	Flooring:
CT	Ceramic floor tile (non-slip finish)
CONC	Sealed concrete
CPT	Carpet or carpet tile
QT	Quarry tile (non-slip finish)
RF	Rubber flooring (impact resistant)
TRZ	Terrazzo
VCT	Vinyl composition tile
WD	Wood athlectic flooring set into recessed concrete slab
WM	Walk off mat
	Base:
CT	Coved ceramic tile base (non-slip finish)
QT	Coved quarry tile base (non-slip)
RB	Rubber base
	Walls:
BK	Brick matching exterior brick
CT	Ceramic wall tile
ECMU	Epoxy painted concrete masonry unit
PCMU	Painted concrete masonry unit
PACMU	Painted acoustical concrete masonry unit
	Ceiling:
ATC	Acoustical tile ceiling
ATCMR	Acoustical tile ceiling- moisture resistant
EGWB	Epoxy painted gypsum wall board
ES	Exposed to structure
ESMR	Exposed to structure- moisture and chlorine resistant finish on structure, underside of roof, and exposed ducting, piping, and conduits
PGWB	Painted gypsum wall board
	Miscellaneous:
NA	Not Applicable

GENERAL NOTES: *11	
1	Vinyl wallcovering is not desired.
2	1" mini blinds and PLAM or painted wood sills shall be provided at all exterior windows, typical.
3	Exterior concrete sidewalks shall have a broom finish. Exposed concrete slabs in interior rooms and slabs to receive resilient tile, carpet and ceramic tile shall have a trowel finish. Exposed concrete slabs shall be sealed.
4	Provide compatible reducers at all changes in floor material. Install reducers under door where door exists. Where no door occurs, install reducer in line with partition until perpendicular partition.
5	Coordinate hardware finishes with Base. All hardware finishes shall match. Provide metal thresholds at all exterior doors.
6	Install ceramic tile for full height of wall behind water closets, sinks and lavatories and recessed paper towel dispenser/disposals for full width of wall. Install 4'-0" high minimum ceramic tile wainscot and cap for all other walls within toilet areas. Concrete masonry units above all wainscots shall be painted with epoxy paint.
7	Special Coating for pool deck- see Appendix B Room Requirements.

APPENDIX E

SUSTAINABLE PROJECT RATING TOOL (SPiRiT)

Sustainable Project Rating Tool (SPiRiT)

Version 1.4

U. S. Army Corps of Engineers
U. S. Army Assistant Chief of Staff for Installation Management

April 2001

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1) This Sustainable Project Rating Tool (SPiRiT) is derived from The U. S. Green Building Council LEED 2.0 (Leadership in Energy and Environmental Design) Green Building Rating System™.

2) The SPiRiT numbering scheme parallels, but does not match LEED 2.0. LEED does not number major sections, which it calls 'Credit Categories,' ex. 'Sustainable Sites,' rather it numbers criteria or 'credits' within each major section. SPiRiT credit numbers match those of LEED where there is a 1:1 comparison. Where additional credits have been added they fall at the end of major sections.

3) The SPiRiT Credits all follow the format: Intent, Requirement and Technologies/Strategies.

Intent: A statement of the primary goal for the credit;
Requirement: Quantifiable conditions necessary to achieve stated intent;
Technologies/Strategies: Suggested technologies, strategies and referenced guidance on the means to achieve identified requirements.

4) Projects are evaluated for each SPiRiT credit which are either 'Prerequisites' or result in a point score:

Prerequisites: These credits are a statement of minimum requirements and must be met. No further points will be awarded unless the minimum is achieved. These credits are recognizable by an 'R' in the number scheme, ex. 1.R1, and a 'Reqd.' in the score column.
Point Score: These credits are evaluated and result in a point score. Where the potential score is greater than 1, no partial points are granted.

5) SPiRiT Sustainable Project Certification Levels:

SPiRiT Bronze	25 to 34 Points
SPiRiT Silver	35 to 49 Points
SPiRiT Gold	50 to 74 Points
SPiRiT Platinum	75 to 100 Points

6) SPiRiT credits have been developed to address facility life cycle phases including programming, design, construction, and commissioning. Additional rating tools will be developed to address installation/base master planning and facilities operations and maintenance, rehabilitation, recycling, and disposal.

7) POC for U. S. Army Corps of Engineers:

Mr. Harry Goradia
U. S. Army Corps of Engineers
ATTN: CEMP-ET
7701 Telegraph Road
Alexandria, VA 22315-3862
Phone 703-428-6460, FAX 703-428-7903
Email harry.goradia@hq02.usace.army.mil

POC for U. S. Army Installations:

Mr. John Scharl
U. S. Army Assistant Chief of Staff for Installation Management, Directorate of Facilities & Housing
ATTN: DAIM-FDF
7701 Telegraph Road, Bldg #2594 (Room 146B),
Alexandria, VA 22315-3800
Phone (703) 428-7614, FAX (703) 428-0197
Email scharja@hqda.army.mil

8) Sustainable Project Rating Tool (SPiRiT) Authors are:
Stephen N. Flanders (Lead), U. S. Army Engineering Research & Development Center (ERDC-CRREL)
Richard L. Schneider, U. S. Army Engineering Research & Development Center (ERDC-CERL)
Donald Fournier, U. S. Army Engineering Research & Development Center (ERDC-CERL)
Annette Stumpf, U. S. Army Engineering Research & Development Center (ERDC-CERL)

9) Army/USACE employees are members of the USGBC with membership privileges accessible via the USGBC web site, http://www.usgbc.org. For information on membership and access to available LEED resources to support use of SPiRiT and sustainable design in your projects, contact Richard Schneider at (217) 373-6752 or richard.l.schneider@erdc.usace.army.mil (Annette Stumpf at (217) 352-6511 ext. 7542 or annette.l.stumpf@erdc.usace.army.mil alternate).

10) For the latest information on SPiRiT and for access to guidance, tools and resources supporting sustainable design initiatives, visit the CERL 'Sustainable Design and Development Resource' website, http://www.cecer.army.mil/SustDesign. There you may also join the CERL Sustainable Design ListServ to be directly notified of information pertinent to sustainable design.

1.0 Sustainable Sites — Score 20

1.R1 **Erosion, Sedimentation, and Water Quality Control** [1] — **Reqd.**

Intent: Control erosion and pollutants to reduce negative impacts on water and air quality.

Requirement:

- ❑ Design a site sediment and erosion control plan and a pollution prevention plan that conforms to best management practices in the EPA's Storm Water Management for Construction Activities, EPA Document No. EPA-833-R-92-001, Chapter 3, OR local Erosion and Sedimentation Control standards and codes, whichever is more stringent. The plan shall meet the following objectives:
  - Prevent loss of soil during construction by storm water runoff and/or wind erosion, including protecting topsoil by stockpiling for reuse.
  - Prevent sedimentation of storm sewer or receiving streams and/or air pollution with dust and particulate matter.
  - Prevent hazardous material discharge into storm water systems.
  - Prevent petroleum oils and lubricants (POL) discharge into storm water systems.

Technologies /Strategies: The EPA standard lists numerous measures such as silt fencing, sediment traps, oil grit separators, construction phasing, stabilization of steep slopes, maintaining vegetated ground cover and providing ground cover that will meet this prerequisite.

1.C1 **Site Selection** [1]

Intent: Avoid development of inappropriate sites and reduce the environmental impact from the location of a building on a site. Select site based on functional adjacencies/relationships and land use compatibility.

Requirement:

- ❑ Do not develop buildings on portions of sites that meet any one of the following criteria: **1**
  - Prime training or maneuver land.
  - Land whose elevation is lower than 5 ft. above the 100-year flood elevation as defined by FEMA.
  - Land that provides habitat for any species on the Federal or State threatened or endangered list.
  - Within 100 feet of any wetland as defined by 40 CFR, Parts 230-233 and Part 22, OR as defined by local or state rule or law, whichever is more stringent.
- ❑ Select site based on functional adjacencies/relationships and land use compatibility. **1**
  - Select sites close to existing roads and utilities or use an existing structure to minimize the need for new infrastructure.
  - Select site in area of high density.
  - Site facilities based on the strength of their relationships to other facilities/land-uses to limit travel distances. The stronger the relationship/functional interaction, the closer the distance between two facilities.
  - Select for distance to installation/base transit systems and access to pedestrian ways and bike paths.
  - Select for development previously used or developed suitable and available sites.

Technologies /Strategies: Screen potential building sites for these criteria and/or ensure that these criteria are addressed by the designer during the conceptual design phase. Utilize landscape architects, ecologists, environmental engineers, civil engineers, and similar professionals for the screening process. New wetlands constructed as part of stormwater mitigation or other site restoration efforts are not affected by the restrictions of this prerequisite.

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[1] Adapted material not reviewed or endorsed by U. S. Green Building Council.

1.0 Sustainable Sites (Continued)

1.C2 **Installation/Base Redevelopment** [1]

Intent: Channel development to installation/base cantonment areas with existing infrastructure, protecting greenfields and preserving habitat and natural resources.

Requirement:

- ❑ Increase localized density to conform to existing or desired density goals by utilizing sites that are located within existing cantonment areas of high development density. **1**
- ❑ Select sites close to existing roads and utilities or use an existing structure to minimize the need for new infrastructure. **1**

Technologies /Strategies: During the site selection process give preference to previously developed sites with installation/base cantonment redevelopment potential such as facility reduction program cleared sites.

1.C3 **Brownfield Redevelopment** [1]

Intent: Rehabilitate damaged sites where development is complicated by real or perceived environmental contamination, reducing pressure on undeveloped land.

Requirement:

- ❑ Develop on a site classified as a brownfield and provide remediation as required by EPA's Brownfield Redevelopment program requirements OR Develop a brownfield site (a site that has been contaminated by previous uses). **1**

Technologies /Strategies: Screen potential damaged sites for these criteria prior to selection for rehabilitation.

Utilize EPA OSWER Directive 9610.17 and ASTM Standard Practice E1739 for site remediation where required.

1.C4 **Alternative Transportation** [1]

Intent: Reduce pollution and land development impacts from automobile use.

Requirement:

- ❑ Locate building within ½ mile of installation/base transit systems. **1**
- ❑ Provide suitable means for securing bicycles, with convenient changing/shower facilities for use by cyclists, for 5% or more of building occupants. **1**
- ❑ Locate building within 2 miles of alternative-fuel refueling station(s). **1**
- ❑ Size parking capacity not to exceed minimum installation/base cantonment requirements AND provide preferred parking for carpools or van pools capable of serving 5% of the building occupants, OR, add no new parking for rehabilitation projects AND provide preferred parking for carpools or van pools capable of serving 5% of the building occupants. **1**

Technologies /Strategies: Select sites near public installation/base transit served by safe, convenient pedestrian pathways.

---

[1] Adapted material not reviewed or endorsed by U. S. Green Building Council.

1.C5 **Reduced Site Disturbance** [1]

Intent: Conserve existing natural areas and restore damaged areas to provide habitat and promote biodiversity.

Requirement:

- ❑ On greenfield sites, limit site disturbance including earthwork and clearing of vegetation to 40 feet beyond the building perimeter, 5 feet beyond primary roadway curbs, walkways, and main utility branch trenches, and 25 feet beyond pervious paving areas that require additional staging areas in order to limit compaction in the paved area; OR, on previously developed sites, restore a minimum of 50% of the remaining open area by planting native or adapted vegetation. **1**

- ❑ Reduce the development footprint (including building, access roads and parking) to exceed the installation/base's/base's master plan local zoning's open space requirement for the site by 25% or in accordance with installation/base policy on open space set asides, whichever is greater. **1**

Technologies /Strategies: Note requirements on plans and in specifications. Establish contractual penalties for destruction of trees and site areas noted for protection. Reduce footprints by tightening program needs and stacking floor plans. Establish clearly marked construction and disturbance boundaries. Delineate laydown, recycling, and disposal areas. Use areas to be paved as staging areas. Work with local horticultural extension services, ~~or~~ native plant societies, or installation/base agronomy staff to select indigenous plant species for site restoration and landscaping.

1.C6 **Stormwater Management** [1]

Intent: Limit disruption of natural water flows by minimizing storm water runoff, increasing on-site infiltration and reducing contaminants.

Requirement: Implement a stormwater management plan that results in:

- ❑ No net increase in the rate or quantity of stormwater runoff from undeveloped to developed conditions; OR, if existing imperviousness is greater than 50%, implement a stormwater management plan that results in a 25% decrease in the rate and quantity of stormwater runoff. **1**

- ❑ Treatment systems designed to remove 80% of the average annual post development total suspended solids (TSS), and 40% of the average annual post development total phosphorous (TP), by implementing Best Management Practices (BMPs) outlined in EPA's Guidance Specifying Management Measures for Sources of Nonpoint Pollution in Coastal Waters (EPA-840-B-92-002 1/93). **1**

Technologies /Strategies: Significantly reduce impervious surfaces, maximize on-site stormwater infiltration, and retain pervious and vegetated areas. Capture rainwater from impervious areas of the building for groundwater recharge or reuse within building. Use green/vegetated roofs. Utilize biologically-based and innovative stormwater management features for pollutant load reduction such as constructed wetlands, stormwater filtering systems, bioswales, bio-retention basins, and vegetated filter strips. Use open vegetated swales to reduce drainage velocity and erosion, reduce system maintenance, increase vegetative variety and support wildlife habitat where space permits.

1.C7 **Landscape and Exterior Design to Reduce Heat Islands** [2]

Intent: Reduce heat islands (thermal gradient differences between developed and undeveloped areas) to minimize impact on microclimate and human and wildlife habitat.

Requirement:

- ❑ Provide shade (within 5 years) on at least 30% of non-roof impervious surface on the site, including parking lots, walkways, plazas, etc., OR, use light-colored/ high-albedo materials (reflectance of at least 0.3) for 30% of the site's non-roof impervious surfaces, OR place a minimum of 50% of parking space under-ground OR use open-grid pavement system (net impervious area of LESS than 50%) for a minimum of 50% of the parking lot area. **1**

- ❑ Use ENERGY STAR Roof compliant, high-reflectance AND low emissivity roofing (initial reflectance of at least .65 and three-year-aged reflectance of at least .5 when tested in accordance with ASTM E408) for a minimum of 75% of the roof surface; OR, install a "green" (vegetated) roof for at least 50% of the roof area. **1**

Technologies /Strategies: Employ design strategies, materials, and landscaping designs that reduce heat absorption of exterior materials. Note albedo/reflectance requirements in the drawings and specifications. Provide shade (calculated on June 21, noon solar time) using native or climate tolerant trees and large shrubs, vegetated trellises, or other exterior structures supporting vegetation. Substitute vegetated surfaces for hard surfaces. Explore elimination of blacktop and the use of new coatings and integral colorants for asphalt to achieve light colored surfaces.

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[1] Adapted material not reviewed or endorsed by U. S. Green Building Council.

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1.C8 **Light Pollution Reduction** [1]

Intent: Eliminate light trespass from the building site, improve night sky access, and reduce development impact on nocturnal environments.

Requirement: ❑ Do not exceed Illuminating Engineering Society of North America (IESNA) footcandle level requirements as stated in the Recommended Practice Manual: Lighting for Exterior Environments, AND design interior and exterior lighting such that zero direct-beam illumination leaves the building site. **1**

Technologies /Strategies: Consult IESNA Recommended Practice Manual: Lighting for Exterior Environments for Commission Internationle de l'Eclairage (CIE) zone and pre and post curfew hour descriptions and associated ambient lighting level requirements. Ambient lighting for pre-curfew hours for CIE zones range between .01 footcandles for areas with dark landscapes such as parks, rural, and residential areas, and 1.5 footcandles for areas with high ambient brightness such as installation/base areas with high levels of nighttime activity. Design site lighting and select lighting styles and technologies to have a minimal impact off-site and minimal contribution to sky glow. Minimize lighting of architectural and landscape features. Exterior lighting should be consistent with security lighting requirements.

1.C9 **Optimize Site Features**

Intent: Optimize utilization of the site's existing natural features and placement of man-made features on the site.

Requirement: ❑ Perform both of the following: **1**

- Maximize the use of free site energy.
- Plan facility, parking and roadways to "fit" existing site contours and limit cut and fill.

Technologies /Strategies: Evaluate site resources to ascertain how each can enhance the proposed project and visa versa. Work to maximum advantage of the site's solar and wind attributes. Use landscaping to optimize solar and wind conditions and to contribute to energy efficiency; Locate and orient the facility on the site to optimize solar and wind conditions.

1.C10 **Facility Impact**

Intent: Minimize negative impacts on the site and on neighboring properties and structures; avoid or mitigate excessive noise, shading on green spaces, additional traffic, obscuring significant views, etc.

Requirement: ❑ Cluster facilities to reduce impact, access distance to utilities and sufficient occupant density to support mass transit. **1**

❑ Collaborate with installation/base and community planners to identify and mitigate potential impacts of the project beyond site boundaries, and transportation planners to insure efficient public transport. **1**

Technologies /Strategies: Involve local/regional planners and community members in installation/base master planning processes. Recognize the context and the impact of a project beyond site boundaries, and integrate it with the larger installation/base/community context/land use.

1.C11 **Site Ecology**

Intent: Identify and mitigate all existing site problems including contamination of soil, water, and air, as well as any negative impacts caused by noise, eyesores, or lack of vegetation, enhancing or creating new site habitat.

Requirement: ❑ Develop site environmental management and mitigation plan. **1**

Technologies /Strategies: Understand site and surrounding ecosystem interdependence and interconnectivity. Plan landscaping scheme to incorporate biodiversity. Preserve/enhance existing trees, hydrological features, ecosystems, habitats, and cultural resources. Increase the existence of healthy habitat for native species. Reintroduce native plants and trees where they have been destroyed by previous development.

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[1] Adapted material not reviewed or endorsed by U. S. Green Building Council.

2.0 Water Efficiency — Score 5

2.C1 Water Efficient Landscaping [2]

Intent: Limit or eliminate the use of potable water for landscape irrigation.

Requirement:

- ❑ Use high efficiency irrigation technology, OR, use captured rain or recycled site water to reduce potable water consumption for irrigation by 50% over conventional means. **1**
- ❑ Use only captured rain or recycled site water for an additional 50% reduction (100% total reduction) of potable water for site irrigation needs, OR, do not install permanent landscape irrigation systems. **1**

Technologies /Strategies: Develop a landscaping water use baseline according to the methodology outlined in the LEED Reference Guide. Specify water-efficient, native or adapted, climate tolerant plantings. High efficiency irrigation technologies include micro irrigation, moisture sensors, or weather data based controllers. Feed irrigation systems with captured rainwater, gray water, or on-site treated wastewater.

2.C2 Innovative Wastewater Technologies [2]

Intent: Reduce generation of wastewater and potable water demand, while increasing local aquifer recharge.

Requirement:

- ❑ Reduce the use of municipally provided potable water for building sewage conveyance by a minimum of 50%, OR, treat 100% of wastewater on site to tertiary standards. **1**

Technologies /Strategies: Develop a wastewater baseline according to the methodology outlined in the LEED Reference Guide. Implement decentralized on-site wastewater treatment and reuse systems. Decrease the use of potable water for sewage conveyance by utilizing gray and/or black water systems. Non-potable reuse opportunities include, toilet flushing, landscape irrigation, etc. Provide advanced wastewater treatment after use by employing innovative, ecological, on-site technologies including constructed wetlands, a mechanical recirculating sand filter, or aerobic treatment systems.

2.C3 Water Use Reduction [1]

Intent: Maximize water efficiency within buildings to reduce the burden on municipal water supply and wastewater systems.

Requirement:

- ❑ Employ strategies that in aggregate use 20% less water than the water use baseline calculated for the building (not including irrigation) after meeting Energy Policy Act (EPACT) of 1992 fixture performance requirements. **1**
- ❑ Exceed the potable water use reduction by an additional 10% (30% total efficiency increase). **1**

Technologies /Strategies: Develop a water use baseline including all water consuming fixtures, equipment, and seasonal conditions according to methodology guidance outlined in the LEED Reference Guide. Specify water conserving plumbing fixtures that exceed Energy Policy Act (EPACT) of 1992 fixture requirements in combination with ultra high efficiency or dry fixture and control technologies. Specify high water efficiency equipment (dishwashers, laundry, cooling towers, etc.). Use alternatives to potable water for sewage transport water. Use recycled or storm water for HVAC/process make up water. Install cooling tower systems designed to minimize water consumption from drift, evaporation and blowdown.

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3.R1 **Fundamental Building Systems Commissioning** [1] **Reqd.**

Intent: Verify and ensure that fundamental building elements and systems are designed, installed and calibrated to operate as intended.

Requirement: ❑ Implement all of the following fundamental best practice commissioning procedures.

- Engage a commissioning authority.
- Develop design intent and basis of design documentation.
- Include commissioning requirements in the construction documents.
- Develop and utilize a commissioning plan.
- Verify installation, functional performance, training and documentation.
- Complete a commissioning report.

Technologies /Strategies: Introduce standards and strategies into the design process early, and then carry through selected measures by clearly stating target requirements in the construction documents. Tie contractor final payments to documented system performance. Perform additional commissioning in accordance with the DOE Building Commissioning Guide, Version 2.2. Refer to the LEED Reference Guide for detailed descriptions of required elements and references to additional commissioning guides. Specify pre-occupancy baseline IAQ testing at time of commissioning. Test for indoor air concentrations of CO, CO2, total VOCs and particulates. Test to assure that adequate ventilation rates have been achieved prior to initial occupancy.

3.R2 **Minimum Energy Performance** [1] **Reqd.**

Intent: Establish the minimum level of energy efficiency for the base building and systems.

Requirement: ❑ Design to meet building energy efficiency and performance as required by TI 800-01 (Design Criteria).

Technologies /Strategies: Use building modeling and analysis techniques to establish and document compliance. ASHRAE/IESNA 90.1-1999 provides guidance for establishing building base case development and analysis. Refer to the LEED Reference Guide for a wide variety of energy efficiency strategy resources.

Use a professionally recognized and proven computer program or programs that integrate architectural features with air-conditioning, heating, lighting, and other energy producing or consuming systems. These programs will be capable of simulating the features, systems, and thermal loads used in the design. Using established weather data files, the program will perform 8760 hourly calculations. BLAST, DOE-2 or EnergyPlus are acceptable programs for these purposes.

3.R3 **CFC Reduction in HVAC&R Equipment** [2] **Reqd.**

Intent: Reduce ozone depletion.

Requirement: ❑ Zero use of CFC-based refrigerants in new base building HVAC&R systems. When reusing existing base building HVAC equipment, complete a comprehensive CFC phaseout conversion.

Technologies /Strategies: Specify only non-CFC-based refrigerants in all base building HVAC&R systems.

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3.0 Energy and Atmosphere (Continued)

3.C1 **Optimize Energy Performance** [1]

Intent: Achieve increasing levels of energy performance above the prerequisite standard to reduce environmental impacts associated with excessive energy use.

Requirement:

- ❑ Reduce design energy usage (DEU) compared to the energy use budget (EUB) in joules per square meter per year for regulated energy components as described in the requirements of Chapter 11 of the TI 800-01 (Design Criteria), as demonstrated by a whole building simulation. **20**
  - 1 Point will be awarded for every reduction in design energy use of 2.5% for both new and existing facilities for a maximum score of 20 points.

Regulated energy components include HVAC systems, building envelope, service hot water systems, lighting and other regulated systems as defined by ASHRAE.

Technologies /Strategies: Develop and use building modeling and analysis techniques to establish a base case that meets the minimum prerequisite standard. ASHRAE/IESNA 90.1-1999 provides guidance for establishing building base case development and analysis. Perform interactive energy use analysis for selected design elements that affect energy performance and document compliance.

Unit of measure for performance shall be annual energy usage in joules per square meter. Life-Cycle energy costs shall be determined using rates for purchased energy, such as electricity, gas, oil, propane, steam, and chilled water and approved by the adopting authority. Refer to the LEED Reference Guide or Whole Building Design Guide for a wide variety of energy efficiency resources and strategies including conservation measures, electromechanical energy efficiency technologies (for example ground-source heat pumps), passive heating and cooling strategies, solar hot water, and daylighting.

Life-Cycle costing will be done in accordance with 10 CFR 436.

Consider installation of an Energy Management and Control System (EMCS), which is compatible with exiting installation systems to optimize performance. Use sensors to control loads based on occupancy, schedule and/or the availability of natural resources use (day light or natural ventilation).

3.C2 **Renewable Energy** [1]

Intent: Encourage and recognize increasing levels of self-supply through renewable technologies to reduce environmental impacts associated with fossil fuel energy use.

Requirement:

- ❑ Supply a net fraction of the building's total energy use through the use of on-site renewable energy systems.

% of Total Annual Energy Usage in Renewables	
5%	**1**
10%	**2**
15%	**3**
20%	**4**

Technologies /Strategies: Employ the use of on-site non-polluting-source renewable technologies contributing to the total energy requirements of the project. Consider and use high temperature solar and/or geothermal, photovoltaics, wind, biomass (other than unsustainably harvested wood), and bio-gas. Passive solar, solar hot water heating, ground-source heat pumps, and daylighting do not qualify for points under this credit. Credit for these strategies is given in Energy & Atmosphere Credit 1: Optimizing Energy Performance.

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[1] Adapted material not reviewed or endorsed by U. S. Green Building Council.

3.C3 **Additional Commissioning** [2]

Intent: Verify and ensure that the entire building is designed, constructed, and calibrated to operate as intended.

Requirement: ❑ In addition to the Fundamental Building Commissioning prerequisite, implement the following additional commissioning tasks: **1**

1. Conduct a focused review of the design prior to the construction documents phase.
2. Conduct a focused review of the construction documents when close to completion.
3. Conduct a selective review of contractor submittals of commissioned equipment.
4. Develop a system and energy management manual.
5. Have a contract in place for a near-warranty end or post occupancy review.

Items 1, 2, and 3 must be performed by someone other than the designer.

Technologies /Strategies: Introduce standards and strategies into the design process early, and then carry through selected measures by clearly stating target requirements in the construction documents. Tie contractor final payments to documented system performance. Refer to the LEED Reference Guide for detailed descriptions of required elements and references to additional guidelines.

3.C4 **<< Deleted >>** [1]

3.C5 **Measurement and Verification** [1]

Intent: Provide for the ongoing accountability and optimization of building energy and water consumption performance over time.

Requirement: ❑ Comply with the installed equipment requirements for continuous metering as stated in selected Measurement and Verification Methods - Option B: Retrofit Isolation of the US DOE's International Performance Measurement and Verification Protocol (IPMVP) for the following: **1**

- Lighting systems and controls.
- Constant and variable motor loads.
- Variable frequency drive (VFD) operation.
- Chiller efficiency at variable loads (kW/ton).
- Cooling load.
- Air and water economizer and heat recovery cycles.
- Air distribution static pressures and ventilation air volumes.
- Boiler efficiencies.
- Building specific process energy efficiency systems and equipment.
- Indoor water risers and outdoor irrigation systems.

Technologies /Strategies: Design and specify equipment to be installed in base building systems to allow for comparison, management, and optimization of actual vs. estimated energy and water performance. Employ building automation systems to perform M&V functions where applicable. Tie contractor final payments to documented M&V system performance and include in the commissioning report. Provide for ongoing M&V system maintenance and operating plan in building operations and maintenance manuals. Consider installation/base of an Energy Management and Control System (EMCS), which is compatible with exiting installation/base systems to optimize performance.

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3.C6 **Green Power** [1]

Intent: Encourage the development and use of grid-source, renewable energy technologies on a net zero pollution basis.

Requirement: ❑ Engage in a two year contract to purchase the amount of power equal to projected building consumption generated from renewable sources that meet the Center for Resource Solutions (CRS) Green-E requirements. **1**

Technologies /Strategies: Purchase power from a provider that guarantees a fraction of its delivered electric power is from net nonpolluting renewable technologies. Begin by contacting local utility companies. If the project is in an open market state, investigate Green Power and Power Marketers licensed to provide power in that state. Grid power that qualifies for this credit originates from solar, wind, geothermal, biomass, or low-impact hydro sources. Low-impact hydro shall comply with the Low Impact Hydropower Certification Program.

3.C7 **Distributed Generation**

Intent: Encourage the development and use of distributed generation technologies, which are less polluting than grid-source energy.

Requirement: ❑ Reduce total energy usage and emissions by considering source energy implications and local cogeneration and direct energy conversion. Generate at least 50% of the building's projected annual consumption by on-site distributed generation sources. **1**

Technologies /Strategies: Investigate the use of integrated generation and delivery systems, such as co-generation, fuel cells, micro-turbines and off-peak thermal storage.

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[1] Adapted material not reviewed or endorsed by U. S. Green Building Council.

4.0 Materials and Resources — Score 13

4.R1 **Storage & Collection of Recyclables** [1] — **Reqd.**

Intent: Facilitate the reduction of waste generated by building occupants that is hauled to and disposed of in landfills.

Requirement:

- ❑ Provide an easily accessible area that serves the entire building that is dedicated to the separation, collection and storage of materials for recycling including (at a minimum) paper, glass, plastics, and metals.

Technologies /Strategies: Establish a waste management plan which meets requirements of the installation/base environmental and/or solid waste management plans in cooperation with users to encourage recycling. Reserve space for recycling functions early in the building occupancy programming process and show areas dedicated to collection of recycled materials on space utilization plans. Broader recycling support space considerations should allow for collection and storage of the required elements and newspaper, organic waste (food and soiled paper), and dry waste. When collection bins are used, bin(s) should be able to accommodate a 75% diversion rate and be easily accessible to custodial staff and recycling collection workers. Consider bin designs that allow for easy cleaning to avoid health issues.

4.C1 **Building Reuse** [1]

Intent: Extend the life cycle of existing building stock, conserve resources, retain cultural resources, reduce waste, and reduce environmental impacts of new buildings as they relate to materials manufacturing and transport.

Requirement: Reuse large portions of existing structures during renovation or redevelopment projects.

- ❑ Maintain at least 75% of existing building structure and shell (exterior skin and framing excluding window assemblies). — **1**
- ❑ Maintain an additional 25% (100% total) of existing building structure and shell (exterior skin and framing excluding window assemblies). — **1**
- ❑ Maintain 100% of existing building structure and shell AND 50% non-shell (walls, floor coverings, and ceiling systems). — **1**

Technologies /Strategies: Evaluate retention of existing structure. Consider facade preservation, particularly in installation/base areas. During programming and space planning, consider adjusting needs and occupant use patterns to fit within existing building structure and interior partition configurations. Identify and effectively address energy, structural, and indoor environmental (lead & asbestos) issues in building reuse planning and deconstruction documents. Percentage of reused non-shell building portions will be calculated as the total area (s.f.) of reused walls, floor covering, and ceiling systems, divided by the existing total area (s.f.) of walls, floor covering, and ceiling systems.

4.C2 **Construction Waste Management** [1]

Intent: Divert construction, demolition, and land clearing debris from landfill disposal. Redirect recyclable material back to the manufacturing process.

Requirement: Develop and implement a waste management plan, quantifying material diversion by weight:

- ❑ Recycle and/or salvage at least 50% (by weight) of construction, demolition, and land clearing waste. — **1**
- ❑ Recycle and/or salvage an additional 25% (75% total by weight) of the construction, demolition, and land clearing debris. — **1**

Technologies /Strategies: Develop and specify a waste management plan which meets requirements of the installation/base environmental and/or solid waste management plans that identifies licensed haulers and processors of recyclables; identifies markets for salvaged materials; employs deconstruction, salvage, and recycling strategies and processes, includes waste auditing; and documents the cost for recycling, salvaging, and reusing materials. Source reduction on the job site should be an integral part of the plan.

The plan should address recycling of corrugated cardboard, metals, concrete brick, asphalt, land clearing debris (if applicable), beverage containers, clean dimensional wood, plastic, glass, gypsum board, and carpet; evaluate the cost-effectiveness of recycling rigid insulation, engineered wood products and other materials; hazardous materials storage and management; and participation in manufacturers' "take-back" programs to the maximum extent possible. Refer to the LEED Reference Guide for guidelines and references that provide waste management plan development and implementation support including model bid specifications.

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4.C3 **Resource Reuse** [2]

Intent: Extend the life cycle of targeted building materials, reducing environmental impacts related to materials manufacturing and transport.

Requirement:

- ❑ Specify salvaged or refurbished materials for 5% of building materials. **1**
- ❑ Specify salvaged or refurbished materials for 10% of building materials. **1**

Technologies /Strategies: Commonly salvaged building materials include wood flooring/ paneling/cabinets, doors and frames, mantels, iron work and decorative lighting fixtures, brick, masonry and heavy timbers. See the LEED Reference Guide for calculation tools and guidelines. Determine percentages in terms of dollar value using the following steps:

1. Calculate total dollars* (see exclusions) of the salvaged or refurbished material.
2. Calculate total dollars (see exclusions) of all building materials.
3. Divide Step 1 by Step 2 to determine the percentage.

Exclusions: In total dollar calculations, exclude; labor costs; all mechanical and electrical material and labor costs and project overhead and fees. *If the cost of the salvaged or refurbished material is below market value, use replacement cost to estimate the material value, otherwise use actual cost to the project.

4.C4 **Recycled Content** [1]

Intent: Increase demand for building products that have incorporated recycled content material, reducing the impacts resulting from extraction of new material.

Requirement:

- ❑ Specify a minimum of 25% of building materials that contain in aggregate a minimum weighted average of 20% post-consumer recycled content material, OR, a minimum weighted average of 40% post-industrial recycled content material. **1**
- ❑ Specify an additional 25% (50% total) of building materials that contain in aggregate, a minimum weighted average of 20% post consumer recycled content material, OR, a minimum weighted average of 40% post-industrial recycled content material. **1**

Technologies /Strategies: Specify building materials containing recycled content for a fraction of total building materials. Select products and materials with supporting information from the AIA Resource Guide or the EPA Environmentally Preferable Purchasing (EPP) Program. Common building materials and products with recycled content include; wall, partition, and ceiling materials and systems; insulation; tiles and carpets; cement, concrete, and reinforcing metals; structural and framing steel. For products/materials not listed, selection should be made on the basis of EPP criterion and/or:

- Toxicity;
- Embodied energy;
- Production use of water, energy and ozone depleting substances (ODSs);
- Production limits on toxic emissions and effluents;
- Minimal, reusable or recycled/recyclable packaging;
- Impact on indoor environmental quality (IEQ);
- Installation that limits generation of waste;
- Materials that limit waste generation over their life;
- EPA guideline compliance; and
- Harvested on a sustainable yield basis.

See the LEED Reference Guide for a summary of the EPA guidelines and calculation methodology guidelines. Determine percentages in terms of dollar value using the following steps:

1. Calculate total dollars (see exclusions) of the material that contain recycled content.
2. Calculate total dollars (see exclusions) of all building materials.
3. Divide Step 1 by Step 2 to determine the percentage.

Exclusions: Labor costs; all mechanical and electrical material and labor costs; project overhead and fees)

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4.C5 **Local/Regional Materials** [2]

Intent: Increase demand for building products that are manufactured locally, reducing the environmental impacts resulting from transportation, and supporting the local economy.

Requirement:

- ❑ Specify a minimum of 20% of building materials that are manufactured regionally within a radius of 500 miles. **1**
- ❑ Of these regionally manufactured materials, specify a minimum of 50% that are extracted, harvested, or recovered within 500 miles. **1**

Technologies /Strategies: Specify and install regionally extracted, harvested, and manufactured building materials. Contact the state and local waste management boards for information about regional building materials. See the LEED Reference Guide for calculation methodology guidelines. Determine percentages in terms of dollar value using the following steps:

1. Calculate total dollars (see exclusions) of material that is locally or regionally manufactured.
2. Calculate total dollars (see exclusions) of all building materials.
3. Divide Step 1 by Step 2 to determine the percentage.

Exclusions: Labor costs; all mechanical and electrical material and labor costs; project overhead and fees.

4.C6 **Rapidly Renewable Materials** [2]

Intent: Reduce the use and depletion of finite raw and long cycle renewable materials by replacing them with rapidly renewable materials.

Requirement:

- ❑ Specify rapidly renewable building materials for 5% of total building materials. **1**

Technologies /Strategies: Rapidly renewable resources are those materials that substantially replenish them-selves faster than traditional extraction demand (e.g. planted and harvested in less than a 10 year cycle) and do not result in significant biodiversity loss, increase erosion, air quality impacts, and that are sustainably managed. See the LEED Reference Guide for calculation methodology guidelines. Determine percentages in terms of dollar value using the following steps:

1. Calculate total dollars (see exclusions) of materials that are considered to be rapidly renewable.
2. Calculate total dollars (see exclusions) of all building materials.
3. Divide Step 1 by Step 2 to determine the percentage.

Exclusions: Labor costs; all mechanical and electrical material and labor costs; project overhead and fees.

4.C7 **Certified Wood** [2]

Intent: Encourage environmentally responsible forest management.

Requirement:

- ❑ Use a minimum of 50% of wood-based materials certified in accordance with the Forest Stewardship Council guidelines for wood building components including but not limited to framing, flooring, finishes, furnishings, and non-rented temporary construction applications such as bracing, concrete form work and pedestrian barriers. **1**

Technologies /Strategies: Refer to the Forest Stewardship Council guidelines for wood building components that qualify for compliance to the requirements and incorporate into material selection for the project.

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5.R1 **Minimum IAQ Performance** [1] **Reqd.**

Intent: Establish minimum IAQ performance to prevent the development of indoor air quality problems in buildings, maintaining the health and well being of the occupants.

Requirement:
- ❑ Meet the minimum requirements of voluntary consensus standard ASHRAE 62-1999, Ventilation for Acceptable Indoor Air Quality and approved Addenda.

Technologies /Strategies: Include proactive design details that will eliminate some of the common causes of indoor air quality problems in buildings. Introduce standards into the design process early. Incorporate references to targets in plans and specifications. Ensure ventilation system outdoor air capacity can meet standards in all modes of operation. Locate building outdoor air intakes (including operable windows) away from potential pollutants/contaminant sources such as sporulating plants (allergens), loading areas, building exhaust fans, cooling towers, sanitary vents, dumpsters, vehicular exhaust, and other sources. Include operational testing in the building commissioning report. Design cooling coil drain pans to ensure complete draining. Include measures to control and mitigate radon buildup in areas where it is prevalent. Limit humidity to a range that minimizes mold growth and promotes respiratory health.

5.R2 **Environmental Tobacco Smoke (ETS) Control** [2] **Reqd.**

Intent: Prevent exposure of building occupants and systems to Environmental Tobacco Smoke (ETS).

Requirement:
- ❑ Zero exposure of nonsmokers to ETS by prohibition of smoking in the building, OR, by providing a designated smoking room designed to effectively contain, capture and remove ETS from the building. At a minimum, the smoking room shall be directly exhausted to the outdoors with no recirculation of ETS-containing air to the non-smoking area of the building, enclosed with impermeable structural deck-to-deck partitions and operated at a negative pressure compared with the surrounding spaces of at least 7 Pa (0.03 inches of water gauge). Performance of smoking rooms shall be verified using tracer gas testing methods as described in ASHRAE Standard 129-1997. Acceptable exposure in non-smoking areas is defined as less than 1% of the tracer gas concentration in the smoking room detectable in the adjoining non-smoking areas. Smoking room testing as described in the ASHRAE Standard 129-1997 is required in the contract documents and critical smoking facility systems testing results must be included in the building commissioning plan and report or as a separate document.

Technologies /Strategies: Prohibit smoking in the building and/or provide designated smoking areas outside the building in locations where ETS cannot reenter the building or ventilation system and away from high building occupant or pedestrian traffic.

5.C1 **IAQ Monitoring** [1]

Intent: Provide capacity for indoor air quality (IAQ) monitoring to sustain long term occupant health and comfort.

Requirement:
- ❑ Install a permanent carbon dioxide (CO_2) monitoring system that provides feedback on space ventilation performance in a form that affords operational adjustments, AND specify initial operational set point parameters that maintain indoor carbon dioxide levels no higher than outdoor levels by more than 530 parts per million at any time. **1**

Technologies /Strategies: Install an independent system or make CO_2 monitoring a function of the building automation system. Situate monitoring locations in areas of the building with high occupant densities and at the ends of the longest runs of the distribution ductwork. Specify that system operation manuals require calibration of all of the sensors per manufacturer recommendations but not less than one year. Include sensor and system operational testing and initial set point adjustment in the commissioning plan and report. Also consider periodic monitoring of carbon monoxide (CO), total volatile organic compounds (TVOCs), and particulates (including PM10).

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5.C2 **Increase Ventilation Effectiveness** [2]

Intent: Provide for the effective delivery and mixing of fresh air to building occupants to support their health, safety, and comfort.

Requirement:

- ❑ For mechanically ventilated buildings, design ventilation systems that result in an air change effectiveness (E) greater than or equal to 0.9 as determined by ASHRAE 129-1997. For naturally ventilated spaces demonstrate a distribution and laminar flow pattern that involves not less than 90% of the room or zone area in the direction of air flow for at least 95% of hours of occupancy. **1**

Technologies /Strategies: Employ architectural and HVAC design strategies to increase ventilation effectiveness and prevent short-circuiting of airflow delivery. Techniques available include use of displacement ventilation, low velocity, and laminar flow ventilation (under floor or near floor delivery) and natural ventilation. Operable windows with an architectural strategy for natural ventilation, cross ventilation, or stack effect can be appropriate options with study of inlet areas and locations. See the LEED Reference Guide for compliance methodology guidelines.

5.C3 **Construction IAQ Management Plan** [2]

Intent: Prevent indoor air quality problems resulting from the construction/renovation process, to sustain long term installer and occupant health and comfort.

Requirement: Develop and implement an Indoor Air Quality (IAQ) Management Plan for the construction and pre-occupancy phases of the building as follows:

- ❑ During construction meet or exceed the minimum requirements of the Sheet Metal and Air Conditioning National Contractors Association (SMACNA) IAQ Guideline for Occupied Buildings under Construction, 1995, AND protect stored on-site or installed absorptive materials from moisture damage, AND replace all filtration media immediately prior to occupancy (Filtration media shall have a Minimum Efficiency Reporting Value (MERV) of 13 as determined by ASHRAE 52.2-1999). **1**
- ❑ Conduct a minimum two-week building flushout with new filtration media at 100% outside air after construction ends and prior to occupancy, OR, conduct a baseline indoor air quality testing procedure consistent with current EPA protocol for Environmental Requirements, Baseline IAQ and Materials, for the Research Triangle Park Campus, Section 01445. **1**

Technologies /Strategies: Specify containment control strategies including protecting the HVAC system, controlling pollutant sources, interrupting pathways for contamination, enforcing proper housekeeping and coordinating schedules to minimize disruption. Specify the construction sequencing to install absorptive materials after the prescribed dry or cure time of wet finishes to minimize adverse impacts on indoor air quality. Materials directly exposed to moisture through precipitation, plumbing leaks, or condensation from the HVAC system are susceptible to microbial contamination. Absorptive materials to protect and sequence installation include; insulation, carpeting, ceiling tiles, and gypsum products. Appoint an IEQ Manager with owner's authority to inspect IEQ problems and require mitigation as necessary.

5.C4 **Low-Emitting Materials** [2]

Intent: Reduce the quantity of indoor air contaminants that are odorous or potentially irritating to provide installer and occupant health and comfort.

Requirement: Meet or exceed VOC limits for adhesives, sealants, paints, composite wood products, and carpet systems as follows:

- ❑ Adhesives must meet or exceed the VOC limits of South Coast Air Quality Management District Rule #1168 by, AND all sealants used as a filler must meet or exceed Bay Area Air Resources Board Reg. 8, Rule 51. **1**
- ❑ Paints and coatings must meet or exceed the VOC and chemical component limits of Green Seal requirements. **1**
- ❑ Carpet systems must meet or exceed the Carpet and Rug Institute Green Label Indoor Air Quality Test Program. **1**
- ❑ Composite wood or agrifiber products must contain no added urea-formaldehyde resins. **1**

Technologies /Strategies: Evaluate and preferentially specify materials that are low emitting, non-irritating, nontoxic and chemically inert. Request and evaluate emissions test data from manufacturers for comparative products. Ensure that VOC limits are clearly stated in specifications, in General Conditions, or in each section where adhesives, sealants, coatings, carpets, and composite woods are addressed.

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5.C5 Indoor Chemical and Pollutant Source Control [1]

Intent: Avoid exposure of building occupants to potentially hazardous chemicals that adversely impact air quality.

Requirement:

- ❑ Design to minimize cross-contamination of regularly occupied areas by chemical pollutants: **1**
  - Employ permanent entryway systems (grills, grates, etc.) to capture dirt, particulates, etc. from entering the building at all high volume entryways, AND provide areas with structural deck to deck partitions with separate outside exhausting, no air recirculation and negative pressure where chemical use occurs (including housekeeping areas and copying/print rooms), AND provide drains plumbed for appropriate disposal of liquid waste in spaces where water and chemical concentrate mixing occurs.

Technologies /Strategies: Design to physically isolate activities associated with chemical contaminants from other locations in the building, providing dedicated systems to contain and remove chemical pollutants from source emitters at source locations. Applicable measures include eliminating or isolating high hazard areas; designing all housekeeping chemical storage and mixing areas (central storage facilities and janitors closets) to allow for secure product storage; designing copy/fax/printer/printing rooms with structural deck to deck partitions and dedicated exhaust ventilation systems; and including permanent architectural entryway system(s) to catch and hold particles to keep them from entering and contaminating the building interior.

Consider utilization of EPA registered anti-microbial treatments in carpet, textile or vinyl wall coverings, ceiling tiles or paints where microbial contamination is a concern. Utilize "breathable" wall finishes where circumstances require, to reduce moisture build-up and prevent microbial contamination. Minimize selection of fibrous materials, e.g. insulation, carpet and padding and flexible fabrics, whose exposed surfaces when exposed to the air stream or occupied space can contribute significant emissions and absorb and re-emit other contaminants over time.

5.C6 Controllability of Systems [2]

Intent: Provide a high level of individual occupant control of thermal, ventilation, and lighting systems to support optimum health, productivity, and comfort conditions.

Requirement:

- ❑ Provide a minimum of one operable window and one lighting control zone per 200 s.f. for all occupied areas within 15 feet of the perimeter wall. **1**
- ❑ Provide controls for each individual for airflow, temperature, and lighting for 50% of the non perimeter, regularly occupied areas. **1**

Technologies /Strategies: Provide individual or integrated controls systems that control lighting, airflow, and temperature in individual rooms and/or work areas. Consider combinations of ambient and task lighting control and operable windows for perimeter and VAV systems for non perimeter with a 1:1: 2 terminal box to controller to occupant ratio.

5.C7 Thermal Comfort [2]

Intent: Provide for a thermally comfortable environment that supports the productive and healthy performance of the building occupants.

Requirement:

- ❑ Comply with ASHRAE Standard 55-1992, Addenda 1995 for thermal comfort standards including humidity control within established ranges per climate zone. **1**
- ❑ Install a permanent temperature and humidity monitoring system configured to provide operators control over thermal comfort performance and effectiveness of humidification and/or dehumidification systems in the building. **1**

Technologies /Strategies: Integrated envelope and HVAC system design strategies that achieve thermal comfort conditions based on mean radiant temperature, local air velocity, relative humidity, and air temperature. Install and maintain a temperature and humidity monitoring system for key areas of the building (i.e., at the perimeter, and spaces provided with humidity control). This function can be satisfied by the building automation system. Specify in system operation manuals that all sensors require quarterly calibration. Include criteria verification and system operation in commissioning plan and report.

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5.C8 **Daylight and Views** [2]

Intent: Provide a connection between indoor spaces and the outdoor environment through the introduction of sunlight and views into the occupied areas of the building.

Requirement:

- ❑ Achieve a minimum Daylight Factor of 2% (excluding all direct sunlight penetration) in 75% of all space occupied for critical visual tasks, not including copy rooms, storage areas, mechanical, laundry, and other low occupancy support areas. Exceptions include those spaces where tasks would be hindered by the use of daylight or where accomplishing the specific tasks within a space would be enhanced by the direct penetration of sunlight. **1**
- ❑ Direct line of sight to vision glazing from 90% of all regularly occupied spaces, not including copy rooms, storage areas, mechanical, laundry, and other low occupancy support areas. **1**

Technologies /Strategies: Implement design strategies to provide access to daylight and views to the outdoors in a glare-free way using exterior sun shading, interior light shelves, and /or window treatments. Orient buildings to maximize daylighting options. Consider shallow or narrow building footprints. Employ courtyards, atriums, clerestory windows, skylights, and light shelves to achieve daylight penetration (from other than direct effect or direct rays from the sun) deep into regularly occupied areas of the building.

5.C9 **Acoustic Environment /Noise Control**

Intent: Provide appropriate acoustic conditions for user privacy and comfort.

Requirement:

- ❑ Minimize environmental noise through appropriate use of insulation, sound-absorbing materials and noise source isolation. **1**

Technologies /Strategies: Evaluate each occupied environment and determine the appropriate layout, materials and furnishings design.

5.C10 **Facility In-Use IAQ Management Plan**

Intent: Insure the effective management of facility air quality during its life.

Requirement:

- ❑ Perform all of the following: **1**
  - Develop an air quality action plan to include scheduled HVAC system cleaning.
  - Develop an air quality action plan to include education of occupants and facility managers on indoor pollutants and their roles in preventing them.
  - Develop an air quality action plan to include permanent monitoring of supply and return air, and ambient air at the fresh air intake, for carbon monoxide (CO), carbon dioxide (CO 2), total volatile organic compounds (TVOCs), and particulates (including PM10).

Technologies /Strategies: Provide action plan for periodic system maintenance, monitoring, occupant/manager training.

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[2] © U. S. Green Building Council. Used by permission.

6.0 Facility Delivery Process — Score 7

6.C1 **Holistic Delivery of Facility**

Intent: Encourage a facility delivery process that actively engages all stakeholders in the design process to deliver a facility that meets all functional requirements while effectively optimizing tradeoffs among sustainability, first costs, life cycle costs and mission requirements.

Requirement:

- ❑ Choose team leaders that are experienced in holistic delivery of facilities. **1**
- ❑ Train the entire team in the holistic delivery process. The team must include all stakeholders in the facility delivery, including the users, the contracting staff, the construction representatives, project manager, and design/engineering team members. **1**
- ❑ Identify project goals and metrics. **1**
- ❑ Plan and execute charrettes with team members at critical phases of the facility delivery. **1**
- ❑ Identify and resolve tradeoffs among sustainability, first costs, life cycle costs and mission requirements through charrettes and other collaborative processes. **2**
- ❑ Document required results for each phase of project deliverables that achieve the project goals and are measurable throughout the facility life span. **1**

Technologies /Strategies:

Develop performance specifications or choose competitive range of products that meet environmental criteria.

Use automated modeling and analysis tools to assess site and facility design alternatives.

Conduct life-cycle cost analysis (LCCA) in the design process according to the Federal Facilities Council Technical Report, Sustainable Federal Facilities: A Guide To Integrating Value Engineering, Life Cycle Costing, and Sustainable Development, FFC # 142, 2000.

Conduct a full ecological assessment to include soil quality, water resources and flows, vegetation and trees, wildlife habitats and corridors, wetlands, and ecologically sensitive areas to identify the least sensitive site areas for development. Evaluate space utilization/functions to reduce overall space requirements, considering networking, flextime, flexi-place, dual-use, and other strategies to reduce space requirements/optimize facility size.

7.0 Current Mission — Score 6

7.C1 **Operation and Maintenance**

Intent: Encourage the development of a facility delivery process that enhances efficient operation and maintenance of the facility.

Requirement:

- ❑ Develop a facility operations and maintenance program to include: **2**
  - Commissioning instructions for all facility systems.
  - Comprehensive facility operations and maintenance instructions for system operation, performance verification procedures and results, an equipment inventory, warrantee information, and recommended maintenance schedule. The instructions should include a comprehensive, preventive maintenance program to keep all facility systems functioning as designed.
  - A periodic training program for occupants, facilities managers, and maintenance staff in all facility operations and maintenance activities.
  - Instructions on sustainable cleaning and pest control practices.
  - Develop a comprehensive site/facility recycling/waste management plan.
- ❑ Provide surfaces, furnishings, and equipment that are appropriately durable, according to life cycle cost analysis. **1**

Technologies /Strategies: Maintain facility elements, systems and subsystems on a routine maintenance schedule to ensure integrity and longevity.

Perform scheduled cleaning and maintenance activities with nontoxic environmentally preferable cleaning products and procedures. Keep air ducts clean and free of microorganisms through a structured program of preventive maintenance. Clean lighting systems following a regular maintenance schedule to ensure optimum light output and energy efficiency.

Use pesticides and herbicides sparingly and only when necessary with preference to natural methods and materials over poisons and toxic agents.

Use automated monitors and controls for energy, water, waste, temperature, moisture, and ventilation monitors and controls. Turn off the lights, computers, computer monitors, and equipment when not in use. Enable power-down features on office equipment.

7.C2 **Soldier and Workforce Productivity and Retention**

Intent: Provide a high-quality, functional, healthy and safe work environment to promote soldier and workforce productivity and retention.

Requirement:

- ❑ Provide a high quality indoor environment to enhance user/occupant quality of life (QOL). **1**
- ❑ Provide a highly functional work environment to promote user/occupant work productivity. **1**
- ❑ Provide a healthy and safe work environment to sustain QOL and productivity. **1**

Technologies /Strategies: Use a registered/certified interior designer to provide stimulating interior environments with pleasant colors, surface treatments, room proportions and ceiling heights, external views, natural lighting, and quality detailing for interior furnishings, equipment, materials and finishes. Use IES standards to provide light to occupied space with variations in level, comfortable contrasts, natural color rendition, natural/man-made, and adequate controls to optimize light aesthetic qualities. Provide occupant control of individual work areas configuration, and lighting, thermal and ventilation systems.

Collaborate with end users to identify functional and technical requirements and to perform adjacency studies. Configure occupied space to address the specific workers/occupants functions and activities that will be carried out there. Meet TI 800-01 Design Guide requirements. Design and configure occupied space, and select furniture and equipment using human ergonomics. Identify existing user amenities, such as dining, recreation, socialization, shopping and child care facilities. Identify what amenities should be incorporated into the project or provided in the future, nearby facility. Provide ventilation air in sufficient volume free from natural and man made contaminants.

8.0 Future Missions — Score 4

8.C1 **Functional Life of Facility and Supporting Systems**

Intent: Assess the functional life of a facility and its supporting systems to optimize the infrastructure investment.

Requirement:

- ❑ Identify how long the designed function is likely to occupy the current facility. **1**
- ❑ Identify how long the envelope, structure, HVAC, plumbing, communications, electrical, and other systems are likely to last before requiring replacement or upgrade. Consider economic, functional and physical obsolescence. **1**

Technologies /Strategies: Assess the typical or likely lifespan of the function(s) to be accommodated to forecast eventual adaptation to a different use(s). Assess the life spans of the various building systems/components to forecast their revision/replacement during the facility lifespan and design in a manner that facilitates revision/replacement.

Consider the life span of the weapon systems, doctrines, or other programs supported by the facility.

Use life cycle data and other sources to identify the life span of the embodied systems.

8.C2 **Adaptation, Renewal and Future Uses**

Intent: Encourage facility design that is responsive to change over time to maximize accommodation of future uses without creating waste and insuring maximum useful life of products.

Requirement:

- ❑ Identify possible future uses for the facility; consider alternatives that expand the list of possible future uses. AND Design the building to accommodate as wide a range of future uses, as practical. AND Design the installation of building systems to accommodate foreseeable change with a minimum amount of disruption, cost, and additional materials. **1**
- ❑ Build the smallest facility necessary to meet current mission functional requirements, using the most efficient shape and form, while taking into consideration expansion capabilities and potential future mission requirements. AND Design the facility for recycling of materials and systems. **1**

Technologies /Strategies: Create durable, long-lasting and adaptable facility shell and structural system. Create an adaptable, flexible facility design using open planning, service corridors, interstitial space, access floors, demountable walls/partitions, modular furniture and other adaptable space configuration/utilization strategies.

Select materials that are recyclable, avoiding composite materials, such as reinforced plastics and carpet fibers and backing. Consider selecting materials and labeling construction materials with identification information to facilitate recycling. Use pre-cut/pre-fabricated materials and use standard lengths and sizes (dimensional modularity) in design. Design facility systems and subsystems for reconfiguration and/or disassembly/recycling using reversible/reusable connectors.

Facility Points Summary

1.0	Sustainable Sites (S)	Score	0	Max 20
1.R1	❑ Erosion, Sedimentation and Water Quality Control			[Required]
1.C1	❑ Site Selection			2
1.C2	❑ Installation/Base Redevelopment			2
1.C3	❑ Brownfield Redevelopment			1
1.C4	❑ Alternative Transportation			4
1.C5	❑ Reduced Site Disturbance			2
1.C6	❑ Stormwater Management			2
1.C7	❑ Landscape and Exterior Design to Reduce Heat Islands			2
1.C8	❑ Light Pollution Reduction			1
1.C9	❑ Optimize Site Features			1
1.C10	❑ Facility Impact			2
1.C11	❑ Site Ecology			1
			0	Max 5
2.C1	❑ Water Efficient Landscaping			2
2.C2	❑ Innovative Wastewater Technologies			1
2.C3	❑ Water Use Reduction			2
			0	Max 28
3.R1	❑ Fundamental Building Systems Commissioning			[Required]
3.R2	❑ Minimum Energy Performance			[Required]
3.R3	❑ CFC Reduction in HVAC&R Equipment			[Required]
3.C1	❑ Optimize Energy Performance			20
3.C2	❑ Renewable Energy			4
3.C3	❑ Additional Commissioning			1
3.C4	❑ <<Deleted>>			
3.C5	❑ Measurement and Verification			1
3.C6	❑ Green Power			1
3.C7	❑ Distributed Generation			1
4.0	**Materials and Resources (M)**	**Score**	**0**	**Max 13**
4.R1	❑ Storage & Collection of Recyclables			[Required]
4.C1	❑ Building Reuse			3
4.C2	❑ Construction Waste Management			2
4.C3	❑ Resource Reuse			2
4.C4	❑ Recycled Content			2
4.C5	❑ Local/Regional Materials			2
4.C6	❑ Rapidly Renewable Materials			1
4.C7	❑ Certified Wood			1
5.0	**Indoor Environmental Quality (IEQ) [Q]**	**Score**	**0**	**Max 17**
5.R1	❑ Minimum IAQ Performance			[Required]
5.R2	❑ Environmental Tobacco Smoke (ETS) Control			[Required]
5.C1	❑ IAQ Monitoring			1
5.C2	❑ Increase Ventilation Effectiveness			1
5.C3	❑ Construction IAQ Management Plan			2
5.C4	❑ Low-Emitting Materials			4
5.C5	❑ Indoor Chemical and Pollutant Source Control			1
5.C6	❑ Controllability of Systems			2
5.C7	❑ Thermal Comfort			2
5.C8	❑ Daylight and Views			2
5.C9	❑ Acoustic Environment /Noise Control			1
5.C10	❑ Facility In-Use IAQ Management Plan			1

Facility Points Summary (Continued)

				Maximum Points
6.0	**Facility Delivery Process (P)**	**Score**	**0**	**Max 7**
6.C1	❑ Holistic Delivery of Facility			7
7.0	**Current Mission**	**Score**	**0**	**Max 6**
7.C1	❑ Operation and Maintenance			3
7.C2	❑ Soldier and Workforce Productivity and Retention			3
8.0	**Future Missions**	**Score**	**0**	**Max 4**
8.C1	❑ Functional Life of Facility and Supporting Systems			2
8.C2	❑ Adaptation, Renewal and Future Uses			2

Total Score | **0** | **Max 100**

SPiRiT Sustainable Project Certification Levels

SPiRiT Bronze		**25 to 34 Points**
SPiRiT Silver		**35 to 49 Points**
SPiRiT Gold		**50 to 74 Points**
SPiRiT Platinum		**75 to 100 Points**

Project Points of Contact

SPiRiT Comment Sheet

Please forward any comments that you may have on this Sustainable Project Rating Tool, preferably by Email, to:

Mr. Harry Goradia
U. S. Army Corps of Engineers
ATTN: CEMP-ET
7701 Telegraph Road
Alexandria, VA 22315-3862
Phone 703-428-6460
FAX 703-428-7903
Email harry.goradia@hq02.usace.army.mil

SPiRiT Para.

APPENDIX F
SPIRIT REQUIREMENTS AND SUMMARY TABLE

APPENDIX F

SPIRIT REQUIREMENTS AND SUMMARY TABLE

	SPIRIT Requirements and Summary Table	Maximum points possible	Mandatory points in RFP	Proposal points	
PAR	**FEATURE**				**REMARKS**
NOTE: SEE SPIRIT TEXT FOR FULL DESCRIPTION OF REQUIREMENTS FOR EACH ITEM.					
COMPLIANCE IS REQUIRED IF "R" OR A NUMBER GREATER THAN ZERO APPEARS IN THE					
MANDATORY POINTS COLUMN					
1.R1	Sediment/Erosion Control Plan	R	R	R	RFP requirement
1.C1	Avoid undesirable sites	1	1	1	
	Site adjacencies/compatibility	1	1	1	
1.C2	Increase density	1	1	1	
	Minimize new infrastructure	1	1	1	
1.C3	Brownfield	1	0	0	
1.C4	Proximity to transit system	1	0	0	
	Bike racks & showers	1	1	1	
	Proximity to alternative fuel station	1			
	Parking capacity, carpool parking	1			
1.C5	Limited site disturbance , restoration	1			
	Reduced footprint	1			
1.C6	Stormwater runoff rate	1			
	Stormwater treatment	1			
1.C7	Reduce site heat islands	1			
	Reduce roof heat islands	1	0	0	
1.C8	Reduce light pollution	1			
1.C9	optimize site features	1			
1.C10	Cluster facilities	1	0	0	
	Mitigate offsite impacts	1	0	0	
1.C11	Site Ecology	1			
2.C1	High efficiecy irrigation/recycle site water	1			
	no irrigation	1			
2.C2	Innovative wastewater technologies	1			
2.C3	20% Water use reduction	1			
	30% Water use reduction	1			
3.R1	Building commissioning	R	R	R	RFP requirement
3.R2	Minimum energy performance	R	R	R	RFP requirement
3.R3	CFC Reduction	R	R	R	RFP requirement
3.C1	Optimize energy performance	20			
3.C2	5% Onsite renewable energy	1			
	10% onsite renewable energy	2			
	15% onsite renewable energy	3			
	20% onsite renewable energy	4			
3.C3	Additional commissioning	1			
3.C5	Measurement and verification	1			
3.C6	Green power	1	0	0	
3.C7	Distributed generation	1			
4.R1	Storage & collection of recyclables	R	R	R	RFP requirement
4.C1	Building reuse	3	0	0	
4.C2	Reduce construction waste	1			
	Reduce construction waste addl	1			

APPENDIX F

SPIRIT REQUIREMENTS AND SUMMARY TABLE

4.C3	Salvage/reused materials	1			
	Salvage/reused materials addl	1			
4.C4	Materials recycled content	1			
	Addl materials recycled content	1			
4.C5	Regionally manufactured materials	1			
	Regionally extracted materials	1			
4.C6	Rapidly renewable materials	1			
4.C7	Certified wood	1			
5.R1	Minimum IAQ performance	R	R	R	RFP requirement
5.R2	Environmental tobacco smoke	R	R	R	RFP requirement
5.C1	IAQ monitoring	1			
5.C2	Increase ventilation effectiveness	1			
5.C3	SMACNA/absorptive mtls/filtration	1			
	Flushout/baseline IAQ test	1			
5.C4	Adhesive/sealant VOC	1			
	Green Seal paints & coatings	1			
	CRI Green Label carpet	1			
	No urea/formaldehyde resins	1			
5.C5	Indoor pollutant source control	1			
5.C6	Operable windows, perimeter light controls	1	0	0	
	Non-perimeter controls	1	0	0	
5.C7	ASHRAE thermal comfort stds	1			
	Temperature/humidity monitoring	1			
5.C8	75% daylighting	1			
	90% outdoor view	1			
5.C9	Noise control	1			
5.C10	IAQ management plan	1			
6.C1	Team leader experience	1			
	Train team	1			
	Identify project goals	1			
	Charettes	1			
	Resolve tradeoffs	1			
	Document results	1			
7.C1	Develop O&M plan	2			
	Durable materials	1			
7.C2	Quality indoor environment	1			
	Functional work environment	1			
	Healthy work environment	1			
8.C1	Determine functional life	1			
	Determine building life	1			
8.C2	Design for future uses	1			
	Minimize building size	1			
	TOTAL	100			

APPENDIX G

INTERIOR DESIGN PRESENTATION FORMAT

US Army Corps
of Engineers
Savannah District

Interior Design Presentation Format

February 1999

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

THE SAVANNAH DISTRICT'S MANUAL
FOR INTERIOR DESIGN PRESENTATION

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THE SAVANNAH DISTRICT'S MANUAL
FOR INTERIOR DESIGN PRESENTATION FORMAT

A. This format is required in accordance with THE SAVANNAH DISTRICT DESIGN MANUAL section 10.8.9. And is developed in accordance with Air Force and Army interior design requirements for SID/CID submittals.

B. SID/CID PACKAGES RUN CONCURRENT WITH THE ARCHITECTURAL SUBMITTALS.

C. "Checklists for Reviews" and "Lessons Learned" are to be used to ensure all required information is included in the Contract Documents, the SID/CID presentation binders and to achieve customer satisfaction.

D. The General Contractor will not be receiving the 8 ½" X 11" SID/CID binders. Verify that all graphic illustrations such as carpet borders, ceramic tile patterns, accent color placement, millwork details and prewired furniture finished and details are on the contract drawings.

E. DO NOT REFERENCE THE SID/CID BINDERS IN THE CONTRACT DOCUMENTS.

F. THIS INFORMATION IS NOT OPTIONAL WHEN PRESENTING A SID/CID SUBMITTAL FOR REVIEW and FINAL DESIGN.

G. The Interior Design Point of Contact for the Savannah District is:

U.S. Army Corps of Engineers
ATTN: EN-DA/Peggy Roberson
100 W. Oglethorpe Avenue
Savannah, GA 31402-0889
COMM (912) 652-5544 FAX (912) 652-5891

GOVERNMENT CONTRACTING TERMS

ARMY	AIR FORCE	DEFINITION
MCA	**MILCON**	**MILITARY CONSTRUCTION** funds appropriated by Congress for new construction-fixed price contracts.
OMA	**O & M**	**OPERATION** AND **MAINTENANCE** funds provided to each installation by the Major Command and used for the day to day operations of the installation. These funds may be used for the renovation of existing buildings or for the purchase of furniture. Funds not spent to award a contract disappear at the end of the FY and cannot be recovered.
FY	**FY**	**FISCAL YEAR:** (A) October 1 through September 30 per the calendar. **(B)** If the project title begins with "FY- . ." This identifies the year Congress will fund the construction Contract Award.
PD	**PD**	**PROJECT DEFINITION:** A conceptual design of the proposed project (floor plans, elevations, cost estimate).
DD FORM 1391	**DD FORM 1391**	A programming document initiated by the installation; passed through the Major Command on to Congress for funding. The **1391** outlines basic needs for a proposed facility and an estimated cost to reach those needs.
JOC	**SABER**	**JOB ORDER CONTRACT OR SIMPLIFIED ACQUISITION OF BASE ENGINEERING REQUIREMENTS:** The installation's method to contract for repair work. Unit prices are agreed upon with a Contractor then individual job orders are negotiated for specific scopes of repair work.

GOVERNMENT CONTRACTING TERMS

ARMY	AIR FORCE	DEFINITION
CBD	**CBD**	**COMMERCE** AND **BUSINESS DAILY:** The federal government's "want ads". Advanced notice of contracting actions & requests for A-E Services.
IFB	**IFB**	**INVITATION FOR BID:** Standard contract procedures with clearly defined requirements, specifications and terms that are not negotiated. Any proposal prepared in response to an IFB must strictly adhered to the terms. Award is based on the lowest bid meeting the requirements and specifications.
RFP **RFQ**	**RFP** **RFQ**	A **REQUEST FOR PROPOSAL** is flexible in contrast to an IFB. It usually defines a problem and allows those who respond to the RFP to suggest a solution.
DESIGN BUILD	**DESIGN BUILD**	A **REQUEST FOR QUOTES** is an informal request for price for standard item. Using the RFP format, performance requirements are outlined; the Construction Contractor and A-E subcontractor are responsibility for the design of specifics to meet performance requirements.
APPENDIX A	**APPENDIX A**	The contractual scope of work for A-E contracts which outlines basic requirements includes specific deliverables and the schedule of design submittals.
SF 254 & 255	**SF 254 & 255**	**STANDARD FORMS** to provide resume information to the government regarding the qualifications of A-E's responding to a CBD announcement.

GOVERNMENT CONTRACTING TERMS

ARMY	AIR FORCE	DEFINITION
SID	**SID**	**STRUCTURAL INTERIOR DESIGN:** Building related finishes; funded with MCA or MILCON dollars; Building Materials and finishes are purchased and installed by the General Contractor; a submittal with samples of proposed building materials being used on a particular project.
CID	**CID**	**COMPREHENSIVE INTERIOR DESIGN:** Furniture related; funded with OMA or O & M dollars: a submittal with furniture illustrations, fabric & finish samples, footprint plans, and furniture ordering information. Purchased by the installation and not by the General Contractor.
PREWIRED WORKSTATION	**PREWIRED WORKSTATION**	**PREWIRED WORKSTATION** is the term used to identify systems furniture purchased with MCA or MILCON funds. The designers will coordinate the footprint plans with the buildings systems and provide the plans and specifications in the contact documents. The General Contractor will purchase and install this furniture.
SYSTEM FURNITURE	**SYSTEM FURNITURE**	**SYSTEMS FURNITURE** is the term used to identify systems furniture purchased with OMA or O& M dollars. The designer will coordinate the footprint plans with the Building systems and provide the plans in the contract documents for "information only. **'I** Procurement information will appear in the CID and will be purchased by the installation.

ARMY	AIR FORCE	DEFINITION
FAR	**FAR**	**FEDERAL ACQUISITION REGULATIONS:** The laws outlining how the government buys products and services. Title 18 of the U.S.Code allows for direct purchase from UNICOR without competitive bids. (FAR) 8.6 identifies UNICOR as a mandatory procurement source to all federal agencies for products that meet the requirements of the ordering office.
FSS	**FSS**	**FEDERAL SUPPLY SCHEDULES** provides indefinite quantity contracts for commercial items at established prices for direct ordering use by government agencies. Address: Furniture Commodity Center (3FN-CO): Crystal Mall 4, RM 403, Washington DC 20406 (703) 305-5056.
UNICOR	**UNICOR**	**UNICOR** is the trade name for the Federal Prison Industries Inc (FPI) a wholly owned government corporation est. in 1934. UNICOR provides a variety of products and services to the Federal Government.
GSA FSC/FSG	**GSA FSC/FSG**	**GENERAL SERVICES ADMINISTRATION** **FEDERAL SUPPLY CLASSES** **FEDERAL SUPPLY GROUPS** are government contracts with private manufacturers that are fixed price, fixed MOL and fixed dates of expirations. GSA CENTRALIZED MAILING LIST SERVICE (7CAFL); PO BOX 6477 FT. WORTH. TX 76115 (817) 334-5215

GOVERNMENT CONTRACTING TERMS

ARMY	AIR FORCE	DEFINITION
MOL	**MOL**	MAXIMDM **ORDER of LIMITATION:** **GSA** FSC/FSC contracts have a ceiling contract dollar amount that can be purchased from a vendor.
OPEN MARKET	**OPEN MARKET**	**OPEN MARKET** is the term indicating products that are not on a **GSA** contract.
ENVIRONMENTAL PRODUCTS GUIDE	**ENVIRONMENTAL PRODUCTS GUIDE**	**GSA** CATALOG SUPPLY ITEMS **GSA** CENTRALIZED MAILING LIST SERVICE (7CAFL); PO BOX 6477 FT. WORTH, TX 76115 (8x7) 334-5215
FSN 595B	**FSN 595B**	**FEDERAL STANDARD NUMBER 595B A** Collection of standard colors used by the various departments or agencies.. Colors have been classified in three categories: 1 is full gloss, 2 is semi gloss and 3 is flat.
FSN 595B FAN DECK	**FSN 595B FAN DECK**	Standard colors are available in a booklet for under **$10.00.** Order number NSN 7690-01-162-2210 **GSA** Specification Unit (3F-BP-W) Seventh and **D** Sts SW Washington DC 20407

INTERIOR DESIGN PRESENTATION FORMAT

GENERAL NOTES

1. DEFINITIONS:

1.1 STRUCTURAL INTERIOR DESIGN (SID): Structural Interior Design is the term referring to the building related finishes. A SID shall involve the selection and sampling of all applied finishes necessary to complete required, the SID shall also include all prewired workstation drawings and specifications. All SID information shall be presented in a 3-ring Binder, 8 ½ x 11″ format. The products sampled in the SID are to be purchased by the General Contractor and are MCA or MILCON funded.

1.2 COMPREHENSIVE INTERIOR DESIGN (CID): Comprehensive Interior Design is the term referring to the furniture related finishes. A CID shall involve the selection and sampling of all the furnishings components necessary to complete the interior environment. The CID shall generally include all free standing furnishings, accessories, Furniture Cost Estimate and generic Order Forms. The products illustrated in the CID are purchased by the installation and are OMA or O&M funded.

1.3 When a "CID Package" is required in the DD Form 1391 and/or the Appendix A, the A/E shall provide to the Government both the SID/ CID illustrated information in the required 8-1/2 X 11 format.

2 . TECHNICAL NOTES:

2.1 SPECIAL REQUIREMENTS: The Interior Designer shall identify items in the SID or CID that require attachment to the building either by cutting or fitting. The Designer must prepare specifications and drawings for this service to be performed.

2.2 DISCLAIMER: Guide Specification 09000 or 09915 Exterior/Interior Finish Schedule indicates all product trade names and colors used for the project. The nonproprietary declaimer indicated within this Guide Specification may also be located on the Finish Schedule of the Contact Drawings.

2.3 FEDERAL STANDARD 595b COLORS (FSN 595b): The use of the Federal Standard Colors is required when indicating exterior colors used on roofs and trim. The use of Federal Standard Colors is not required when indicating interior colors. EXCEPTION: Hurlburt Field, FL requires both exterior and interior paint colors to be indicated with the FSN 595b code.

2.4 CID FURNITURE RESOURCE: Every effort should be made to use UNICOR, GSA Stock or Federal Supply Schedule items. However, when the Interior Designer determines CID items available on FSS/GSA contract or from UNICOR do not meet the functional requirements or there is no current FSS/GSA/ UNICOR resource for a furniture requirement, a waiver to use an Open Market source is required. The Designer shall write a waiver/justification letter (Paragraph 15).

This letter shall be included in the CID Binder; attached to the required Order Form. The Government will process the waiver.

3. SIGNAGE:
Signage is critical to "pathway finding" and is to meet the requirements indicated in the American With Disabilities Act unless directed by the client to do otherwise.

Indicate on separate signage drawings the typical plaque sizes, types locations, and the message for all signage. Submit a sample of the signage color in the SID.

4. SID/CID SUBMITTAL REQUIREMENTS

4.1 The Interior Designer shall be involved in all phases of the design in order to ensure customer satisfaction.

4.2 REVIEWS: During each phase of the project all SID/CID Binders shall be reviewed by the Government with written and annotated comments being issued back to the A/E. This is done in Projnet/DrChecks. See the Savannah District Design Manual for further instructions on this Internet database. These annotated comments are to be incorporated into the next SID/CID Binder update. A printed hard copy of responses from the Interior Designer are to be included in the front inside pocket of the first volume of the SID Binder.

4.3 FORMAT: Submit all SID/CID information and samples on 8-1/2”x 11" color boards with a maximum spread of 25-1/2" for foldouts.
-
Each binder shall be labeled on the outside spine and front cover with the Phase %, SID or CID, Project title, Location, Date, and A/E firm. Indicate the volume number (example: Vol. 1 of 3).

Each sheet shall be labeled with the Date, Project Tile, Location, A/E firm.

4.3.1 The color boards shall support and anchor all samples. Anchor large or heavy samples with mechanical fasteners or with Velcro. Rubber cement or glue will not be acceptable.

4.3.2 Assemble the 8 1/2" x 11" pages and color boards in a 3-ring binder.

4.3.3 Material and finish samples must indicate true pattern, color and texture. Carpet samples must be large enough to indicate a complete pattern or design.

4.3.4 Photographs or colored photocopies of SID materials or CID fabrics will be disapproved. Color photocopies of artwork are accepted.

4.4 REVISIONS: The Interior Designer shall revise the binders after each review to satisfy review comments. Printed information on existing pages can be updated with "white-out" for cost effective reasons. If the binders are not returned to the A/E for in-house update, the A/E may provide updated inserts to the Government.

4.5 RENDERINGS: Verify that renderings are a contract requirement. All renderings shall be provided by a professional illustrator.

4.6 BLACK AND WHITE SKETCHES: Verify that B&W Sketches are a contract requirement. If they are required, emphasize space-relationships, furnishings, patterns and texture. One major area is to be illustrated and possibly used as a basis for the interior color rendering for the final design.

4.7 SEQUENCE: Organize the SID/CID Binder presentation according to the following sequence:

SEQUENCE OF SID SUBMITTAL

1. TITLE PAGE

2. TABLE OF CONTENTS

3. NARRATIVE OF INTERIOR DESIGN OBJECTIVES

4. EXTERIOR ELEVATION

5. EXTERIOR BUILDING MATERIAL LEGEND

6. EXTERIOR BUILDING MATERIAL COLOR BOARD

7. INTERIOR COLOR PLACEMENT PLAN
   (Half size drawing or 8 1/2" X 11")

8. INTERIOR COLOR BOARDS (according color placement plan)

9. INTERIOR SIGNAGE COLOR BOARDS

10. PREWIRED WORKSTATION COLOR BOARDS

11. INTERIOR FLOOR PLANS

12. ROOM FINISH SCHEDULES

13. SIGNAGE PLANS

14.PREWIRED WORKSTATION COMPOSITE FLOOR PLAN

15. PREWIRED WORKSTATION PANEL PLAN

16. PREWIRED WORKSTATION ELECTRICAL/VOICE/DATA PLAN

17. PREWIRED WORKSTATION ELEVATION AND INVENTORY DRAWINGS

SEQUENCE OF CID SUBMITTAL

18. TITLE PAGE

19. TABLE OF CONTENTS

20. NARRATIVE OF INTERIOR DESIGN OBJECTIVES

21. PHOTO OF INTERIOR COLOR RENDERING (only if required by contract)

22. BLACK AND WHITE SKETCH PERSPECTIVE(on1y if required by contract)

23. COMPOSITE FURNITURE PLANS WITH CONVENTIONAL AND SYSTEMS FURNITURE (full size sheet 1/8" scale. Note: provide all systems furniture plans in the contact drawings and indicate "for information only." This is only if the user is buying and installing the systems furniture. Drawing requirements are the same as indicated in items 11-15 of the SID Sequence.

24. MANUFACTURE'S SUMMARY LISTS

25. FURNITURE LOCATION CODE INDEX

26. CONVENTIONAL FURNITURE PLACEMENT PLANS (1/4" scale)

27. CONVENTIONAL FURNITURE ILLUSTRATION SHEETS

28. ARTWORK ILLUSTRATION SHEETS AND PLACEMENT PLAN

29. ITEMIZED FURNITURE COST ESTIMATE

30. INTERIOR FURNISHING ORDER FORMS

31. LETTER OF JUSTIFICATION FOR WAIVER

5. SID/CID SUBMITTAL MATRIX SUMMARY

INTERIOR DESIGN SUBMITTALS RUN CONCURRENT WITH ARCHITECTURAL SUBMITTALS

		DESIGN PHASE			
ITEM	DESCRIPTION	35%	65%	95%	100% RTA
1.	TITLE PAGE	X	X	X	X
2.	TABLE OF CONTENTS (SID)	X	X	X	X
3.	NARRATIVE (SID)	X	X	X	X
4.	EXTERIOR ELEVATIONS	X	X	X	X
5.	EXTERIOR MATERIAL LEGEND	X	X	X	X
6.	EXTERIOR COLOR BOARDS	X	X	X	X
7.	INTERIOR COLOR PLACEMENT PLAN	X	X	X	X
8.	INTERIOR COLOR BOARDS	X	X	X	X
9.	SIGNAGE COLOR BOARD	X	X	X	X
10.	WORKSTATION COLOR BOARDS	X	X	X	X
11.	INTERIOR FLOOR PLANS	X	X	X	X
12.	ROOM FINISH SCHEDULE	X	X	X	X
13.	SIGNAGE PLANS	X	X	X	X
14.	PREWIRED WORKSTATIONS COMPOSITE FLOOR PLAN	X	X	X	X
15.	PREWIRED WORKSTATION PANEL PLANS	X	X	X	X
16.	PREWIRED WORKSTATION ELECTRICAL/VOICE/DATA PLANS	X	X	X	X
17.	WORKSTATION ELEVATIONS AND INVENTORY DRAWINGS			X	X
18.	TITLE PAGE (CID)	X	X	X	X
19.	TABLE OF CONTENTS	X	X	X	X
20	NARRATIVE	X	X	X	X
21.	PHOTO OF PROPOSED RENDERING TECHNIQUE (APPROVAL NEEDED)	X			
21a.	FINAL INTERIOR RENDERING			X	X

5. Con't. SID/CID SUBMITTAL MATRIX SUMMARY

INTERIOR DESIGN SUBMITTALS RUN CONCURRENT WITH ARCHITECTURAL SUBMITTALS

		DESIGN PHASE			
ITEM	DESCRIPTION	35%	65%	95%	100% RTA
22.	BLACK AND WHITE SKETCHES (ONE SHALL BE APPROVED FOR THE INTERIIOR RENDERING)		X	X	X
23.	COMPOSITE AND SYSTEMS FURNITURE PLANS	X	X	X	X
24.	MANUFACTURER'S SUMMARY LIST			X	X
25.	FURNITURE LOCATION CODE (ONE MAJOR AREA)	X			
25A.	FURNITURE LOCATION CODES (ALL AREAS)		X	X	X
26.	FURNITURE PLACEMENT PLANS (ONE MAJOR AREA)	X			
26A.	FURNITURE PLACEMENT PLANS (ALL AREAS)		X	X	X
27.	FURNITURE INSTALLATION SHEETS (ONE MAJOR AREA)	X			
27A.	FURNITURE INSTALLATION SHEETS (ALL AREAS)		X	X	X
28.	ARTWORK ILLUSTRATION SHEETS (PUBLIC AREAS ONLY, ARTWORK NOT REQUIRED IN PRIVATE OFFICES).			X	X
29.	ITEMIZED COST ESTIMATE		X	X	X
30.	FURNITURE ORDER FORMS (ONE MAJOR AREA)	X			
30A.	FURNITURE ORDER FORMS (ALL AREAS)			X	X
31.	LETTERS OF JUSTIFICATION		X	X	X

6. TYPICAL CID FURNISHINGS AND COST GUIDELINES

6.1 CID FURNISHINGS

ADP tables/printer stands
Acoustical Partial Height Partitions 6' of less in height - freestanding
Artwork
Beds/wall units/ night stands/ chests/ refrigerators
Bedspreads/bedding
Bookcases
Bulletin board/ projection screens (If NOT attached to structure.)
Carts
Chairs - all kinds, including stools
Desks - freestanding
Drafting tables
Draperies
Files - all kinds
Library furniture - book stacks/card files/ study carrels
Modular desk units
Podium/ lecture stands
Systems furniture workstations (If not in SID)
Planters/art/waste & ash receptacles
Storage - all kinds
Tables - all kinds
Upholstered lounge seating (sofas, etc.)
Wardrobes

6.2 FURNISHINGS COST GUIDELINES

The figures are based on an Air Force FY 88 Costs Guide and an inflation factor of 5% per year should be included for subsequent years. These guidelines are for actual items (furniture, window treatments, accessories, etc.) and they do not include other associated cost such as contractor's overhead, profit and shipping.

Overseas Consideration: If local items are used prices may vary from country to country and may vary depending on the current exchange rates.

FACILITY TYPE	$/SOUARE FEET
.	
Administration Space (Conventional Furn)	$ 7.00 - $15.00
Administration Space (Systems Furn)	$33.00 - *
Airmen Club (Not incl kitchen equip)	$14.00
Alert Facilities	$12.00

Auditorium	$35.00
Base Ops DV Lounge	$18.00
Billeting Office	$15.00
Chief Suite (Billeting)	$17.00
Child Development Center	$13.00
Classroom	$20.00
Clinic/Dental Clinic (not incl equip)	$35.00
Conference Room	$18.00
Dining Facility (incl kitchen equip)	$35.00-$45.00
Dining Facility (not incl kitchen equip)	$15.00
DV Suite (Billeting)	$24.00
Flight .Training Center	$30.00
Family Housing Office	$14.00
Golf Clubhouse	$12.00
Intelligence Training Center	$30.00
Medical Training Center	$30.00
Package Store	$28.00
NC Officer Mess (Not incl Kitchen equip)	$17.00
Officer Open Mess (Not incl Kitchen equip)	$17.00
Recreation Center	$11.00
Transient Living Facility	$15.00
Unenlisted Personnel Housing	$16.00*

Visiting Airman Quarters	$13.00
Visiting Officers Quarters	$16.00*
Yacht Clubhouse	$12.00
Youth Center	$12.00

FACILITY TYPE	$/SOUARE FEET
*UNIT BUDGET GUIDES	
Admin Space (Systems Furn)	1994 price ($4,000/per workstation) incl install(ergo chair $350.00)
1988 Price	
Billeting Office/Lobby	$14,000-$16,000 refinish existing. $35.0000-50,000 for new
Distinguished Visitor Suite	$15,000 per one bedroom suite $20,000 per two bedroom suite $37,000 per 2/3 bedroom apartment
Transient Living Facility One Bedroom, Living/Dining 525 sq feet (new construction).	$15,000 per standard unit
Dorms Unaccompanied Enlisted	$2,500-$3,500 Per person
Personnel Housing	
UOPH	$ 7,000 per single unit
VAQ	$ 6,000 per double occupancy
VOQ	$ 5,000 per single occupancy $ 8,000 per single Suite $11,000 per double Suite

PARAGRAPHS 7-15 EXPLAIN THE FORMAT REOUIRED FOR THE FOLLOWING:

7. PREWIRED AND SYSTEMS FURNITURE WORKSTATIONS
8. MANUFACTURE'S SUMMARY LIST
9. FURNITURE LOCATION CODES
10. FURNITURE ILLUSTRATION SHEETS
11. FURNITURE PLACEMENT PLANS
12. ARTWORK
13. FURNITURE COST SUMMARY

14. ORDER FORMS
15. LETTER OF WAIVER JUSTIFICATION

7. PREWIRED AND SYSTEMS FURNITURE

7.1 General

Prewired and or systems furniture workstations shall be designed with generic components and work surfaces that are typically sold by various manufacturers of systems furniture. Indicate on the contract drawings one manufacture's name and finishes as a bases for design. This will provide a general of range colors for competitive bid purposes. Indicate in the Guide Specifications 12640 Prewired Workstations, the fabric width, fiber content, and construction method. DO NOT INDICATE A VENDOR IN THE SPECIFICATIONS. INDICATE A VENDOR ONLY ON THE DRAWINGS.

7.2. COMPOSITE FLOOR PLAN

A Composite floor plan shall show the all panels, components and free-standing furniture in relationship to the building and the building system-s such as light switches and mechanical devices.

7.3. PANEL PLAN

The panel plan shall indicate a panel symbol legend, all panel placements, critical dimensions of aisles widths and critical dimensions in relation to the building's structure and the building's n electrical/mechanical system devices and the panels. Each panel shall be noted as follows:

N (non-power) Width (in feet) Height (in inches)
or
P (power)

Example: a non-powered panel 2 feet wide and 68 inches high will be noted on the plan N 2 68

7.4 ELECTRICAL, VOICE AND DATA PLAN

The Electrical, voice and data plans shall indicate all panel placements, a symbol legend, and all receptacles used in each workstation. This plan shall also indicate the height and location of the building's light switches and building's mechanical control devices like thermostats. Provide a general note that on the "PREWIRED WORKSTATION plans" are to be coordinated with the Communication and Mechanical Engineering Plans.

7.5 ELEVATIONS AND INVENTORY PLAN

The Elevation and inventory drawings shall illustrate each typical workstation in elevation form with a related inventory list of all panels and components used to build the typical. The inventory fist shall be generic in description.

7.6 FINISHES

It is suggested when selecting finishes for prewired workstations that only two (2) fabric colors be used: one color for all panels and one color for tack boards. A third color can be used as a means of "way finding" for large open office projects.

7.7 COST

The average cost of a prewired workstation is $4000.00. Do not exceed this average cost figure or the project will be rejected. Verify line item 10 in the 1391 for a line item total cost of the prewired workstations appropriated for the project.

7 . 8 WORKSTATION LOCATION CODE

Each and every workstation will be identified on each plan with a single alpha identification code to indicate the "Typical". For example all like reception stations are "A" and like offices are "B". Every workstation shall have a "room number" that is separate and apart from the fixed room numbering system. This is to provide consistent workstation identification throughout all drawings. An example would be “A-100” “B-101” “B-102” “B-103”

7.9 PREWIRED WORKSTATION PACKAGE ITEMS

1. Panels
1.1 Acoustical/non-acoustical
1.2 Powered/non-powered
1.3 Connecting hardware

2. Components
2.1 Work surfaces
2.2 Drawers
2.3 Shelves(with doors/ without doors)
2.4 Files (lateral, panel hung/ bins)
2.5 Task Lights/special purpose
2.6 Counter tops
2.7 Drafting surface

3. Accessories
3.1 Tack boards
3.2 Locks
3.3 Shelf dividers
3.4 Reader Stand
3.5 Paper flow devices
3.6 Marker boards
3.7 Computer turntable
3.8 Printer stand
3.9 Coat rack
3.10 Wire guides
4. Signage
4.1 Organization signs
4.2 Workstation name signs

8. MANUFACTURER'S SUMMARY LIST

Provide a summary of all the manufactures' used in the CID package.
Manufactures name, address, phone, fax and Point of Contact is to be included.

9. FURNISHINGS LOCATION CODE

This CODE is assigned by the interior designer to each conventional furnishing item indicated in the CID. Use of this code is important for quick reference between Order Forms, Furniture Illustrations, and Placement Plans.
The first letter of the code is a GENERAL CATEGORY

EXAMPLE:
A - Accessories
B - Book storage
C – Chairs

The second number of the code is a SPECIFIC CATEGORY

1 - Plant (7' height in brass container)
2 - Clocks, Peter Pepper, #0000 Color Blue
3 - Wastebaskets, FSS, Color Black
4 - Chalkboard: Egan Visual, Oak

OVERALL EXAMPLE: C1, C2 and C3

C - CHAIRS
1 - Guest chair, Knoll, #1234, Color: #12 Red
2 - Ergo Chair, Knoll Bulldog, 1233, Color: #34- Blue
3 - Stacking Chair, Fixtures, Bola, 1234, Color #12 Multi

10. FURNITURE ILLUSTRATION SHEET

A Furniture Illustration Sheet is a pictorial example with finish samples of a single product specified for the CID. Only one product is illustrated per page.

The Furniture Illustration Sheet shall have the following information:

1. A Picture or line drawings of the product specified.

2. A Location Code to Key the specified product to the Footprint

3. A Sample of the product's finishes.

4. Recap quantity of illustrated item listed by room number (e.g. 4 ea. Room 104 Commander
3 ea. Room 103 Receptionist)

5. Job name, Job Location, Date.

11. FURNITURE PLACEMENT PLAN

A Furniture Placement Plan consist of one room broken out from the Composite Furniture Plan which identifies each furniture component shall be illustrated in the Furniture Placement Plan section. The Furniture Placement Plans shall be drawn at a 1/4" scale. Large rooms/areas shall be drawn at 1/8" scale.

Each Furniture Placement Plan shall contain the following:

1. 1/4" Scale-Drawing showing room and furniture.
2. Location Code and quantity of each item specified per room.
3. Name and Number of Room
4. Job Name, Job Location, Date.

The Composite Furniture Plan shall be a full size contract drawing with location codes. Half sizes will not be acceptable for review.

12. ARTWORK ILLUSTRATIONS SHEETS AND PLANS

The Artwork Illustrations Sheets shall have a pictorial example of the artwork with mat colors. Color photos copies are accepted.

Full size drawings of the Artwork Plan are to show plan placement of artwork and an elevation for all the artwork showing placement height and installation instructions.

Each Artwork sheet shall have the following:

1. A Picture of the proposed artwork.
2. Location Code
4. Room Name and Number that artwork will be displayed in.
5. Job name, Job Number, Date.
6. Mounting height and installation instructions.

13. ITEMIZED FURNITURE COST ESTIMATE

The itemized furniture cost estimate sheets list all furnishings; indicate quantities, unit costs and grand totals. The Cost Estimate is organized according to UNICOR and GSA Source/Schedules. The Cost estimate will also include a general 10% contingency and 7% installation. Because some items will include freight in the price. Note that freight charges are not included.

14. FURNITURE ORDER FORM

The Furniture Order Forms indicate all information necessary to order products specified in the CID. Only one product shall be listed per page.

Organize and separate the Order Forms according to the Sources and GSA Schedules to coordinate with the Itemized Furniture Cost Estimate. Do not organize forms according to the locations codes.

15. LETTER FOR WAIVER/JUSTIFICATION

FOR CID ITEMS THAT REQUIRE A JUSTIFICATION, SUCH AS OPEN MARKET ITEMS FOLLOW THE FORMAT EXAMPLE AND ATTACH IT TO THE APPROPRIATE ORDER FORM. See Appendix "C" for UNICOR Waiver information.

JUSTIFICATION FOR ACOUSTICAL PANELS
December 15, 1994

1. REQUESTING ACTIVITY:	U.S. Army Corps of Engineers EN-DA/Peggy Roberson 100 W. Oglethorpe Avenue Savannah, GA 31402-0889

2. POINT OF CONTACT: Peggy Roberson
(912) 652-5144

3. REQUIREMENTS: To provide acoustical and visual control through a cost effective and timely means. The panels will separate and define workstations for 7 individuals representing 5 engineering disciplines. These individuals are located in 1,470 sq. ft. of open area.

4. PROPOSED SOLUTION: To purchase portable, acoustical panels 62 inches high and various widths from XYZ manufacture. This manufacturer delivers and installs within 30 days from the date they received the order. See the attached order form for stock number, dimensions, colors and manufacturers.

5. UNICOR WAIVER: Market research indicates that the Federal Prison Industry does not supply this type of portable panel.

6. TRIANGLE/INTANGIBLE BENEFITS: The tangible benefits to be gained from this purchase will be an enhancement of employee morale and productivity due to the reduction of sound and visual disturbances currently found in this open space.

7. IMPACT IS REQUEST IS NOT APPROVED: Employee morale will drop, which could impact performance.

8. ESTIMATED DATE ITEMS ARE REQUIRED: ASAP but no later than 30 days.

16. HEALTH AND SAFETY CRITERIA

16.1 PROVIDE PROTECTION AGAINST PERSONAL INJURY AND DEATH FROM:

16.1.1 FALLS

* ASTM D-2047-Test for Slip Resistance of Hard Surfaces

16.1.2 CHEMICAL EMISSIONS
16.1.3 ELECTRONIC EMISSIONS
16.1.4 MICROBIAL CONDITIONS

NOTE: 16.1.2, 16.1.3, and 16.1.4 are not defined by code at the present. OSHA has a proposed regulation in relation to indoor air quality standards. It is currently in the review phase. It is not in

16.1.5 FIRE (Interior Finishes and Furnishings)
* ASTM-E-84-Steiner Tunnel Test.

* NFAP-701-Standard method of Fire Test for Flame Resistant Textiles and Films.

* NFPA-705-Field flame Test for Textiles and Films

* FF 1-70-Standard for the Surface Flammability of Carpet and Rugs (Methenamine Pill Test)

* NFPA 80-Fire Test of Door and Windows\

* NFPA 253-Flooring Radiant Panel Test

* NFPA 258-Research Test method for Determining Smoke Generation of Solid Materials.

*NFPA 259-Potential Heat of Building Materials

*NFPA 260 Methods of Tests and Classification System for Cigarette Ignition Resistance of Components

* NFPA 261- Method of Test for Determining Resistance of Mock-up Upholstered Furniture Material Assemblies to Ignition by Smoldering Cigarettes.

* NFPA 264- A Standard Test Method of Test for Heat Release Rates for Upholstered Furniture Components or Composites and Mattresses Using an Oxygen Consumption Calometer.

* NFPA 267- Standard on Mattress, subjected to Open Flame Ignition, Using a Large-Scale Oxygen Consumption Calorimeter.

* UL-1056- Fire Test of Upholstered Furniture

* TB 133- Flammability Test Procedure For Seating Furniture for Use in Public Occupancies. State of California Bureau Home Furnishings.

* TB 117- (Section A though E) Test Procedures for Testing the Flame Retardance of Resilient Filling Materials used in Upholstered Furniture.

16.2 PROVIDE FURNISHINGS AND EQUIPMENT WITH ANTHROPOMORPHIC FIT AND STABILITY
* ANSI/BIFMA X5.6-86 Standard for office Furnishings.

16.3 PROVIDE GLARE-FREE ILLUMINATION OF WORK SURFACES
* ANSI E-97

16.4 PROVIDE ACCEPTABLE REFLECTANCE LEVELS
* ASTM E-97-IES

16.5 PROVIDE FOR USE AND MAKE ACCESSIBLE TO PHYSICALLY DISABLED
* American Disabilities Act: ASTM 117.1
* Uniform Federal Accessibility Standards

16.6 PROVIDE SAFE AND SWIFT EGRESS FROM INTERIOR SPACES
* International Building Code, BOCA

* NFPA 101 Fire Safety Code-94
* National Building Code, BOCA
* Standard Building Code
* Uniform Building Code, ICBO

16.7 PROVIDE ACOUSTIC CONTROL
* Airborne sound: ASTM C 423, PBS C.I
* Speech Privacy: SPP, Speech Privacy Potential
* Impact sound transmission: ASTM C 423-66, PBS C-2

17 CHECKLIST FOR SID REVIEWS

17.1 GENERAL
The Checklists are used to ensure that SID/CID binders and all contact drawings and specifications are complete and will meet customer approval.

17.2 CHECKLISTS FOR SID BINDERS

The correct organization of the SID Binder is important to ensure a rapid and accurate evaluation of the submittal and to ensure all the information provided in the binders appears in the contract documents The SID binder shall include the information in the order indicated in
Paragraphs 4 and paragraph 5 Submittal Matrix Summary 1-17.

17.2.1 CHECKLIST FOR SID NARRATIVE

Review the statement of DESIGN OBJECTIVES. Design Objectives are to indicate the proposed building materials, color scheme and the philosophy for the selection each. When applicable the design narrative shall discuss Energy Efficiency, Safety, Maintenance, Durability, Image and Occupant Morale.

17.2 CHECKLIST FOR EXTERIOR COLOR LEGEND AND COLOR BOARDS
Exterior Colors are often dictated by the Installation's Design Guidance. In these instances, the Federal Standard 59533 paint colors may be referenced for factory-finished items. See examples below.

Metal Roof Federal Standard 595b 0000

17.2.2 REVIEW QUESTIONS

1. Are all exterior materials labeled and properly identified?

2. Do all exterior materials and finishes meet standard Installation Design Guidance requirements?

3. Are there any miscellaneous exterior materials and finishes that need to be listed and sampled in the SID Binder OR indicated in Guide Specifications or and indicated on Finish Schedule? Contract drawings?

4. Are all the exterior materials sampled in SID Binder?

5. Are all exterior materials indicated on Finish Schedule sampled in SID Binder?

17.3 CHECKLIST FOR SID INTERIOR COLOR SCHEME AND COLOR BOARDS:
Review the architectural finish samples for an orderly arrangement on 8 1/2" x 11" color boards according to like rooms/areas receiving like finishes.

Each color board will be noted as a COLOR SCHEME. Each Color Board shall consist of a material sample board and a material legend board.

17.3.1 Each Color Scheme shall be properly identified:
[The following information should be on the lower portion of each sheet]

a. Project title
b. Location
c. Date

d. A/E Firm

17.3.2 Each material legend shall have written identification of materials in the order as follows:

1. Alpha Code
2. Material
3. Manufacturer
4. Color name
5. Color Number

The material legend identification shall be consistent with the material legend found in the Exterior and Interior Finish Guide Specification or in the contract drawings. Without exception all rooms and areas shall be identified and their finishes shown.

* The general contractor will not be receiving the SID binders therefore all finishes and their placement must be on the contract drawings or in the Guide Specifications.

17.4 CHECKLIST FOR INTERIOR COLOR SCHEME

17.4.1 SID REVIEW QUESTIONS

COLOR SCHEME

1. What basic color scheme is used?
    a. Monochromatic
    b. Analogous plus complement accent
    c. Complementary
    d. Split Complementary
    e. Triadic

2. Is there a basic neutral color for all walls?

3. Does the color scheme create a sense of order?

4. Are accent colors appropriate in hue value and intensity to create interest? Do they overpower the space?

5. Are Accent Colors clearly indicated on the contract drawings?

6. Are the colors placed to create a "visual balance" throughout the building?

7. Do the Accent colors assist with "pathway finding"?

GENERAL FINISHES

1. Do finishes offer variety in appearance? (soft, hard, smooth, rough, dull, gloss, matte)

2. Do selected finishes enhance the architectural lines of the rough, dull, gloss, matte) building?

3. Are materials, finishes, and colors appropriate for the surfaces they will be covering?

4. Are walls painted [Gloss] [Semi-Gloss] [eggshell]?
(Flat Latex wall paint is not durable for interior walls.)

5. Do the interior finishes reflect and reinforce the appropriate image for the facility?

6. Is the flooring selected for all areas appropriate in color pattern, texture and scale?

7. Does color and pattern in Carpet/Carpet Tile relate to scale and size of room?

8. Will Carpet/ Carpet Tile color and pattern hide soil and wear path?

9. Are window treatments compatible with architectural detailing?

10. Will window treatment and its installation cause unnecessary wear or abrasion?

11. Are finishes selected creative in use and placement?

12 Will there be acoustical problems because of the materials selected? (A balance of Reflective and Absorptive surfaces is necessary)

13. Will all colors, materials, and finishes retain their appearance long-term?

14. Are all interior finishes labeled and properly identified?

15. Do all interior finishes meet standard codes requirements?

16. Are there any miscellaneous interior finishes and materials that need to be listed, sampled and specified?

17. Are all interior materials sampled in SID Binder listed on the Finish Schedule?

18. Are all materials listed on the Finish Schedule sampled in the SID Binder?

19. Are there any treatments such as bordered carpets, or multi-color ceramic tile borders that need to be illustrated in plans but are not?

20. Are all SID finishes specified according to the quality to ensure quality and performance?

PREWIRED WORKSTATIONS

1. Do the prewired workstations and specifications coordinate to fully cover all the information required for bidding, and installation of the product?

2. Have all the required contract drawings as indicated in paragraph of the Submittal Summary Matrix been provided?

17.4.2 CHECKLIST FOR SAFETY:

Do all finishes selected shall meet code requirements and are appropriate in color, texture, and pattern to insure the well being of the inhabitants?

17.4.3 FACILITY SIGNAGE REVIEW QUESTIONS

1. Is the signage listed on a separate plan and indicated correctly in the specifications?

2. What typeface is specified? Does it meet approved standards?

3. Is Symbol Signage used in lieu of Printed identification for restrooms?

4. Are Signs flexible so that names and rooms can be changed easily?

5. Are Signage colors and samples in the SID?

For additional reference on signage refer to Sign Standards relative to the Department of Defense.

18.5 CHECKLIST FOR CID BINDER LAYOUT

The CID Binder is the most detailed of all binders submitted because of the numerous components specified, priced, and illustrated. The correct organization of

the CID Binder is important to insure a rapid and accurate review of the building's furniture components and their relationship to the architecture and its finishes. The CID Binder shall include the information in the order indicated in paragraph 5 Submittal Matrix Summary items 18-31.

18.5.1 CHECKLIST FOR CID NARRATIVE: Review the statement of DESIGN OBJECTIVES explaining the CID interior design philosophy of the facility. Design Objectives and the proposed method of accomplishing the objectives shall cover, when applicable, the furnishings and their relationship to the building and it's inhabitants, energy, efficiency, safety, health, maintenance, image, personal performance of occupants and functional flexibility.

18.5.2 CID REVIEW QUESTIONS

1. Does the layout of the CID Binder follow the TABLE OF CONTENTS format indicated in paragraph 4.7 and 5?

2. Are all pages properly identified?

3. Are all samples labeled and identified?

4. Are there any miscellaneous components shown on the Footprint Plan that are not shown in the CID Binder?

5. Are there any miscellaneous components shown in the CID Binder that are not reflected on the FURNITURE PLACEMENT PLANS?

CHAIRS

1. Is the chair appropriate for the task?

2. Is the style of the chair in keeping with the overall theme of the building and other components selected?

3. Is the chair scaled correctly for the space it occupies?

4. Are chair costs appropriate for the project?(ERGO $300-350)

5. Is the finish of the chair interesting and in harmony with the elements surrounding it?

6. Are all chairs listed on the composite Footprint Plan, Furniture Placement Plans, Illustration Sheets, Location Code and Order Forms?

DESK

1. Is the desk appropriate for the task?

2. Is the style of the desk in keeping with the overall theme of the building and other components selected?

3. Is the desk too large for the space it occupies?

4. Are the desk costs appropriate for the project?

5. Is the finish of the desk interesting and in harmony with the elements surrounding it?

6. Are all desks listed on the composite Footprint Plan, Furniture Placement Plan, Location Code and Cost Estimate, Furniture Illustration Sheet, and Order Form?

COST ESTIMATES and ORDER FORMS

1. Are cost estimates correct?

2. Are Order Forms completed and accurate?

18.5.3 CHECKLIST FOR SAFETY

1. In the placement of furniture, is emergency egress considered?

2. In the placement of furniture, is consideration given to the requirements for the handicapped. (Reference: Uniform Federal Accessibility Standards and ADA).

19. LESSONS LEARNED

Lessons Learned are for information only and to eliminate lost effort in the development of SID/CID submittals. Lessons learned are from both Air Force and Army projects.

Experience has taught that generally neutral interior environments with color accents used appropriately in SID finishes and all CID finishes provide the best

"look" for a government facility. The common sense approach to all projects is the most cost effective way to achieve customer satisfaction.

Interior Design Solutions are important to the treatment and housing of all personnel. If leaders expect excellence in people, the environment in which they are housed should not be created on a whim or by individuals not technically educated and experienced in creating such environments.

Although interior environments cannot motivate people to excel they can provide a background that creates a functional opportunity for them to excel.

The Savannah District considers a quality interior design environment to be one that meets the followings ten (10) objectives:

1. Complete Coordination between contract drawings and specifications. The lack thereof is a potential source of liability.

2. The use of durable, easily maintained finishes that support "good housekeeping".

3. Appropriate use of accents colors that are easy to "live with" and cost effectively removed when updating the "look".

4. Spaces that are planned to support life safety.

5. Spaces that meet the functional needs of the user. Maximize flexibility for future change in both SID and CID plans.

6. Furnishing selected that support personal performance and personal health.

7. Appropriate use of alll the design elements (Landscape, Architecture and Interior Design) to support "path-way finding" "up to" and within the facility.

8. Accurate documentation of all the contract documents (SID) and procurement documents (CID).

9. Finishes and furniture selected that meet government procurement regulations.

10. Customer satisfaction.

19.1 EXTERIOR FINISHES

1. Exterior SID: The Exterior building finish materials, colors and signage shall be in accordance with the Master Plan/Installation Design Guide of the installation on which the project is being constructed.

2. Verify with each installation what their current standard exterior finishes are.

3. Use the Federal Standard Number 595B to indicate the range of exterior finish colors.

19.2 INTERIOR DESIGN PHILOSOPHY

1. Interiors building finishes, furnishings and colors schemes are to be appropriate and support the function of the facility.

2. Interior design objectives are to create an environment that enhances public image, employee morale, provide building finishes that are durable, easy to clean, cost effective to maintain and support life safety.

3. Appropriate accent colors are easy to "live with" and can be easy and cost effectively removed when updating the "look" is the objective.

4. Accurate documentation of finishes and furnishings in both the SID and the CID.

5. Talk to the customer. Let them know what you are planning before you submit the color boards. Do more in-process design and review communication with the customer before formal submittals.

6. Generally the exterior color scheme should transition and continue into the interior color scheme.

19.3 INTERIOR FINISHES

1. Non-slip surfaces at entryway

2. Semi-gloss for trim only

3. Egg-shell finish for walls if possible.

19.4 INTERIOR COLORS

1. A neutral warm or cool color palette with accent colors used in furnishings has generally been the most successful for most interior projects.

2. Colors in a mid-tone range used for door trim and matching base is generally approved.

3. Light colored carpets shows soil easily and will be disapproved.

3. Painted doors, trim and walls to blend (do not use extreme contrast colors for doors and walls).

5. Because the general contractor can substitute colors, textures and patterns during the construction process "permanent interior building finishes" are most successful if they are neutral colors.

The most typical finishes substituted during construction are: Plastic laminates, vinyl wall coverings, ceramic tile, toilet partitions, wood stains.

19.5 ACCENT COLORS

1. Ceramic tile accent borders on floors and walls in restrooms (one or two colors on a neutral field.)

2. Multi-colored graphic pattern carpet with solid or fleck colors used as accent borders.

3. Accent vinyl wall covering colors used a visual "pathway finding" guide through a facility.

4. Colorful fabrics with small pattern designs used on guest chairs.

19.6 WALL COVERING

1. Use Type II for all areas. Type III only in heavy use corridors. The additional satin resistant coatings used for health care environments.

2. The architect is to design walls with a correct vapor barrier. Wall covering can be used on both exterior and interior perimeter walls.

3. Must meet NFPA Class A Flame Spread rating.

4. Use chair rail when walls are subject to frequent furniture movement and scarring. ig. Conference rooms and waiting areas.

5. Fabric wall covering can only be used in a sprinkled building according to NFPA.

19.7 CARPET

1. Primary interior finish and should be the bases for the overall color scheme.

2. Graphic Patterns with random pattern is the best. Avoid large geometric or rigid patterns. They look askew if adjacent to a wall that is not plumb,

3. Avoid bright or light colors which soil easily.

4. Carpet tile is recommended when power and communications are installed in floor raceways.

5. Carpet tile is best for corridors: use patterned fields and solid-colored borders for "pathway finding".

19.8 SIGNAGE

1. Use the Installations' Design Guidance or the appropriate design guide for the Department of Defense agency.

2. Coordinate the signage color with the interiors color scheme.

3. Specify a flexible sign that allows for easy personnel name change or room name change.

4. Signage changes. It is helpful when ordering additional signage that signage specified be on a GSA schedule.

5. Bulletin Boards and fire exit plans are to be included in facility signage package.

19.9 UPHOLSTERY

1. Tweeds and small-scaled patterns retain their appearance longer.

2. Avoid solid colors because they show dirt, lint and fade faster that patterns and tweeds.

3. Vinyl's are used for wet areas such as labs.

4. Avoid vinyl fabrics in administrative areas or for general use seating.

5. Leather seating is used for only high-ranking officers and directors.

6. Use Nylon and Nylon blends seating fabrics that are easy to maintain.

19.10 FURNITURE

1. Black and wood veneer horizontal surfaces are discouraged in general public use areas. A plastic laminate table surface in public areas retains its appearance longer.

2. Mid-tone range colors for work surfaces are recommended because it will not add to eye fatigue. Light oaks, beige, and grays work best.

3. Black finishes are discouraged for case goods because it is a housekeeping problem.

4. Oak is an acceptable color range for woods and laminated wood surfaces and frames. Darker woods are traditionally accepted for those of higher rank.

5. Use commercial grade, performance tested GSA contracts.

6. Laminate tops are recommended for all work surfaces other that executive suite areas (wood veneer may be used).

7. Systems furniture plans require Air Force HQ Interior Design Review and approval.

8. Acoustical panels over 65" in height may restrict light and air distribution. 62-64" high panels are generally the best.

9. Fabric finishes on flipper doors will not be approved.

19.11 ARTWORK

1. Only use in public areas; not in private personnel offices.

2. Use to assist occupants in "pathway finding"

3. Hang artwork at 5'-6" with security type devices.

4. Choose mats and frames, which complement other accessories and interior color scheme.

5 . Art should be large enough to fill the space.

19.12 PLANTS AND ACCESSORIES

1. Plants help soften the space.

2. Do not specify live plants. This type of specification requires a maintenance contract.

3. Use quality artificial plants such as with real trucks, bark etc.

4. Specify sturdy containers. Limit the use of wicker baskets.

19.13 Window Treatments

1. Use doubled return hems and doubled bottom hems.

2. Draperies are not encouraged in areas other that executive suites and living areas.

3. Mini blinds that match the window frame are recommended for admin space.

4. Vertical blinds are accepted and can have a fabric inserts. Do not specify any fabric vertical blinds without using a PVC insert vain.

5. Specify blackout lining in sleeping areas

6. Fabric valances may be used over mini blinds

7. Use decorative rods or top treatments to give draperies a finished appearance.

8. Draperies are to be 2.5 fullness.

9. Ripple fold over pinched pleats recommended.

10. Draperies are to have minimum 4-inch returns and 2 inch overlaps with a 4-inch heading. Weighted at the corners and all seams.

19.14 BEDSPREADS

1. Use a fitted style bedspread.

2. Pattern is recommended.

3. Minimum 5 oz 100% polyester fill

4. Fabric must have dimensional stability with less than 2% shrinkage after washing at 160 F degrees.

19.15 THE DISTINGUISHING CHARACTERISTICS OF SUCCESSFUL INTERIORS

The Savannah District holds firmly to the position that a successful interior design solution consistently incorporates typical finishes, colors and features to obtain quality interior design solutions. The following guidelines shall be the basis from which all projects will be reviewed and judged for their success.

When planning for the interior environment emphases of one from each of the following groups will hopefully achieve good design:

1. Architectural Emphasis or Component Emphasis

2. Color System in Contrast or Color System in Continuity

3. Directional Reinforcement OF Directional Change

4. Value Contrast or Value similarity

5. Surface/Texture Emphases or Surface Pattern Emphasis

6. Contemporary/Traditional Emphases or Eclectic Emphasis

Interior SID: Permanent interior building finishes are to be neutral in color. "Permanent finishes" are considered:

1. Plastic Laminates

2. Vinyl Composition Tile

3. Ceramic Tile or other hard tiles

4. Wood doors (stained wood finish)

5. Metal Doors and Metal Trim

6. Toilet Partitions

7. The majority of walls and ceilings.

The appropriate placement of accent hues and patterns for a Government project are considered to be:

1. Accent borders on floors and walls in restrooms.

2. Multi-colored graphic patterned carpet used throughout the facility.

3. Accent colors on vertical surfaces used as visual assistant in “path wayfinding”

4. Artwork

5. Upholstery fabric

Although cost constraints can limit complex design details throughout the facility, there are areas where cost effective use of accents hues and identifying architectural features should be considered and used to create an image. The following areas are ranked according to importance:

1. Lobby Areas
2. Main Conference rooms
3. Command Areas
4. Employee Break rooms and Toilet Rooms
5. General Office Areas

Successful "Path wayfinding" is achieved when users and visitors easily find their way “up to" a building and throughout its interiors. The District's position is that "path wayfinding" can successfully be obtained by incorporating reason and experience offered by a multi-disciplined team of the Landscape Architect, the Architect and the Interior Designer.

20. SID/CID ILLUSTRATIONS

30% STRUCTURAL INTERIOR DESIGN

FY – 2003
UEPH DORMS

ENGLIN AIR FORCE BASE
FLORIDA

U.S. ARMY CORP OF ENGINEERS
MOBILE DISTRICT
MOBILE, ALABAMA
APRIL 1994

Building Exterior Elevation

1. SMOOTH FACE BLOCK LIGHT TAN
2. GLACING, PPG, SOLARBRONZE TINT
3. META, RCSF, FEDERAL STANDARD 595B 000000
4. METAL GURRER, FEDERAL STANDARD 595B 000000

EXTERIOR MATERIAL SAMPLES

SAMPLE 1

SAMPLE 2

SAMPLE 3

SAMPLE 4

FLOOR PLAN OF BUILDING

COLOR SCHEME "**A**"- GENERAL OFFICE AREAS
COLOR SCHEME "B" TOILET ROOMS
COLOR SCHEME "C" MISCELLANEOUS AREAS

FIRM PROJECT NAME

INTERIOR COLOR PLACEMENT

DATE LOCATION

INTERIOR
COLOR BOARDS

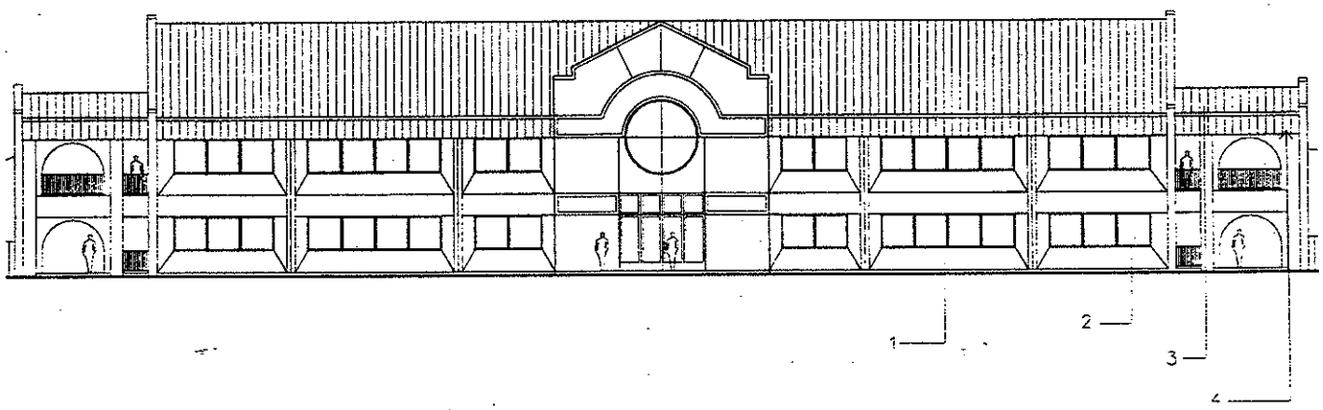
FIRM

PROJECT NAME

INTERIOR COLOR BOARD

DATE

LOCATION

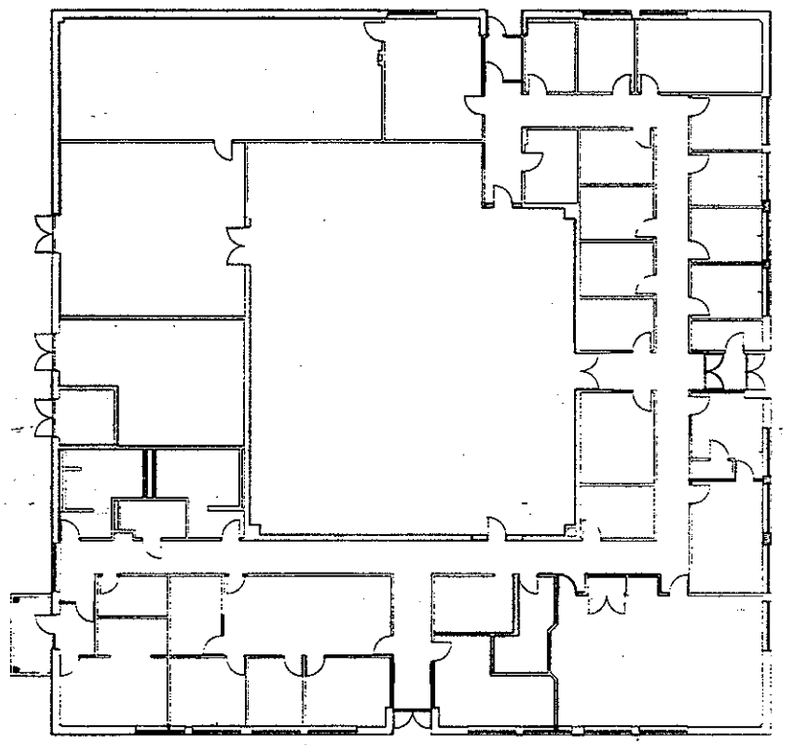


1. SMOOTH FACE BLOCK, LT. TAN
2. GLAZING, PPG, SOLARBRONZE TINT
3. METAL ROOF, FEDERAL STANDARD 595B 00000C
4. METAL GUTTER, FEDERAL STANDARD 595B 00000

FRM
DATE

EXTERIOR ELEVATIONS

PROJECT NAME
LOCATION



COLOR SCHEME "A"- GENERAL OFFICE AREAS

COLOR SCHEME "B" TOILET ROOMS

COLOR SCHEME "C" MISCELLANEOUS AREAS

FIRM

DATE

INTERIOR COLOR PLACEMENT

PROJECT NAME

LOCATION

INTERIOR
COLOR BOARDS

FRM

DATE

PROJECT NAME

LOCATION

SAMPLE

FIELD

CT-1

ACCENT

CT-2

SAMPLE

GROUT-1

SAMPLE

CT-3

FLOOR TILE

SAMPLE

P-2

CEILING

SAMPLE

TP-1

PL-1

FIRM

DATE

COLOR SCHEME "C"

PROJECT NAME

LOCATION

CT-1: CERAMIC TILE, AMERICAN OLEAN, 153 ALMOND. 4" X 4"

CT-2: CERAMIC TILE, AMERICAN OLEN, 2" X 2" TEAL

CT-3: CERAMIC TILE, AMERICAN OLEN, 2" X 2" A 20 BEACH TAN

GROUT-1: AMERICAN OLEAN, BROWN

P-2: EPOXY PAINT, WHITE (FOR CEILINGS)

PL-1: PLASTIC LAMINATE, WILSONART, ALMOND, 513 COUNTER TOPS

TP-1: PLASTIC LAMINATE, WILSONART, ALMOND 513 TOILET PARTITIONS

FIRM

DATE

COLOR SCHEME "C"

PROJECT NAME

LOCATION

SAMPLE

APCO WHITE (PLAQUE HOLDER)

SAMPLE

LETTERING

APCO BLACK

SAMPLE

APCO CLEAR (INSERT)

FIRM

DATE

SIGNAGE

PROJECT NAME

LOCATION

XYZ SYSTEMS MFG.

SAMPLE

PANELS FABRIC
466 TAN

SAMPLE

TACKBOARD
033 TEAL

SAMPLE

FLIPPER DOOR AND TRIM
PUTTY

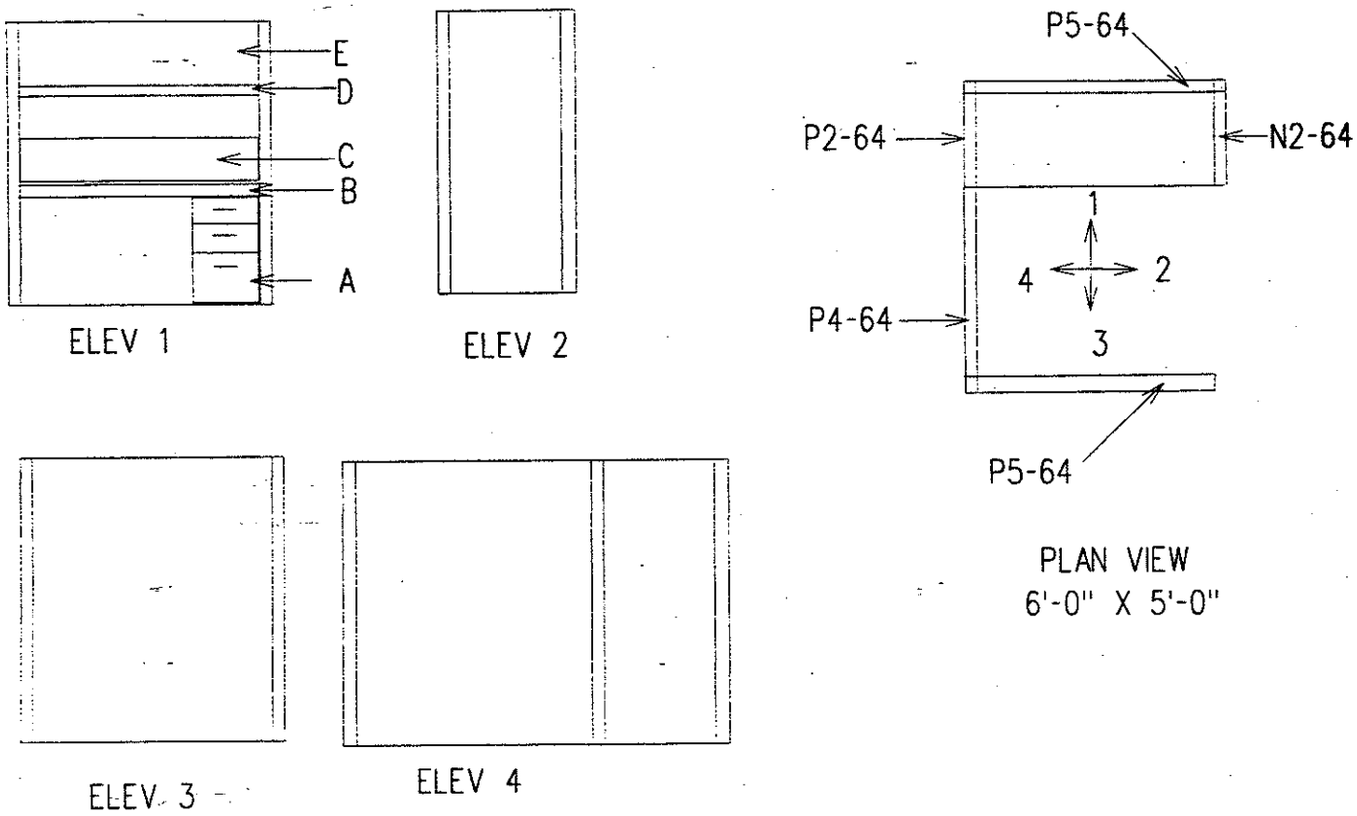
COMPONENTS

WORKSURFACES

FIRM
DATE

PREWIRED WORKSTATION COLOR BOARD

PROJECT NAME
LOCATION



QTY.	CODE	DESCRIPTION
2	P5-64	2' W X 64"H POWERED ACOUSTICAL PANEL
1	N2-64	2'W X 64"H NON-POWERED ACOUSTICAL PANEL
1	A	3", 3", 12" DRAWER PEDESTAL
1	B	23"D X 60" W HANGING WORK SURFACE

10 EACH TYPICAL" A"

FIRM

DATE

PREWIRED WORKSTATION

TYPICAL "A"

LOCATION

INSERT CONTRACT DRAWINGS OF:

FLOOR PLANS

FINISH SCHEDULE

SIGNAGE PLAN

PREWIRED WORKSTATIONS DRAWINGS

FIRM

DATE

PROJECT NAME

LOCATION

100%
COMPREHENSIVE INTERIOR DESIGN

FY-95
UEPH DORMS

EGLIN AIR FORCE BASE
FLORIDA

U.S. ARMY CORPS OF ENGINEERS
MOBILE DISTRICT
MOBILE, ALABAMA
APRIL 1994

MANUFACTURER ABC
109 MAIN STREET
ANYWHERE, USA 00000
POINT OF CONTACT:
1-800-000-0000

MANUFACTURER XYZ
109 MAIN STREET
ANYWHERE, USA 00000
POINT OF CONTACT:
1-800-000-0000

MANUFACTURER XXX
109 MAIN STREET
ANYWHERE, USA 00000
POINT OF CONTACT:
1-800-000-0000

INSERT COMPOSITE FURNITURE PLANS

FIRM

DATE

PROJECT NAME

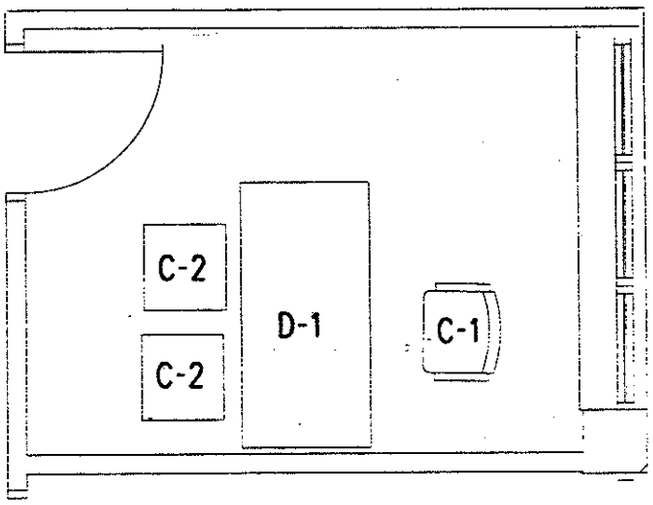
LOCATION

A- ACCESSORIES

B- BOOKCASES

C- CHAIRS

D- DESKS



ROOM:123

QTY.	LOCATION CODE	DESCRIPTION
1 EA.	C-1	KNOLL BULL DOG , BLACK FRAME, COLOR: TEAL
2 EA.	C-2	KRUGER, "VERSA" BLACK FRAME, TEAL
1 EA.	D-1:	XYZ , WOOD: WALNUT

FIRM

DATE

FURNITURE PLACEMENT PLAN

PROJECT NAME

LOCATION

FURNITURE ILLUSTRATION

C-2

SINGLE LINE DRAWING
OR
CUT SHEET

FABRIC:
002 BLUE

SAMPLE

FRAME
BLACK

SAMPLE

ROOM	QTY	TOTALS
123	2	8
124	2	
125	2	
126	2	

FIRM
DATE

FURNITURE ILLUSTRATION SHEET

PROJECT NAME
LOCATION

ARTWORK ILLUSTRATION

A-1

A-1

MAT
002 BLUE

SAMPLE

FRAME
BLACK

SAMPLE

MOUNTING INSTRUCTIONS:

PLACE CENTER OF WALL WITH TOP OF FRAME 64"
ABOVE THE FINISHED FLOOR

ROOM	QTY	TOTALS
123	1	1

FIRM
DATE

ART ILLUSTRATION SHEET

PROJECT NAME
LOCATION

FIRM
DATE

COST ESTIMATE

PROJECT NAME
LOCATION

SOURCE: FSC GROUP 71, PART X CONFERENCE TABLES

CODE	MFG.	ITEM	QT.	UNIT PRICE	TOTAL
T-1	KRUGER	TABLE	04	$ 350.00	1,400.00
T-2	KRUGER	TABLE	01	$ 350.00	350.00
T-3	KRUGER	TABLE	04	$ 350.00	1,400.00
				TOTAL:	$5,4350.00
T-5	VECTA	TABLE	04	$1,000.00	$4,000.00
T-6	VECTA	TABLE	04	$1,000.00	$4,000.00
				TOTAL:	$8,000.00

TOTAL OF ALL CID SOURCES:
10% CONTINGENCY:
7% INSTALLATION:
MISCELLANEOUS FEES:

GRAND TOTAL:

FURNITURE ORDER FORM SAMPLE
PROJECT TITLE

1. LOCATION CODE:
2 DIRECTORATE:
4. DEPARTMENT
5. ACTIVITY:
6. FSC GROUP: 71 PART III SECTION: L CLASS 7110 SIN 499-1 CONTRACT EXPIRATION DATE: MOL:
7. SOURCE: Manufacturer's name etc....
8. PRODUCT NAME:
9. PRODUCT STOCK NUMBER:
10. PRODUCT FABRIC NAME AND COLOR NUMBER:
11. PRODUCT FINISH NAME AND COLOR NUMBER:
12. DIMENSIONS: WEIGHT:
13. DESCRIPTION:(Include construction information; fabric content, finish application)
14. JUSTIFICATION: These guest chairs are coordinated to match the tasks seating at each workstation. The size of the guest chair was critical because of the limited space where they were to be placed. If this company is not selected coordinate the newly proposed finishes with Location Codes: C3, C4 and C5.
15. ROOM LOCATION QUANTITY PER ROOM
16. TOTAL QUANTITY:
17. UNIT PRICE:
18. TOTAL PRICE:
19. FREIGHT CHARGES: FOB DESTINATION (Note if freight charges are included in the price of the CID item.)
20. Additional remarks or justification.

21. APPENDICES

A. ADA REQUIREMENTS

B. COMMANDER'S POLICY

C. UNICOR WAIVER

DEPARTMENT OF THE ARMY
U.S. Army Corps of Engineers
WASHINGTON, D.C. 20314-1000

REPLY TO
ATTENTION OF:

CEMP-EA/CECW-EP

25 JAN 1994

MEMORANDUM FOR SEE DISTRIBUTION

SUBJECT: Access for People with Disabilities

1. Reference Secretary of Defense memorandum dated 20 October 1993, subject as above (enclosure 1).

2. In accordance with the referenced memorandum, the Department of Defense (DoD) has implemented a new policy concerning accessibility standards. In the past, USACE was required to meet the requirements of the **Uniform Federal Accessibility Standards (UFAS)** and not the **Americans with Disabilities Act Accessibility Guidelines (ADAAG)**. The new policy requires that, in addition to meeting UFAS requirements as required by 42 U.S.C. 4151-4157 and consistent with 29 U.S.C. 794, the requirements of the ADAAG that provide equal or greater accessibility then the requirements of the UFAS must also be met in those facilities subject to UFAS. The facilities excluded under UFAS (such as unaccompanied personnel housing) are still excluded under this new policy, even though the ADAAG has no such exclusions. The implementation of this new policy is considered to have *routine application* as defined by ER 1110-345-100.

3. Copies of UFAS and ADAAG criteria are available from the Architectural and Transportation Barriers Compliance Board, telephone (202) 272-5434. Copies of the Title II Technical Assistance Manual which explains differences between the two standards are available from the Department of Justice, (202) 514-0301.

4. The Directorate of Military Programs POC is Mr. D. S. Gim, CEMP-EA, (202) 272-0440, and the Directorate of Civil Works POC is Mr. Douglas J. Kamien, CECW-EP, (202) 272-8894.

FOR THE DIRECTORS OF MILITARY PROGRAMS AND CIVIL WORKS:

Encl

RICHARD C. ARMSTRONG, P.E.
Chief, Engineering Division
Directorate of Military Programs

PAUL D. BARBER, P.E.
Chief, Engineering Division
Directorate of Civil Works

DEPARTMENT OF THE ARMY
U.S. Army Corps of Engineers
WASHINGTON, D.C. 20314-1000

REPLY TO
ATTENTION OF:

CEMP-EA

31 MAR 1993

COMMANDER'S POLICY MEMORANDUM #7

SUBJECT: Comprehensive Interior Designs

1. The Vice Chief of Staff, Army has placed priority on providing quality living conditions for our soldiers wherever stationed. While this initial thrust to improve the quality of interior environments is directed at barracks facilities, my overall concern is that we ensure quality interior living, working, and training conditions for all of our customers.

2. In order for the Army and our other customers to recruit and retain dedicated career professionals, excellent environments are needed to provide a high quality of life. Our customers and our own personnel spend a majority of their time in interior environments. Excellence in building interiors and furnishings is critical in meeting our customer's and our own functional and operations requirements. Excellent comprehensive interior design must be given high priority in the planning, programming, design, and implementation of our construction projects.

ARTHUR E. WILLIAMS
Lieutenant General, USA
Commanding

DEPARTMENT OF THE ARMY
U.S. Army Corps of Engineers
Washington, DC 20314-1000

CEMP-EA

Regulation
No. 1110-345-122

15 April 1994

Engineering and Design
INTERIOR DESIGN

1. **Purpose.** This regulation establishes policy, requirements, and responsibilities to be followed in the planning, design, approval, and procurement of interior designs for military construction projects and improvement programs.

2. **Applicability.** This regulation applies to HQUSACE/OCE elements, major subordinate commands (MSC), district commands and technical centers, laboratories, and field operating activities (FOA) having military construction (MILCON) responsibilities.

3. **References.** References and additional information resources are listed at Appendix A.

4. **Projects Requiring Interior Design.** Interior design is required on all new building construction and renovation projects regardless of funding source. Interior design guidance for most facility types is provided by Design Guide (DG) 1110-3-122. Interior design guidance for medical facilities is furnished by Architectural and Engineering Instructions, Medical Design Standards. Interior design for family housing will be in accordance with Architectural and Engineering Instructions, Army Family Housing.

5. **Interior Design Services.** Two types of interior design services are offered.

a. **Building-Related Interior Design.** Building-related interior design service will be provided for all facilities. This service requires the accommodation of needed furniture and equipment within the building, and the design or selection of items normally provided as part of the building construction project in accordance with AR 415-15. These services will be provided as an integral part of the project design and shall include:

(1) Basic space planning for anticipated furniture and equipment requirements in conjunction with the functional layout of the building design and such requirements as life safety, privacy, lighting, ventilation, and accessibility.

(2) Design, selection, and coordination of surface materials and colors that are applied to or compose walls, floors, ceilings, trims, doors, windows, window treatments, built-in furniture and installed building equipment, lighting, signage and other items which are permanently attached to, or are integral to the building. Appendix B further defines interior design elements that are building-related and furniture-related.

b. **Furniture-Related Interior Design.** Furniture-related interior design should be provided for all facilities where the arrangement of furniture and furnishings is important to building functionality. Furniture-related interior design services relate to the accommodation and selection of items that will be provided or procured by the Government. This service will be provided when requested by the using activity and will normally include:

(1) Selection, and color coordination of furniture and equipment drawn from existing inventory, procured from Government supply sources (see Appendix C), or procured by competitive bid. These items normally include such things as ergonomic chairs, freestanding and mobile furniture, draperies, lamps, rugs, plant materials, planters, and free standing or wall hung art.

(2) Detailed space design, placement planning, and procurement documentation for the selected furniture, furnishings, and equipment.

This regulation supersedes ER 1110-345-122, 31 October 1989.

(3) Coordination of furniture-related items with the building design.

6. General Requirements.

a. **Building-Related Interior Design.** General requirements for building-related interior design are as follows:

(1) Preparation of the basic space layout plans for furniture and equipment, in coordination with the functional layout of the building design.

(2) Specification of the material and color applications for interior component surfaces, and preparation of color and finish schedules.

(3) Design and specification of permanent features such as signage, graphics, casework, and built-in equipment; and the preparation of appropriate schedules.

(4) Coordination of finishes, interior components, lighting, acoustical treatment, electrical, information systems, and mechanical elements.

(5) Preparation of display books or boards showing layout diagrams, special details, and material and color samples, for the purpose of obtaining approval of the design scheme and for facilitating the execution of the design intent through the construction contract or other procurement.

(6) Description of interior design intentions for enhancement of energy efficiency, safety, health, functional flexibility, maintenance, increased personnel performance, and projecting the proper image.

b. **Furniture-Related Interior Design.** General requirements for furniture-related interior design are:

(1) Coordination with all the tasks identified in paragraph 6a above, so that the furniture-related and building-related design schemes reflect a single, coordinated design theme.

(2) Selection and description of furniture and equipment from available Government sources of supply (see Appendix C). Selection will be based on factors indicated in DG 1110-3-122. When Government source items do not meet requirements, purchase specifications to include materials testing and/or rating requirements to meet minimum Federal standards, and any other data necessary for procurement on the open market will be provided.

(3) Preparation of detailed furniture arrangement and placement plans, and coordination with electrical, information systems, and mechanical elements.

(4) Preparation of procurement documents with source data, item identification, color and finish schedules, and cost estimates. Documents will reflect current source data for procurement.

(5) Preparation of display books or boards showing layout diagrams, selected furniture and equipment, material and color samples. Perspectives or sketches may also be necessary to obtaining approval of the design scheme.

(6) Technical consultation during procurement, delivery, and placement, to assure receipt of specified and selected items, and completion and coordination of the overall design scheme.

7. Design Requirements. Preparation of project interior designs will coincide with the project design process described in AR 415-15. An interior design analysis will be prepared as part of the project design analysis required by ER 1110-345-700. Interior design drawings will likewise be prepared as part of the project drawings required by ER 1110-345-710.

a. **Concept Design.** During the concept design phase, those responsible for interior design will meet with representatives of the using activity and the building design team to determine the design concept. The design concept should meet the users functional, physical, and aesthetic needs as defined below.

(1) Functional. Achieve space planning layout which considers all furniture and equipment required to support the users operation. Related design issues include accessibility, privacy, safety, and health.

(2) Physical. Assure that environmental support systems such as electrical, lighting, mechanical,

information systems, and structure meet the users physical requirements.

(3) Aesthetic. Meet the users needs for aesthetic expression. Aesthetic needs are the physical interpretations of the users sociological and psychological needs. Design issues related to these needs include the use of light, color, and texture.

b. **Final Design.** Upon approval of the concept design, those responsible for design will develop the design concept in sufficient detail to assure successful execution. Building-related interior design is the detailed design and specification of building-related elements in the contract documents. Furniture-related interior design includes the detailed design and preparation of procurement documents.

8. **Responsibilities.**

a. **Planning Phase.**

(1) The using activity and installation will:

(a) Provide design and design review funds for furniture-related design, as indicated in paragraphs 10 and 11 of this regulation.

(b) Provide funds for procurement of furniture and equipment, and indicate these funds on DD Form 1391, as required by AR 415-15.

(c) Identify unique functional requirements related to the interior design of the facility.

(d) Identify existing furniture and equipment to be reused in addition to new furniture and equipment required.

(2) USACE MSC and district commands responsible for design will assist, on a reimbursable basis, in determining preliminary design requirements, indicated in paragraphs 8a(l)(c) and (d) above, during development of the planning and programming documents.

b. **Design Phase.**

(1) The designated representative of the using activity, having final approval authority for the project will review and approve interior design in a manner that is compatible with the provisions of AR 415-15.

(2) USACE MSC and district commands will:

(a) Accomplish interior design services within the scope and methods described herein, and as stated in the programming documents and design directives.

(b) Assure that interior design services are coordinated with the architectural design and reflect the requirements of the using activity.

(c) Verify and validate the technical adequacy and professional quality of the interior design.

c. **Construction and Procurement Phases.**

(1) The using activity and installation have the following responsibilities regarding interior design:

(a) Procurement of furniture and equipment for delivery to coincide as closely as possible with beneficial occupancy of the building.

(b) Tracking of procurement to assure timely receipt of required furniture and equipment.

(c) Warehousing of furniture and equipment until it is required for placement in the building.

(d) Delivery, assembly, and placement of furniture and furnishings at the project site.

(e) Verification that furniture and equipment received meet specifications requirements.

(f) Establishment of a move in date for the user. This date should be coordinated with the USACE MSC or district command to assure adequate time to furnish the facility after it is released for beneficial occupancy.

(2) USACE MSC and district commands have the following responsibilities:

(a) Assure that appropriate information is provided to the using activity to fully describe the interior design intentions, and the maintenance and operational aspects of the building.

(b) Establish beneficial occupancy date so that procurement of furniture and equipment by the using activity or by USACE may be scheduled for a timely delivery.

(3) When USACE provides furniture-related interior design services, the using activity or installation may request the following execution services from USACE on a reimbursable basis:

(a) Technical consultation during procurement, delivery and placement of furniture and equipment.

(b) Assistance in evaluating deviations from specified furniture and equipment to avoid installation of inferior or inappropriate furniture and equipment.

(c) Services in support of the using activities responsibilities indicated in paragraphs 8c(l)(a), (b), and (e) above including supervision of assembly and placement.

9. Methods of Accomplishment. Design and design review shall be accomplished by, or in consultation with professional interior designers and architects. Qualification of designers will be based on completion of a recognized program of academic training in interior design and demonstrated interior design experience. When furniture-related services are provided, those services should be accomplished by the same designer providing the building-related services if possible. Methods for accomplishment of interior design may include in-house capability, Architect Engineer (A-E) contract, separate interior design service contract, or indefinite delivery contract for interior design services.

10. Funding. Project design funds will be used for building-related interior design services. Funds for furniture-related interior design services, including design reviews, will be provided separately by the using activity, except as indicated in paragraph 11 of this regulation.

11. Exception. Because the furniture-related interior design is critical to the operational effectiveness of living, administrative, and operational facilities, USACE encourages the use of furniture-related interior design services. USACE will provide furniture-related interior design services as an integral part of the building design without additional cost to the using activity for Category Codes 610, 310 & 171 and for DA Standard Design Packages with comprehensive interior designs. The using activity, however, must commit funds for the procurement of the furniture on the DD Form 1391 and request this additional service.

FOR THE COMMANDER:

WILLIAM D. BROWN
Colonel, Corps of Engineers
Chief of Staff

3 Appendices
APP A - References
APP B - Definitions
APP C - Government Sources of Supply

APPENDIX A

REFERENCES

1. Federal Acquisition Regulations (FAR).

a. Part 8, Required Sources of Supplies and Services.

b. Part 10, Specifications, Standards, and Other Purchase Descriptions.

2. Department of the Army.

a. AR 415-15, Military Construction, Army (MCA) Program Development.

b. AR 415-17, Cost Estimating for Military Programming.

3. U.S. Army Corps Of Engineers.

a. ER 1110-345-700, Engineering and Design, Design Analyses.

b. ER 1110-345-710, Engineering and Design, Drawings.

c. DG 1110-3-122, Design Guide for Interiors.

d. Architectural and Engineering Instructions (AEI), Design Criteria issued by HQUSACE (CEMP-EA). Additional copies are available from HQUSACE (CEMP-EA), 20 Massachusetts Ave., N.W., Washington, DC 20314-1000.

e. Architectural and Engineering Instructions (AEI), Medical Design Standards, issued by HQUSACE (CEMP-EM). Additional copies are available from HQUSACE (CEMP-EM), 20 Massachusetts Ave., N.W., Washington, DC 20314-1000.

APPENDIX B

DEFINITIONS

1. Building-related Interior Design. Design in support of installed building equipment and personal property fixed are an integral part of building-related interior design.

a. Installed Building Equipment. Construction elements of building-related interior design are defined as installed building equipment by Appendix H, Equipment Installation, of AR 415-15. They consist of items that are affixed or built into the facility and become an integral part of the facility. Installed building equipment is MILCON funded and is provided as part of the construction contract. Examples of installed building equipment associated with building-related interior design are listed in paragraph H-1 of AR 415-15.

b. Personal Property Fixed. Personal property fixed is defined by AR 415-15, Appendix H as capital equipment and other equipment of a movable nature that has been fixed in place or attached to real property, but may be severed or removed from buildings without destroying the usefulness of the facilities. Personal property fixed is normally funded as Other Procurement, Army (OPA), however, the utility support for this equipment is MILCON funded. Equipment installation may be funded by either fund source, and installation responsibilities must be defined in the contract documents.

c. Pre-wired Work Stations. Pre-wired work stations are a special area within personal property fixed.

(1) Physical Definition. The physical characteristics of a pre-wired work station should include posts, panels, partitions, wiring for electrical and information systems, task lighting, and partition hung components to support individual or group work efforts. Both panel to panel and post and panel systems are acceptable. Additional system components are ambient lighting and partition supported files. Pre-wired work stations do not include movable furniture and furnishings such as chairs, stand alone file cabinets, coat hooks, file trays, or similar accoutrements.

(2) Functional Definition. A pre-wired work station should, at a minimum, provide for the following functions:

(a) An acoustically treated enclosure defining the limits of an individual or a shared use work station.

(b) Adequate work surfaces to accommodate the individual's equipment, writing surface, and work layout surface.

(c) Storage space for individual files and supplies.

(d) Task lighting and electrical and information systems outlets to support the individual's equipment.

(3) Planning and Design. When pre-wired work stations are planned as an integral part of new construction or MILCON funded renovation they may be MILCON funded. To obtain MILCON funded pre-wired work stations, they must be justified and itemized on programming documents. Indicate number of work stations, unit cost and total cost as a line item under primary facility. Pre-wired work stations must also be itemized in Government estimates, and contractor pricing.

(4) Construction. MILCON funded pre-wired work stations will be provided by the construction contractor based on project drawings and specifications. When the contractor provides pre-wired work stations, the provisions of the FAR that apply to construction are applicable.

2. Furniture-related Interior Design. Elements associated with furniture-related interior design are defined as personal property moveable by Appendix H of AR 415-15. Elements associated with furniture-

related interior design consist of capital equipment and other equipment of a movable nature. Personal property is generally mission specific and can be separated from the building without destroying its use for another function. Personal property should be financed from Operations and Maintenance, Army (OMA) or Other Procurement, Army (OPA) funds, depending on the investment threshold.

a. Physical Definition. Items associated with furniture-related interior design include, but are not limited to, the following items:

(1) Furniture. Including Desks, Tables, Chairs, Sofas, Ergonomic Seating, Free Standing and Mobile Storage, Free Standing Acoustical Screens, and Modular and Automated Data Processing (ADP) Furniture.

(2) Furnishings. Including Art Work, Curtains, Draperies, and Rugs.

(3) Mission Equipment. Including Computers, ADP, Medical and Dental, Organs and Pianos, Simulators and Training Aids, Printing,
Photographic, and Shop Equipment.

b. Planning and Design. Users should provide OMA or OPA funding for furniture, furnishings, equipment and for the associated installation costs. When furniture-related interior design is requested as part of a MILCON project, furniture and furnishings should be itemized on DD Form 1391 and Government estimates. DD Form 1391 should indicate furniture requirements in Section 13, and furniture cost itemized in Section 2G.

c. Procurement. Procurement of furniture and furnishings is considered Government procurement, and the provisions of FAR Parts 8 and 10 apply. See Appendix C for Government Sources of Supply. When systems furniture is provided as part of an OMA funded renovation project or a reconfiguration, it is to be procured as furniture.

PROCUREMENT PROCEDURES FOR FURNITURE

A. THE MISSION-COMPREHENSIVE INTERIOR DESIGN PACKAGE

B. PRIORITIES FOR USE OF GOVERNMENT SUPPLY SOURCES IN ACCORDANCE WITH FEDERAL ACQUISITION REGULATION 8.001.

- AGENCY INVENTORIES
- EXCESS FROM OTHER AGENCIES
- FEDERAL PRISON INDUSTRIES
- COMMITTEE FOR PURCHASE FROM THE BLIND AND OTHER SEVERELY HANDICAPPED
- GSA STOCK PROGRAMS (DEFENSE LOGISTICS AGENCY, DEPARTMENT OF VETERANS AFFAIRS, MILITARY INVENTORY CONTROL POINTS.
- MANDATORY FEDERAL SUPPLY SCHEDULES
- OPTIONAL USE OF FEDERAL SUPPLY SCHEDULES
- COMMERCIAL SOURCES

C. PROCURING FROM THE FEDERAL PRISON INDUSTRIES, REQUESTS FOR WAIVER.

D. GSA STOCK PROGRAMS

E. PROCUREMENT FROM FEDERAL SUPPLY SCHEDULES

- COMPETITION REQUIREMENTS
- MAXIMUM ORDER LIMITATIONS

F. PROCUREMENT FROM OPEN MARKET SOURCES

- UNDER $25,000, REQUEST FOR QUOTATIONS
- OVER $25,000, INVITATION FOR BID (IFB'S)

G. SPECIFICATIONS

H. COMMUNICATION

APPENDIX C

GOVERNMENT SOURCES OF SUPPLY

1. Priority of Sources. FAR, Part 8.001, indicates the order of preference for acquisition of supplies and services for the Federal Government.

2. Federal Prison Industries (FPI). FPI is a mandatory source of supply and should be considered in accordance with the requirements of FAR, Part 8.6. A furniture catalog and other product information are available from UNICOR, Federal Prisons Industries, Inc., 320 Ist Street, N.W., Washington, DC 20534.

3. General Services Administration (GSA). The use of Federal Supply Schedules is optional for Department of Defense agencies. GSA schedules do provide a wide selection of furniture and furnishing products. GSA Federal Supply Service source information is available through the Centralized Mailing Lists Services (CMLS), P.O. Box 6477, Fort Worth, TX 76115.

WAIVER REQUEST PROCEDURE

In accordance with Title 18, U.S.C., Sec. 4124(a) and Federal Acquisition Regulations subpart 8.6, Federal Prison Industries, Inc. (UNICOR) has a mandatory preference for supplies listed in its "Schedule of Products." When an ordering office wishes to purchase supplies listed in the "Schedule" from sources other than UNICOR, it will submit a request for waiver to the Customer Service Manager, Federal Prison Industries, Inc. (UNICOR). The request will be directed as follows:

Federal Prison Industries, Inc.
320 First St., N. W. (ACACIA)
Washington, DC 20534
Attn: Customer Service Manager

Telephone: 1-800-827-3168
Facsimile: 202-628-1597

Federal Prison Industries, Inc. (UNICOR) will consider requests for waivers based on documented disparities in price, inability to meet reasonable delivery dates, and disqualifying variations in function and "match." Requests will be considered in connection with the standards set out in its Waiver Policy. UNICOR has attempted to set out with the greatest degree of objectivity the standards that it applies in making decisions on waivers. While there must inevitably be some discretion exercised in these decisions, UNICOR will always give careful consideration to a customer's request. It is guided in all its decisions by its commitment to "Total Customer Satisfaction."

A. Requests shall contain the following information:

1. As complete a description as possible of the required items: e.g., National Stock Number, descriptive literature such as cuts, illustrations, drawings, and brochures that explain the characteristics and/or the construction. When applicable, e.g., items built to a military or Federal specification, a complete technical data package should be submitted.
2. Quantity required, price of preferred item and required delivery date.
3. In situations where the waiver request is based on functional differences, a comparison of the functional differences between the requested item and the "schedule" item should be provided identifying as a minimum:

   (a) inadequacies of the "schedule" item to perform the required functions; and
   (b) economic, or other advantages of the item requested.
4. Estimated annual usage or future need for similar items or a statement that the requirement is nonrecurring and no future need is anticipated. Indicate if this or similar items have previously been purchased from UNICOR.

B. UNICOR delivery schedules are consistent with delivery schedules for comparable items appearing on General Services Administration Federal Supply Schedules (FSS). Where schedules for comparable items do not exist, deliveries are consistent with good commercial practices. In the event that delivery times shorter than normally available from the FSS or commercial sources are required, certification, in writing from the contracting officer must be provided stating the reason for the shorter delivery requirement.

C. All factors are considered when a determination is made. This includes customer needs, current factory loading and future requirements. Each request is evaluated on its own merits. UNICOR policy does not permit blanket waivers but evaluates each request on a case-by-case basis considering, primarily, the needs of the customer.

D. Appeals to waiver denials can be made by forwarding reasons for the appeal to the Customer Service Manager by letter. Please note in your transmission that this is an appeal and reference the original waiver identification number. Appeals should be transmitted no later than 30 days after receipt of the original decision.

E. Every attempt will be made to respond to waiver requests and appeals within five (5) working days of receipt.

F. Ordering offices should not initiate action to acquire similar items from sources other than UNICOR until a request for waiver is approved.

To check the status of your request or to inquire about prices, delivery, order status or other concerns please call the UNICOR Customer Service Hotline:

1-800-827-3168

8.403 Types of Federal Supply Schedules.

8.403-1 Single-award schedules.

Single-award schedules cover contracts made with one supplier at a stated price for delivery to a geographic area as defined in the schedule. Most schedules contain all information necessary for placing orders. Some schedules specify that contractor catalogs must be used for additional ordering information to aid in the selection of fabrics, colors, and similar variables.

8.403-2 Multiple-award schedules.

Multiple-award schedules cover contracts made with more than one supplier for comparable supplies and services. Contracts are awarded to suppliers of the same generic types of items at varying prices for delivery within the same geographic area. Contractor catalogs and pricelists must be used with the schedules to prepare delivery orders. The catalogs and pricelists contain information such as item descriptions, prices and discounts, order limitations, and delivery.

8.403-3 New Item Introductory Schedule.

The New Item Introductory Schedule (NIIS) provides the means to introduce new or improved products into the Federal Supply System. The schedule lists brand names of products available from various suppliers. With the exception of GSA, the only mandatory user of this schedule, Federal agencies and agencies authorized by law or agreement may use the NIIS on an optional basis. Ordering offices must use contractor catalogs and pricelists with the schedule to prepare delivery orders.

8.403-4 International Federal Supply Schedule.

(a) The International Federal Supply Schedule (IFSS) provides sources of supply (supplies and services) at reasonable prices to U.S. Government activities located overseas. The use of the schedule is mandatory only on GSA.

(b) The schedule is divided into two sections. Section A includes those items which were awarded under sealed bid procedures, while Section B covers items that were awarded under negotiated procedures.

(c) Ordering offices need to review the information in the schedule and any applicable contractor's catalogs/price lists to ensure the proper placement of orders. Orders are placed directly with the contractors.

(d) Ordering offices shall forward copies of any orders (at the time the orders are issued) to the contracting office designated in the IFSS.

8.404 Using schedules.

(a) The planning, solicitation, and award phases of Federal Supply Schedules comply with FAR requirements. Consequently, contracting officers need not seek further competition, synopsize the solicitation or award, determine fair and reasonable pricing, or consider small business-small purchase set-aside procedures when placing an order under a Federal Supply Schedule.

(b) Before soliciting commercial sources, executive agencies shall determine if the required supplies or services, or similar supplies or services fulfilling the same purpose, are available from schedules (see FPMR 101-26.4). If so, the ordering office shall proceed in accordance with the procedure of 8.404-1 or 8.404-2, as appropriate.

(c) In the case of mandatory schedules, ordering offices shall not (1) solicit bids, proposals, quotations, or otherwise test the market solely for the purpose of seeking alternative sources to Federal Supply Schedules; or (2) request formal or informal quotations from Federal Supply Schedule contractors for the purpose of price comparisons.

8.404-1 Mandatory use. See Deviation per AL-91-7

Schedules identify executive agencies required to use them as mandatory sources of supply. The single-award schedule shall be used as a primary source and the multiple-award schedule as a secondary source. The following are exceptions to the mandatory-use requirement:

(a) *Urgent requirements.* When an ordering office requires supplies or services with a shorter delivery time than specified in the schedules, and time permits, the ordering office shall request the contractor by letter, telegram, mailgram, or telephone conversation (confirmed in writing) to state the best delivery time that can be met under the circumstances and subject to all other terms and conditions of the schedule contract. The contractor shall be instructed to reply to the inquiry within not more than 3 workdays after receipt, by the same or a faster communications medium than the one by which the inquiry was received. If the contractor offers accelerated delivery acceptable to the ordering office, orders shall obligate the contractor to make the shorter delivery under all other terms and conditions of the contract. When the contractor fails to reply, or the best delivery time does not meet the ordering office's requirements, use of the schedule is not mandatory.

(b) *Small requirements.* Dollar or quantity minimums are established for most schedules, below which ordering offices are not obligated to order and contractors are not obligated to accept orders. Ordering offices may submit orders below established minimums, subject to the contractor's acceptance. Once an order is accepted, the contractor is obligated to perform according to all the terms and conditions of the contract. Some schedules require the contractor to accept orders below the dollar or quantity minimum, but authorize the contractor to include a service charge up to a certain dollar amount. In these cases, the

8.405 Ordering office responsibilities.

Ordering offices shall place orders directly with contractors and shall perform contract administration on individual orders. Ordering offices should deal directly with contractors concerning contract performance (see 41 CFR 101-26.403-1).

8.405-1 Ordering from multiple-award schedules.

When ordering from multiple award schedules, ordering offices shall use the procedures set forth below. When these procedures are followed, orders placed against schedules will result in the lowest overall cost alternative to meet the needs of the Government.

(a) Orders should be placed with the schedule contractor offering the lowest delivered price available. The ordering office shall review the schedule price lists that are reasonably available at the ordering office. Where the ordering office has available fewer than three price lists from current schedule contractors that offer the required items, the ordering activity shall obtain additional price lists from schedule contractors listed in the GSA schedule for the required items. The ordering office shall fully justify in the contract file orders for a line item exceeding the price reasonableness verification threshold at 13.106 placed at other than the lowest price identified in its review. Justification for ordering a higher priced item may be based on such considerations as—

(1) Delivery time in terms of actual need that cannot be met by a contractor offering a lower price;

(2) Specific or unusual requirements such as differences in performance characteristics;

(3) Compatibility with existing equipment or systems;

(4) Trade-in considerations that favor a higher priced item and produce the lowest net cost; and

(5) Special features of one item not provided by comparable items that are required in effective program performance.

(b) When two or more items at the same delivered price will meet an ordering office's needs, the ordering office shall give preference to the items of small business and/or labor surplus area concerns by following the order of priority in 14.407-6 for equal low bids.

(c) When a schedule lists both foreign and domestic items that will meet the ordering office's needs, the ordering office shall apply the procedures of Part 25, Foreign Acquisition.

(d) If an item available from a multiple-award schedule is ordered from the schedule contractor at a price lower than the schedule price, the ordering office shall notify the schedule contracting office within 10 days.

8.405-2 Order placement.

Ordering offices may use Optional Form 347, or an agency-prescribed form, to order items from schedules and shall place orders directly with the contractor within the limitations specified in each schedule. Orders shall include, at a minimum, the following information in addition to any information required by the schedule:

(a) Complete shipping and billing addresses.

(b) Contract number and date.

(c) Agency order number.

(d) F.o.b. delivery point; i.e., origin or destination.

(e) Discount terms.

(f) Delivery time.

(g) Special item number or national stock number.

(h) Brief, complete description of each item (when ordering by model number, features and options such as color, finish, and electrical characteristics, if available, must be specified).

(i) Quantity and any variation in quantity.

(j) Number of units.

(k) Unit price.

(l) Total price of order.

(m) Points of inspection and acceptance.

(n) Other pertinent data; e.g., delivery instructions or receiving hours and size-of-truck limitation.

(o) Marking requirements.

(p) Level of preservation, packaging, and packing.

8.405-3 Inspection and acceptance.

(a) Consignees shall inspect supplies at destination except when—

(1) The schedule provides for the schedule contracting agency to perform source inspection (in this case, the schedule will indicate that mandatory source inspection is required); or

(2) A schedule item is covered by a product description, and the ordering office determines that the schedule contracting agency's inspection assistance is needed (inspection assistance may be based on the ordering volume, the complexity of items, or the past performance of the supplier).

(b) When the schedule contracting agency performs the inspection, as specified in the schedule, the ordering office will provide two copies of the order specifying source inspection to the schedule contracting agency. The schedule contracting agency will notify the ordering office of acceptance or rejection of the supplies.

(c) Material inspected at source by the schedule contracting agency, and determined to conform with the product description of the schedule, shall not be reinspected for the same purpose. The consignee shall limit inspection to quantity and condition on receipt.

(d) Unless otherwise provided in the schedule, acceptance shall be conclusive except as regards latent defects, fraud, or such gross mistakes as amount to fraud.

8.405-4 Delinquent performance.

When the contractor fails to perform on the order, the

APPENDIX H

NOT USED

APPENDIX I
WATER FLOW TESTS

HUNTER ARMY AIRFIELD
PHYSICAL FITNESS CENTER

HYDRANT FLOW DATA, 11 MARCH 2003

Hydrant #	Hydrant Location	Main Size	S	R	Pitot Reading	Flow @ Test	Flow Avail @ 20 PSI
29	Dutchtown Rd	6"	50	20	26	548	548
20	Dutchtown Rd	6"	40	20	26	548	548
21	Hunter Golf Course (8215)	8"	65	35	28	887	1200
262	Duncan/B. Mitchell	6"	45	35	44	1116	1775
103	Duncan/ Between Gym& Pk Lt	8"	55	45	44	1116	2100
190	Bulk Fuel Near 7004	6"	65	25	28	887	1100
119	117th	4"	95	55	48	1160	1690
181	117th	4"	95	55	48	1160	1690
197	Leonard Neal& Lghtng	6"	45	35	26	548	1150
5	ASP near 8623	6"	40	20	26	548	548

Data provided by Ken Robinson, DPW

APPENDIX J
GEOTECHNICAL
INFORMATION

SUBSURFACE EXPLORATION
AND
GEOTECHNICAL ENGINEERING REPORT
(PRELIMINARY)

PHYSICAL FITNESS CENTER
L.I. 39451, FY-04
Hunter Army Airfield, Georgia

By
Soils Section
Geotechnical & HTRW Branch
U.S. Army Engineer District, Savannah

JULY 2003

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One-Point and Two-Point Compaction Methods

SUBSURFACE EXPLORATION AND
GEOTECHNICAL ENGINEERING REPORT
(PRELIMINARY)

PHYSICAL FITNESS CENTER
L.I. 39451, FY-04
Hunter Army Airfield, Georgia

14 July 2003

1. PURPOSE. The Government has conducted a preliminary geotechnical investigation for the proposed project. This report provides an overview of the site conditions, including subsurface soil and groundwater conditions, and preliminary recommendations pertaining to the geotechnical design and construction of the project.

2. QUALIFICATION OF REPORT. The field explorations performed for this report were made to determine the subsurface soil and groundwater conditions and were not intended to serve as an assessment of site environmental conditions. No effort was made to define, delineate, or designate any areas of environmental concern or of contamination. Any recommendations regarding drainage and earthwork construction are made on the basis that such work can be performed in accordance with applicable laws pertaining to environmental contamination.

3. PROJECT DESCRIPTION. The proposed project consists of the design and construction of a new Physical Fitness Center which will be used to support both unit and individual fitness for readiness, water survival techniques for aviation and ranger personnel, general water safety training, and to improve the overall quality of life for the Hunter military community. The facility will serve military personnel and their families, as well as civilian support personnel. The new fitness center will replace the existing gymnasium located on Duncan Drive, which will be demolished after the new center is in operation.

Since the project will be constructed under a design/build contract, detailed structural information and loads for the proposed building are unavailable. Some of the pertinent structural features required by the RFP are as follows: The typical roof structural system consists of open web steel joists supported on a structural steel frame. Wide rib metal roof deck spans to the steel joists and supports the roof system. Second floor framing which supports mechanical mezzanines will be framed by concrete slabs supported on 9/16 inch corrugated metal deck on open web steel joists. Minimum slab thickness will be 3-1/2 inches. The typical ground floor slab will consist of 4-inch minimum thickness cast-in-place concrete reinforced and jointed for crack control.

4. EXPLORATION PROCEDURES.

a. Site Reconnaissance. Prior to the field explorations, the site and surrounding areas were visually inspected by a geotechnical engineer. The observations were used in planning the

explorations, in determining areas of special interest, and in relating site conditions to known geologic conditions in the area.

b. Field Exploration.

(1) Subsurface conditions at the Physical Fitness Center site were explored by thirteen soil test borings (designated B-1 through B-14; boring B-12 was not drilled), three exploratory test pits (designated TP-1 through TP-3) and fifteen cone penetrometer test (CPT) soundings (designated CPT-1 through CPT-15). The locations of the borings, test pits, and CPT soundings are shown on the drawings included with this RFP. Depths of the borings ranged from 5 to 25 feet. Test pits were excavated to depths of about 7 feet and the CPT soundings were performed to depths of 9 to 28 feet.

(2) Locations of the exploratory features were established in the field by an engineer by measuring distances and estimating right angles from existing roads, buildings, sidewalks, and other features. The ground surface elevation at each boring and test pit location was determined by interpolation from the site topography survey. Since the measurements were not precise, the locations shown on the exploration location plans and the elevations on the boring logs and test pit logs should be considered approximate.

(3) The soil test borings were drilled by Environmental Field Technology, Inc., under contract to the Savannah District. The borings were drilled with a trailer-mounted Simco 2400 drill rig; a 4-inch solid auger was used to advance the boreholes. Split-barrel sampling with Standard Penetration Testing (SPT) was performed at intervals shown on the boring logs. Soil sampling and Standard Penetration Testing were in general accordance with ASTM D 1586. In the Standard Penetration Test, a soil sample is obtained with a standard 1-1/2 inch I.D. by 2-inch O.D. split-barrel sampler. The sampler is first seated 6 inches and then driven an additional 12 inches with blows from a 140-pound hammer falling a distance of 30 inches. The number of blows required to drive the sampler the final 12 inches is recorded and is termed the “standard penetration resistance”, or the “N-value”. Penetration resistance, when properly evaluated, is an index of the soil’s strength, density, and foundation support capability. Groundwater levels were measured in all the boreholes at the completion of drilling and in a few boreholes again at some time following completion as time permitted.

(4) The CPT soundings were performed in accordance with ASTM D 5778 by Savannah District personnel using a truck-mounted Geoprobe^{R} cordless CPT system. During a CPT sounding, an electronically instrumented cone penetrometer is hydraulically pushed through the soil to measure the tip resistance, sleeve friction, and pore water pressure. Using theoretical and empirical correlations, the measured values are used to determine soil stratigraphy and to estimate soil engineering parameters such as strength, compressibility, and permeability.

(5) The test pits were excavated by Barnett Construction Company under direction of Savannah District personnel. The pits were excavated using a rubber-tired backhoe equipped with an 18-inch wide bucket.

(6) Representative portions of the soil samples obtained from the borings were sealed in airtight containers and transported to the Savannah District office where they were examined by

an engineer to confirm the driller's field classifications. Classification of the soil samples was performed in general accordance with ASTM D 2488 (Visual-Manual Procedure for Description of Soils). The soil classifications include the use of the Unified Soil Classification System described in ASTM D 2487 (Classification of Soils for Engineering Purposes). Since the soil descriptions and classifications are based on visual examination, they should be considered approximate, except where samples were subjected to laboratory testing, as described below.

(7) Logs of the soil borings and test pits graphically depicting soil descriptions, standard penetration resistances (borings), and observed groundwater levels, and logs of the CPT soundings are shown on the drawings included with this RFP.

c. Laboratory Soils Testing. Nineteen Standard Penetration Test samples and two test pit bag samples were selected for grain-size distribution and Atterberg limits testing. The purpose of the laboratory testing was to aid in our evaluation of the subsurface soils and in confirming the field classifications. The laboratory tests were performed in substantial accordance with applicable ASTM standards. Results of the laboratory testing are shown on the drawings included with this RFP.

5. SITE AND SUBSURFACE CONDITIONS.

a. Site Description. The site for the Physical Fitness Center is at the southeast corner of Duncan Drive and Billy Mitchell Blvd., across Billy Mitchell Blvd. from a planned new barracks complex. The site has existing vegetation, which is typical of the region and consists primarily of a grassy area with a few hardwoods and pine trees. The pine trees are centrally located on the site and surround the existing parking lot and gym. Topography at the site ranges in elevation from 24 feet (MSL) on the north side to 23 feet on the south side; the area of the parking lot varies from 24 feet on the north side to 22 feet on the south side.

b. Area and Site Geology. Hunter Army Airfield is located near the eastern edge of the South Atlantic Coastal Plain. In South Carolina and Georgia, this broad, gently sloping region extends southeastward from the Fall Line (Columbia-Augusta-Macon-Columbus) to the Atlantic Ocean. The soils encountered are predominantly sedimentary in origin and consist of layered marine deposits of sands, silts and clays. The deposits have since been subjected to successive erosion and re-deposition by fluctuations of sea levels, storm tides and winds. Many of the surface sands are the result of depositional forces along ancient beaches which formed during the changing shoreline and river conditions. Intermittent deposits of shells occur within the strata at irregular intervals.

c. Subsurface Conditions.

(1) The soils encountered in the exploration features performed at the project site are typical coastal plain sediments. Below the topsoil, which is generally only a few inches thick, the soil profile consists of silty sand to depths of about 3 to 8 feet which is underlain by clayey sand, sandy clay, or sand with silt to the termination depths of the borings. Standard penetration resistances, or N-values, ranged from 1 to 34, indicating very loose to dense sand.

(2) The above subsurface description is of a generalized nature to highlight the major subsurface stratification features and material characteristics. The logs shown on the drawings should be reviewed for specific information at individual exploration locations. The stratifications shown on the logs represent the conditions only at the actual exploration locations. Variations may occur and should be expected between exploration locations. The stratifications represent the approximate boundary between the subsurface materials; the actual transition may be gradual.

d. Groundwater Conditions. Groundwater levels were measured in the boreholes at completion of drilling. Most of the boreholes were backfilled immediately, thus, long-term stabilized water levels were not obtained. However, water levels were measured in several of the boreholes after some time following completion of drilling. In general, groundwater was encountered from about 4.5 to 6 feet below existing grade. Groundwater depths or elevations shown on the boring logs represent groundwater encountered on the dates shown. Absence of groundwater data for certain borings implies that no data is available, but does not necessarily mean that groundwater will not be encountered at the locations of those borings. Groundwater levels will fluctuate with seasonal and climatic variations, variations in subsurface soil conditions, and construction operations. Therefore, groundwater conditions in the future, and at other locations on the site, may differ from the conditions encountered at the boring locations, on the dates the borings were performed.

6. ENGINEERING EVALUATIONS AND RECOMMENDATIONS.

a. General. The following conclusions and recommendations are based on the information available on the proposed structure, observations made at the project site, interpretation of the data obtained from the explorations, and our experience with soils and subsurface conditions similar to those encountered at the site. Since the explorations represent a very small statistical sampling of the subsurface conditions, it is possible that subsurface conditions substantially different from those indicated by the explorations could be encountered during the construction. In such instances, adjustments to the design and construction of the proposed structure might be necessary, depending on the actual conditions.

b. General Site Preparation. The demolition of trees, concrete and asphalt pavements, and site utilities will be required to prepare the site for construction. Following demolition, clearing and removal, the construction areas should be grubbed and stripped of all vegetation, topsoil, organics, remnants of foundations and other deleterious materials. Clean topsoil can be stockpiled and reused in landscaped areas. It is recommended that the zone of stripping extend a minimum of 10 feet beyond the outer edges of the structure and pavement. Any existing utilities in construction areas should be located and rerouted, as necessary.

c. Foundation Design and Construction.

(1) The soil borings and CPT soundings performed in the area of the fitness center indicated very loose to loose sands and soft clays. Based on the anticipated loadings from the proposed structure, these soils are unsuitable for foundation support as excessive settlements are expected. Therefore, it is recommended that the near-surface loose soils be excavated over a major portion of the fitness center and be replaced with compacted structural fill. The

recommended areal and vertical extent and procedures for the excavation and replacement are indicated on Plate B-01 of the drawings included with this RFP. Provided the loose and soft soils are excavated and replaced in compacted layers beneath the structure as described above, it is anticipated the structure can be supported on shallow spread footings. In lieu of excavation and replacement of the loose soils, some form of engineered ground modification or ground improvement system, or a combination of these could be utilized for support of the proposed structure.

(2) Conventional shallow spread footings should be supported on approved natural soils or on properly compacted structural fill. Column footings and load-bearing wall footings should have minimum dimensions of 30 and 24 inches, respectively, and should be located at a minimum depth of 24 inches below finish floor or finish grade, as appropriate. Non load-bearing wall footings should have a minimum width of 18 inches and should be located at a depth of 18 inches below finish floor or finish grade, as appropriate.

(3) Foundation excavations should be concreted as soon as practical following excavation. Exposure to the environment could weaken the soils at the footing bearing level should the foundation excavations remain open for an extended period of time. Bottoms of foundation excavations should be inspected immediately prior to placement of reinforcing steel and concrete to verify that adequate bearing soils are present and that all debris, mud, and loose, frozen or water softened soils are removed. If the bearing surface soils have been softened by surface water intrusion or by exposure, the softened soils must be removed to firm bearing, and replaced with additional concrete during the concreting, or replaced to design subgrade with No. 57 or No. 67 stone, compacted to a non-yielding condition. To minimize the exposure, the final excavation (4 to 6 inches) to design subgrade could be delayed until just prior to placement of reinforcing steel and concreting. Foundation excavations must be maintained in a drained/dewatered condition throughout the foundation construction process.

d. Seismic Design. Seismic loads should be computed in accordance with IBC 2003, except as modified by UFC 1-200-01. The project site is classified as Site Class D for the purpose of determining maximum considered earthquake spectral response accelerations.

e. Concrete Slabs-On-Grade.

(1) Based upon our past experience and the subsurface conditions encountered at the site, concrete floor slabs can be supported on densified in situ soils or on fill soils placed and compacted in accordance with the recommendations presented in this report regarding structural fill. We recommend that all concrete slabs-on-grade in inhabitable areas, including storage areas, be underlain by a minimum of 4 inches of open graded, washed pea gravel, or stone, often termed "capillary water barrier," to prevent the capillary rise of groundwater. Nos. 57, 67, 78, or 89 stone could be used. We also recommend that a moisture vapor barrier consisting of lapped polyethylene sheeting having a minimum thickness of 6 mils be provided beneath the building floor slabs to reduce the potential for slab dampness from soil moisture. Concrete slabs should be jointed around columns and along supported walls to minimize cracking due to possible differential movement.

(2) Construction activities and exposure to the environment often cause deterioration of the prepared slab-on-grade subgrade. Therefore, we recommend that the slab subgrade soil be inspected and evaluated immediately prior to floor slab construction. The evaluation might include a combination of visual observations, hand rod probing and field density tests to verify that the subgrade has been properly prepared. If unstable soil is revealed, the affected soil should be removed to firm bearing, and replaced to design subgrade with suitable structural fill soil placed and compacted as recommended, or replaced with additional capillary water barrier material.

f. Groundwater Considerations. Water should not be allowed to collect near the foundation or on floor slab areas of the building either during or after construction. Undercut or excavated areas should be sloped toward one corner to facilitate removal of any collected rainwater, groundwater, or surface runoff. Positive site drainage should be provided to reduce infiltration of surface water around the perimeter of the building and beneath the floor slabs.

g. Structural Fill. In order to achieve high density structural fill, the following evaluations and recommendations are offered:

(1) Based on the explorations performed at the project site, excavated on-site soils (excluding any organics and debris) can be used as structural fill. Some moisture content adjustment will probably be necessary to achieve proper compaction. If water must be added, it should be uniformly applied and thoroughly mixed into the soil by discing.

(2) We recommend that the contractor have appropriate disc harrows on site during earthwork for both drying and wetting the soils.

(3) Materials selected for use as structural fill should be free from roots and other organic matter, trash, debris, and frozen soil, and stones larger than 3 inches in any dimension. The following soils represented by their Unified Soil Classification System (ASTM D 2487) group symbols will be suitable for use as structural fill: GC, GM, SP, SW, SC, SM, and CL. The following soil types are considered unsuitable: Pt, OH, OL, GP, GW, ML, MH, and CH.

(4) Suitable fill soils should be placed in lifts of maximum 8 inches loose measurement. The soil should be compacted by mechanical means such as steel drum, sheepsfoot, tamping, or rubber-tired rollers. Compaction of clays is best accomplished with a sheepsfoot or tamping roller. Periodically rolling with heavily loaded, rubber-tired equipment may be desirable to seal the surface of the compacted fill, thus reducing the potential for absorption of surface water following a rain. This sealing operation is particularly important at the end of the workday and at the end of the week. Within confined areas or foundation excavations, we recommend the use of manually operated, internal combustion activated compactors (“wacker packers” or sled tamps). The compactors should have sufficient weight and striking power to produce the same degree of compaction that is obtained on the other portions of the fill by the rolling equipment as specified. Where hand operated equipment is used, the soils should be placed in lifts of maximum 4 inches loose measurement.

(5) We recommend the structural fill and subgrades be compacted to the following minimum percents of the modified Proctor maximum dry density (ASTM D 1557):

Beneath structures and building slabs, to 5 feet beyond building and structure line, around footings and in trenches	92 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

*5

h. Construction Quality Control Testing.

(1) Prior to initiating any structural fill placement and/or compaction operations, we recommend that representative samples of the soils which will be used as structural fill or subgrade, both suitable on-site soils and off-site soils (borrow), be obtained and tested to determine their classification and compaction characteristics. The samples should 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 should 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. Tests for the above soil properties should 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, less hydrometer)	ASTM D 422 and D 1140
Plasticity	ASTM D 4318

(2) A representative number of in-place field density tests should 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 should be performed in accordance with the sand cone method prescribed in ASTM D 1556. We recommend at least one density test be performed for each 5000 square feet, or portion thereof, of compacted existing on-site soils, subgrades, and in each lift of compacted structural fill. We also recommend that at least one density test be performed for each 100 linear feet in the bearing level soils of continuous footings. Density tests should be performed at 100-foot intervals along roadway subgrade soils. In addition, a density test should be performed for each 150 linear feet of backfill placed per foot of depth in trenches for utilities systems. Where other areas are compacted separately by manually operated compactors, a

minimum of one density test should be performed for every 250 square feet, or portion thereof, of fill placed per foot of depth.

(3) Compaction control of soils requires the comparison of fill water content and dry density values obtained in the field density tests with optimum water content and maximum dry density. The performance of a laboratory compaction test on material from each field density test would provide the most accurate relation of the in-place material to optimum water content and maximum density, but it is not feasible to do this as the testing could not keep pace with fill construction. We recommend that compaction control of the earthwork construction be performed using a "family" of compaction curves and the one-point or two-point compaction methods. Excerpts from construction specifications, which describe the approach and its use, are included in the Appendix.

(4) Any area that does not meet the required compaction criteria should 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 should be adjusted to within the range, and the area recompacted.

(5) All laboratory and field density testing should be performed by an approved commercial testing laboratory qualified in this type of work.

APPENDIX

One-Point and Two-Point Compaction Methods

Compaction Control

For fine grained (clayey and silty) soils and for sands with appreciable fines such that normal shaped compaction curves are obtained, results of all compaction tests shall be plotted on a common plot as a family of curves. For each field density test performed, a one-point compaction test, with additional points as needed, shall be performed on the same material on which the field density test was conducted. The one-point compaction test shall be performed on the dry side of the optimum moisture content. For comparison of field density data to the proper laboratory compaction test results, the procedures for the one-point and/or two-point compaction control methods as described in paragraph Compaction Procedure, shall be used. Compaction curves plotted on the family of curves shall be of such a scale that the optimum moisture content can be interpreted to the nearest 0.1 percent and the maximum dry density can be interpreted to the nearest 0.1 pcf(or 2 kg/m^3). When a one-point test plots outside the range of the family of curves, an additional five-point compaction test shall be performed.

Compaction Procedure

General

The following paragraphs describe methods of relating field density data to desired or specified values. Compaction control of soils requires comparison of fill water content and/or dry density values obtained in field density tests with optimum water content and/or maximum dry density. At a minimum, control shall be in accordance with the One-Point Compaction Method. Where conditions require, the Two-Point Compaction Method shall be used.

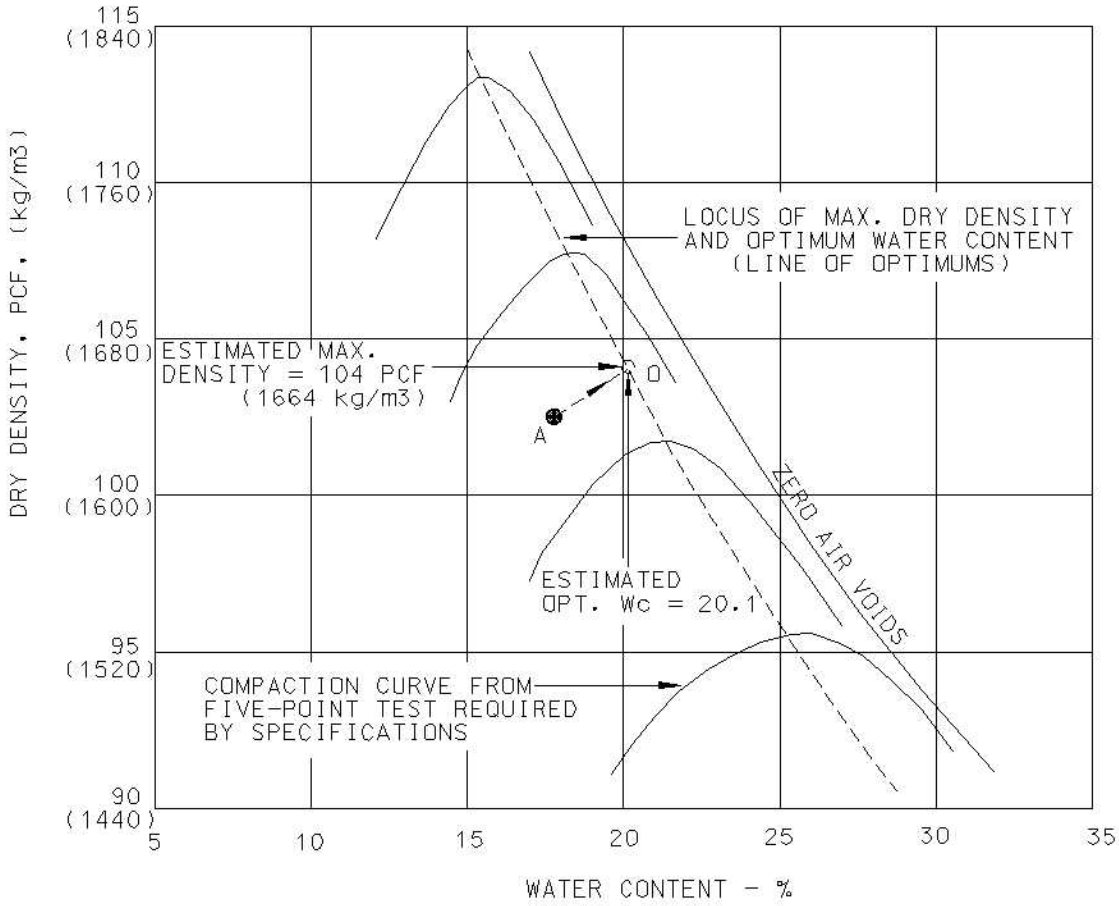
One-Point Compaction Method

The material from the field density test is allowed to dry to a water content on the dry side of estimated optimum, and then compacted using the same equipment and procedures used in the five-point compaction test. Thorough mixing is required to obtain uniform drying; otherwise, results obtained may be erroneous. The water content and dry density of the compacted sample are determined and then used to estimate its optimum water content and maximum dry density as illustrated in Figure 1 at the end of this section. In Figure 1, the line of optimums is well defined and the compaction curves are approximately parallel to each other, consequently, the one-point compaction method could be used with a relatively high degree of confidence. However, in Figure 2 at the end of this section, the curves are not parallel to each other and in several instances will cross if extended on the dry side. Consequently, the correct curve cannot be determined from the one-point method; therefore, the two-point compaction method should be used. The one-point method should be used only when the data define a relatively good line of optimums.

Two-Point Compaction Method

In the two-point test, one sample of material from the location of the field density test is compacted at the fill water content if thought to be at or on the dry side of optimum water

content (otherwise, reduced by drying to this condition) using the same equipment and procedures used in the five-point compaction test. A second sample of material is allowed to dry back about 2 to 3 percentage points dry of the water content of the first sample and then compacted in the same manner. At least one point shall fall within 3 percent of the line of optimums. After compaction, the water contents and dry densities for the two samples are determined. The results are used to identify the appropriate compaction curve for the material being tested as shown in Figure 2 at the end of this section. The data shown in Figure 2 warrant the use of the two-point compaction test because the five-point compaction curves are not parallel. Using point A only, as in the one-point test method, would result in appreciable error as the shape of the curve would not be defined. The estimated compaction curve can be more accurately defined by two compaction points.



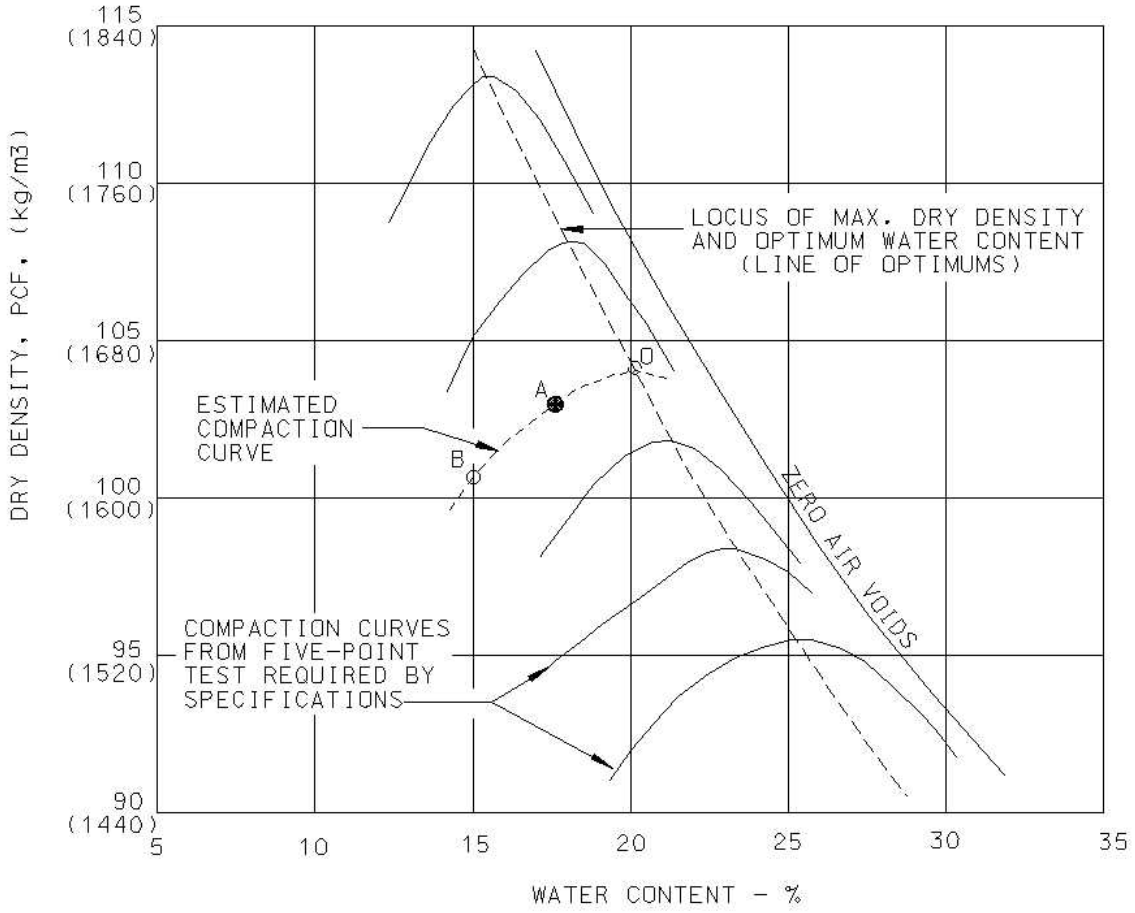
PROCEDURE:

1. Point A is the result of a one-point compaction test on material from field density test. This point must be on the dry side of optimum water content.

2. Point O is the estimated optimum water content and maximum density of the fill material based on a projection of point A approximately parallel to the adjacent compaction curves.

3. Point A must plot within 3 percent of the line of optimums.

Figure 1. Illustration of one-point compaction method.



PROCEDURE:

1. Points A and B are results of a two-point compaction test on material from field density test. Points A and B must be on the dry side of optimum water content.

2. The estimated compaction curve based on Points A and B establishes Point O on the locus, which is the estimated maximum dry density and optimum water content of the fill material.

3. One point must plot within 3 percent of the line of optimums.

Figure 2. Illustration of two-point compaction method.

APPENDIX K
ENVIRONMENTAL AND ABATEMENT INFORMATION

Savannah District
Environmental and Materials Unit

US Army Corps of Engineers®

Asbestos Survey

Building No. 925 Hunter Army Airfield, Georgia

Prepared by Timothy A. Jones

Approved for public release, distribution is unlimited

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The findings of this report are not to be construed as an official Department of the Army position, unless so designated by other authorized documents.

Asbestos Survey **July 2003**

Building No. 925 Hunter Army Airfield, Georgia

bv Timothv A. Jones

Final report

Approved for public release; distribution is unlimited

Prepared for **US Army Corps of Engineers**
Savannah District

Asbestos Inspection Report

Introduction

Scope of the Investigation

This report documents the asbestos inspection and survey of Building No. 925 at Hunter Army Airfield; Georgia conducted on 11-12 June 2003 by Savannah District US Army Corps of Engineers employees Tim Jones and Mike Ruth. The survey was conducted in general accordance with the regulatory guidelines in the Asbestos Hazard Emergency Response Act (AHERA) (40 CFR Part 763 Subpart E Sections 763.80-763.88) and "Guidance for Controlling Asbestos-Containing Materials in Buildings" (Purple Book) (EPA publication number 560/5-85-024). Although not required by the AHERA guidelines, roof and other exterior miscellaneous materials were also inspected and sampled.

Background

Building No. 925 is a single-story concrete block frame structure. Most original walls are constructed of concrete masonry block units (CMU). Newer interior partition walls have been added at some point in time and are constructed of wood framing covered with gypsum drywall or plywood. Four racquetball courts were added at some date. The floor system is concrete slab on grade with multiple covering types. The roof systems are of three basic designs; built up tar and felt on the flat portions, shingled on the peaked sections and rolled roofing on the curved section. The buildings primary use is as gymnasium and recreation facility. Rooms on the building floor plans are arbitrarily numbered for identification in this report only.

Description of study

Investigation

All accessible areas of Building No. 925 were visually inspected for suspected asbestos containing materials (ACM) by accredited inspectors. Bulk samples of all suspect ACM's were collected. This report details ACM as identified at the time of inspection only. Whether other asbestos inspection reports are available or not, the material quantities quoted in this report are assumed complete and are the quantities to be used for abatement/demolition project purposes.

The bulk samples were analyzed by Hygeia Laboratories, Inc. Hygeia is accredited by the National Voluntary Laboratory Accredited Program (NVLAP Accreditation sponsored by the National Institute of Standards and Technology (NIST)). Copies of their accreditation certificates are included in Appendix C. The samples were analyzed by the accepted method of polarized light microscopy (PLM) using EPA's "Method For the Determination of Asbestos In Bulk Building Materials", EPA/600/R-93/116. Hygeia's analytical report is included in Appendix A.

In compliance with the AHERA regulations, material is considered an Asbestos Containing Material (ACM) when it contains greater than one percent asbestos. Likewise, in this report, any material containing concentrations greater than one percent asbestos will be considered "positive". Occasionally, materials containing less than one percent asbestos, or not sampled, are assumed to be a "positive" asbestos containing material at the discretion of the inspectors. A narrative discussion of the AHERA ACM types (i.e., thermal systems insulation, miscellaneous and surfacing materials) found in Building No. 925 is included in this report where relevant. Bulk sample information appears on Table 1. Estimated quantities of individual asbestos containing materials appear on Table 2. Material characterization of asbestos containing materials appears on Table 3. The approximate location where each bulk sample was obtained is shown on the building floor plans, which appear as Figures. Positive ACM samples are indicated on the floor plan Figures with their numbers enclosed in squares and, where possible, locations of positive ACM are identified. Samples testing negative for asbestos are indicated on the floor plan Figures with their numbers enclosed in circles. It is reasonable to assume that all materials similar to those testing positive also contain positive amounts of asbestos and should be treated as such.

Analysis

Thermal Systems Insulation (TSI)

TSI is insulation material applied to pipes, fittings, tanks, ducts, or for other interior structural components to prevent heat loss or gain, or water condensation, or for other purposes.

a. *TSI Pipe Run Insulation*: All TSI pipe runs within Building 925 both domestic water and HVAC contain or are assumed to contain asbestos with the exceptions of the majority of HVAC hot water piping in the gymnasium Room 119 and short sections in the viewing area above Corridor 125. Small sections of piping have been replaced with fiberglass but other than the section in the gymnasium the quantities are insignificant. There appear to be two separate systems each for the HVAC piping and domestic water piping installed in different time periods. The older HVAC steam and condensate piping is installed within the voids in the bar joists and appears to be abandoned. This insulation is severely deteriorated and is generally of the white fluffy type. In portions of the building it is run above plaster ceilings and locations are assumed on the Figure based on old as built drawings. Small sections remain in the gymnasium and are labeled

"Asbestos". The newer HVAC hot water piping is installed below the bar joists and plaster ceilings and is generally in good condition. The older domestic water piping is also installed in the voids of the bar joists and above plaster ceilings in some locations. The location of this piping concealed above plaster ceilings is also estimated based on old as built drawings. The newer piping is mostly installed below the bar joists, but locations are unknown above plaster ceilings. - (Refer to Tables 1, 2 and 3 for specific information, Figure 1 for sample locations and Figures 3-5 for homogeneous area locations).

b. *TSI Molded Fittings:* Molded fittings on both HVAC and domestic water piping were sampled and analyzed. Results were mixed between asbestos and non-asbestos containing. For purposed of this report and due to the inconsistency of results, all hard molded cement type fittings are assumed to be asbestos containing material. - (Refer to Tables 1, 2 and 3 for specific information, Figure 1 for sample locations and Figures 3-5 for homogeneous area locations).

c. *TSI Tank Insulation:* Insulation on the domestic hot water storage tank in Mechanical Room 122 is assumed to contain asbestos. It has been previously sampled and is labeled as containing asbestos. This insulation material is approximately 1 1/2" thick. One plastic garbage bag of assumed asbestos debris was located on top of the hot water storage tank. - (Refer to Tables 2 and 3 for specific information).

Miscellaneous Materials

Miscellaneous materials include building material on structural components, structural members or fixtures, such as floor and ceiling tiles, and do not include surfacing or TSI. In the past, there were a great number of miscellaneous building materials that had asbestos fibers added to them during the manufacturing process to increase durability and fireproofing qualities. The following suspect miscellaneous materials at Building No. 925 were found to contain or were assumed to contain asbestos:

a. *Flooring Materials:* The lower layer of tan vinyl floor tiles and mastic in Rooms 101 & 103 contain asbestos. The single layer of floor tiles and mastic in room 102 contain asbestos. The mastic associated with the floor tiles in corridor 127 contains asbestos. - (Refer to Tables 1, 2 and 3 for specific information, and Figure 1 for sample locations locations).

b. *Roofing Materials:* The rolled roofing material over the gymnasium, Room 119, contains asbestos. Multi layer tar and felt flashing under the rolled roof flashing at the junction of the flat roofs and concrete block walls contains or is assumed to contain asbestos. Multi layer flashing at the roof curbs contains or is assumed to contain asbestos. Flashing cement on the center of the large roof vent on the peaked roof above the racquetball courts contains asbestos. - (Refer to Tables 1,

2 and 3 for specific information and Figure 2 for sample locations and roof types).

c. *Caulking Material:* Caulking material around the interior and exterior of the window frames and doorframes at the block walls contains or is assumed to contain asbestos. The caulking material at the joints between the brick chimney and the exterior block wall contains asbestos. - (Refer to Tables 1, 2 and 3 for specific information and Figures 1 and 2 for sample locations).

d. *Adhesive:* The adhesive mastic used to attach the ceiling board to the wood framing above the racquetball courts; Rooms 126, 127, 128 and 129 contains asbestos. -(Refer to Tables 1, 2 and 3 for specific information and Figure 1 for sample locations).

e. *Asbestos Cement Board:* Asbestos cement board resembling Transite lining the underside of the eaves on the Gymnasium wing contains asbestos. Similar material used as flooring in the upper mechanical space over Corridor 127 also contains asbestos. This flooring material is unfinished and is susceptible to damage from foot traffic and impact. -(Refer to Tables 1, 2 and 3 for specific information and Figures 1 and 2 for sample locations).

Surfacing

Surfacing material is friable material that is sprayed on, troweled on, or otherwise applied to surfaces for decorative or other purposes.

No asbestos containing surfacing material was located in Building 925.

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TABLE 1
SUSPECT ACM SAMPLES
HUNTER AAF, BUILDING 925

FIELD ID	DESCRIPTION	LOCATION	ASBESTOS TYPE & %
925-1-1	12” X 12” gray Floor tile and mastic	Room 101, upper layer	None
925-1-2	**Tan Floor tile and mastic**	**Room 101, lower layer**	**Total – 7% Chrysotile, 7% Chrysotile in tile, 5% Chrysotile in black mastic, none in brown mastic (on top of tile)**
925-1-3	Cove base and mastic	Room 101	None
925-1-4	Ceiling plaster	Room 101	None
925-1-5	TSI – cloth and mastic 3” OD	Room 101, HVAC piping at unit heater, looks like patching material	None
925-1-6	TSI – hard fitting 3” OD	Room 101, HVAC piping at unit heater	None
925-1-7	**TSI – 3” OD pipe run**	**Room 101, domestic clod water, above drinking fountain**	**3% Chrysotile**
925-1-8	**Caulking material**	**Room 101, around window frame at concrete block**	**5% Chrysotile**
925-1-9	Wall plaster	Room 103, wall	None
925-1-10	**TSI – 3” OD pipe run**	**Room 103, HVAC piping**	**20% Chrysotile, 20% Amosite**
925-1-11	**Floor tile and mastic**	**Room 102**	**7% Chrysotile Total – 7% Chrysotile, 7% Chrysotile in tile, 5% Chrysotile in black mastic, none in brown mastic (on top of tile)**
925-1-12	Ceiling plaster	Room 105	None
925-1-13	**TSI – 4” OD pipe run**	**Room 108, HVAC piping, old system, within bar joists**	**35% Chrysotile**
925-1-14	Ceiling tile	Room 108	None
925-1-15	Craft paper	Room 108, on concrete roof deck	None
925-1-16	TSI – 3” OD hard fitting	Room 106, HVAC piping below plaster ceiling	None
925-1-17	Ceiling tile	Room 115	None

925-1-18	**TSI – 3” OD hard fitting**	**Room 118, domestic cold water, above suspended ceiling, debris noted on ceiling tile**	**2% Chrysotile**
925-1-19	TSI – 3” tee	Room 118, domestic cold water, above suspended ceiling, debris noted on ceiling tile	None
925-1-20	**Caulking material**	**Room 120, around metal window frames at concrete block**	**3% Chrysotile**
925-1-21	Expansion joint filler	Room 118, at joint between concrete floor and block wall	None
925-1-22	Ceiling tile	Room 117	None
925-1-23	Ceiling tile	Room 120	None
925-1-24	Floor adhesive	Room 120, under rubber mat	None
925-1-25	Floor leveling compound	Room 120, under rubber mat	None
925-1-26	Floor tile	Room 120, upper layer under rubber mat	None
925-1-27	Floor tile	Room 120, lower layer under rubber mat	None
925-1-28	**Floor tile and mastic**	**Entry foyer between corridors 125 & 127**	**Total - <1% Chrysotile, 5% Chrysotile in mastic, none in tile**
925-1-29	Drywall joint compound	Corridor 127 wall	None
925-1-30	Wall covering	Room 129	None
925-1-31	Ceiling tile	Corridor 127	None
925-A-32	**Cement board**	**Second floor mechanical room above corridor 127, material is used as flooring and is un-finished**	**30% Chrysotile**
925-A-33	Drywall joint compound	Second floor mechanical room above corridor 127	None
925-A-34	Gasket material	Second floor mechanical room above corridor 127, at furnace burner flange	None
925-A-35	Drywall joint compound	Attic above room 126	None
925-A-36	Drywall joint compound, QC duplicate of sample 35	Attic above room 126	None
925-A-37	**Ceiling adhesive**	**Attic above room 126, used to cement ceiling to framing**	**6% Chrysotile**

925-E-38	**Caulking material**	**Exterior, outside of Room 121, around window frame at concrete**	**3% Chrysotile**
925-E-39	Window glazing material	Exterior, outside of Room 121	None
925-M-40	Tank lagging	Mechanical Room 122, at old boiler	None
925-M-41	Tank lagging	Mechanical Room 122, at old boiler	None
925-M-42	Boiler insulation	Mechanical Room 122, at old boiler	None
925-M-43	Tank lagging	Mechanical Room 122, at old boiler	None
925-M-44	**TSI – 4" OD pipe run**	**Mechanical Room 122, domestic cold water piping, corrugated paper type insulation**	**5% Chrysotile**
925-M-45	**TSI – 6" OD pipe run**	**Mechanical Room 122, HVAC piping, white chalky type**	**35% Chrysotile**
925-M-46	Concrete?	Mechanical Room 122, ceiling material	None
925-M-47	Craft paper	Mechanical Room 122, on ceiling	None
925-M-48	**TSI – 4" OD elbow**	**Mechanical Room 122, domestic cold water piping**	**30% Chrysotile**
925-M-49	**TSI – 6" OD elbow**	**Mechanical Room 122, HVAC piping condensate line above condensate tank**	**40% Chrysotile**
925-M-50	Expansion joint filler	Mechanical Room 122, in seams in concrete floor	None
925-E-51	Expansion joint filler	Exterior, outside Room 107, behind copper in block wall	None
925-E-52	Window glazing compound	Exterior, outside Room 105	None
925-E-53	Window glazing compound, QC duplicate of 52	Exterior, outside Room 105	None
925-E-54	Caulking material	Exterior, outside Room 119, in block control joint	None
925-E-55	Caulking material	Exterior, outside Room 119, used to repair mortar joints	None
925-R-56	Multi-layer BUR	Flat roof, upper layer	None
925-R-57	Roof insulation	Under sample 56	None
925-R-58	Felt paper	Under sample 57	None
925-R-59	Felt paper	Under sample 58	None
925-R-60	Multi-layer BUR	Under sample 59	None

925-R-61	Pitch pan filler	Flat roof	None
925-R-62	Flashing cement	Flat roof, at junction with block wall, behind silver cloth flashing	None
925-R-63	Flashing cement	Flat roof, at junction with block wall, on seams in flashing	None
925-R-64	Rolled roofing flashing	Flat roof, at junction with block wall	None
925-R-65	Felt paper	Under sample 64	None
925-R-66	Flashing cement	Under rubber expansion joint flashing	None
925-R-67	Multi-layer BUR	Flat roof section upper layer	None
925-R-68	Felt paper	Flat roof section, under sample 67	None
925-R-69	Felt paper	Flat roof section, under sample 68	None
925-R-70	Felt paper	Flat roof section, under sample 69	None
925-R-71	Multi-layer BUR	Flat roof section, under sample 70	None
925-R-72	Flashing cement	At seams on rolled roof flashing at block wall	None
925-R-73	Rolled roofing flashing	At block wall	None
925-R-74	**Flashing material**	**Multi layer felt & tar under sample 73**	**3% Chrysotile**
925-R-75	**Multi-layer flashing**	**At vent roof curb**	**4% Chrysotile**
925-R-76	Flashing cement	Gray colored, at corners of vent roof curb over sample 75	None
925-R-77	Multi-layer BUR	Flat roof section upper layer	None
925-R-78	Felt paper	Flat roof section, under sample 77	None
925-R-79	Felt paper	Flat roof section, under sample 78	None
925-R-80	Multi-layer BUR	Flat roof section, under sample 79	None
925-E-81	**Caulking material**	**Exterior, at joint between brick chimney and block wall**	**3% Chrysotile**
925-E-82	**Cement board**	**Exterior, underside of eaves on gymnasium wing**	**35% Chrysotile**
925-R-83	Multi-layer BUR	Flat roof section upper layer	None
925-R-84	Felt paper	Flat roof section, under sample 83	None
925-R-85	Felt paper	Flat roof section, under sample 84	None

925-R-86	Multi-layer BUR	Flat roof section, under sample 85	None
925-R-87	Duct flex joint	Between rooftop AHU and ductwork	None
925-R-88	Multi-layer BUR	Flat roof section upper layer	None
925-R-89	Multi-layer BUR	Flat roof section, under sample 88	None
925-R-90	**Multi-layer BUR**	**Rolled roofing type over gymnasium**	**7% Chrysotile**
925-R-91	Felt paper	Under sample 90	None
925-R-92	**Multi-layer BUR**	**Rolled roofing type over gymnasium**	**7% Chrysotile**
925-R-93	Felt paper	Under sample 92	None
925-R-94	Felt paper, QC duplicate of sample 93	Under sample 92	None
925-R-95	Silver surfacing	On older metal roof vents	None
925-R-96	Roof shingle	On pitched roof over racquetball courts	None
925-R-97	Felt paper	On pitched roof over racquetball courts, under sample 96	None
925-R-98	**Flashing cement**	**Between sections of roof vent at peak of shingled roof**	**7% Chrysotile**
925-R-99	Multi-layer BUR	Flat roof section at entrance to upper mechanical room	None

Samples testing positive for asbestos indicated in **BOLD** type

TABLE 2
ACM QUANTITY SUMMARY
HUNTER AAF, BUILDING 925

Material Description	UNITS	Area Descriptions								
		APPLICIPAL SAMPLE NUMBERS	FIRST FLOOR	SECOND FLOOR MECHANICAL	ATTIC	ROOF	EXTERIOR	MECHANICAL ROOM 122		TOTALS
Caulking Material	L.F. ½" wide	1-8, 1-20 E-38, E-81	1200			50	1000			2250
Floor Tile & Mastic	S.F.	1-2, 1-11 1-28	1200							1200
Roofing Materials, Multi-layer Flashing	S.F.	R-74 R-75				1350				1350
Roofing Materials, Flashing Cement	S.F	R-98				10				10
Rolled Roofing Material	S.F.	R-90 R-92				10,560				10,560

Asbestos Cement Board	S.F.	A-32 E-82			250		480			730
Ceiling Board Adhesive	S.F.	A-37			500					500
TSI 8” OD Pipe Run Insulation	L.F.	Assumed Asbestos						30		30
TSI 8” OD Fittings	Ea.	Assumed Asbestos						5		5
TSI 6” OD Pipe Run Insulation	L.F.	M-45	192							192
TSI 6” OD Fittings	Ea.	M-49	17							17
TSI 5” OD Pipe Run Insulation	L.F.	Assumed Asbestos	508							508
TSI 5” OD Fittings	Ea.	Assumed Asbestos	75							75
TSI 4” OD Pipe Run Insulation	L.F.	1-13 M-44	1280							1280
TSI 4” OD Fittings	Ea.	M-48	105							105
TSI 3” OD Pipe Run Insulation	L.F.	1-7 1-10	1808							1808
TSI 3” OD Fittings	Ea.	1-18	240							240

TSI Tank Insulation	S.F.	Assumed Asbestos						150		150
TSI Debris in Bag	C.F.	Assumed Asbestos						3		3

S.F. = Square Foot, L.F. = Linear Foot, C.F. = Cubic Foot

TABLE 3
MATERIAL CHARACTERIZATION AND ASSESSMENT
HUNTER AAF, BUILDING 925

MATERIAL		CHARACTERISTICS			ASSESSMENT	
Type	**Description**	**Asbestos Yes/No/Assumed**	**Quantity (If ACM)**	**Friable / Non-friable**	**Condition**	**Disturbance Potential**
Miscellaneous	Caulking Material	Yes 3-5%	2250 L.F.	Non-friable	Good-Damaged	Low
Miscellaneous	Floor Tile & Mastic	Yes 5-7%	1200 S.F.	Non-friable	Good	Low
Miscellaneous	Roofing Materials, Multi Layer Flashing	Yes 3-4%	1350 S.F.	Non-friable	Good	Low
Miscellaneous	Roofing Materials, Flashing Cement	Yes 7%	10 S.F.	Non-friable	Damaged	Low
Miscellaneous	Roofing Materials, Rolled Roofing	Yes 7%	10,560 S.F.	Non-Friable	Good	Low
Miscellaneous	Asbestos Cement Board	Yes 30-35%	730 S.F.	Non-Friable	Good	Low-Moderate
Miscellaneous	Ceiling Board Adhesive	Yes 6%	500 S.F.	Non-Friable	Good	Low
TSI	Pipe Run Insulation	Yes 3-35%	3788 L.F.	Friable	Good-Significantly Damaged	Moderate-High

TSI	Pipe Fittings	Yes 2-40 %	437 Ea.	Friable	Good-Significantly Damaged	Moderate-High
TSI	Tank Insulation	Assumed Asbestos	150 S.F.	Friable	Damaged	Moderate
TSI	Debris in Bag	Assumed Asbestos	3 C.F.	Friable	Significantly Damaged	High

S.F. = Square Foot, L.F. = Linear Foot, C.F. = Cubic Foot

Figure 1

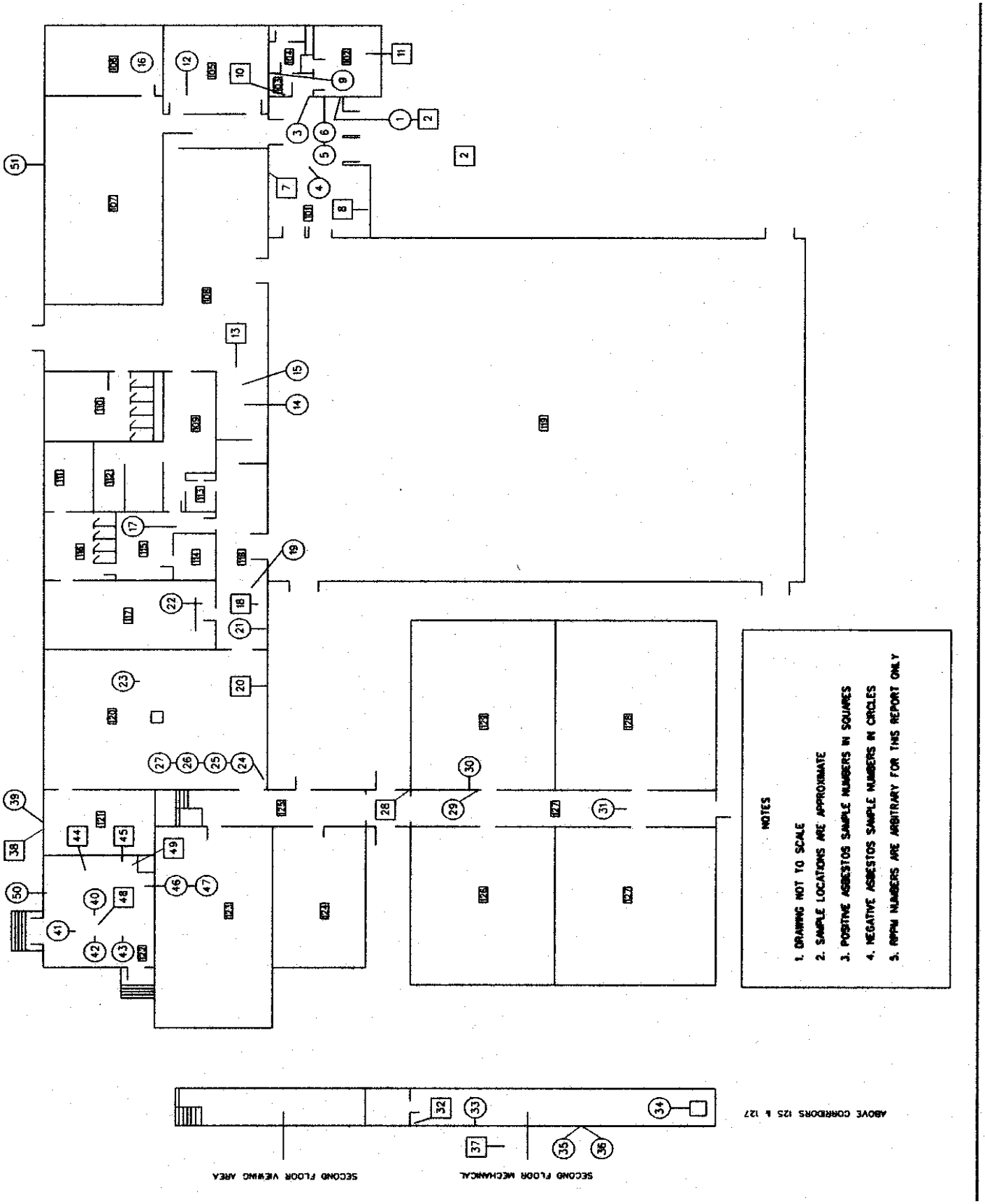

NOTES
1. DRAWING NOT TO SCALE
2. SAMPLE LOCATIONS ARE APPROXIMATE
3. POSITIVE ASBESTOS SAMPLE NUMBERS IN SQUARES
4. NEGATIVE ASBESTOS SAMPLE NUMBERS IN CIRCLES
5. RPPM NUMBERS ARE ARBITRARY FOR THIS REPORT ONLY
ABOVE CORRIDORS 125 & 127
SECOND FLOOR MECHANICAL
SECOND FLOOR VIEWING AREA

Figure 2

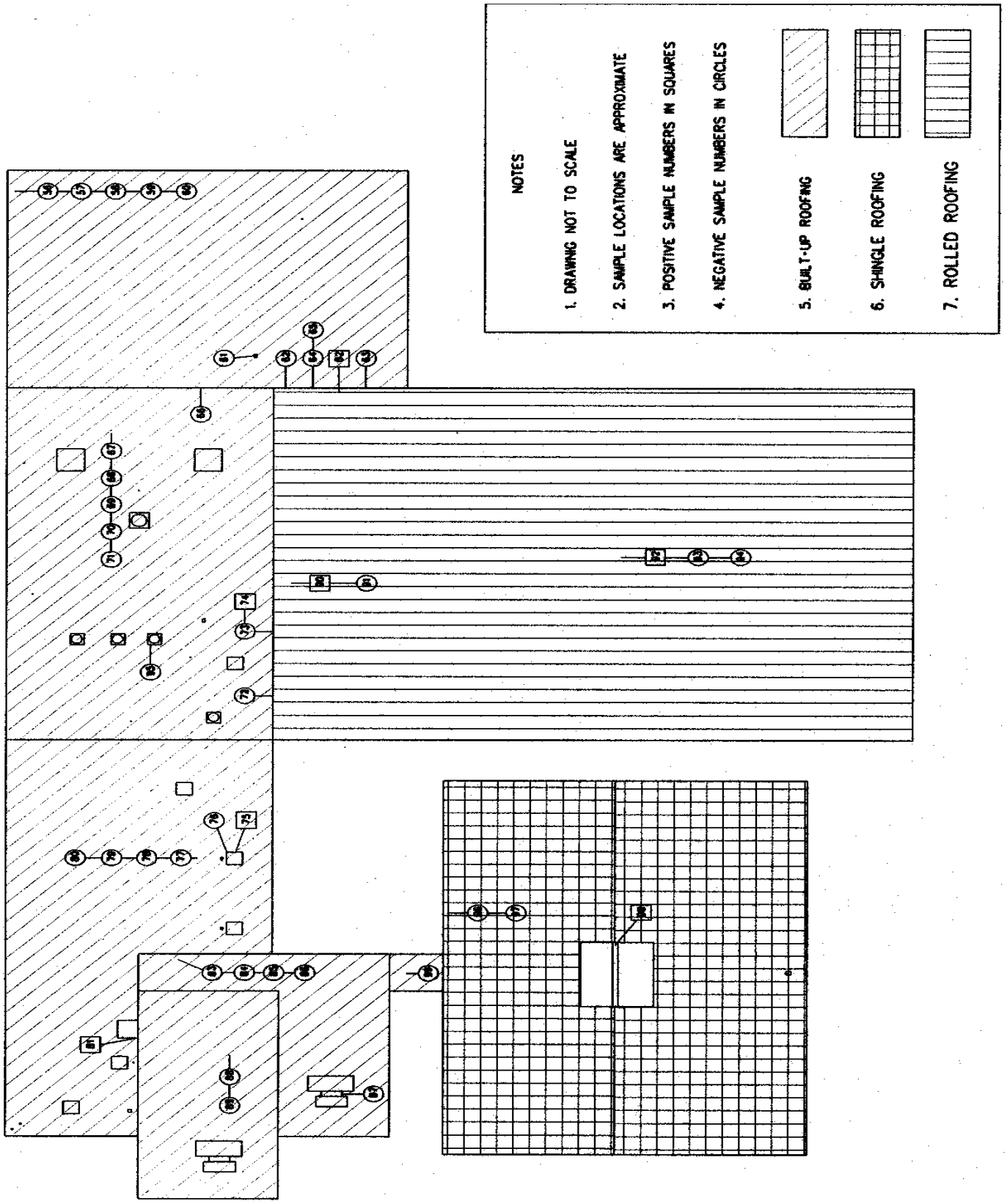

NOTES
1. DRAWING NOT TO SCALE
2. SAMPLE LOCATIONS ARE APPROXIMATE
3. POSITIVE SAMPLE NUMBERS IN SQUARES
4. NEGATIVE SAMPLE NUMBERS IN CIRCLES
5. BUILT-UP ROOFING
6. SHINGLE ROOFING
7. ROLLED ROOFING

Figure 3

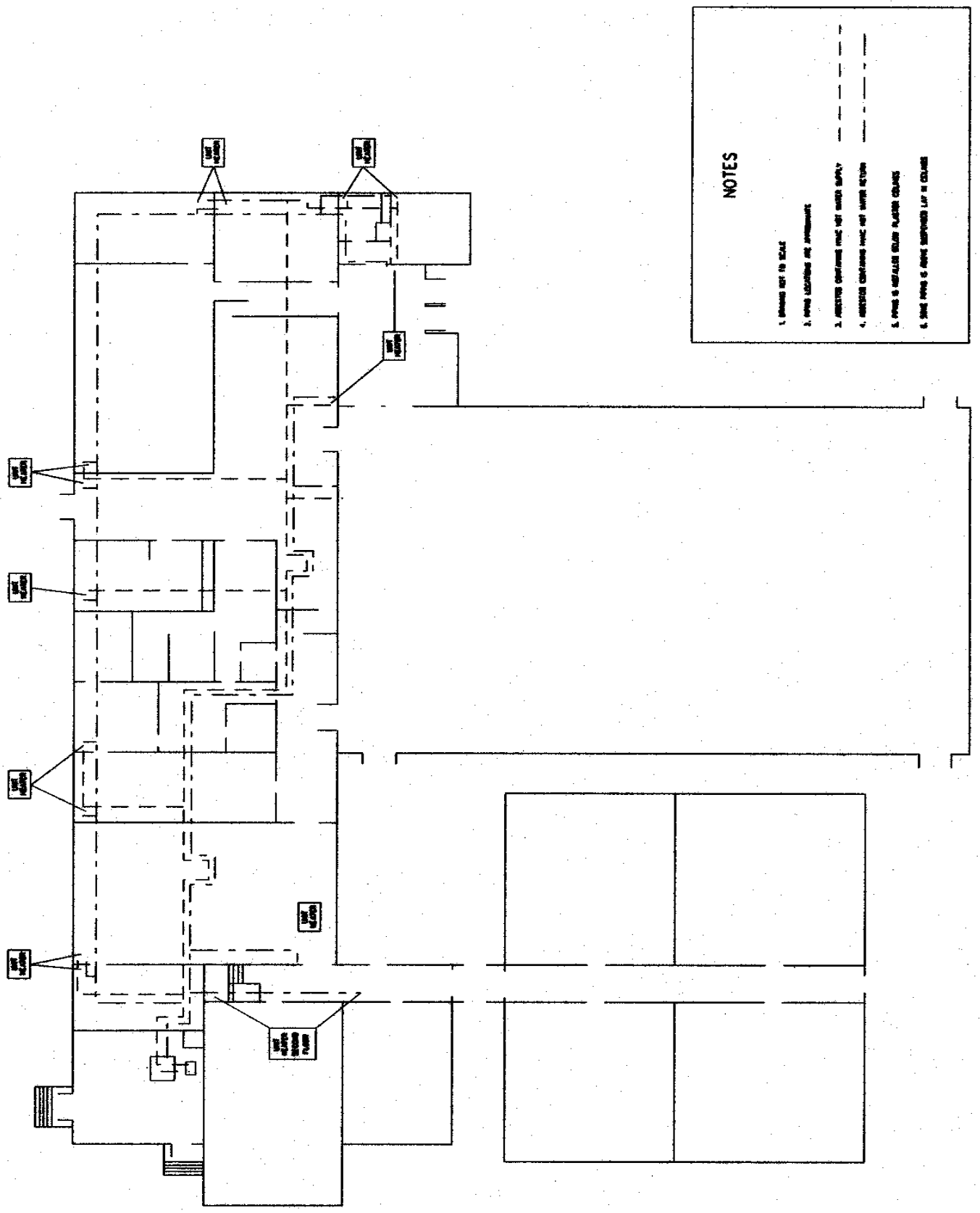


Figure 4

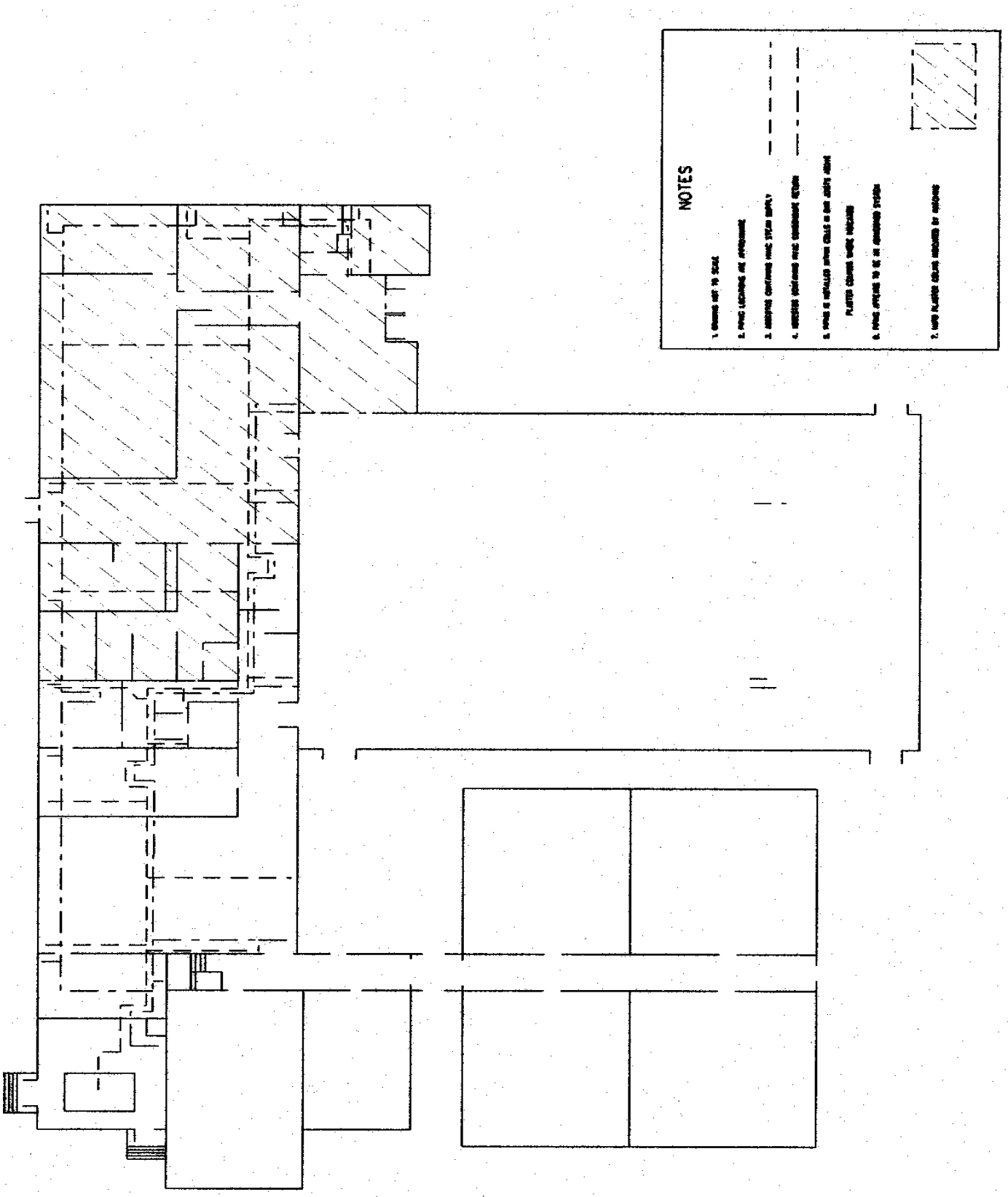
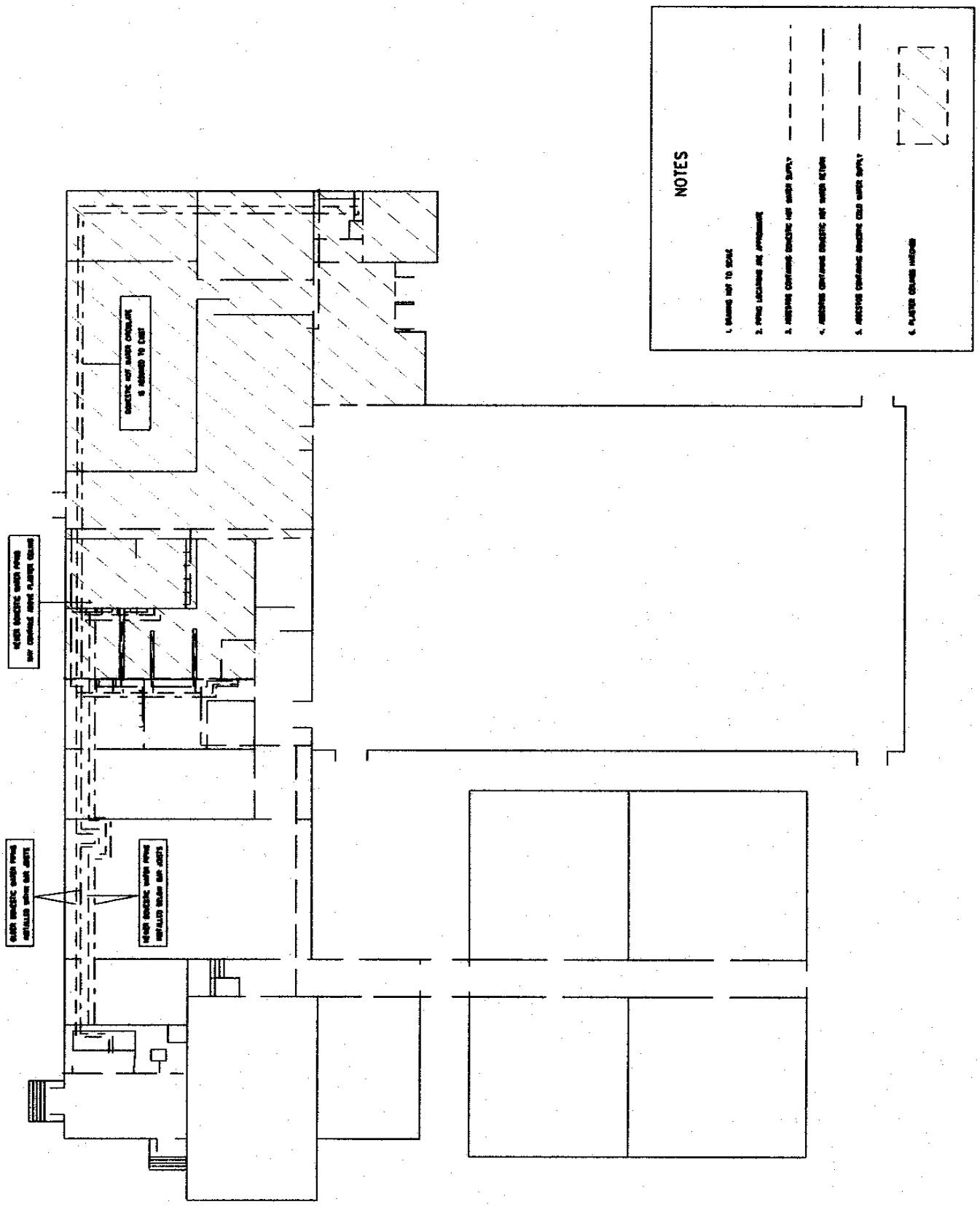


Figure 5



Appendix A

Analytical Report - Hygeia Laboratories, Inc.

HYGEIA LABORATORIES, INC.

1300 Williams Drive, Suite A - Marietta, Georgia 30066-6299 - (770) 514-6933, FAX (770) 514-6966

US Army Corps of Engineers
Environmental & Materials Unit
200 North Cobb Parkway
Bldg. 400, Ste. 404
Marietta, GA 30062

6/26/2003

Subject:
Hygeia Project Number: A0306111
Client Project Number/Name: 7839 /Hunter Building 925

Dear Mr. Tim Jones:

Enclosed are the analytical results of bulk samples submitted by you to this laboratory on 6/16/2003. All analyses were performed by polarized light microscopy (PLM) in accordance with the EPA method as defined in Perkins and Harvey, July 1993, "Methods for the Determination of Asbestos in Bulk Materials" 61pp. (EPA/600/R-93/116). The reported percentages are volume estimates obtained by calibrated visual estimation. The results in this report apply only to the items tested.

The EPA defines an asbestos containing material (ACM) as a material that is reported to contain greater than one percent asbestos. HYGEIA is only responsible for the accuracy of the analytical results provided in this report and cannot be held responsible for the errors resulting from improper sample collection techniques. This report may not be used to claim product endorsement by NVLAP or any other U.S. Government agency.

For nonhomogeneous samples, each layer was analyzed separately and the results combined to form the reported value except where otherwise noted. Vinyl floor tile samples with negative results by PLM should be submitted for confirmation by transmission electron microscopy (TEM). Friable samples containing less than 10% asbestos as determined by PLM may be resubmitted for point counting at your discretion.

Thank you for using our analytical services. HYGEIA Laboratories has been NVLAP accredited since 1988. Our current NVLAP code is 102087-0. We will keep a copy of this report on file for three years. We will dispose of your samples in 60 days unless you request that we return them. This report my be reproduced only in its entirety with the consent of Hygeia Laboratories, Inc. If you have any questions, please call us at (770) - 514-6933.

Sincerely,

Clayton Call
Asbestos Laboratory Manager

NVLAP# 102087-0
Texas Dept. of Health # 30-0232

Commonwealth of Virginia # 3333-000210

Hygeia Laboratories Inc.
1300 Williams Drive, Suite A
Marietta, GA 30066
(770) 514-6933

PLM Analysis Summary

Hygeia Project Number: A0306111
Client Project Number/Name: 7839 / Hunter Building 925

Analyzed: 6/20/2003 **by** WAS

Sample ID		Sample Description			Asbestos Percent					Other Fibers			Non - Fibers	
Client #	Hygeia #	Color	Texture	Homog.	Chr.	Am.	Cro.	An.	T/A	Cell.	Glass	OF	B/F	ONF
925-1-1	A0306111-01	Gray	Cons.	Yes									100%	

Comment: **Tile and mastic: NAD. No Asbestos Detected.**

Client #	Hygeia #	Color	Texture	Homog.	Chr.	Am.	Cro.	An.	T/A	Cell.	Glass	OF	B/F	ONF
925-1-2	A0306111-02	Brown	Cons.	Yes	7%								93%	

Comment: **Tile: 7% Chrysotile. Black mastic: 5% Chrysotile. Brown mastic: NAD. Asbestos Detected.**

Client #	Hygeia #	Color	Texture	Homog.	Chr.	Am.	Cro.	An.	T/A	Cell.	Glass	OF	B/F	ONF
925-1-3	A0306111-03	Black	Cons.	Yes									100%	

Comment: **Tile and mastic: NAD. No Asbestos Detected.**

Client #	Hygeia #	Color	Texture	Homog.	Chr.	Am.	Cro.	An.	T/A	Cell.	Glass	OF	B/F	ONF
925-1-4	A0306111-04	Cream	Cons.	Yes									100%	

Comment: **No Asbestos Detected.**

Client #	Hygeia #	Color	Texture	Homog.	Chr.	Am.	Cro.	An.	T/A	Cell.	Glass	OF	B/F	ONF
925-1-5	A0306111-05	White	Gummy	Yes									100%	

Comment: **No Asbestos Detected.**

Hygeia Project Number: A0306111
Client Project Number/Name: 7839 / Hunter Building 925

Analyzed: 6/20/2003 **by** WAS

Sample ID		Sample Description			Asbestos Percent					Other Fibers			Non - Fibers	
Client #	Hygeia #	Color	Texture	Homog.	Chr.	Am.	Cro.	An.	T/A	Cell.	Glass	OF	B/F	ONF
925-1-6	A0306111-06	Brown	Fibrous	Yes							70%		30%	

Comment: **No Asbestos Detected.**

Client #	Hygeia #	Color	Texture	Homog.	Chr.	Am.	Cro.	An.	T/A	Cell.	Glass	OF	B/F	ONF
925-1-7	A0306111-07	Brown	Fibrous	Yes	3%					37%			60%	

Comment: **Asbestos Detected.**

Client #	Hygeia #	Color	Texture	Homog.	Chr.	Am.	Cro.	An.	T/A	Cell.	Glass	OF	B/F	ONF
925-1-8	A0306111-08	Brown	Cons.	Yes	5%								95%	

Comment: **Asbestos Detected.**

Client #	Hygeia #	Color	Texture	Homog.	Chr.	Am.	Cro.	An.	T/A	Cell.	Glass	OF	B/F	ONF
925-1-9	A0306111-09	Brown	Cons.	Yes									100%	

Comment: **No Asbestos Detected.**

Client #	Hygeia #	Color	Texture	Homog.	Chr.	Am.	Cro.	An.	T/A	Cell.	Glass	OF	B/F	ONF
925-1-10	A0306111-10	Brown	Cons.	Yes	20%	20%				10%			50%	

Comment: **Asbestos Detected.**

Hygeia Project Number: A0306111
Client Project Number/Name: 7839 / Hunter Building 925

Analyzed: 6/20/2003 **by** WAS

Sample ID		Sample Description			Asbestos Percent					Other Fibers			Non - Fibers	
Client #	Hygeia #	Color	Texture	Homog.	Chr.	Am.	Cro.	An.	T/A	Cell.	Glass	OF	B/F	ONF
925-1-11	A0306111-11	Brown	Cons.	Yes	7%								93%	

Comment: **Tile: 7% Chrysotile. Brown mastic: NAD. Black mastic: 5% Chrysotile. Asbestos Detected.**

Client #	Hygeia #	Color	Texture	Homog.	Chr.	Am.	Cro.	An.	T/A	Cell.	Glass	OF	B/F	ONF
925-1-12	A0306111-12	White	Cons.	Yes									100%	

Comment: **No Asbestos Detected.**

Client #	Hygeia #	Color	Texture	Homog.	Chr.	Am.	Cro.	An.	T/A	Cell.	Glass	OF	B/F	ONF
925-1-13	A0306111-13	Brown	Cons.	Yes	35%								65%	

Comment: **Asbestos Detected.**

Client #	Hygeia #	Color	Texture	Homog.	Chr.	Am.	Cro.	An.	T/A	Cell.	Glass	OF	B/F	ONF
925-1-14	A0306111-14	Brown	Powdery	Yes							70%		30%	

Comment: **No Asbestos Detected.**

Client #	Hygeia #	Color	Texture	Homog.	Chr.	Am.	Cro.	An.	T/A	Cell.	Glass	OF	B/F	ONF
925-1-15	A0306111-15	Brown	Flaky	Yes						80%			20%	

Comment: **No Asbestos Detected.**

Hygeia Project Number: A0306111
Client Project Number/Name: 7839 / Hunter Building 925

Analyzed: 6/20/2003 **by** WAS

Sample ID		Sample Description			Asbestos Percent					Other Fibers			Non - Fibers	
Client #	Hygeia #	Color	Texture	Homog.	Chr.	Am.	Cro.	An.	T/A	Cell.	Glass	OF	B/F	ONF
925-1-16	A0306111-16	Gray	Fibrous	Yes							80%		20%	

Comment: **No Asbestos Detected.**

Client #	Hygeia #	Color	Texture	Homog.	Chr.	Am.	Cro.	An.	T/A	Cell.	Glass	OF	B/F	ONF
925-1-17	A0306111-17	Brown	Cons.	Yes							70%		30%	

Comment: **No Asbestos Detected.**

Client #	Hygeia #	Color	Texture	Homog.	Chr.	Am.	Cro.	An.	T/A	Cell.	Glass	OF	B/F	ONF
925-1-18	A0306111-18	Brown	Fibrous	Yes	2%					38%			60%	

Comment: **Asbestos Detected.**

Client #	Hygeia #	Color	Texture	Homog.	Chr.	Am.	Cro.	An.	T/A	Cell.	Glass	OF	B/F	ONF
925-1-19	A0306111-19	Brown	Cons.	Yes						10%			90%	

Comment: **No Asbestos Detected.**

Client #	Hygeia #	Color	Texture	Homog.	Chr.	Am.	Cro.	An.	T/A	Cell.	Glass	OF	B/F	ONF
925-1-20	A0306111-20	Brown	Cons.	Yes	3%								97%	

Comment: **Asbestos Detected.**

Hygeia Project Number: A0306111
Client Project Number/Name: 7839 / Hunter Building 925

Analyzed: 6/20/2003 **by** WAS

Sample ID		Sample Description			Asbestos Percent					Other Fibers			Non - Fibers	
Client #	Hygeia #	Color	Texture	Homog.	Chr.	Am.	Cro.	An.	T/A	Cell.	Glass	OF	B/F	ONF
925-1-21	A0306111-21	Black	Cons.	Yes									100%	

Comment: **No Asbestos Detected.**

Client #	Hygeia #	Color	Texture	Homog.	Chr.	Am.	Cro.	An.	T/A	Cell.	Glass	OF	B/F	ONF
925-1-22	A0306111-22	Brown	Cons.	Yes						40%	20%		40%	

Comment: **No Asbestos Detected.**

Client #	Hygeia #	Color	Texture	Homog.	Chr.	Am.	Cro.	An.	T/A	Cell.	Glass	OF	B/F	ONF
925-1-23	A0306111-23	Brown	Cons.	Yes						40%	20%		40%	

Comment: **No Asbestos Detected.**

Client #	Hygeia #	Color	Texture	Homog.	Chr.	Am.	Cro.	An.	T/A	Cell.	Glass	OF	B/F	ONF
925-1-24	A0306111-24	Gray	Cons.	Yes									100%	

Comment: **No Asbestos Detected.**

Client #	Hygeia #	Color	Texture	Homog.	Chr.	Am.	Cro.	An.	T/A	Cell.	Glass	OF	B/F	ONF
925-1-25	A0306111-25	Brown	Cons.	Yes									100%	

Comment: **No Asbestos Detected.**

Hygeia Project Number: A0306111
Client Project Number/Name: 7839 / Hunter Building 925

Analyzed: 6/20/2003 **by** WAS

Sample ID		Sample Description			Asbestos Percent					Other Fibers			Non - Fibers	
Client #	Hygeia #	Color	Texture	Homog.	Chr.	Am.	Cro.	An.	T/A	Cell.	Glass	OF	B/F	ONF
925-1-26	A0306111-26	Gray	Cons.	Yes									100%	

Comment: **No Asbestos Detected.**

Client #	Hygeia #	Color	Texture	Homog.	Chr.	Am.	Cro.	An.	T/A	Cell.	Glass	OF	B/F	ONF
925-1-27	A0306111-27	Brown	Cons.	Yes									100%	

Comment: **No Asbestos Detected.**

Client #	Hygeia #	Color	Texture	Homog.	Chr.	Am.	Cro.	An.	T/A	Cell.	Glass	OF	B/F	ONF
925-1-28	A0306111-28	Brown	Cons.	Yes	<1%								100%	

Comment: **Tile: NAD. Mastic: 5% Chrysotile. Asbestos Detected.**

Client #	Hygeia #	Color	Texture	Homog.	Chr.	Am.	Cro.	An.	T/A	Cell.	Glass	OF	B/F	ONF
925-1-29	A0306111-29	Cream	Cons.	Yes						40%			60%	

Comment: **Joint compound: NAD. Rest: NAD. No Asbestos Detected.**

Client #	Hygeia #	Color	Texture	Homog.	Chr.	Am.	Cro.	An.	T/A	Cell.	Glass	OF	B/F	ONF
925-1-30	A0306111-30	Brown	Cons.	Yes						70%			30%	

Comment: **No Asbestos Detected.**

Hygeia Project Number: A0306111
Client Project Number/Name: 7839 / Hunter Building 925

Analyzed: 6/20/2003 **by** WAS

Sample ID		Sample Description			Asbestos Percent					Other Fibers			Non - Fibers	
Client #	Hygeia #	Color	Texture	Homog.	Chr.	Am.	Cro.	An.	T/A	Cell.	Glass	OF	B/F	ONF
925-1-31	A0306111-31	Brown	Cons.	Yes						40%	20%		40%	

Comment: **No Asbestos Detected.**

Client #	Hygeia #	Color	Texture	Homog.	Chr.	Am.	Cro.	An.	T/A	Cell.	Glass	OF	B/F	ONF
925-A-32	A0306111-32	Gray	Cons.	Yes	30%								70%	

Comment: **Asbestos Detected.**

Client #	Hygeia #	Color	Texture	Homog.	Chr.	Am.	Cro.	An.	T/A	Cell.	Glass	OF	B/F	ONF
925-A-33	A0306111-33	Cream	Cons.	Yes						40%			60%	

Comment: **Joint compound: NAD. Rest: NAD. No Asbestos Detected.**

Client #	Hygeia #	Color	Texture	Homog.	Chr.	Am.	Cro.	An.	T/A	Cell.	Glass	OF	B/F	ONF
925-A-34	A0306111-34	Brown	Cons.	Yes							80%		20%	

Comment: **No Asbestos Detected.**

Client #	Hygeia #	Color	Texture	Homog.	Chr.	Am.	Cro.	An.	T/A	Cell.	Glass	OF	B/F	ONF
925-A-35	A0306111-35	White	Cons.	Yes									100%	

Comment: **Joint compound: NAD. Rest: NAD. No Asbestos Detected.**

Hygeia Project Number: A0306111
Client Project Number/Name: 7839 / Hunter Building 925

Analyzed: 6/20/2003 **by** WAS

Sample ID		Sample Description			Asbestos Percent					Other Fibers			Non - Fibers	
Client #	Hygeia #	Color	Texture	Homog.	Chr.	Am.	Cro.	An.	T/A	Cell.	Glass	OF	B/F	ONF
925-A-36	A0306111-36	White	Cons.	Yes									100%	

Comment: **No Asbestos Detected.**

Client #	Hygeia #	Color	Texture	Homog.	Chr.	Am.	Cro.	An.	T/A	Cell.	Glass	OF	B/F	ONF
925-A-37	A0306111-37	White	Cons.	Yes	6%								94%	

Comment: **Asbestos Detected.**

Client #	Hygeia #	Color	Texture	Homog.	Chr.	Am.	Cro.	An.	T/A	Cell.	Glass	OF	B/F	ONF
925-E-38	A0306111-38	Brown	Cons.	Yes	3%								97%	

Comment: **Asbestos Detected.**

Client #	Hygeia #	Color	Texture	Homog.	Chr.	Am.	Cro.	An.	T/A	Cell.	Glass	OF	B/F	ONF
925-E-39	A0306111-39	Gray	Cons.	Yes									100%	

Comment: **No Asbestos Detected.**

Client #	Hygeia #	Color	Texture	Homog.	Chr.	Am.	Cro.	An.	T/A	Cell.	Glass	OF	B/F	ONF
925-M-40	A0306111-40	Brown	Powdery	Yes							70%		30%	

Comment: **No Asbestos Detected.**

Hygeia Project Number: A0306111
Client Project Number/Name: 7839 / Hunter Building 925

Analyzed: 6/20/2003 **by** WAS

Sample ID		Sample Description			Asbestos Percent					Other Fibers			Non - Fibers	
Client #	Hygeia #	Color	Texture	Homog.	Chr.	Am.	Cro.	An.	T/A	Cell.	Glass	OF	B/F	ONF
925-M-41	A0306111-41	Brown	Cons.	Yes							70%		30%	

Comment: **No Asbestos Detected.**

Client #	Hygeia #	Color	Texture	Homog.	Chr.	Am.	Cro.	An.	T/A	Cell.	Glass	OF	B/F	ONF
925-M-42	A0306111-42	Brown	Cons.	Yes							70%		30%	

Comment: **No Asbestos Detected.**

Client #	Hygeia #	Color	Texture	Homog.	Chr.	Am.	Cro.	An.	T/A	Cell.	Glass	OF	B/F	ONF
925-M-43	A0306111-43	Brown	Cons.	Yes							70%		30%	

Comment: **No Asbestos Detected.**

Client #	Hygeia #	Color	Texture	Homog.	Chr.	Am.	Cro.	An.	T/A	Cell.	Glass	OF	B/F	ONF
925-M-44	A0306111-44	Brown	Cons.	Yes	5%					45%			50%	

Comment: **Asbestos Detected.**

Client #	Hygeia #	Color	Texture	Homog.	Chr.	Am.	Cro.	An.	T/A	Cell.	Glass	OF	B/F	ONF
925-M-45	A0306111-45	Brown	Cons.	Yes	35%					20%			45%	

Comment: **Asbestos Detected.**

Hygeia Project Number: A0306111
Client Project Number/Name: 7839 / Hunter Building 925

Analyzed: 6/20/2003 **by** WAS

Sample ID		Sample Description			Asbestos Percent					Other Fibers			Non - Fibers	
Client #	Hygeia #	Color	Texture	Homog.	Chr.	Am.	Cro.	An.	T/A	Cell.	Glass	OF	B/F	ONF
925-M-46	A0306111-46	Brown	Cons.	Yes									100%	

Comment: **No Asbestos Detected.**

Client #	Hygeia #	Color	Texture	Homog.	Chr.	Am.	Cro.	An.	T/A	Cell.	Glass	OF	B/F	ONF
925-M-47	A0306111-47	Brown	Cons.	Yes						70%			30%	

Comment: **No Asbestos Detected.**

Client #	Hygeia #	Color	Texture	Homog.	Chr.	Am.	Cro.	An.	T/A	Cell.	Glass	OF	B/F	ONF
925-M-48	A0306111-48	Brown	Cons.	Yes	30%						30%		40%	

Comment: **Asbestos Detected.**

Client #	Hygeia #	Color	Texture	Homog.	Chr.	Am.	Cro.	An.	T/A	Cell.	Glass	OF	B/F	ONF
925-M-49	A0306111-49	Brown	Fibrous	Yes	40%						20%		40%	

Comment: **Asbestos Detected.**

Client #	Hygeia #	Color	Texture	Homog.	Chr.	Am.	Cro.	An.	T/A	Cell.	Glass	OF	B/F	ONF
925-M-50	A0306111-50	Brown	Cons.	Yes									100%	

Comment: **No Asbestos Detected.**

Hygeia Project Number: A0306111
Client Project Number/Name: 7839 / Hunter Building 925

Analyzed: 6/20/2003 **by** WAS

Sample ID		Sample Description			Asbestos Percent					Other Fibers			Non - Fibers	
Client #	Hygeia #	Color	Texture	Homog.	Chr.	Am.	Cro.	An.	T/A	Cell.	Glass	OF	B/F	ONF
925-E-51	A0306111-51	Brown	Cons.	Yes						70%			30%	

Comment: **No Asbestos Detected.**

Client #	Hygeia #	Color	Texture	Homog.	Chr.	Am.	Cro.	An.	T/A	Cell.	Glass	OF	B/F	ONF
925-E-52	A0306111-52	Brown	Cons.	Yes									100%	

Comment: **No Asbestos Detected.**

Client #	Hygeia #	Color	Texture	Homog.	Chr.	Am.	Cro.	An.	T/A	Cell.	Glass	OF	B/F	ONF
925-E-53	A0306111-53	Gray	Cons.	Yes									100%	

Comment: **No Asbestos Detected.**

Client #	Hygeia #	Color	Texture	Homog.	Chr.	Am.	Cro.	An.	T/A	Cell.	Glass	OF	B/F	ONF
925-E-54	A0306111-54	Brown	Cons.	Yes									100%	

Comment: **No Asbestos Detected.**

Client #	Hygeia #	Color	Texture	Homog.	Chr.	Am.	Cro.	An.	T/A	Cell.	Glass	OF	B/F	ONF
925-E-55	A0306111-55	Cream	Cons.	Yes									100%	

Comment: **No Asbestos Detected.**

Hygeia Project Number: A0306111
Client Project Number/Name: 7839 / Hunter Building 925

Analyzed: 6/20/2003 **by** WAS

Sample ID		Sample Description			Asbestos Percent					Other Fibers			Non - Fibers	
Client #	Hygeia #	Color	Texture	Homog.	Chr.	Am.	Cro.	An.	T/A	Cell.	Glass	OF	B/F	ONF
925-R-56	A0306111-56	Black	Cons.	Yes						30%			70%	

Comment: **No Asbestos Detected.**

Client #	Hygeia #	Color	Texture	Homog.	Chr.	Am.	Cro.	An.	T/A	Cell.	Glass	OF	B/F	ONF
925-R-57	A0306111-57	Brown	Fibrous	Yes						80%			20%	

Comment: **No Asbestos Detected.**

Client #	Hygeia #	Color	Texture	Homog.	Chr.	Am.	Cro.	An.	T/A	Cell.	Glass	OF	B/F	ONF
925-R-58	A0306111-58	Brown	Cons.	Yes						40%			60%	

Comment: **No Asbestos Detected.**

Client #	Hygeia #	Color	Texture	Homog.	Chr.	Am.	Cro.	An.	T/A	Cell.	Glass	OF	B/F	ONF
925-R-59	A0306111-59	Brown	Cons.	Yes						40%			60%	

Comment: **No Asbestos Detected.**

Client #	Hygeia #	Color	Texture	Homog.	Chr.	Am.	Cro.	An.	T/A	Cell.	Glass	OF	B/F	ONF
925-R-60	A0306111-60	Black	Cons.	Yes						40%			60%	

Comment: **No Asbestos Detected.**

Hygeia Project Number: A0306111
Client Project Number/Name: 7839 / Hunter Building 925

Analyzed: 6/20/2003 **by** WAS

Sample ID		Sample Description			Asbestos Percent					Other Fibers			Non - Fibers	
Client #	Hygeia #	Color	Texture	Homog.	Chr.	Am.	Cro.	An.	T/A	Cell.	Glass	OF	B/F	ONF
925-R-61	A0306111-61	Black	Gummy	Yes						10%			90%	

Comment: **No Asbestos Detected.**

Client #	Hygeia #	Color	Texture	Homog.	Chr.	Am.	Cro.	An.	T/A	Cell.	Glass	OF	B/F	ONF
925-R-62	A0306111-62	Black	Cons.	Yes						60%			40%	

Comment: **No Asbestos Detected.**

Client #	Hygeia #	Color	Texture	Homog.	Chr.	Am.	Cro.	An.	T/A	Cell.	Glass	OF	B/F	ONF
925-R-63	A0306111-63	Black	Cons.	Yes						60%			40%	

Comment: **No Asbestos Detected.**

Client #	Hygeia #	Color	Texture	Homog.	Chr.	Am.	Cro.	An.	T/A	Cell.	Glass	OF	B/F	ONF
925-R-64	A0306111-64	Black	Cons.	Yes							10%		90%	

Comment: **No Asbestos Detected.**

Client #	Hygeia #	Color	Texture	Homog.	Chr.	Am.	Cro.	An.	T/A	Cell.	Glass	OF	B/F	ONF
925-R-65	A0306111-65	Black	Cons.	Yes							10%		90%	

Comment: **No Asbestos Detected.**

Hygeia Project Number: A0306111
Client Project Number/Name: 7839 / Hunter Building 925

Analyzed: 6/20/2003 **by** WAS

Sample ID		Sample Description			Asbestos Percent					Other Fibers			Non - Fibers	
Client #	Hygeia #	Color	Texture	Homog.	Chr.	Am.	Cro.	An.	T/A	Cell.	Glass	OF	B/F	ONF
925-R-66	A0306111-66	Black	Cons.	Yes						20%			80%	

Comment: **No Asbestos Detected.**

Client #	Hygeia #	Color	Texture	Homog.	Chr.	Am.	Cro.	An.	T/A	Cell.	Glass	OF	B/F	ONF
925-R-67	A0306111-67	Black	Cons.	Yes						40%			60%	

Comment: **No Asbestos Detected.**

Client #	Hygeia #	Color	Texture	Homog.	Chr.	Am.	Cro.	An.	T/A	Cell.	Glass	OF	B/F	ONF
925-R-68	A0306111-68	Brown	Cons.	Yes						40%			60%	

Comment: **No Asbestos Detected.**

Client #	Hygeia #	Color	Texture	Homog.	Chr.	Am.	Cro.	An.	T/A	Cell.	Glass	OF	B/F	ONF
925-R-69	A0306111-69	Brown	Cons.	Yes						40%			60%	

Comment: **No Asbestos Detected.**

Client #	Hygeia #	Color	Texture	Homog.	Chr.	Am.	Cro.	An.	T/A	Cell.	Glass	OF	B/F	ONF
925-R-70	A0306111-70	Brown	Cons.	Yes						40%			60%	

Comment: **No Asbestos Detected.**

Hygeia Project Number: A0306111
Client Project Number/Name: 7839 / Hunter Building 925

Analyzed: 6/20/2003 **by** WAS

Sample ID		Sample Description			Asbestos Percent					Other Fibers			Non - Fibers	
Client #	Hygeia #	Color	Texture	Homog.	Chr.	Am.	Cro.	An.	T/A	Cell.	Glass	OF	B/F	ONF
925-R-71	A0306111-71	Black	Cons.	Yes						60%			40%	

Comment: **No Asbestos Detected.**

Client #	Hygeia #	Color	Texture	Homog.	Chr.	Am.	Cro.	An.	T/A	Cell.	Glass	OF	B/F	ONF
925-R-72	A0306111-72	Black	Cons.	Yes						20%			80%	

Comment: **No Asbestos Detected.**

Client #	Hygeia #	Color	Texture	Homog.	Chr.	Am.	Cro.	An.	T/A	Cell.	Glass	OF	B/F	ONF
925-R-73	A0306111-73	Black	Cons.	Yes						10%			90%	

Comment: **No Asbestos Detected.**

Client #	Hygeia #	Color	Texture	Homog.	Chr.	Am.	Cro.	An.	T/A	Cell.	Glass	OF	B/F	ONF
925-R-74	A0306111-74	Black	Cons.	Yes	3%					30%	17%		50%	

Comment: **Asbestos Detected.**

Client #	Hygeia #	Color	Texture	Homog.	Chr.	Am.	Cro.	An.	T/A	Cell.	Glass	OF	B/F	ONF
925-R-75	A0306111-75	Black	Cons.	Yes	4%					30%	16%		50%	

Comment: **Asbestos Detected.**

Hygeia Project Number: A0306111
Client Project Number/Name: 7839 / Hunter Building 925

Analyzed: 6/20/2003 **by** WAS

Sample ID		Sample Description			Asbestos Percent					Other Fibers			Non - Fibers	
Client #	Hygeia #	Color	Texture	Homog.	Chr.	Am.	Cro.	An.	T/A	Cell.	Glass	OF	B/F	ONF
925-R-76	A0306111-76	Brown	Cons.	Yes						30%			70%	

Comment: **No Asbestos Detected.**

Client #	Hygeia #	Color	Texture	Homog.	Chr.	Am.	Cro.	An.	T/A	Cell.	Glass	OF	B/F	ONF
925-R-77	A0306111-77	Black	Cons.	Yes						30%			70%	

Comment: **No Asbestos Detected.**

Client #	Hygeia #	Color	Texture	Homog.	Chr.	Am.	Cro.	An.	T/A	Cell.	Glass	OF	B/F	ONF
925-R-78	A0306111-78	Black	Cons.	Yes						70%			30%	

Comment: **No Asbestos Detected.**

Client #	Hygeia #	Color	Texture	Homog.	Chr.	Am.	Cro.	An.	T/A	Cell.	Glass	OF	B/F	ONF
925-R-79	A0306111-79	Black	Cons.	Yes						70%			30%	

Comment: **No Asbestos Detected.**

Client #	Hygeia #	Color	Texture	Homog.	Chr.	Am.	Cro.	An.	T/A	Cell.	Glass	OF	B/F	ONF
925-R-80	A0306111-80	Black	Cons.	Yes						70%			30%	

Comment: **No Asbestos Detected.**

Hygeia Project Number: A0306111
Client Project Number/Name: 7839 / Hunter Building 925

Analyzed: 6/20/2003 **by** WAS

Sample ID		Sample Description			Asbestos Percent					Other Fibers			Non - Fibers	
Client #	Hygeia #	Color	Texture	Homog.	Chr.	Am.	Cro.	An.	T/A	Cell.	Glass	OF	B/F	ONF
925-E-81	A0306111-81	Brown	Cons.	Yes	3%								97%	

Comment: **Asbestos Detected.**

Client #	Hygeia #	Color	Texture	Homog.	Chr.	Am.	Cro.	An.	T/A	Cell.	Glass	OF	B/F	ONF
925-E-82	A0306111-82	Gray	Cons.	Yes	35%								65%	

Comment: **Asbestos Detected.**

Client #	Hygeia #	Color	Texture	Homog.	Chr.	Am.	Cro.	An.	T/A	Cell.	Glass	OF	B/F	ONF
925-R-83	A0306111-83	Black	Cons.	Yes						30%			70%	

Comment: **No Asbestos Detected.**

Client #	Hygeia #	Color	Texture	Homog.	Chr.	Am.	Cro.	An.	T/A	Cell.	Glass	OF	B/F	ONF
925-R-84	A0306111-84	Black	Cons.	Yes						70%			30%	

Comment: **No Asbestos Detected.**

Client #	Hygeia #	Color	Texture	Homog.	Chr.	Am.	Cro.	An.	T/A	Cell.	Glass	OF	B/F	ONF
925-R-85	A0306111-85	Black	Cons.	Yes						70%			30%	

Comment: **No Asbestos Detected.**

Hygeia Project Number: A0306111
Client Project Number/Name: 7839 / Hunter Building 925

Analyzed: 6/20/2003 **by** WAS

Sample ID		Sample Description			Asbestos Percent					Other Fibers			Non - Fibers	
Client #	Hygeia #	Color	Texture	Homog.	Chr.	Am.	Cro.	An.	T/A	Cell.	Glass	OF	B/F	ONF
925-R-86	A0306111-86	Black	Cons.	Yes						70%			30%	

Comment: **No Asbestos Detected.**

Client #	Hygeia #	Color	Texture	Homog.	Chr.	Am.	Cro.	An.	T/A	Cell.	Glass	OF	B/F	ONF
925-R-87	A0306111-87	Black	Cons.	Yes									100%	

Comment: **No Asbestos Detected.**

Client #	Hygeia #	Color	Texture	Homog.	Chr.	Am.	Cro.	An.	T/A	Cell.	Glass	OF	B/F	ONF
925-R-88	A0306111-88	Black	Cons.	Yes						20%	10%		70%	

Comment: **No Asbestos Detected.**

Client #	Hygeia #	Color	Texture	Homog.	Chr.	Am.	Cro.	An.	T/A	Cell.	Glass	OF	B/F	ONF
925-R-89	A0306111-89	Black	Cons.	Yes						70%			30%	

Comment: **No Asbestos Detected.**

Client #	Hygeia #	Color	Texture	Homog.	Chr.	Am.	Cro.	An.	T/A	Cell.	Glass	OF	B/F	ONF
925-R-90	A0306111-90	Black	Cons.	Yes	7%					33%	10%		50%	

Comment: **Asbestos Detected.**

Hygeia Project Number: A0306111
Client Project Number/Name: 7839 / Hunter Building 925

Analyzed: 6/20/2003 **by** WAS

Sample ID		Sample Description			Asbestos Percent					Other Fibers			Non - Fibers	
Client #	Hygeia #	Color	Texture	Homog.	Chr.	Am.	Cro.	An.	T/A	Cell.	Glass	OF	B/F	ONF
925-R-91	A0306111-91	Black	Cons.	Yes						70%	10%		20%	

Comment: **No Asbestos Detected.**

Client #	Hygeia #	Color	Texture	Homog.	Chr.	Am.	Cro.	An.	T/A	Cell.	Glass	OF	B/F	ONF
925-R-92	A0306111-92	Black	Cons.	Yes	7%					27%	10%		56%	

Comment: **Asbestos Detected.**

Client #	Hygeia #	Color	Texture	Homog.	Chr.	Am.	Cro.	An.	T/A	Cell.	Glass	OF	B/F	ONF
925-R-93	A0306111-93	Black	Cons.	Yes						30%			70%	

Comment: **No Asbestos Detected.**

Client #	Hygeia #	Color	Texture	Homog.	Chr.	Am.	Cro.	An.	T/A	Cell.	Glass	OF	B/F	ONF
925-R-94	A0306111-94	Black	Cons.	Yes						40%			60%	

Comment: **No Asbestos Detected.**

Client #	Hygeia #	Color	Texture	Homog.	Chr.	Am.	Cro.	An.	T/A	Cell.	Glass	OF	B/F	ONF
925-R-95	A0306111-95	Multi	Cons.	Yes									100%	

Comment: **No Asbestos Detected.**

Hygeia Project Number: A0306111
Client Project Number/Name: 7839 / Hunter Building 925

Analyzed: 6/20/2003 **by** WAS

Sample ID		Sample Description			Asbestos Percent					Other Fibers			Non - Fibers	
Client #	Hygeia #	Color	Texture	Homog.	Chr.	Am.	Cro.	An.	T/A	Cell.	Glass	OF	B/F	ONF
925-R-96	A0306111-96	Brown	Cons.	Yes						10%	30%		60%	

Comment: **No Asbestos Detected.**

Client #	Hygeia #	Color	Texture	Homog.	Chr.	Am.	Cro.	An.	T/A	Cell.	Glass	OF	B/F	ONF
925-R-97	A0306111-97	Brown	Cons.	Yes						80%			20%	

Comment: **No Asbestos Detected.**

Client #	Hygeia #	Color	Texture	Homog.	Chr.	Am.	Cro.	An.	T/A	Cell.	Glass	OF	B/F	ONF
925-R-98	A0306111-98	Brown	Cons.	Yes	4%					10%			86%	

Comment: **Asbestos Detected.**

Client #	Hygeia #	Color	Texture	Homog.	Chr.	Am.	Cro.	An.	T/A	Cell.	Glass	OF	B/F	ONF
925-R-99	A0306111-99	Brown	Cons.	Yes						10%			90%	

Comment: **No Asbestos Detected.**

abbreviations:

Chr. = chrysotile
Am. = amosite
Cro. = crocidolite
An. = anthophyllite
T/A = tremolite/actinolite

cell = cellulose
glass = fibrous glass
syn = synthetic
sty = styrene foam
det = detected

per = perlite
ver = vermiculite
MF = Mineral filler
B/F = Binder / filler
NAD = No asbestos detected

OF = Other Fibers
ONF = Other Non-Fibers
Cons = Consolidated

Appendix B

Sample Chain of Custody Forms

AD3OC0111

ASBESTOS CHAIN OF CUSTODY - US ARMY CORPS OF ENGINEERS

Project: Hunter Bldg 925	Job No.: 7839
Sampler: Tim Jones	Analysis: PLM

DATE	FIELD ID	EMU ID	COMPONENTS/NOTES
6-11-03	925-1-1	46334	Floor tile & Mastic
	1-2	35	" " "
	1-3	36	Cove Base & Mastic
	1-4	37	Ceiling plaster
	1-5	38	TSI - Cloth & Mastic 2" OD
	1-6	39	TSI - Hard Fitting 2" OD
	1-7	40	TSI - 2" OD pipe run
	1-8	41	Caulking Material
	1-9	42	Wall Plaster
	1-10	43	TSI - 3" OD pipe run
	1-11	44	Floor tile & Mastic
	1-12	45	Ceiling Plaster
	1-13	46	TSI - 4" OD Pipe run
	1-14	47	Ceiling tile
	1-15	48	Craft paper
	1-16	49	TSI - 2½" OD hard Fitting
	1-17	50	Ceiling tile
	1-18	51	TSI 2½" pipe run
	1-19	52	TSI 2½" tee
	1-20	53	Caulking Material
	1-21	54	Expansion Joint Filler
	1-22	55	Ceiling tile

Relinquished By	Date	Time	Received By	Date	Time
Tim Jones	6-16-03	1030	CCell	6/16/03	10:30

Comments: Fax results to Tim Jones @ 678-354-0330

A0306111

ASBESTOS CHAIN OF CUSTODY - US ARMY CORPS OF ENGINEERS

Project: Hunter Bldg 925	Job No.: 7839
Sampler: Tim Jones	Analysis: PLM

DATE	FIELD ID	EMU ID	COMPONENTS/NOTES
6-11-03	925-1-23	46356	Ceiling tile
	1-24	57	Floor Adhesive
	1-25	58	Floor leveling Compound
	1-26	59	Floor tile
	1-27	60	Floor tile
	1-28	61	Floor tile & Mastic
	1-29	62	Drywall Joint Compound
	1-30	63	Wall Covering
	1-31	64	Ceiling Tile
	A-32	65	Cement board
	A-33	66	Drywall Joint Compound
	A-34	67	Gasket Material
	A-35	68	Drywall Joint Compound
	A-36	69	" " "
	A-37	70	Ceiling Adhesive
	E-38	71	Caulking Material
	E-39	72	Window Glazing Material
	M-40	73	Tank lagging
	M-41	74	" "
	M-42	75	Boiler Insulation
	M-43	76	Tank lagging
↓	↓ M-44	↓ 77	TSI 4" OD pipe run

Relinquished By	Date	Time	Received By	Date	Time
Tim Jones	6-16-03	1030	C. Cell	6/16/03	10:30

Comments: Fax results to Tim Jones @ 678-354-0330

A0306111

ASBESTOS CHAIN OF CUSTODY - US ARMY CORPS OF ENGINEERS

Project: Hunter Bldg 925	Job No.: 7839
Sampler: Tim Jones	Analysis: PLM

DATE	FIELD ID	EMU ID	COMPONENTS/NOTES
6-12-03	925- R-67	46400	Multi-layer Bur
	R-68	01	Felt paper
	R-69	02	" "
	R-70	03	" "
	R-71	04	Multi-layer Bur
	R-72	05	Flashing Cement
	R-73	06	Rolled roofing Flashing
	R-74	07	Flashing Materials
	R-75	08	Multi-layer Flashing
	R-76	09	Flashing Cement
	R-77	10	Multi-layer Bur
	R-78	11	Felt paper
	R-79	12	" "
	R-80	13	Multi-layer BUR
	E-81	14	Caulking Material
	E-82	15	Cement Board
	R-83	16	Multi-layer BUR
	R-84	17	Felt paper
	R-85	18	" "
	R-86	19	Multi-layer BUR
	R-87	20	Duct Flex Joint
	R-88	21	Multi-layer BUR

Relinquished By	Date	Time	Received By	Date	Time
Tim Jones	10-16-03	1030	C Cell	6/13/03	10:30

Comments: Fax results to Tim Jones @ 678-354-0330

A030611

ASBESTOS CHAIN OF CUSTODY - US ARMY CORPS OF ENGINEERS

Project: Hunter Bldg 925	Job No.: 7839
Sampler: Tim Jones	Analysis: PLM

DATE	FIELD ID	EMU ID	COMPONENTS/NOTES
6-11-03	925-M-45	46378	TSI - 6" OD pipe run
	M-46	79	Concrete ?
	M-47	80	Craft paper
	M-48	81	TSI 4" OD elbow
	M-49	82	TSI 6" OD elbow
	M-50	83	Expansion Joint Filler
	E-51	84	" " "
	E-52	85	Window Glazing Compound
	E-53	86	Window Glazing Compound
	E-54	87	Caulking Material
	E-55	88	" "
6-12-03	R-56	89	Multi-layer Bur
	R-57	90	Roof Insulation
	R-58	91	Felt paper
	R-59	92	Felt paper
	R-60	93	Multi-layer Bur
	R-61	94	Pitch pan Filler
	R-62	95	Flashing Cement
	R-63	96	" "
	R-64	97	Rolled roofing Flashing
	R-65	98	Felt paper
	R-66	99	Flashing Cement

Relinquished By	Date	Time	Received By	Date	Time
Tim Jones	6-16-03	1030	C. Cell	6/16/03	10:30

Comments: Fax results to Tim Jones @ 678-354-0330

A0306111

ASBESTOS CHAIN OF CUSTODY - US ARMY CORPS OF ENGINEERS

Project: Hunter Bldg 925	Job No.: 7839
Sampler: Tim Jones	Analysis: PLM

DATE	FIELD ID	EMU ID	COMPONENTS/NOTES
6-12-03	46422	925- R-89	Multi-layer Bur
	23	R-90	" " "
	24	R-91	Felt paper
	25	R-92	Multi-layer Bur
	26	R-93	Felt paper
	27	R-94	" "
	28	R-95	Silver Surfacing
	29	R-96	Roof shingle
	30	R-97	Felt paper
	31	R-98	Flashing cement
	32	R-99	Multi-layer BUR
			TJ. 6-12-03

Relinquished By	Date	Time	Received By	Date	Time
Tim Jones	10-16-03	1030	C. Cell	10/16/03	

Comments: Fax results to Tim Jones @ 678-354-0330

Appendix C

Certifications

The Environmental Institute

Tim Jones

Has completed coursework and satisfactorily passed

an examination that meets all criteria required for

EPA / AHERA (TSCA Title II) Approved Accreditation

and NESHAP Regulations Training

Asbestos in Buildings: Inspection and Assessment

February 10-12, 1997
Course Date

2360
Certificate Number

February 12, 1997
Examination Date

February 11, 1998
Expiration Date

William H. Spain - Course Director

Rachel G. McCain - Exam Administrator

TEI - 1300 Williams Drive, Suite E - Marietta, Georgia 30066 - (770) 427-3600

The Environmental Institute

Timothy A. Jones

Social Security Number - 411-04-8826
200 N. Cobb Parkway, Bldg. 400, Suite 404 - Marietta, GA 30062

Has completed coursework and satisfactorily passed an examination that meets all criteria required for EPA/AHERA/ASHARA (TSCA Title II) Approved Reaccreditation and NESHAP Regulations Training

Asbestos in Buildings: Inspector Refresher

January 29, 2003	7644
Course Date	Certificate Number
January 29, 2003	
Examination Date	
January 28, 2004	
Expiration Date	

David W. Hogue - Course Director

Rachel G. McCain - Exam Administrator

TEI - 1300 Williams Drive, Suite E - Marietta, Georgia 30066 - (770) 427-3600

Georgia Institute of Technology

This is to certify that

Michael Stephen Ruth

has attended and satisfactorily passed an examination covering the contents of a Continuing Education Course entitled:

Inspecting Buildings for Asbestos Containing Materials (Initial Course for Building Inspectors)

meeting the Federal EPA AHERA Model Accreditation Plan requirements for Building Inspectors (TSCA Title II).

October 16-18, 2000
Dates of Attendance

October 18, 2000
Examination Date

October 18, 2001
Expiration Date

Georgia Tech Research Institute
Electro-Optics, Environment and Materials Laboratory
Atlanta, Georgia 30332
Phone: (404) 894-7430; FAX: (404) 894-1267

578-78-6898
Social Security Number

Robert D. Schmitter
Course Director

2897
Certificate Number

© GOES 440

LITHO IN U.S.A.

Medical University of South Carolina

College of Health Professions

Program in Environmental Health Sciences

19 Hagood Avenue, Charleston, South Carolina 29425 (843) 792-5315

Certifies that

MICHAEL RUTH

Attended and Satisfactorily Completed

Asbestos Inspector Refresher

conducted October 31, 2002 through October 31, 2002
and passed an exam on October 31, 2002.

AbInsp-r27120-17203	4	578-78-6898	T.A. Rowland, III
Certificate Number	Contact Hours	ID Number	Program Director
October 31, 2002	October 30, 2003		T. A. Rowland III
Exam Date	Certificate Expires		Instructor

AUGET LARGIENDO UNIV. MED. CAR. AUS. 1824

This certifies that the above recipient has completed the requisite training for Asbestos Certification under TSCA Title II.

United States Department of Commerce
National Institute of Standards and Technology

NVLAP®

ISO/IEC 17025:1999
ISO 9002:1994

Certificate of Accreditation

DEPARTMENT OF COMMERCE ★ UNITED STATES OF AMERICA ★

HYGEIA LABORATORIES, INC.

MARIETTA, GA

is recognized by the National Voluntary Laboratory Accreditation Program for satisfactory compliance with criteria set forth in NIST Handbook 150:2001, all requirements of ISO/IEC 17025:1999, and relevant requirements of ISO 9002:1994. Accreditation is awarded for specific services, listed on the Scope of Accreditation, for:

BULK ASBESTOS FIBER ANALYSIS

March 31, 2004

Effective through

For the National Institute of Standards and Technology

NVLAP Lab Code: 102087-0

NVLAP-01C (06-01)

National Institute of Standards and Technology

NVLAP®

National Voluntary Laboratory Accreditation Program

ISO/IEC 17025:1999
ISO 9002:1994

Scope of Accreditation

BULK ASBESTOS FIBER ANALYSIS **NVLAP LAB CODE 102087-0**

HYGEIA LABORATORIES, INC.
1300 Williams Drive, Suite A
Marietta, GA 30066-6299
Mr. Clayton Call
Phone: 770-514-6933 Fax: 770-514-6966
E-Mail: call67@atc-enviro.com

NVLAP Code	*Designation*
18/A01	EPA-600/M4-82-020: Interim Method for the Determination of Asbestos in Bulk Insulation Samples

March 31, 2004

Effective through

For the National Institute of Standards and Technology

NVLAP-01S (06-01)

Savannah District
Environmental and Materials Unit

US Army Corps of Engineers®

Hazardous Building Materials Survey

Building No. 925 Hunter Army Air Field, Georgia

Prepared by Timothy A. Jones

Approved for public release, distribution is unlimited

The contents of this report are not to be used for advertising, publication, or promotional purposes. Citation of trade names does not constitute an official endorsement or approval of the use of such commercial products.

The findings of this report are not to be construed as an official Department of the Army position, unless so designated by other authorized documents.

Building 925, Hunter Army Air Field, GA

by Timothy A. Jones

Final Report

Approved for public release; distribution is unlimited

Prepared for **US Army Corps of Engineers**
Savannah District

Hazardous Building Materials Survey Report

Introduction

Background

Building No. 925 is a single-story concrete block frame structure. Most original walls are constructed of concrete masonry block units (CMU). Newer interior partition walls have been added at some point in time and are constructed of wood framing covered with gypsum drywall or plywood. Four racquetball courts were added at some date. The floor system is concrete slab on grade with multiple covering types. The roof systems are of three basic designs; built up tar and felt on the flat portions, shingled on the peaked sections and rolled roofing on the curved section. The buildings primary use is as gymnasium and recreation facility.

Description of study

Investigation

This report documents the hazardous building materials survey of Building No. 925 at Hunter Army Air Field; Georgia conducted on 11-12 June 2003 by USACE Savannah District employees Tim Jones and Mike Ruth. This survey was conducted in general accordance with the Statement of Services developed by Ray Willingham, USACE Savannah District, which includes the USAEHA guidance for demolition debris characterization by TCLP sampling.

Conclusions

The following information gathered during the survey of Building 925 is presented in attached information:

a. *Light Count:* The fluorescent and mercury vapor light count results are presented in Table 1.

b. *Lead Building Materials:* Inspection of the building revealed lead in the plumbing drainage and vent piping system used as pipe joints. Lead flashings are used at the pipe penetrations through the roof. Details are outlined in Table 2.

c. *T*CLP *Lead Results:* Sampling of building components was performed as required and components were processed and mixed in the proper percentages and given a sample identification of HB 925 TCLP. TCLP analysis by Hygeia Laboratories indicates that lead is not present above their reporting limit of 0.5 mg/L, and therefore is below the regulatory limit of 5 mg/L for landfill disposal. Field sampling data including component type, color, TCLP mix percentage and approximate sampling location is presented in Table 3. Approximate locations of material sub-samples are indicated in the floor plan, Figure 1. A scanned copy of Hygeia's analytical report is included as Appendix A.

d. *Thermostats & Mercury-Containing Switches:* No mercury-containing thermostats were located in Building 925. Five mercury-containing switches were located in the Mechanical Room 122 at the boiler.

e. *Compressed Refrigerant Gas:* Fourteen window air-conditioners and three drinking fountain were located in Building 925 that are assumed to contain refrigerant gas that should be recovered prior to demolition.

f. *Underground And Above Ground Storage Tanks:* Two underground fuel oil storage tanks were located at building 925. One outside Mechanical Room 122 and one outside Room 127. One above ground LP gas tank was located outside of Mechanical Room 122. Approximate locations are indicated on the building floor plan, Figure 1.

g. *Smoke Detectors:* Two smoke detectors that may contain radioactive sources or printed circuit boards were located in Building 925.

List of Tables

Table 1. Fluorescent, Mercury Vapor and Other Light Count 4

Table 2. Lead Building Components..... 4

Table 3. TCLP Sampling Details..... 5

List of Figures

Figure 1. HAAF925f.dgn Hazardous Building Material Survey Results 6

Appendix

Appendix A. Analytical Report – Hygeia Laboratories, Inc.....7-11

Tables

TABLE 1
HUNTER ARMY AIRFIELD BUILDING 925
FLUORESCENT, MERCURY AND OTHER LIGHT FIXTURES

AREA IDENTIFICATION	NUMBER OF LIGHTS PRESENT	DESCRIPTION OF LIGHTS
Interior	131	2 Bulb, 4 Foot Long Fluorescent Fixtures With Single 2” X 8” Ballast
Interior	60	Mercury Vapor Lamps in Gymnasium and Racquetball Courts
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Exterior	6	1 Foot Possible Mercury Vapor Lamps

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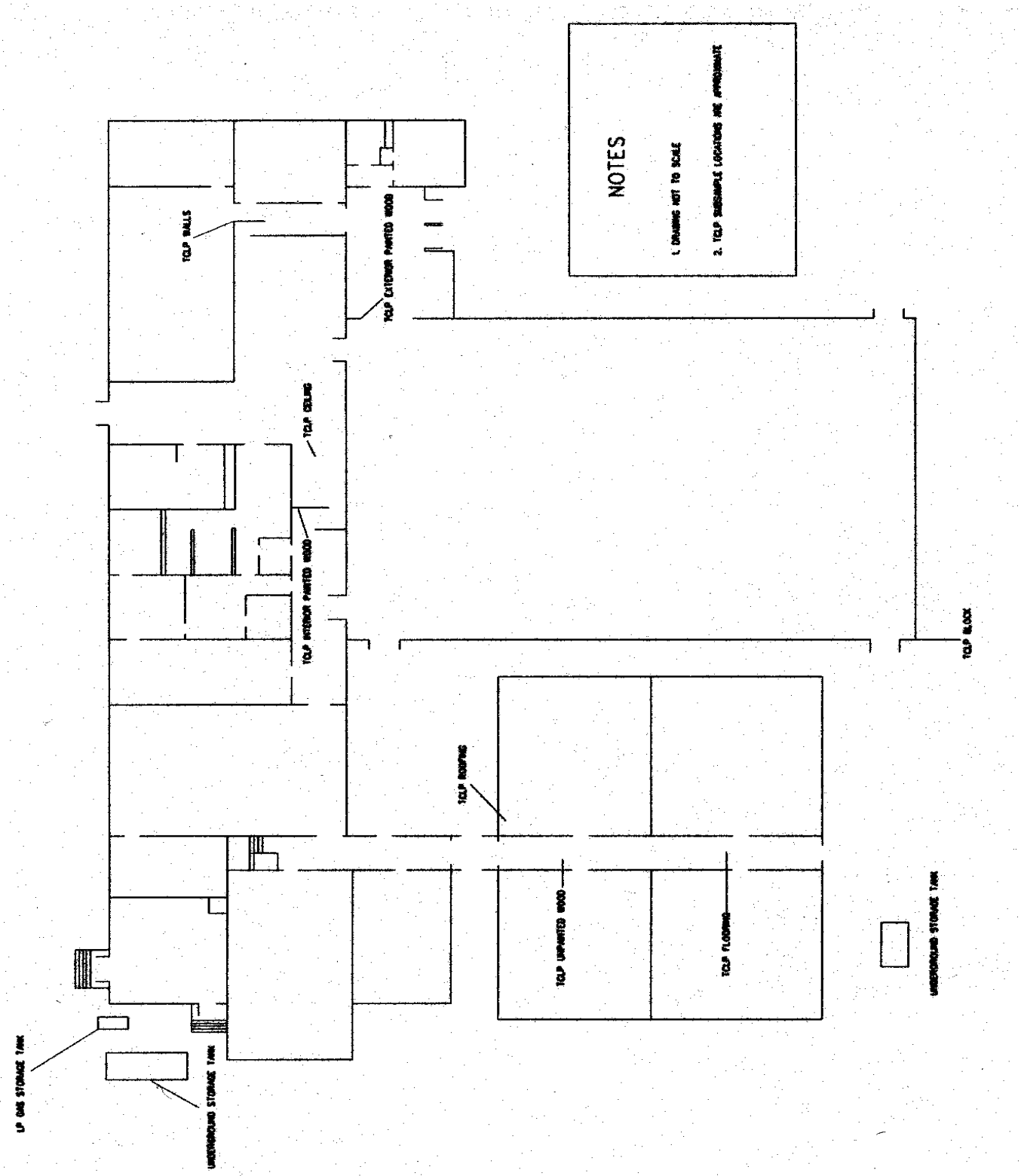
LEAD BUILDING COMPONENTS

BUILDING COMPONENT	DESCRIPTION	LOCATION	ESTIMATED NUMBER
Hot poured lead pipe joint	In plumbing drainage, waste and vent piping	Under slab and in plumbing chases	125-150
Lead Pipe Flashings	Roof flashing	Roof	10

TABLE 3
HUNTER ARMY AIRFIELD BUILDING 925
TCLP COMPOSITE SAMPLE COMPONENTS

BUILDING COMPONENT	DESCRIPTION	LOCATION	PERCENTAGE OF SAMPLE
Unpainted Wood	Roof framing	Attic, above Room 127	26%
Interior wall covering	White painted block	Room 107	23%
Roofing Components	Roof shingle	Roof, above Room 129	7%
Interior Floor Coverings	Tan floor tile	Room 127	10%
Block, Brick, Concrete	White painted concrete	Foundation, outside Room 119	25%
Ceiling Material	White ceiling tile	Room 108	7%
Painted Wood-Interior	White base molding	Room 118	1%
Painted Wood-Exterior	White fascia board	Exterior, above Room 119	1%

Figure 1


NOTES
1. DRAWING NOT TO SCALE
2. TCLP SUBSAMPLE LOCATIONS ARE APPROXIMATE
TCLP WALLS
TCLP EXTERIOR PAINTED WOOD
TCLP CEILING
TCLP INTERIOR PAINTED WOOD
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TCLP FLOORING
TCLP BLOCK
UNDERGROUND STORAGE TANK
LP GAS STORAGE TANK
UNDERGROUND STORAGE TANK

Appendix A

Analytical Report – Hygeia Laboratories, Inc

HYGEIA LABORATORIES, INC.

1300 Williams Drive, Suite A - Marietta, Georgia 30066-6299 - (770) 514-6933, FAX (770) 514-6966

Lab Project No. M0306168 Report Date: 6/20/03

Client Name:	**US Army Corps of Engineers - Atlanta**
Contact:	**Tim Jones**
Address:	Environmental & Materials Unit 200 North Cobb Parkway Bldg. 400, Ste. 404 Marietta, GA 30062
Project Name:	**HUNTER BLDG 925**
Project ID:	7839
Receipt Date:	6/16/2003

Case Narrative

1. The sample holding times were met for all analyses.
2. Where applicable, results & reporting limits are based on wet weight; dry weight calculations available.
3. The temperature of the sample cooler as received by the laboratory was 24 ° C.
4. Hygeia Laboratories, Inc., certifies that the following analytical results meet all the requirements of the National Environmental Laboratory Accreditation Conference (NELAC).

Reviewed By: AWS

Respectively Submitted:

Hygeia Laboratories, Inc.

Sample Identification

Lab Sample #	Client Sample ID	Sample Supply	Collected
M0306168-01	HB 925 TCLP	Bulk	6/12/03

HYGEIA LABORATORIES, INC.

1300 Williams Drive, Suite A - Marietta, Georgia 30066-6299 - (770) 514-6933, FAX (770) 514-6966

Lab Project No. M0306168

Report Date: 6/20/03

TCLP Lead Units: mg/L (ppm) Method #: **EPA_1311/6010B**

Matrix: Leachate Analysis Date: 6/18/2003 Prep Date: 6/16/2003 Analyst: SR

Lab Sample #: **M0306168-01** Client ID: **HB 925 TCLP**

Analyte(s)	CAS #	Result	Report Limit	Flag Code
Lead	7439-92-1	BRL	0.5	

NOTES:

- Results relate only to the samples tested as received (See Chain-of-Custody).
- BRL = "Below Reporting Limit"
- RL = "Reporting Limit"
- E = "Estimated Result"
- Dates are presented in the format "month/day/year"

Certifications

Alabama - Lab ID 40970; Arkansas - No. 03-044-0; Connecticut - No. PH 0208; Georgia - No. 804; Indiana - Lab ID C-GA-01
Kentucky - Lab ID 90053, UST - No. 0005; Maryland - No. 293; Massachussetts No. M - GA040; North Carolina - No. 409; Oklahoma - No. 9945
Pennsylvania - No. 68-668; Rhode Island - License No. 263; South Carolina - No. 98012001; Tennessee - Lab ID 02827; Virginia - Lab ID 00024

Accreditations

NELAC - State of Florida DOH, No. E87257
NELAC - Louisiana DEQ, No. 02084

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WD306168

R-10 24°C

US Army Corps of Engineers
Savannah District
Environmental & Materials Unit

Chain of Custody Record

Project Name: Hunter Bldg 925

SAI Acct # 5394

Job # 7839

TAT 7 days

Date	Time	Pres.	Gr	Cm	Site Code/Sample Number	No. of Containers	TCLP Lead					SAD No.	Matrix
6-12-03	1300			✓	HB 925 TCLP	2	✓					46433	Building Composite

Sampler Relinquisher by: (sig)	Date/Time	Received by: (sig)	Date/Time	Remarks:
Tim Jones	6-16-03 1040	Randy Brown	6/16/03 1040	Fax Results to Tim Jones 678-354-0330 Also E-mail Report
Relinquished by: (sig)	Date/Time	Received by: (sig)	Date/Time	
Relinquished by: (sig)	Date/Time	Received by: (sig)	Date/Time 6-16-03 1:30	

Savannah District
Environmental and Materials Unit

US Army Corps of Engineers®

Hazardous Building Materials Survey

Building No. 925 Hunter Army Air Field, Georgia

Prepared by Timothy A. Jones

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Building 925, Hunter Army Air Field, GA

by Timothy A. Jones

Final Report

Approved for public release; distribution is unlimited

Prepared for **US Army Corps of Engineers**
Savannah District

Hazardous Building Materials Survey Report

Introduction

Background

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Conclusions

The following information gathered during the survey of Building 925 is presented in attached information:

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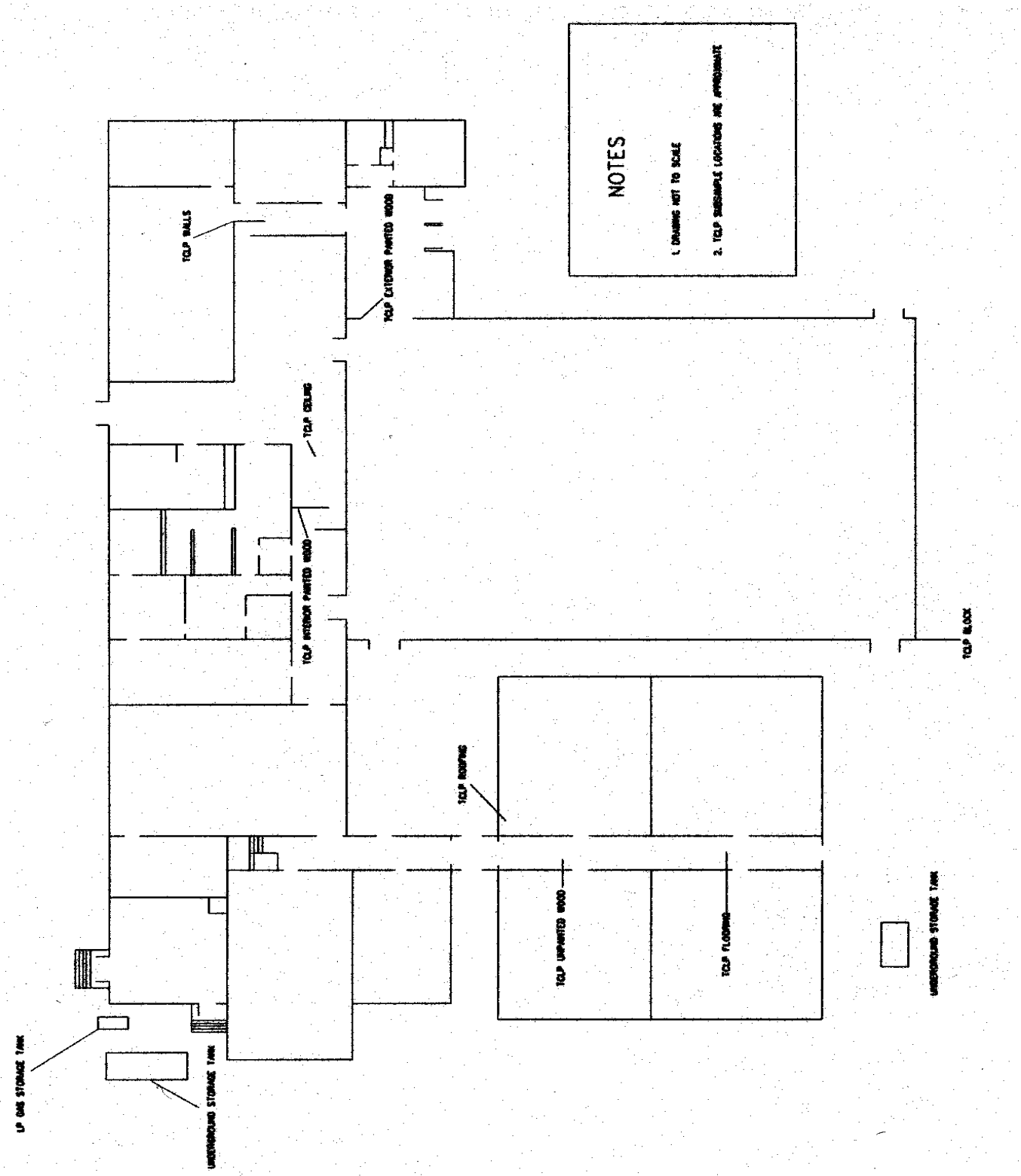
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UNDERGROUND STORAGE TANK
LP GAS STORAGE TANK
UNDERGROUND STORAGE TANK

Appendix A

Analytical Report – Hygeia Laboratories, Inc

HYGEIA LABORATORIES, INC.

1300 Williams Drive, Suite A - Marietta, Georgia 30066-6299 - (770) 514-6933, FAX (770) 514-6966

Lab Project No. M0306168 Report Date: 6/20/03

Client Name:	**US Army Corps of Engineers - Atlanta**
Contact:	**Tim Jones**
Address:	Environmental & Materials Unit 200 North Cobb Parkway Bldg. 400, Ste. 404 Marietta, GA 30062
Project Name:	**HUNTER BLDG 925**
Project ID:	7839
Receipt Date:	6/16/2003

Case Narrative

1. The sample holding times were met for all analyses.
2. Where applicable, results & reporting limits are based on wet weight; dry weight calculations available.
3. The temperature of the sample cooler as received by the laboratory was 24 ° C.
4. Hygeia Laboratories, Inc., certifies that the following analytical results meet all the requirements of the National Environmental Laboratory Accreditation Conference (NELAC).

Reviewed By: AWS

Respectively Submitted:

Hygeia Laboratories, Inc.

Sample Identification

Lab Sample #	Client Sample ID	Sample Supply	Collected
M0306168-01	HB 925 TCLP	Bulk	6/12/03

HYGEIA LABORATORIES, INC.

1300 Williams Drive, Suite A - Marietta, Georgia 30066-6299 - (770) 514-6933, FAX (770) 514-6966

Lab Project No. M0306168

Report Date: 6/20/03

TCLP Lead Units: mg/L (ppm) Method #: **EPA_1311/6010B**

Matrix: Leachate Analysis Date: 6/18/2003 Prep Date: 6/16/2003 Analyst: SR

Lab Sample #: **M0306168-01** Client ID: **HB 925 TCLP**

Analyte(s)	CAS #	Result	Report Limit	Flag Code
Lead	7439-92-1	BRL	0.5	

NOTES:

- Results relate only to the samples tested as received (See Chain-of-Custody).
- BRL = "Below Reporting Limit"
- RL = "Reporting Limit"
- E = "Estimated Result"
- Dates are presented in the format "month/day/year"

Certifications

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Pennsylvania - No. 68-668; Rhode Island - License No. 263; South Carolina - No. 98012001; Tennessee - Lab ID 02827; Virginia - Lab ID 00024

Accreditations

NELAC - State of Florida DOH, No. E87257
NELAC - Louisiana DEQ, No. 02084

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WD306168

R-10 24°C

US Army Corps of Engineers
Savannah District
Environmental & Materials Unit

Chain of Custody Record

Project Name: Hunter Bldg 925

SAI Acct # 5394

Job # 7839

TAT 7 days

Date	Time	Pres.	Gr	Cm	Site Code/Sample Number	No. of Containers	TCLP Lead					SAD No.	Matrix
6-12-03	1300			✓	HB 925 TCLP	2	✓					46433	Building Composite

Sampler Relinquisher by: (sig)	Date/Time	Received by: (sig)	Date/Time	Remarks:
Tim Jones	6-16-03 1040	Randy Brown	6/16/03 1040	Fax Results to Tim Jones 678-354-0330 Also E-mail Report
Relinquished by: (sig)	Date/Time	Received by: (sig)	Date/Time	
Relinquished by: (sig)	Date/Time	Received by: (sig)	Date/Time 6-16-03 1:30	

SECTION 01012

DESIGN AFTER AWARD
(DESIGN/BUILD)
01/2002

1. GENERAL

The Contractor shall furnish and be responsible for a complete set of design documents as called for in Section 01010, GENERAL PROJECT DESCRIPTION AND GENERAL DESIGN REQUIREMENTS and as called for hereinafter.

1.1 Within 30 days after Notice to Proceed, the Contractor shall submit, for approval, a complete design schedule with all submittals and review times indicated in calendar dates. The Contractor shall update this schedule monthly. No design submittals will be reviewed or evaluated until after receipt and acceptance of the proposed design/review schedule. As a minimum, design submittals are required at the Preliminary (60%), Final (100%), and at the Corrected Final stages. The requirements of each design stage are listed hereinafter. The Contractor shall reflect the number and schedules for the design submittals phases in the progress charts. As a maximum, the Preliminary (60%), Final (100%), and Corrected Final Submittals shall be made in one consolidated package which includes each of the major categories listed in paragraph “Contents of Design Submittals”.

1.2 To facilitate fast-track design-construction activities the contractor shall submit a Final “Site/Utility Design” Submittal at the same time as the as the Preliminary Submittal for the “Physical Fitness Center”. Following review, resolution, and incorporation of all Government comments, and submittal of a satisfactory Corrected Final set of Site/Utility Design documents, the Contracting Officer shall issue a limited Notice to Proceed (NTP) which shall allow the contractor to proceed with site development activities within the parameters set forth in the accepted design submittal. Submittal review, comment, and resolution times from this specification apply to this initial Final Site/Utility Design Submittal. No on-site construction activities shall begin prior to receipt of a construction NTP by the contractor.

1.3 The Contractor shall submit the design of the buildings at different stages of design to the Government for review. The drawings shall be grouped into Submittals as indicated below, each set complete by itself. All submittals required at each stage of design shall be submitted as a complete package at one time. No partial submittals will be reviewed. The Submittals are : “Site/Utility Design” including site demolition to be submitted at Final and Corrected Final; “Fitness Center” to be submitted at Preliminary, Final, and Corrected Final; “Track” including demolition of existing gymnasium building to be submitted at Preliminary, Final and Corrected Final.

2.0 DESIGNER OF RECORD

The Contractor shall identify, for approval, the Designer of Record for each area of work. One Designer of Record may be responsible for more than one area. All areas of design disciplines shall be accounted for by a listed, registered Designer of Record. The Designer(s) of Record shall stamp, sign, and date all design drawings under their responsible discipline at each design submittal stage (see SCR - "Registration of Designers").

3.0 DEFINITION OF DESIGN SUBMITTALS

3.1 Corrected Proposal Submittal. The Contractor shall submit 10 copies of corrected drawings and technical proposal notebooks which incorporate any corrections on clarification items or deficiencies noted during negotiations for distribution to the Users and Government agencies. Submit the drawings in half size to the project manager within 30 days after contract award. This item only applies to the successful proposer after contract award, and only if there were requests for clarification or deficiencies were noted.

3.2 Site/Utility Design Submittal (100%). This submittal is provided to allow the contractor to concentrate initial efforts for the site/utility portions of the project. By allowing this work to be separated, the contractor is given the opportunity to fast track and begin construction on the site/utility work prior to completion of the building designs. More specific submittal requirements by stage and discipline are identified in the Savannah District Design Manual. This is available on the Internet (under "Engineering Criteria") at:

http://en.sas.usace.army.mil

This submittal shall consist of the following:
*5
3.2.1 Design analysis, developed to 100%, site work and utility work only; include pavement design, including design California Bearing Ratio (CBR) and modulus of subgrade reaction.

3.2.2 100% complete site/utility drawings

3.2.3 Final site/utility specifications

3.2.4 Environmental permits, as required. When environmental permits are not required, the Contractor shall provide a statement with justification to that effect.

3.3 Preliminary Submittal (60%). This submittal is intended to insure that the Contractor's design is proceeding in accordance with the terms of the solicitation and the Contractor's original proposal as well as in a timely manner. This submittal shall consist of the following:

3.3.1 Design analysis, developed to 60%

3.3.2 60% complete drawings

3.3.3 Draft specifications

3.3.4 Spirit Requirements and Summary Table (RFP Appendix F).

3.3.5 Site Utility design information need not be included in this submittal package except where interface to the interior building systems is required.
*5
3.3.6 "Final" Geotechnical Report (three copies).

3.4 Final Submittal (100%). The review of this submittal is to insure that the design is in accordance with directions provided the Contractor during the design process as well as the original solicitation and the contractor's

proposal. The Contractor shall submit the following documents for Final Design Review:

3.4.1 Preliminary Submittal (60%) review comments and responses annotated.

3.4.2 Spirit Requirements and Summary Table (RFP Appendix F).

3.4.3 The Design Analysis submitted for the Final Submittal shall be in its final form. The Design Analysis shall include all backup material previously submitted and revised as necessary. All design calculations shall be included. The Design Analysis shall contain all explanatory material giving the design rationale for any design decisions which would not be obvious to an engineer reviewing the Final Submittal drawings and specifications.

3.4.4 The Contract Drawings submitted for Final Submittal shall include the drawings previously submitted which have been revised and completed as necessary. The Contractor is expected to have completed all of his coordination checks and have the drawings in a design complete condition. The drawings shall be complete at this time including the incorporation of any design review comments generated by the previous Submittal reviews. The drawings shall contain all the details necessary to assure a clear understanding of the work throughout construction. Shop drawings will not be considered as design drawings. All design shall be shown on design drawings prior to submittal of shop drawings. Each discipline has unique Final Submittal requirements. Respective chapters of the Savannah District Design Manual should be reviewed to determine the exact nature of these requirements.

Example for HVAC Controls: HVAC Controls System Drawings (MC-Plates) shall be submitted at the Final Submittal 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.

3.4.5 The Draft Specifications on all items of work submitted for the Final Submittal shall consist of legible marked-up guide specification sections.

3.4.6 Site Utility design information need not be included in this submittal package except where interface to the interior building systems is required.

3.5 Corrected Final submittal. After the Final Submittal Review, the Contractor shall revise the Contract Documents by incorporating any comments generated during the Final Submittal Review and shall prepare final hard copy Contract Specifications. The Contractor shall submit the following documents for the design complete submittal:

3.5.1 Design analysis, in Corrected Final 100% complete form.

3.5.2 100% complete corrected drawings.

3.5.3 Final corrected specifications

3.5.4 Final Submittal Review comments and responses.

3.5.5 Electronic Submission: All CADD files in native MicroStation version 8 format, as well as all prepared technical specifications shall be provided on CD-ROM. Two copies are required.

3.6 Structural Interior Design (SID).

3.6.1 Definition: The Structural Interior Design (SID) shall involve the selection and sampling of all applied finishes including material, color, texture and patterns necessary to complete the building's interior architectural features. This information shall be submitted in 3" D-ring binders, 8-1/2" x 11" format.

3.6.2 Present architectural finish samples in an orderly arrangements according to like rooms/areas receiving like finishes. Each like room receiving like finishes will be noted as a Color Scheme. Each Color Scheme shall have a written description of material used. This written description shall use the same material abbreviations and notes that appear on the Room Finish Schedule and Legend in the contract drawings. Submit the SID binders concurrently with the architectural design submittals.

3.6.3 Preliminary Submittals: The Contractor shall submit three complete sets of the initial SID package. The design philosophy shall use a warm neutral background color with appropriate accent colors. All SID proposals shall be reviewed and approved by the Government. The Interior Designer shall revise the SID binders after each review and update the SID to satisfy review comments. Each submittal will follow this method of review until the Government approves the completed SID package.

3.6.4 Final Submittal: After approval of the Preliminary Submittal, the Contractor shall submit three (3) complete sets of the approved and final Structural Interior Design packages. Once the Contractor has submitted the SID and the Government has approved the submittal, all materials, finishes, colors, textures and pattern submitted and approved for this project are then considered as part of the contract and the Contractor shall furnish all approved SID finishes. No deviations will be considered.

3.6.5 Format: Submit all SID information and samples on 8 1/2"x 11" modules with only one foldout. The maximum foldout width shall be approximately 25 inches. No foldouts on the top or bottom of the pages. Place the project title, base, architectural firm, page number and date on the bottom of each page or module.

3.6.5.1 The module shall support and anchor all samples. Anchor large or heavy samples with mechanical fasteners, velcro or double sided foam tape. Rubber cement or glue will not be acceptable.

3.6.5.2 Assemble the 8 1/2" x 11" pages and modules in a 3" D-ring binder. Holes for placement of the modules in the binder shall be 3/8" in diameter. Each binder shall be identified on the outside spine and front cover by title, project number, percentage phase and date.

3.6.5.3 Material and finish samples shall indicate true pattern, color and texture. Carpet samples shall be large enough to indicate a complete pattern

or design.

3.6.5.4 Where paint manufacturers color names and numbers are used indicated the finish of the paint such as gloss, semi-gloss, flat and so on.

3.6.5.5 Signage may include emblems, striping, letters, numbers and logos. The interior designer shall consider visual appearance, organization, location, structural supports (if required) and relation to other base graphics. Indicate on a separate signage sheet the location and message for all signage. Submit a sample of the signage material finish and color with the structural finishes.

3.6.5.6 No photographs or colored photocopies of materials will be accepted or approved.

3.6.6 The SID Binder shall include the following information at each design submittal in this order:

==========

SEQUENCE OF SID SUBMITTAL

1. Title page

2. Table of contents

3. Design objectives - A statement of design objectives explaining the interior design philosophy of the facility shall be provided in the SID. Design objectives and the proposed method of accomplishing the objectives. Shall cover, when applicable, energy efficiency, safety, health, maintenance, image, personal performance of occupants and functional flexibility.

4. Interior floor plan

5. Interior sample finish boards (Color boards)

Scheme A
Scheme B
Scheme C

Example all restrooms could be noted as color scheme "A", all general open office finishes could be noted as color scheme "B" and the main lobby could be noted as color scheme "C".

6. Room finish schedule

7. Signage

8. Signage plan

9. Integration and layout of ACSIM specific furniture. Plan must show suitability of proposed space to suit the furniture to be provided.

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3.7 The Contractor shall submit as part of the Design Analysis the "SpiRiT REQUIREMENTS AND POINT SUMMARY" spreadsheet (appendix F) at each submittal phase.

4. 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.

5. 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.

Addresses and submittal distribution:

(A) US Army Engineer District, Savannah
ATTN: CESAS-PM-MC (Mr. Robert Sauntry)
100 West Oglethorpe Avenue
Savannah, GA 31401

(B) Hunter Army Airfield
Directorate of Public Works
HQ's 3rd Infantry Division (Mech) and Fort Stewart
Engineering Plans and Services Division
ATTN: Project Management Office (Anne de la Sierra)
399 Stephen Douglas Street - Suite 100
Hunter Army Airfield, GA 31409-4627

(C) Commander, 3rd Infantry Division (Mechanized) & Fort Stewart
ATTN: AFZP-DPW (Mr. Rose)
Building 1114, Frank Cochran Street
Fort Stewart, GA 31314-5000

(D) US Army Engineer District, Savannah
ATTN: CESAS-CD-STH (Robert Unger)
Hunter AAF Resident Office
Bldg PB-101, Mitchell Blvd.
Hunter Army Airfield, GA 31409

(E) Director, USAISEC-FDEO
ATTN: AMSEL-IE-DE-IN-CO (Gaffney)
1435 Porter Street, Suite 2000
Fort Detrick, MD 21702-5047

(F) Eastern Paralyzed Veterans Association
Architecture & Facilities Management
75-20 Astoria Boulevard
Queens, NY 11370-1178

*7
(G) Canoochee EMC
Attn: Phil Proctor
P.O. Box 487

342 Brazell St.
Reidsville, GA 30453

The Contractor shall submit complete design documents for the required submittal in the same quantity and to the same offices listed below, for each review (one or more) until the Government is satisfied that all review comments have been addressed and resolved. Following the last review, the Contractor shall forward the completed construction documents specified as follows:

DISTRIBUTION SCHEDULE

	NUMBER OF COPIES PER ADDRESSEE						
*7 SUBMITTAL - Preliminary	(A)	(B)	(C)	(D)	(E)	(F)	(G)
*7							
DRAWINGS (HALF-SIZE)	0	0	0	0	0	0	0
DRAWINGS (FULL SIZE)	14	10	3	4	2	2	1
SPECIFICATIONS	14	10	3	4	2	2	1
DESIGN ANALYSIS	14	10	3	4	2	2	1
COLOR BOARDS	2	1	1	2	0	0	0
FURNITURE PACKAGE	1	1	0	1	0	0	0

DISTRIBUTION SCHEDULE

	NUMBER OF COPIES PER ADDRESSEE						
*7 SUBMITTAL - Final, Corrected Final	(A)	(B)	(C)	(D)	(E)	(F)	(G)
FINAL DESIGN SUBMITTAL							
FINAL (100 percent)							
*7							
DRAWINGS (HALF-SIZE)	0	0	0	0	0	0	0
DRAWINGS (FULL SIZE)	14	10	3	4	2	2	1
SPECIFICATIONS	14	10	3	4	2	2	1
DESIGN ANALYSIS	14	10	3	4	2	2	1
REVISED COLOR BOARDS	2	1	1	2	0	0	0
REVISED FURNITURE PACKAGE	1	1	0	1	0	0	0
DRAWINGS ON CD	1	1	1	1	0	0	0
CORRECTED FINAL DESIGN SUBMITTAL							
*7							
DRAWINGS (HALF-SIZE)	0	0	0	0	0	0	0
DRAWINGS (FULL SIZE)	10	4	3	4	0	0	0
SPECIFICATIONS	10	4	3	4	0	0	0
DESIGN ANALYSIS	10	4	3	4	0	0	0
DRAWINGS ON CD	1	1	1	1	0	0	0
*7							
APPROVED CORRECTED FINAL[1]							
DRAWINGS (HALF-SIZE)	3	3	2	5	0	0	1
DRAWINGS (FULL SIZE)	1	1	0	2	0	0	1

SPECIFICATIONS	4	4	2	5	0	0	1
ELECTRONIC SPECIFICATIONS & DRAWING FILES IN MICROSTATION.DGN FORMAT	~~3~~	~~0~~	~~0~~	~~0~~	~~0~~	~~0~~	
CD	2	2	1	2	0	0	1

6. GOVERNMENT REVIEWS

The Government will take twenty-one (21) days to review and comment on each design submittal. For each design review submittal, the COR will furnish, to the Contractor, a single consolidated listing of all comments from the various design sections and from other concerned agencies involved in the review process. The review will be for conformance with the technical requirements of the solicitation and the Successful Offeror's (Contractor's) RFP proposal. If the Contractor disagrees technically with any comment or comments and does not intend to comply with the comment, he must 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 Contractor shall furnish disposition of all comments, 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 the Installation. The Contractor shall bring the appropriate design staff to the review conference. These conferences will take place the week after the receipt of the comments by the Contractor.

Comments will be made by the Corp of Engineers and the Installation at the 60% and 100% review phases that concern issues not discussed or described within the RFP- these comments, if related to the normal development of a design and/or project documents, do not constitute requested changes to the Contract.

ProjNet/DrChecks is the required method for preparing and annotating comments. This is an Internet based database available on the Internet at:

http://65.204.17.188/projnet/home/version1/

User ID and password will be granted at the submittal stage.

6.1 If a design submittal is late by the approved schedule, the review will slip according. The review process will not be shortened. Submittals date revisions must be made in writing at least one (1) week prior to the effect submittal.

6.2 Post review conference action: Copies of comments, annotated with comment action agreed on, will be made available to all parties before the conference adjourns. Unresolved problems will be resolved by immediate follow-on action at the end of conferences. Valid comments will be incorporated. After receipt of final corrected design documents upon incorporation of backcheck comments the Project Manager will recommend issuance of a Construction Notice to Proceed (NTP). The Government, however, reserves the right to disapprove design document submittals if comments are significant. If final or backcheck submittal(s) are incomplete or deficient, and require correction by the Contractor and resubmittal for review, the cost of rehandling and reviewing will be deducted from payment due the Contractor at the rate of $ 5,000.00 per submittal.

7.0 COORDINATION

7.1 Written Records. The Contractor shall prepare a written record of each design site visit, meeting, or conference, either telephonic or personal, and furnish within five (5) working days copies to the Contracting Officer and all parties involved. The written record shall include subject, names of participants, outline of discussion, and recommendation or conclusions. Number each written record for the particular project under design in consecutive order.

7.2 Design Needs List. Throughout the life of his contract the Contractor shall furnish the COR a monthly "needs" list for design related items. This list shall itemize in an orderly fashion design data required by the Contractor to advance the design in a timely manner. Each list shall include a sequence number, description of action item, name of the individual or agency responsible for satisfying the action item and remarks. The list will be maintained on a continuous basis with satisfied action items checked off and new action items added as required. Once a request for information is initiated, that item shall remain on the list until the requested information has been furnished or otherwise resolved. Copies of the list will be mailed to both the Administrative Contracting Officer and the agencies tasked with supplying the information. It is highly recommended that the Corps' RFI system be utilized during the design phase for this purpose. Originally developed for the Construction phase but it works well for both. The system has report capability. User access and passwords will be furnished at the time needed with over the phone instructions.

8.0 DESIGN ANALYSIS

8.1 Media and Format. Present the design analysis 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 in 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.

8.2 Organization. Assign the several parts and sheets of the design analysis a sequential binding number and bind them under a cover indicating the name of the facility and project number, if applicable. 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.

8.3 Design Calculations. Design calculations are a part of the design analysis. When they are voluminous, bind them separately from the narrative part of the design analysis. Present the design calculations in a clean and legible form incorporating a title page and index for each volume. Furnish a table of contents, which shall be an index of the indices, when there is more than one volume. Identify the source of loading conditions, supplementary sketches, graphs, formulae, and references. Explain all assumptions and conclusions. Calculation sheets shall carry the names or initials of the author and the checker and the dates of calculations and checking. No portion of the calculations shall be computed and checked by the same person.

8.4 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. Precede each set of computer printouts 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 description which must accompany each set of ADPS printouts shall include the following:

1. Explain the design method, including assumptions, theories, and formulae.
2. Include applicable diagrams, adequately identified.
3. State exactly the computation performed by the computer.
4. Provide all necessary explanations of the computer printout format, symbols, and abbreviations.
5. Use adequate and consistent notation.
6. Provide sufficient information to permit manual checks of the results.

8.5 SpiRiT REQUIREMENTS AND POINT SUMMARY. The spreadsheet indicating SpiRiT points to be achieved by the design is part of the design analysis. The point summary shall be filled out completely and shall reflect the design requirements contained in other sections of the documents.

9.0 DRAWINGS

9.1 Prepare all drawings on Computer-Aided Design and Drafting (CADD) so that they are well-arranged and placed for ready reference and so that they present complete information. The Contractor shall prepare the drawings with the expectation that the Corps of Engineers, in the role of supervision, will be able to 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. Do not show standard details not applicable to the project, and minimize unnecessary wasted space. Do not include details of standard products or items which are adequately covered by specifications on the drawings. Detail the drawings such that conformance with the RFP can be checked and to the extent that shop drawings can be checked. Do not use shop drawings as design drawings. The Contractor shall use standard Corps of Engineers title blocks and borders on all drawings. Submit an index of drawings with each submittal. The COR will furnish the Contractor file number, drawing name prefix, and specifics for inclusion in the title blocks of the drawings.

9.2 Create all drawings using CADD methods in MicroStation format. Save all Design Complete CADD files as MicroStation8. The Contractor shall use EM 1110-1-1807 Standards Manual for U.S. Army Corps of Engineers Computer-Aided Design and Drafting (CADD) Systems as guidance to for standard details, cell libraries, title blocks, and layer/level assignments. Drawing features not addressed in EM 1110-1-1807 shall conform to drafting standards.

9.3 Only standard fonts provided by MicroStation are allowed to be used in the creation of CADD files. No fonts created by third parties or the designer are permitted.

9.4 The uses of Reference files and model files during the design stage is up to the discretion of the designers. All CADD files at Design Complete submittal shall be in separate folder by discipline or building, free standing, independent files by folder. All reference files shall be in the same folder as the design files. Example of folders, Civil, Building 1, Building 2, etc.

9.5 Submit all Design Complete CADD files on the following media.

- Read/Write CD-ROM Disk

10.0 SPECIFICATIONS

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10.1 The Contractor shall submit ~~marked up and~~ final specifications ~~as required~~ in accordance with paragraph 6.1.4 of Section 01010. ~~The specifications may be any one of the major, well known master guide specification sources such as MASTERSPEC from the American Institute of Architects, SPECTEXT from Construction Specification Institute or Unified Federal Guide Specifications (UFGS), etc. Use only one source for the project. Edit the specifications for this project and submit in marked-up or redlined draft version at the Final Review submittal stage. If the design is based on a specific product, the specification shall consist of the important features of the product. The specification shall be detailed enough such that another product meeting the specification could be substituted and it would not adversely impact the project. After incorporation of comments, submit a final, design complete specification package. Delete all marked-out or redlined text and type in all inserted text. If Unified Federal Guide Specifications (UFGS) and Savannah District Guide Specifications are used they are available on the Internet at:~~

~~http://www.hnd.usace.army.mil and http://en.sas.usace.army.mil/~~

~~Many of these specifications are in Specsintact format (*.sec). Specsintact software is available free of charge at:~~

~~http://si.ksc.nasa.gov/specsintact~~

~~These specifications shall be edited and tailored by the Contractor to meet the requirements of the project under design.~~

10.2 Submittal Register. Develop the submittal requirements during construction during the design phase of the contract, by producing a Contractor Submittal Register during design. Attach a submittal register to each section of the specifications for the submittal requirements of that section. Prepare the Submittal Register on ENG Form 4288 or similar format spreadsheet with Excel. The Contractor 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. The Contractor shall place all the Submittal Register pages in an appendix of the final specifications. See Sections 01300 SUBMITTAL DESCRIPTIONS-DURING DESIGN AND 01330 SUBMITTAL PROCEDURES (DESIGN BUILD) for submittal and submittal register definitions and procedures.

11.0 CONTENTS OF DESIGN SUBMITTALS

11.1 The 100% site/utility design submittal shall contain as a minimum, the following:

11.1.1 General Narratives:

11.1.1.1 Site/Layout: Explanation of objectives and factors influencing

siting decisions. General overview of major site features planned, such as building orientation, drainage patterns, parking provisions, traffic circulation, provisions for the handicapped, security requirements, etc. Rationale for locating major site elements. Set back requirements or specific clearance requirements. Locations of borrow and spoil areas.

11.1.1.2 Utility Systems: Design narrative for the natural gas, water supply, storm drainage, and wastewater systems relating to this project. Include an analysis of the existing distribution systems capability to supply sufficient quantity at adequate levels. If the existing distribution systems are inadequate, provide the design solution to augment the systems to provide the requirements for the new facilities.

11.1.2 All drawings included in the required technical data for the proposal submission (see Contract Clauses, TECHNICAL SUBMISSION REQUIREMENTS AND INSTRUCTIONS), shall be developed to 100 percent completion. In addition to the individual utility plans, submit a combined utility plan drawn to the same scale as the individual utility plans.

11.1.2.1 General Site Layout: Scale shall be included.

11.1.2.2 Site Grading and Drainage Plans: Show locations of all sediment basins, diversion ditches, and other erosion control structures. Indicate the approximate drainage areas each will service. Indicate the materials, construction and capacity of each structure. Include limits of landscaping and seeded areas. General site grading and drainage shall be indicated by contour lines with an interval of not more than approximately one foot [800mm].

11.1.2.3 Road Alignment Plans: Scale shall be no greater than 1"=30' and profiles showing pavement and shoulder widths, azimuths and curve data, limits of grading, and erosion control. The materials to be used shall be indicated.

11.1.2.4 Traffic Control Plan: Traffic routing and signage shall be in accordance with The Manual on Uniform Traffic Control Devices for Streets and Highways, U.S. Department of Transportation, Federal Highways Administration.

11.1.2.5 Parking lots: Show the actual dimensions of parking lots and measurements from a known reference point rather than coordinates at corners. Show the number of parking spaces.

11.1.2.5 Sanitary Sewer Plan: Scale shall be 1"=30' and profiles showing location and elevation of pipe, thrust blocks, manholes, etc. Materials and construction of main and appurtenances shall be indicated. Specifications shall be provided.

11.1.2.6 Water Supply Line Plans: Scale shall be 1"=30' and profiles showing locations of valves, thrust blocks, connections, etc. Materials shall be indicated and specifications shall be provided for valves, pipes, etc.

11.1.2.7 Electrical Plan Requirements:

11.1.2.7.1 Required diagrams and details on Site Electrical Drawings.

11.1.2.7.1.a. Off-Site Electrical Distribution Plan:
11.1.2.7.1.b. Off-Site Primary Circuit Routing Plans:
11.1.2.7.1.c. Off-Site One Line Diagram. (If applicable)
11.1.2.7.1.d. Off-Site Details. (Aerial Pole Line Construction, etc.) (If applicable).
11.1.2.7.1.e. On-Site Electrical Distribution Plan:

11.1.2.7.1.f. On-Site One Line Diagram.
11.1.2.7.1.g. On-Site Distribution Transformer Schedule: Provide with the following headings:

Transformer Designation.
Transformer Size (KVA).
Building(s) Served.
Primary Phase(s) and Circuit to which connected.

11.1.2.7.1.h. On-Site Details (Site Lighting, Trenching, Pad-Mounted Transformer, etc.).

11.1.2.8 Specifications: Provide final specifications which include all sections which apply to site/utility work.

11.1.2.9 Design Analysis: Design analysis shall include design calculations fully developed to support the design of the site and utility systems included in this submittal.
*5
11.1.2.10 Geotechnical: ~~Soils analysis and~~A "preliminary" geotechnical report will be furnished by the Government with the RFP. Any additional data necessary for the design ~~will~~ shall be obtained by the Contractor. Geotechnical information must be provided to support all assumptions and design parameters utilized in the presented site/utility design as applicable.

11.2 The final design submittal shall contain as a minimum, the following:

11.2.1 Lawn and Landscaping Irrigation System: The design submittal shall include drawings clearly showing the piping layout and location of sprinkler heads coordinated with the landscaping plan, control valves, backflow preventers, rain check switches, controllers, etc. Indicate buildings, walks, shrubbery, trees, and other obstacles that might interfere with the proper operation of the sprinkler system. A design analysis calculating the pressures at each sprinkler head for the capacity and radius of throw is required. Details of the sprinkler head installation, valve boxes, and other irrigation appurtenances shall be submitted.

11.2.2 Landscape, Planting and Turfing

11.2.2.1 The landscape planting design narrative shall describe the analysis of existing site conditions, including an indication of existing plant materials that are to remain on the site. The statement of concept shall indicate specific site problems related to proposed development and the rationale for proposed plant locations. The narrative shall also include a list of suggested types and sizes of plant materials which are to be used, based upon the designated functional and visual criteria.

11.2.2.2 The drawings shall be prepared at a scale which corresponds with the site layout and grading plans and, likewise, shall include reference coordinates, north arrows, graphic scales and appropriate legends. An overall planting layout shall be developed and shall include enlarged detail plans of specific areas, as needed, to clarify requirements. The proposed layout shall indicate shade trees, evergreen trees, flowering trees, shrub masses, etc., according to designated functional and visual locations of planting. A legend which also indicates sizes of plants recommended for each of the above categories shall be included. The drawings and all subsequent plans shall indicate existing and proposed buildings, paved areas, signs, light standards, transformers, dumpster areas, storm drainage system, and other structures and utilities.

11.2.2.3 Landscape, Planting and Turfing Final design drawing(s) shall include a complete schedule of plant materials which indicates their botanical

and common names, plan symbols, quantities, sizes, condition furnished, and pertinent remarks. Scale of drawing shall be prepared at 1" = 30'. Drawing shall correspond with the site layout and grading plans and reference coordinates, north arrows, graphic scales and appropriate legends. An overall planting layout shall be developed and shall include enlarged detail plans of specific areas as needed, to clarify requirements. Final design drawings, indicating proposed plants by a (+) mark for the plant location and a circle which is scaled at approximately 2/3 the ultimate growth spread (diameter) of plants, shall also include a complete schedule of plant materials which indicates botanical and common names, plan symbols, quantities, sizes, condition furnished, and pertinent remarks. Final drawings shall also include the basic details for installation of tree, shrub, and ground cover planting, as well as any other applicable details for clarification of specific project requirements.

11.2.3 Architectural

11.2.3.1 Design narrative shall provide a summary of functional space relationships, as well as circulation. There shall also be a general statement for the rationale behind the major design decisions.

11.2.3.2 Architectural Floor Plans shall indicate dimensions, columns lines, and detail references. Toilets and other specialized areas shall be drawn to 1/4" scale and shall show any needed interior features.

11.2.3.3 Finish schedule shall indicate material, finishes, colors and any special interior design features such as soffits, fascias, and lighting troughs, etc.

11.2.3.4 All required equipment shall be shown on the drawings with an equipment list.

11.2.3.5 List any special graphics requirements that will be provided.

11.2.3.6 Schedules shall be provided for both doors and windows. These schedules shall indicate sizes, types, and details for all items shown on floor plans.

11.2.3.7 Hardware sets using BHMA designations.

11.2.3.8 SID package.

11.2.3.9 Fire Protection and Life Safety Analysis. This analysis must be performed by a Registered Fire Protection Engineer (FPE). NICET certification is not sufficient to address this requirement.

11.2.4 Structural Systems

11.2.4.1 State the live loads to be used for design. Include roof and floor loads; wind loads, lateral earth pressure loads, seismic loads, etc., as applicable.

11.2.4.2 Describe the method of providing lateral stability for the structural system to meet seismic and wind load requirements. Include sufficient calculations to verify the adequacy of the method.

11.2.4.3 Furnish calculations for all principal roof, floor, and foundation members.

11.2.4.4 This submittal shall include drawings showing roof and floor framing

plans as applicable. Principal members will be shown on the plans. A foundation plan shall also be furnished showing main footings and grade beams where applicable. Where beam, column, and footing schedules are used, show schedules and fill in sufficient items to indicate method to be used. Show typical bar bending diagram if applicable. Typical sections shall be furnished for roof, floor, and foundation conditions. Structural drawings for proposals and submittals shall be separate from architectural drawings.

11.2.4.5 Provide any computer analyses used. The software shall be widely accepted, commercially available programs and complete documentation of the input and output of the program must be provided.

11.2.4.6 Provide complete seismic analyses for all building structural components. Seismic calculations shall clearly demonstrate compliance with all requirements set forth in the Statement of Work.

11.2.5 Plumbing Systems

11.2.5.1 List all references used in the design including Government design documents and industry standards.

11.2.5.2 Provide justification and brief description of the types of plumbing fixtures, piping materials and equipment proposed for use.

11.2.5.3 Prepare detail calculations for systems such as sizing of domestic hot water heater and piping; natural gas piping.

11.2.5.4. Indicate locations and general arrangement of plumbing fixtures and major equipment.

11.2.5.5 Include plan and isometric riser diagrams of all areas including hot water, cold water, waste and vent piping. Piping layouts and risers should also include natural gas (and meter as required) and other specialty systems as applicable.

11.2.5.6 Include equipment and fixture connection schedules with descriptions, capacities, locations, connection sizes and other information as required.

11.2.6 Fire Protection/Suppression

11.2.6.1 List all references used in the design including Government design documents and industry standards used to generate the fire protection analysis.

11.2.6.2 Classify each building in accordance with fire zone, building floor areas and height and number of stories. This information shall be contained in the fire protection analysis.

11.2.6.3 Discuss and provide description of required fire protection requirements including extinguishing equipment, detection equipment, alarm equipment. Alarm and detection equipment shall interface to requirements of Electronic Systems. This information shall be contained in the fire protection design analysis.

11.2.6.4 Prepare a plan for each floor of each building that presents a compendium of the total fire protection features being incorporated into the design. Provide the following types of information:

The location and rating of any fire-resistive construction such as

occupancy separations, area separations, exterior walls, shaft enclosures, corridors, stair enclosures, exit passageways, etc.

The location and coverage of any fire detection systems.

The location and coverage of any fire suppression systems (sprinkler risers, standpipes, etc.).

The location of any other major fire protection equipment.

Indicate any hazardous areas and their classification.

11.2.6.5 Prepare a schedule describing the internal systems with the following information: fire hazard and occupancy classifications, building construction type, GPM/square foot sprinkler density, area of operation and other as required.

11.2.6.6 Hydraulic calculations based on water flow test shall be prepared for each sprinkler system to insure that flow and pressure requirements can be met with current water supply. Include copies of Contractor water flow testing done to certify the available water source.

11.2.7 Electronic Systems: Electronic Systems responsibilities include the following:

Fire Detection and Alarm System
Fire Suppression System Control
Public Address System
Telephone System
Cable Television System
Special Grounding Systems
Cathodic Protection
Intrusion Detection, Card Access System
Central Control and Monitoring System

11.2.8.1 The design analysis shall include all calculations required to support design decisions and estimates at this stage of design. The analysis shall include specific criteria furnished, conference minutes and cost analyses of all systems considered.

11.2.8.2 Design of the fire alarm and detection system shall include layout drawings for all devices and a riser diagram showing the control panel, annunciator panel, all zones, radio transmitter and interfaces to other systems (HVAC, sprinkler, etc.).

11.2.8.3 Specify all components of the Fire Suppression (FS) System in the FS section of the specifications. Provide a clear description of how the system will operate and interact with other systems such as the fire alarm system. Include a riser diagram on the drawings showing principal components and interconnections with other systems. Include FS system components on drawing legend. All components shown of floor plans shall be designated as FS system components (as opposed to Fire Alarm components). Show the location of FS control panels, HVAC control devices, sensors, and 120V power panel connections on the floor plans. Indicate zoning of areas by numbers (1, 2, 3) and detectors subzoned for cross zoning by letter designations (A and B). Differentiate between ceiling mounted and underfloor detectors with distinct symbols and indicate subzone of each.

11.2.8.4 Show location of telephone outlets (including pay phones) on the plans. Include legend and symbol definition to indicate height above finished

floor. Show Telephone Conduit System Riser Diagram. Size conduit on Riser Diagram. Do not show conduit runs between backboard and outlets on the floor plans. Underground telephone distribution conduit shall be shown on either the electrical or electronic site plan.

11.2.8.5 Grounding System. The specifications and drawings shall completely reflect all of the design requirements. The specifications shall require field tests (in the construction phase), witnessed by the Contracting Officer, to determine the effectiveness of the grounding system. The design shall include drawings showing existing construction. Verification of the validity of any existing drawings and/or any other data furnished by the Government shall be the responsibility of the engineering services firm.

11.2.8.6 Provide a statement describing the extent of any exterior work such as telephone lines, cable television (TV) distribution cables, duct banks, etc., outside of 5 feet from the building line.

11.2.8.7 Provide the name of the licensed corrosion engineer or NACE specialist. Provide the following for cathodic protection systems:

Clearly define areas of structures or components in soil or water to be protected.

Type system recommended, comparison of systems, cost estimates showing all equipment alternatives.

Calculations on all systems that are considered showing all information and descriptions.

11.2.8.7.1 Design of Cathodic Protection. The design shall clearly provide a thorough and comprehensive specification and drawing. The design plans and specifications shall show extent of the facilities to be protected, location and type of anodes, location of test points, details for sectionalizing an underground piping system. This design shall be complete enough to purchase equipment and build without design changes to meet criteria of protection.

11.2.8.8 Exterior work to be shown on electrical site plan.

Existing and new communications service lines, both overhead and underground, shall be properly identified.

Show removals and relocations, if any.

11.2.8.9 Provide a descriptive narrative of all electronic systems that are required for project. Define any hazardous areas (as defined in the National Electric Code) and indicate the type of equipment proposed for use in such areas. Show the location of all electronic system panels, etc., on the floor plans. Show the proposed riser diagrams for all systems. Sizes of all conduit, wires, cables, panels, etc. Provide a complete symbol legend for all devices or equipment shown on the plans. For work requiring removals or demolition, the designer shall show by use of drawings or narrative, how demolition work is to be done.

11.2.9 Electrical and Mechanical Systems: Provide all information as required on the 100% design submittal developed to 50% completion.
*5
11.2.10 ~~Specifications: Draft of specifications for housing units, including index and trade sections~~Deleted.

11.3 The 100% design submittal shall contain, as a minimum, the following items for all submittals:

11.3.1 General: A complete set of construction documents plans and specifications at the same level of detail as if the project were to be bid including a complete list of equipment, fixtures and materials to be used. The final drawings are an extension of the reviewed 60% drawings and are to include the 60% comments and responses. All details shall be shown on the drawings.

11.3.2 The design analysis is an extension of the reviewed 60% design analysis and supports and verifies that the design complies with the requirements of the project.

11.3.3 Submit marked-up specifications. The specifications shall be coordinated with the drawings and describe in detail all items shown on the drawings.

11.3.4 Omitted

11.3.5 Architectural

11.3.5.1 All architectural drawings shall be coordinated with the other engineering disciplines. Ensure that the plans are in compliance with the applicable codes. It will be the Contractor's responsibility to implement the comments generated from any design review submittal as well as verify the consistency between plans and specification. The evaluation of the Contractor's submittals shall be based on degree to which the submittal meet the requirements set forth in this document and the specifications.

11.3.5.3 SID package.

11.3.5.4 Fire Protection and Life Safety Analysis. This analysis must be performed by a Registered Fire Protection Engineer (FPE). NICET certification is not sufficient to address this requirement.

11.3.6 Structural Design

11.3.6.1 Furnish complete checked calculations for all structural members. Incorporate any changes required by comments on 50% Design Submittal.

11.3.6.2 Prior to this submittal, structural drawings shall be coordinated with all other design disciplines.

11.3.6.3 The final structural drawings shall contain the following information as a set of general notes:

The allowable soil bearing value.
The design stresses of structural materials used.
The design live loads used in the design of various portions of the structures.
The design wind speed.
The seismic zone and the "K", "C", "I" and "Z" values used in design.

11.3.6.4 All structural drawings and calculations shall be checked and stamped by the designer of record (a registered Professional Engineer).

[11.3.7 Fire Suppression System: Provide a file of the input data used in the computer program to design the fire suppression system as well as the output data.]

11.3.8 Specific Mechanical and Plumbing Requirements:

11.3.8.1 Required Plans, Diagrams, Schedules and Details on Unit Mechanical Drawings:

11.3.8.1.1 Mechanical Floor Plan: The floor plans shall show all principle architectural features of the building which will affect the mechanical design. The floor plans shall also show the following:

Room designations.
Mechanical legend and applicable notes.
Location of all ductwork or piping (double line ductwork required).
Location and capacity of all terminal units (i.e., registers, diffusers, grilles, hydronic baseboards). Exhaust fan and range hood location.
Size of all ductwork and piping.
Thermostat location.
Location of heating/cooling plant (i.e., boiler, chiller, cooling tower, etc).
Location of all air handling equipment.
Return air paths (i.e., undercut doors, transfer grilles).
Flue piping size and location.
Piping diagram for forced hot water system (if used).
Fuel supply and return piping

11.3.8.1.2. Equipment Schedule: Complete equipment Schedules shall be provided. Schedule shall also include:

Capacity
Electrical characteristics
Efficiency (if applicable)
Manufacturer's name
Optional features to be provided
Physical size

11.3.8.1.3 Details: Construction details, sections, elevations, etc., shall be provided where required for clarification of methods and materials of design. Roof and exterior wall penetrations shall be detailed on the drawings.

11.3.8.2 Plumbing Floor Plan: The floor plan shall show all principal architectural features of the building which will affect the plumbing design. Separate plumbing plans will not be required if sufficient information can be shown on the mechanical plans to meet the requirements shown above. The floor plan shall also show the following:

Room designations.
Fixture Schedule.
Location of utility entrances.
Waste and water pipe location and size.
Fixture designations.

11.3.8.3 Design Analysis: Complete design calculations for mechanical systems shall be summarized and all assumptions identified to allow for complete and easy review. Include computations for sizing PM&E equipment, air duct design, and U-factors for ceilings, roofs and exterior walls and floors. Contractor shall employ commercially available energy analysis techniques to determine the energy performance of all passive systems and features. Use of hourly energy load computer simulation (e.g., TRNSYS, DOE 2.1 Blast, etc.) is required. These calculations can be used to size the mechanical systems. Based on the results of calculations, provide a complete list of the materials and equipment proposed for heating and plumbing, with the manufacturer's published cataloged product installation specifications and roughing-in data.

The heating and cooling equipment data shall include the manufacturer's wiring diagrams, installation specifications, ARI certification, and the standard warranty for the equipment.

11.3.9 Specific Electrical Requirements:

11.3.9.1 Required Plans, Diagrams, Schedules, and Details on Unit Electrical Drawings:

11.3.9.1.1. Electrical Floor Plan. The floor plans shall show all principle architectural features of the building which will affect the electrical design. The floor plan shall also show the following:

Room designations.
Electrical legend and applicable notes.
Lighting fixtures, properly identified.
Location of smoke and CO detectors.
Location of telephone and cable TV outlets.
Switches for control of lighting.
Receptacles.
Location and designation of panelboards. Plans should clearly indicate type of mounting required (flush or surface) and be reflected accordingly in specifications. Service entrance (conduit and main disconnect).
Location, designation and rating of motors and/or equipment which requires electrical service. Show method of termination and/or connection to motors and/or equipment. Show necessary junction boxes, disconnects, controllers (approximate only), conduit stubs, and receptacles required to serve the motor and/or equipment.

11.3.9.1.2. Building Riser Diagram (from pad-mounted transformer to unit load center panelboard): Indicate the types and sizes of electrical equipment and wiring. Include grounding and metering requirements.

11.3.9.1.3. Load Center Panelboard Schedule(s): Schedule shall indicate the following information:
Panelboard Characteristics (Panel Designation, Voltage, Phase, Wires, Main Breaker Rating and Mounting.
Branch Circuit Designations.
Load Designations.
Circuit Breaker Characteristics. (Number of Poles, Trip Rating, AIC Rating)
Branch Circuit Connected Loads (AMPS).
Special Features.

11.3.9.1.4 Lighting Fixture Schedule: (Schedule shall indicate the following information:)

Fixture Designation.
General Fixture Description.
Number and Type of Lamp(s).
Type of Mounting.
Special Features.

11.3.9.1.5. Details: Construction details, sections, elevations, etc., shall be provided where required for clarification of methods and materials of design.

11.3.9.2. Required Electrical Design Analysis: Design analysis and calculations for the electrical systems shall be prepared by a licensed professional engineer with experience in family housing, and shall be stamped

as such. The design analysis shall be separately bound, in one or more volumes. Show functional and engineering criteria, design information, and calculations applicable to the project. The analysis shall be organized in a format appropriate for review, approval, and record purposes. The design calculations shall indicate methods and references identified, and shall explain assumptions and conclusions.

11.3.9.2.1. Voltage Drop (VD) Calculations: Select conductor sizes of primary feeders, site lighting circuits, service laterals, and unit feeder conductors. Calculate maximum length for each phase of each primary circuit, using a maximum allowable VD for each circuit. Calculate voltage drops for each conductor. Maximum allowable voltage drop for site lighting and service laterals is 3%. The combined voltage drop for the service laterals, unit feeders, and branch circuit cannot exceed 5%. Calculate the available fault current at the main breaker for the living unit panel. Provide a coordination study to support breaker selection.

11.3.10 Specifications: Provide final specifications. The Contractor shall make final identification of all materials and finishes at this stage.

11.4 Design complete submittal (Corrected Final):

11.4.1 Design Drawings: Drawings shall be 100% complete, signed and sealed by the designer of record. All previous review comments shall be incorporated.

11.4.2 Design Analysis: Complete design analysis for all design disciplines. The final Fire Protection and Life Safety Analysis shall be included in the Design Analysis.

11.4.3 Comment Response Package: Complete package showing all comments from all previous reviews and the respective response and disposition.

11.4.4 This submittal shall include all drawings and design information from the 100% site/utility submittal to form a complete design package.

12.0 DESIGN RELATED PRODUCTS

12.1 Architectural Renderings: Contractor shall provide the original and three copies of each ground level perspective artist's renderings of completed typical facilities with walks, parking, and landscaping. Renderings shall be no smaller than 14" x 18" or larger than 28" x 36", multi-colored, and shall be suitably titled, matted, and framed. Submit rendering at “Physical Fitness Center” 60% Submittal.

12.2 DD Form 1354: Three (3) sets of DD Form 1354, Transfer and Acceptance of Military Real Property shall be prepared in accordance with DA Pamphlet 415-28 available at http://www.usapa.army.mil/gils/ and submitted to the Contracting Officer. The DD Form 1354 will require input from both the design agent and the Contractor. The form must be completed in English units.

12.3 Submittal Register, ENG FORM 4288: The Contractor shall complete and submit three (03) copies of a "preliminary" Eng Form 4288, Submittal Register to Contracting Officer. The "preliminary" Eng Form 4288, Submittal Register shall have the column "Submittal Identification", "Specification Paragraph Number", "Description of Submittal" "Type of Submittal", and "Remarks" completed; the Contractor shall identify whether the submittal is for "Government Approval" or for "Government Information" under the column "Remarks." The "final" Eng Form 4288, Submittal Register, shall be in

accordance with clause CONTRACTOR SUBMITTALS AND SUBMITTAL CONTROL in this section.

12.4 Reproduction: Upon Government approval of 100% design documents, the original will be returned to the Contractor for reproduction purposes. The Contractor will be responsible for his own reproduction as well as reproduction for Government use. The Government will require twice the number of copies of the plans and specifications as were required for the review stages, no color boards will be required. The originals will be retained by the Contractor for recording of as-built conditions. Upon completion of the project, the original design documents corrected to reflect as-built conditions will be supplied to the Government.

-- END OF SECTION --

SECTION 01090

SOURCES FOR REFERENCE PUBLICATIONS
02/02

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: http://www.aci-int.org
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: http://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: http://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: http://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: http://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: http://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: http://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: http://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: http://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: http://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: http://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: http://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: http://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 or 202-463-2700
Fax: 202-463-2471
Internet: http://www.forestprod.org/awc/
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: http://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: http://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: http://www.agma.org
AOK 5/01
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: http://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: http://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: http://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: http://www.ansi.org/
Note --- Documents beginning with the letter "S" can be ordered from:
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 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: http://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: http://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: http://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: http://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: http://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: http://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: http://www.astm.org
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e-mail: info@wclib.org
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-- End of Section --

SECTION 01312A

QUALITY CONTROL SYSTEM (QCS)
08/02

PART 1 GENERAL

1.1 GENERAL

The Government will use the Resident Management System for Windows (RMS) to assist in its monitoring and administration of this contract. The Contractor shall use the Government-furnished Construction Contractor Module of RMS, referred to as QCS, to record, maintain, and submit various information throughout the contract period. The Contractor module, user manuals, updates, and training information can be downloaded from the RMS web site. This joint Government-Contractor use of RMS and QCS will facilitate electronic exchange of information and overall management of the contract. QCS provides the means for the Contractor to input, track, and electronically share information with the Government in the following areas:

Administration
Finances
Quality Control
Submittal Monitoring
Scheduling
Import/Export of Data

1.1.1 Correspondence and Electronic Communications

For ease and speed of communications, both Government and Contractor will, to the maximum extent feasible, exchange correspondence and other documents in electronic format. Correspondence, pay requests and other documents comprising the official contract record shall also be provided in paper format, with signatures and dates where necessary. Paper documents will govern, in the event of discrepancy with the electronic version.

1.1.2 Other Factors

Particular attention is directed to Contract Clause, "Schedules for Construction Contracts", Contract Clause, "Payments", Section 01320A, PROJECT SCHEDULE, Section 01330, SUBMITTAL PROCEDURES, and Section 01451A, CONTRACTOR QUALITY CONTROL, which have a direct relationship to the reporting to be accomplished through QCS. Also, there is no separate payment for establishing and maintaining the QCS database; all costs associated therewith shall be included in the contract pricing for the work.

1.2 QCS SOFTWARE

QCS is a Windows-based program that can be run on a stand-alone personal computer or on a network. The Government will make available the QCS software to the Contractor after award of the construction contract. Prior to the Pre-Construction Conference, the Contractor shall be responsible to download, install and use the latest version of the QCS software from the Government's RMS Internet Website. Upon specific justification and request by the Contractor, the Government can provide QCS on 3-1/2 inch high-density

diskettes or CD-ROM. Any program updates of QCS will be made available to the Contractor via the Government RMS Website as they become available.

1.3 SYSTEM REQUIREMENTS

The following listed hardware and software is the minimum system configuration that the Contractor shall have to run QCS:

Hardware

IBM-compatible PC with 500 MHz Pentium or higher processor

128+ MB RAM for workstation / 256+ MB RAM for server

1 GB hard drive disk space for sole use by the QCS system

3 1/2 inch high-density floppy drive

Compact disk (CD) Reader, 8x speed or higher

SVGA or higher resolution monitor (1024 x 768, 256 colors)

Mouse or other pointing devise

Windows compatible printer (Laser printer must have 4+ MB of RAM)

Connection to the Internet, minimum 56 BPS

Software

MS Windows 98, ME, NT, or 2000

Word Processing software compatible with MS Word 97 or newer

Latest version of : Netscape Navigator, Microsoft Internet Explorer, or other browser that supports HTML 4.0 or higher

Electronic mail (E-mail), MAPI compatible

Virus protection software that is regularly upgraded with all issued manufacturer's updates

1.4 RELATED INFORMATION

1.4.1 QCS User Guide

After contract award, the Contractor shall download instructions for the installation and use of QCS from the Government RMS Internet Website; the Contractor can obtain the current address from the Government. In case of justifiable difficulties, the Government will provide the Contractor with a CD-ROM containing these instructions.

1.4.2 Contractor Quality Control(CQC) Training

The use of QCS will be discussed with the Contractor's QC System Manager during the mandatory CQC Training class.

1.5 CONTRACT DATABASE

Prior to the pre-construction conference, the Government shall provide the Contractor with basic contract award data to use for QCS. The Government will provide data updates to the Contractor as needed, generally by files attached to E-mail. These updates will generally consist of submittal reviews, correspondence status, QA comments, and other administrative and QA data.

1.6 DATABASE MAINTENANCE

The Contractor shall establish, maintain, and update data for the contract in the QCS database throughout the duration of the contract. The Contractor shall establish and maintain the QCS database at the Contractor's site office. Data updates to the Government shall be submitted by E-mail with file attachments, e.g., daily reports, schedule updates, payment requests. If permitted by the Contracting Officer, a data diskette or CD-ROM may be used instead of E-mail (see Paragraph DATA SUBMISSION VIA COMPUTER DISKETTE OR CD-ROM). The QCS database typically shall include current data on the following items:

1.6.1 Administration

1.6.1.1 Contractor Information

The database shall contain the Contractor's name, address, telephone numbers, management staff, and other required items. Within 14 calendar days of receipt of QCS software from the Government, the Contractor shall deliver Contractor administrative data in electronic format via E-mail.

1.6.1.2 Subcontractor Information

The database shall contain the name, trade, address, phone numbers, and other required information for all subcontractors. A subcontractor must be listed separately for each trade to be performed. Each subcontractor/trade shall be assigned a unique Responsibility Code, provided in QCS. Within 14 calendar days of receipt of QCS software from the Government, the Contractor shall deliver subcontractor administrative data in electronic format via E-mail.

1.6.1.3 Correspondence

All Contractor correspondence to the Government shall be identified with a serial number. Correspondence initiated by the Contractor's site office shall be prefixed with "S". Letters initiated by the Contractor's home (main) office shall be prefixed with "H". Letters shall be numbered starting from 0001. (e.g., H-0001 or S-0001). The Government's letters to the Contractor will be prefixed with "C".

1.6.1.4 Equipment

The Contractor's QCS database shall contain a current list of equipment planned for use or being used on the jobsite, including the most recent and planned equipment inspection dates.

1.6.1.5 Management Reporting

QCS includes a number of reports that Contractor management can use to track the status of the project. The value of these reports is reflective of the quality of the data input, and is maintained in the various sections of QCS. Among these reports are: Progress Payment Request worksheet, QA/QC comments, Submittal Register Status, Three-Phase Inspection checklists.

1.6.2 Finances

1.6.2.1 Pay Activity Data

The QCS database shall include a list of pay activities that the Contractor shall develop in conjunction with the construction schedule. The sum of all pay activities shall be equal to the total contract amount, including modifications. Pay activities shall be grouped by Contract Line Item Number (CLIN), and the sum of the activities shall equal the amount of each CLIN. The total of all CLINs equals the Contract Amount.

1.6.2.2 Payment Requests

All progress payment requests shall be prepared using QCS. The Contractor shall complete the payment request worksheet and include it with the payment request. The work completed under the contract, measured as percent or as specific quantities, shall be updated at least monthly. After the update, the Contractor shall generate a payment request report using QCS. The Contractor shall submit the payment requests with supporting data by E-mail with file attachment(s). If permitted by the Contracting Officer, a data diskette may be used instead of E-mail. A signed paper copy of the approved payment request is also required, which shall govern in the event of discrepancy with the electronic version.

1.6.3 Quality Control (QC)

QCS provides a means to track implementation of the 3-phase QC Control System, prepare daily reports, identify and track deficiencies, document progress of work, and support other contractor QC requirements. The Contractor shall maintain this data on a daily basis. Entered data will automatically output to the QCS generated daily report. The Contractor shall provide the Government a Contractor Quality Control (CQC) Plan within the time required in Section 01451A, CONTRACTOR QUALITY CONTROL. Within seven calendar days of Government acceptance, the Contractor shall submit a data diskette or CD-ROM reflecting the information contained in the accepted CQC Plan: schedule, pay activities, features of work, submittal register, QC requirements, and equipment list.

1.6.3.1 Daily Contractor Quality Control (CQC) Reports.

QCS includes the means to produce the Daily CQC Report. The Contractor may use other formats to record basic QC data. However, the Daily CQC Report generated by QCS shall be the Contractor's official report. Data from any supplemental reports by the Contractor shall be summarized and consolidated onto the QCS-generated Daily CQC Report. Daily CQC Reports shall be submitted as required by Section 01451A, CONTRACTOR QUALITY CONTROL. Reports shall be submitted electronically to the Government using E-mail or diskette within 24 hours after the date covered by the report. Use of either mode of submittal shall be coordinated with the Government representative. The Contractor shall also provide the Government a signed, printed copy of the daily CQC report.

1.6.3.2 Deficiency Tracking.

The Contractor shall use QCS to track deficiencies. Deficiencies identified by the Contractor will be numerically tracked using QC punch list items. The Contractor shall maintain a current log of its QC punch list items in the QCS database. The Government will log the deficiencies it has identified using its QA punch list items. The Government's QA punch list items will be included in its export file to the Contractor. The Contractor shall regularly update the correction status of both QC and QA punch list items.

1.6.3.3 Three-Phase Control Meetings

The Contractor shall maintain scheduled and actual dates and times of preparatory and initial control meetings in QCS.

1.6.3.4 Accident/Safety Tracking.

The Government will issue safety comments, directions, or guidance whenever safety deficiencies are observed. The Government's safety comments will be included in its export file to the Contractor. The Contractor shall regularly update the correction status of the safety comments. In addition, the Contractor shall utilize QCS to advise the Government of any accidents occurring on the jobsite. This brief supplemental entry is not to be considered as a substitute for completion of mandatory reports, e.g., ENG Form 3394 and OSHA Form 200 or OSHA Form 300.

1.6.3.5 Features of Work

The Contractor shall include a complete list of the features of work in the QCS database. A feature of work may be associated with multiple pay activities. However, each pay activity (see subparagraph "Pay Activity Data" of paragraph "Finances") will only be linked to a single feature of work.

1.6.3.6 QC Requirements

The Contractor shall develop and maintain a complete list of QC testing, transferred and installed property, and user training requirements in QCS. The Contractor shall update all data on these QC requirements as work progresses, and shall promptly provide this information to the Government via QCS.

1.6.4 Submittal Management

The Government will provide the initial submittal register, ENG Form 4288, SUBMITTAL REGISTER, in electronic format. Thereafter, the Contractor shall maintain a complete list of all submittals, including completion of all data columns. Dates on which submittals are received and returned by the Government will be included in its export file to the Contractor. The Contractor shall use QCS to track and transmit all submittals. ENG Form 4025, submittal transmittal form, and the submittal register update, ENG Form 4288, shall be produced using QCS. RMS will be used to update, store and exchange submittal registers and transmittals, but will not be used for storage of actual submittals.

1.6.5 Schedule

The Contractor shall develop a construction schedule consisting of pay activities, in accordance with Contract Clause "Schedules for Construction Contracts", or Section 01320A, PROJECT SCHEDULE, as applicable. This schedule shall be input and maintained in the QCS database either manually or by using the Standard Data Exchange Format (SDEF) (see Section 01320A PROJECT SCHEDULE). The updated schedule data shall be included with each pay request submitted by the Contractor.

1.6.6 Import/Export of Data

QCS includes the ability to export Contractor data to the Government and to import submittal register and other Government-provided data, and schedule data using SDEF.

1.7 IMPLEMENTATION

Contractor use of QCS as described in the preceding paragraphs is mandatory. The Contractor shall ensure that sufficient resources are available to maintain its QCS database, and to provide the Government with regular database updates. QCS shall be an integral part of the Contractor's management of quality control.

1.8 DATA SUBMISSION VIA COMPUTER DISKETTE OR CD-ROM

The Government-preferred method for Contractor's submission of updates, payment requests, correspondence and other data is by E-mail with file attachment(s). For locations where this is not feasible, the Contracting Officer may permit use of computer diskettes or CD-ROM for data transfer. Data on the disks or CDs shall be exported using the QCS built-in export function. If used, diskettes and CD-ROMs will be submitted in accordance with the following:

1.8.1 File Medium

The Contractor shall submit required data on 3-1/2 inch double-sided high-density diskettes formatted to hold 1.44 MB of data, capable of running under Microsoft Windows 95 or newer. Alternatively, CD-ROMs may be used. They shall conform to industry standards used in the United States. All data shall be provided in English.

1.8.2 Disk or CD-ROM Labels

The Contractor shall affix a permanent exterior label to each diskette and CD-ROM submitted. The label shall indicate in English, the QCS file name, full contract number, contract name, project location, data date, name and telephone number of person responsible for the data.

1.8.3 File Names

The Government will provide the file names to be used by the Contractor with the QCS software.

1.9 MONTHLY COORDINATION MEETING

The Contractor shall update the QCS database each workday. At least monthly, the Contractor shall generate and submit an export file to the Government with schedule update and progress payment request. As required in Contract Clause "Payments", at least one week prior to submittal, the Contractor shall meet with the Government representative to review the planned progress payment data submission for errors and omissions. The Contractor shall make all required corrections prior to Government acceptance of the export file and progress payment request. Payment requests accompanied by incomplete or incorrect data submittals will be returned. The Government will not process progress payments until an acceptable QCS export file is received.

1.10 NOTIFICATION OF NONCOMPLIANCE

The Contracting Officer will notify the Contractor of any detected noncompliance with the requirements of this specification. 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.

-- End of Section --

SECTION 01320A

PROJECT SCHEDULE
04/03

PART 1 GENERAL

1.1 REFERENCES

The publications listed below form a part of the specification to the extent referenced. The publication is referenced in the text by basic designation only.

ER 1-1-11 Progress, Schedules, and Network Analysis Systems (June 1995)

1.2 QUALIFICATIONS - CONTRACTOR SCHEDULING REPRESENTATIVE

The Contractor shall designate a scheduling representative who shall be responsible for the preparation and submittal of the entire NAS project schedule including all items specified below and revisions to the schedule or supplemental completion schedules, as applicable or directed by the Contracting Officer. The scheduling representative shall be approved by the Contracting Officer based on a resume indicating as a minimum, formal training from software vendor or 5 years experience in working with NAS schedules.

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 NAS Project Schedule shall be a composite schedule including the design and construction activities. The scheduling of construction only and design-construction shall be the responsibility of the Contractor. Contractor management personnel shall actively participate in its development. Subcontractors and suppliers 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.

The Government will use the NAS Project Schedule to evaluate the contractor’s progress for timely completion, plan for Quality Assurance verification of the work and evaluate the effects of a proposed modification on the contract duration (critical path activities).

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 these 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 contractor shall prepare the NAS schedule using a computer software system. The system utilized by the Contractor shall be capable of satisfying all requirements of this specification and ER 1-1-11. Manual methods used to produce any required information shall require prior approval by the Contracting Officer. The Contracting Officer intends to use PRIMAVERA P3.

Should the contractor utilize software that is different than that utilized by the Contracting Officer, based on the software utilized by the contractor for the preparation of the NAS schedule, the contractor shall provide a copy of the software and a license to the Administrative Contracting Officer at the Government field office until final payment. The software and license shall be returned to the contractor. The Contractor shall submit a copy of the user's manual outlining the selected CPM computer program's mathematical analysis capabilities, details, functions and operation. The Contractor shall provide to the Government a complete input listing for the selected software.

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). Durations shall be in work 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 60 days. Examples of key procurement activities include, but are not limited to: shop drawing submittals/ approvals/review and fabrication/delivery.

3.3.2.4 Critical Submission 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 0&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 and water balance dates

3.3.2.5 Government Activities

Government and other agency activities that could impact progress shall be included in the schedule. These activities include, but are not limited to: Government approvals, Government review and verification that design submittals are in accordance with the RFP inspections, utility tie-in, Government Furnished Equipment (GFE) and Notice to Proceed (NTP) for phasing requirements. Government approval of shop drawings activities should be shown with the duration at least the minimum allowed by the contract. The contractor’s failure to provide reasonable durations in its schedule for Government activities does not establish or change the Government’s review or approval path periods and the durations established for Government’s activities are subject to approval by the Contracting Officer.

3.3.2.5.1 Work activities to be included on the critical path:

a. CQC mechanical systems tests (each system, indicate the specific systems)

b. CQC electrical systems tests (each system, indicate the specific systems)

c. Government QA mechanical system acceptance/operational tests (each system, indicate specific systems)

d. Government QA electrical system acceptance/operational tests (each system, indicate specific systems)

e. CQC completion inspection of the entire project

f. Contractor works off CQC punchlist

g. Prefinal inspection performed when the facility is completed such that it can be used for it intended function (as determined by the Contracting Officer)

h. Contractor works off prefinal punchlist

i. Final/acceptance inspection of the entire project

j. Contractor works off final punchlist

The Contractor shall allow 45 calendar days total duration prior to current contract completion date for the above stated activities. (See Specification Section 01451 Contractor Quality Control)

Government and other agency activities that could impact progress shall be shown. These activities include, but are not limited to: approvals, 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.

3.3.2.5.2 Contracts with multiple buildings/facilities

The contractor shall prepare a separate detailed NAS schedule for each building/facility indicating its critical path for specified interim completion dates or critical milestone date. The master NAS schedule shall indicate the interface/lag/link between buildings/facilities to maximize/level the labor and other resources. The master schedule critical path must be indicated through the various buildings/ facilities and total duration equal to the contract duration.

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 submittals 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 duration shall extend from NTP to the official contract completion date as awarded (unless approved by Contracting Officer-for early completion).

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. The 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.

The Contractor shall include an activity named “contingency” with no cost and a duration equal to the number of calendar days from the date all the contract work is planned to be completed, to the official contract completion date as awarded.

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.

Design phase. The contractor shall include the following design phase activities in the composite design and construction NAS Project schedule:

a. Prework conference within 5 days after NTP

b. Design Charette (Preliminary Design) within 7 days after NTP

c. Submittal of Preliminary Design (60%)

d. Design review conference for Preliminary Design

e. Submittal of Final Design (95%)

f. Design review conference for Final Design

g. Submittal of Corrected Final Design (100%)

h. Design review conference for Corrected Final Design

i. Design Complete

The duration of each of these activities must be the duration as included in the contract award.

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 Contractor shall provide a bar chart schedule for the first 45 calendar days of the construction phase at the Pre-construction conference.

3.4.1 Preliminary NAS Project Schedule Submission

The Preliminary NAS Project Schedule, defining the Contractor's planned operations for the first 90 calendar days of the construction phase, shall be submitted for approval within 30 days after the start of the construction phase. The approved preliminary schedule shall be used for payment purposes not to exceed 90 calendar days after the start of the construction phase. The preliminary schedule shall be detailed for the first 90 days and depict the remainder of the project in summary format. Preliminary schedule submittals shall be:

a. The preliminary schedule on data disk or CD (2 copies)

b. One hard copy of diagrams

c. Three hared copies of all sorts/reports, including earning curve and manpower plot

3.4.2 Initial NAS Project Schedule Submission

The Initial NAS Project Schedule shall be submitted for approval within 70 calendar days after the start of the construction phase. The schedule shall include detailed activities for the entire project with a reasonable sequence of activities, and shall be at a reasonable level of detail as approved by the Contracting Officer. Initial schedule submittals shall be:

a. The initial schedule on data disk or CD (2 copies)

b. One hard copy of diagrams

c. Three hared copies of all sorts/reports, including earning curve and manpower plot

3.4.3 Periodic/Monthly Updates

The Contractor shall submit monthly schedule updates to the Contracting Officer for approval. Monthly updates shall continue until the contract is accepted by the Contracting Officer. These submissions shall enable the Contracting Officer to evaluate the Contractor's monthly progress. Monthly schedule submittals shall include:

a. The monthly schedule updates on data disk or CD (2 copies)

b. One hard copy of diagrams

c. Three hard copies of all sorts/reports, including earning curve and manpower plot

The contractor’s invoice may be deemed as an improper invoice if it fails to provide monthly updates acceptable to Contracting Officer, this may delay progress payment and may result in an interim unsatisfactory performance rating.

The contractor shall include its requests to revise/adjust the NAS schedule for approval, prior to implementing the revisions into the official schedule.

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

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 CD including the baseline and all updates (cumulative). Monthly data disks must be, 3.5 disks, formatted to hold 1.44 MB of data, under the MS-DOS Version S. 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. Provide the naming convention (limited to 4 characters: i.e. Filename (contract 99-47) = 47BL for Baseline and 4701 for 1st monthly.

3.5.2 Narrative Report

A Narrative Report shall be provided with the preliminary, initial, and each monthly update of the project schedule. This report shall include: a description of activities along the 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.
If the contractor believes that any Government action or inaction has, or potentially, will impact its progress, it will include the specific notice of the fact in this report. This information should include the activity number of the impacted work, nature and duration of the

impact.

The narrative report shall address all modifications and weather activities that were input for the progress and their impact on the contract completion and total float.

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.

3.5.3.1 Project Monthly and Specific Milestone Dates

Milestone dates shall be shown on the diagram for start of project, each monthly milestone for the critical path activity in progress as of the data date, specific milestones such as: foundation complete, structure complete, roof complete, facility dried in, interim completion dates, and other specific contract milestones as required by the Contracting Officer.

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.

Milestone Report. The established monthly and special milestones shall be included in this report. The milestones must be established for each significant project features such as: clearing-grading-demolition, foundation, slab-on-grade, structure-frame, exterior walls-windows, roof-building dry-in, interior walls-mech/elect R/I, above ceiling mech/elect R/I, ceiling, interior wall finish-doors, painting-coverings, floor finish, installation of mech/elect and other equipment-fixtures-casework, plumbing, HVAC system, finish interior mech/elect, testing-commissioning mech/elect systems, onsite utilities, paving-landscaping, prefinal/final inspections—final cleanup and/or other features (as applicable for the project).

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

One hard copy of the network diagram shall be required on the preliminary schedule, initial schedule submission, and updated on each monthly schedule submissions. Monthly updates must indicate actual progress as of the data date. The network diagram shall depict and display the order and interdependence of activities and the sequence in which the work is to be accomplished.

Network diagrams shall show the order and interdependence of project activities and the sequence in which the work is to be accomplished, as planned by the Contractor. The network diagramming procedure which will be used will show how the start of a given activity is dependent on the completion of preceding activities, and how its completion restricts the start of following activities.

Activity durations shall be indicated in “work” days, and revise the assigned calendar.

The contractor may request to change the work days from 5 days/week to 6 or 7 days/week should this action become necessary to regain the schedule due to problems unrelated to the Government actions.

Contractor submissions shall include reasonable activity durations as determined by the Contractor and subcontractors. The durations are to be determined by the Contractor using the planned crew size/composition.

All activities shall be resource loaded with the crew size.

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 Earnings (S-Curves)

Earnings (cash flow) curves shall show scheduled ES/EF and LS/LF curves. The monthly updates must indicate the actual progress plotted as of the data date. The cash flow curves are affected by the assigned cost and duration of the activities. The LS/LF cash flow curve is expected approximate a reasonable % earned for any % of duration completed based on previous contracts which were completed on schedule. Earnings curves showing projected early and late earnings and earnings to date.

3.6 PERIODIC/MONTHLY PROGRESS MEETINGS

There will be two progress meetings.

First Meeting - A progress update meeting will be held on site between the Government and the authorized Contractor representatives on the agreed cut-off date established at the pre-construction conference. During this meeting the Contractor shall indicate his requested percentage completed on each activity on which there was a revised percentage of completion. The Contracting Officer must approve actual progress percentages for each. 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.

The updated progress data will be evaluated at the second progress meeting.

Second Meeting - A progress evaluation meeting shall be held with the Contractor, after the updating of the current progress period work activities percentage is complete, including modifications and adverse weather activities, to evaluate progress and the NAS schedule.

Adjustments to the NAS schedule. Update information must include the Actual Start Dates, Actual Finish Dates, Remaining Durations, and Cost-to-Date. The Contractor must address all the activities on an activity-by-activity basis during the second progress meeting.

The monthly updated NAS schedule is submitted to the Contracting Officer, for approval, with the Contractor's request for progress payment. The evaluation will include a review of actual durations compared to scheduled durations for critical and non-critical activities, progress on critical activities and near critical activities, trends, and current/potential problem areas, cash flow progress, and projected workflow of activities.

The Contractor's narrative report shall be available for review at least three days prior to the second progress meeting.

The monthly NAS schedule update must include an adverse weather activity for work activities impacted greated than 50% of the work shift or impacted by previous adverse weather (carry-over). The adverse weather activities must be added and applied to the NAS schedule after all of the modifications finalized within the month have been applied to the NAS schedule in the sequential order of finalization during the progress month.

The time extension for usually severe weather (in calendar days) must result from the agreement reached, or as directed by the Contracting Officer, following the joint Contractor and Contracting Officer monthly weather evaluation held to review the CQC and QA daily reports, not later than 7 calendar days after the end of the progress month. The Contracting Officer will confirm the results of this evaluation to the Contractor in writing monthly.

The official contract completion date must be revised on the NAS schedule monthly (if applicable) based on the Contracting Officer's letter confirming the results of the monthly evaluation, to include the time extension in calendars of unusually severe weather (actual adverse weather impact less the specified anticipated adverse weather impact for the specific month). A new work activity shall be entered into the NAS schedule adjacent to the critical path activity affected by the unusually severe weather for each month based on the agreed number of calendar days for each month.

A contract modification (SF 30) for a time extension to the official contract completion date due to unusually severe weather (if any) will be completed quarterly by the Contracting Officer based on the monthly evaluations.

3.6.1 Meeting attendance

The Contractor's Project Manager/Superintendent, Chief Quality Control, and Contractor's Scheduler shall attend the second monthly progress meeting. The onsite Government representatives shall be advised of the meetings location, time, and date.

3.6.2 Update submission following progress meeting

A complete update of the entire NAS project progress schedule containing all approved revisions, and adjustments, based on the second

monthly progress meeting, shall be submitted not later than 6 working days after the second monthly progress meeting.

3.6.3 Progress Meeting contents

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 correcting 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 a time 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 shall be based on a subnet/fragnet of work activities, revised activity logic, duration, and costs (updated to the specific date that the delay occurred) is required for any time extension approvals. 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. Actual delays that are found to be caused by the Contractor's own actions, which result in the extension of the schedule, shall not be a cause for a time extension to the contract

completion date.

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 for time extension requests

The Contractor shall submit a comprehensive time analysis and justification for each "Request for Proposal" for a change in the contract, based upon the most recent approved schedule update at the time that the RFP is issued. Such a time analysis and justification shall be in accordance with the requirements of other appropriate Contract Clauses and shall include, as a minimum:

a. A subnet/fragnet of activities indicating all new change activities and the affect on existing schedule activities.

b. A brief explanation of the causes of the change.

c. An analysis of the overall impact the subnet/fragnet has when applied to the current-updated approved NAS schedule.

d. Activities impacted in each justification for change shall be identified by a unique activity code contained in the required data file.

3.7.3 Modifications to the contract (without agreement on time)

Upon receipt of the signed SF 30 for unpriced and unilateral modifications (or bilateral modifications with agreement on costs without an agreement on time, the Contractor shall submit proposed schedule revisions (in the form of a proposed subnet/fragnet) to the Contracting Officer for approval within 14 days of the SF30 being issued. The proposed (subnet/fragnet) revisions to the schedule shall be approved by the Contracting Officer prior to application of those changes within the project schedule.

Should the Contractor fail or refuse to submit the provisions, the Contracting Officer may furnish to the Contractor suggested (subnet/fragnet) revisions to the project schedule. Upon receipt, the Contractor shall include those revisions in the project schedule. If the Contractor has any objections to the revisions furnished by the Contracting Officer, the Contractor shall advise the Contracting Officer within 14 days 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 on 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 shall be deemed to have concurred

with the Contracting Officer's proposed revisions. The proposed revisions will be the basis for an "equitable adjustment" for performance of the work.

Bilateral modifications shall be entered into the NAS schedule, utilizing the subnet/fragnet as agreed during negotiations, immediately after receipt of signed SF30. Entries to the schedule must be approved by Contracting Officer.

All modification subnets/fragnets shall be applied to the NAS schedule immediately in the sequence in which they were finalized (received signed SF30). The modification with time extension shall result in new work activities entered adjacent to the critical path work activity affected by the modification.

Weather time extensions must be included monthly upon receipt of the written results of the monthly weather evaluation from the Contracting Officer.

3.7.4 Ccontractor falls behind the approved project schedule

If the Contractor falls behind his approved schedule (behind the LS/LF cash flow curve or more than 15 work days of negative float), or performs the work in such a manner that the network diagram and mathematical analysis no longer indicate reasonable logic and duration for completion of the work by the current contract completion date, as determined by the Contracting Officer, the Contractor shall promptly provide a supplemental NAS recovery or completion schedule for completion by the current completion date, by reducing the remaining durations, revising logic, or adjusting resources onsite (in addition to the original approved NAS schedule), as approved by the Contracting Officer. The supplemental schedule shall be resource loaded with crew size and productivity for each remaining activity, and indicating overtime, weekend work, and/or double shifts needed to regain the schedule, in accordance with FAR 52.236-15, without additional cost to the Government.

The supplement schedule shall not replace the original approved schedule as the official contract schedule. The original approved schedule shall be updated monthly (in addition to the supplemental schedule) and monitored by the Contractor and the Contracting Officer to determine the effect of the supplemental schedule progress has on the contract progress to regain the rate of progress for timely completion.

The Contractor shall not artificially improve his progress by revising the schedule logic restraints or shortening future work activity durations. The Contractor may improve his progress by performing sequential work activities concurrently or by performing activities more quickly than planned, but such improvements shall be indicated on the supplement schedule and shall not be recorded on the official schedule until they have actually been achieved by the contractor. The additional resources required to improve the progress must be evident on the work site.

Failure of the Contractor to perform work and maintain progress in accordance with the supplemental recovery or completion schedule may result in an interim and final unsatisfactory performance rating and/or

may result in corrective action by the Contracting Officer in accordance with FAR 52.236-15.

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

1.1 SUBMITTAL CLASSIFICATION

Submittals are identified with submittal description (SD) numbers and are classified as follows:

1.1.1 Government Approved

Governmental approval is required for extensions of design, critical materials, deviations, equipment whose compatibility with the entire system must be checked, and other items as designated by the Contracting Officer. Within the terms of the Contract Clause entitled "Specifications and Drawings for Construction," they are considered to be "shop drawings."

These items are tagged GA/AE or GA/RE in the submittal register.

The designer of record approves GA/AE review materials. This is usually an architectural-engineering design firm hired by the construction contractor. The Corps of Engineers construction resident engineer approves GA/RE review materials. This is usually a group of engineers who work for the installation’s resident engineer.

1.1.2 For Information Only (FIO)

All submittals not requiring Government approval will be for information only. These items are tagged FIO in the submittal register. They are not considered to be "shop drawings" within the terms of the Contract Clause referred to above.

1.2 APPROVED SUBMITTALS

The Contracting Officer's approval of submittals shall not be construed as a complete check, but will indicate only that the general method of construction, materials, detailing and other information are satisfactory.

Approval will not relieve the Contractor of the responsibility for any error, which may exist, as the Contractor under the CQC requirements of this contract is responsible for dimensions, the design of adequate connections and details, and the satisfactory construction of all work.

After submittals have been approved by the Contracting Officer, no re-submittal for the purpose of substituting materials or equipment will be considered unless accompanied by an explanation of why a substitution is necessary.

1.3 DISAPPROVED SUBMITTALS

The Contractor shall make all corrections required by the Contracting Officer and promptly furnish a corrected submittal in the form and number of copies specified for the initial submittal.

If the Contractor considers any correction indicated on the submittals to constitute a change to the contract, a notice in accordance with the Contract Clause "Changes" shall be given promptly to the Contracting Officer.

1.4 WITHHOLDING OF PAYMENT

Payment for materials incorporated in the work will not be made if required approvals have not been obtained.

2.1 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 (GA and FIO) shall be checked and approved by the Contractor's Quality Control (CQC) representative and each item shall be stamped, signed, and dated by the CQC representative 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.

2.2 SUBMITTAL REGISTER (ENG FORM 4288)

At the end of this section is one set of ENG Form 4288 listing items of equipment and materials for which submittals are required by the specifications; this list may not be all-inclusive and additional submittals may be required.

The Contractor will also be given the submittal register as a diskette containing the computerized ENG Form 4288 and instructions on the use of the diskette. Columns "d" through "r" have been completed by the Government; the Contractor shall complete columns "a" and "s" through "u" and submit the forms (hard copy plus associated electronic file) to the Contracting Officer for approval within 30 calendar days after Notice to Proceed.

The Contractor shall keep this diskette up-to-date and shall submit it to the Government together with the monthly payment request. The approved

submittal register will become the scheduling document and will be used to control submittals throughout the life of the contract.

The submittal register and the progress schedules shall be coordinated.

2.3 SCHEDULING

Submittals covering component items forming a system or items that are interrelated shall be scheduled to be coordinated and submitted concurrently.

All submittals for all interior finishes (wall, floor, ceiling), all base, casework, toilet partitions, window treatments and all other similar items requiring coordinated color selection shall be submitted concurrently. Certifications to be submitted with the pertinent drawings shall be so scheduled.

The contractor shall allow 30 calendar days, exclusive of mailing time, and this period shown on the submittal register and NAS schedule for submittals requiring Government review and approval.

No delay damages or time extensions will be allowed for time lost in late submittals or resubmittals.

An additional 10 calendar days shall be allowed and shown on the register and NAS schedule for the review and approval of submittals for food service equipment and refrigeration and HVAC control systems.

2.4 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 for information only submittals in accordance with the instructions on the reverse side of the form. These forms will be furnished to the Contractor. 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.

2.5 SUBMITTAL PROCEDURE

Submittals shall be made as follows:

2.5.1 Procedures

The Contractor shall be responsible for the scheduling and control of all submittals.

The Contractor is responsible for confirming that the submittal register includes all submittals required by the contract documents.

In addition to those items listed on ENG Form 4288, the Contractor will furnish submittals for any deviation from the plans or specifications. The scheduled need dates must be recorded on the document for each item for

control purposes and critical items must be tied to the contractor's approved schedule where applicable.

The Contractor will submit to the Contracting Officer for approval five (5) copies of all G/AE or G/RE level and for all FIO level submittals. This number of copies of submittals specified in this portion of the contract shall be as specified in lieu of the number as specified by FAR 52.236-21.

For those contracts requiring project schedule (Network Analysis System (NAS)), the Contractor shall schedule on the NAS critical or key items of material or equipment which the procurement activities will, or have the potential to, significantly impact project critical path and completion. The list of key or critical items of material or equipment shall be submittal approved by the Contracting Officer.

Where ENG Form 4025 must be submitted prior to approval of the Construction Progress Schedule, the Contractor shall submit an initial annotated ENG Form 4288 upon which dates for submittal, approval and delivery of procurement items shall be included for the first 60 days of the work.

Upon approval of the Construction Progress Schedule, or no later than 60 days after Notice to Proceed, the Contractor shall submit final annotated copies of ENG Form 4288-Submittal Register. Dates shall be coordinated with the approved Construction Progress Schedule to logically interface with the sequence of construction. Critical item numbers will be shown on the listing if NAS is required.

Furnishing the schedule shall not be interpreted as relieving the Contractor of his obligation to comply with all the specification requirements for the items on the schedule.

The Contractor's Quality Control representative shall review the listing at least every 30 days and take appropriate action to maintain an effective system.

The Contractor shall furnish a list each 30 days of all submittals on which either Government's or Contractor's action is past due. This monthly list of delayed items shall also be annotated by the Contractor to show what corrective action he is taking with regard to slippages in submittal schedule that are attributable to actions by him, his subcontractors, or suppliers.

The Contractor shall provide updated submittal register data, electronically or on floppy disk, to the contracting Officer, monthly, indicating the current status and codes of all submittals in order update the master submittal register maintained by the Contracting Officer and to assure that the Contractor’s schedule is being maintained. He shall also furnish revised due dates in those cases when the original submittal schedule is no longer realistic.

The Contractor shall certify that each submittal is correct and in strict conformance with the contract drawings and specifications. All submittals not subject to the approval of the Contracting Officer will be submitted for Information purposes only (FIO).

No Corps of Engineers action will be required for FIO submittals prior to incorporating these items into the work, but the submittal shall be

furnished to the Area/Resident Engineer not less than 2 weeks prior to procurement of Contractor certified material, equipment, etc.

These Contractor approved submittals (FIO), will be used to verify that material received and used in the job is the same as that described and approved and will be used as record copies.

All samples of materials submitted as required by these specifications shall be properly identified and labeled for ready identification, and upon being certified by the Contractor and reviewed by the Contracting Officer, shall be stored at the site of the work for job site use until all work has been completed and accepted by the Contracting Officer.

Delegation of this approval authority to Contractor Quality Control does not relieve the Contractor from the obligation to conform to any contract requirement and will not prevent the Contracting Officer from requiring removal and replacement of construction not in contract conformance; nor does it relieve the Contractor from the requirement to furnish "samples" for testing by the Government Laboratory or check testing by the Government in those instances where the technical specifications so prescribe.

Contractor certified drawings will be subject to quality assurance review by the Government at any time during the duration of the contract.

No adjustment for time or money will be allowed for corrections required as a result of noncompliance with plans and specifications.

Submittals Requiring Government Approval (G/AE Level or G/RE Level). Where the review authority is designated to the Government, the Contractor is required to sign the certification on ENG Form 4025 in the box beside the remarks block in Section I. The Government will code the items in block h and sign the approval action block in Section II as the approving authority.

Operating and Maintenance Instructions. Six (6) complete sets of instructions containing the manufacturer's operating and maintenance instructions for each piece of equipment shall be furnished. Each set shall be permanently bound and shall have a hard cover.

One (1) complete set shall be furnished at the time test procedures are submitted.

Remaining sets shall be furnished to the Contracting Officer on the date of final/acceptance inspection of the project.

The following identification shall be inscribed on the covers: The words "OPERATING AND MAINTENANCE INSTRUCTIONS," name and location of the facility, name of the Contractor, and contract number. Flysheets shall be placed before instructions covering each subject. Instruction sheets shall be approximately 8-1/2 by 11 inches, with large sheets of drawings folded in. Instructions shall include but are not limited to:

(1) System layout showing piping, valves and controls;

(2) Approved wiring and control diagrams;

(3) A control sequence describing startup, operation and shutdown;

(4) Operating and maintenance instructions for each piece of equipment, including lubrication instructions and troubleshooting guide; and

(5) Manufacturer's bulletins, cuts and descriptive data; parts lists and recommended parts.

2.5.2 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.

The Government reserves the right to rescind inadvertent approval of submittals containing unnoted deviations.

The contractor is not authorized to take action on an approved deviation until the deviation is included in a final contract modification.

2.6 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."

2.7 GOVERNMENT 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 (3) copies of the GA submittals will be retained by the Contracting Officer and two (2) copies of the submittal will be returned to the Contractor-within the time specified-with action code.

Submittals requiring re-submittal to the Government are due immediately upon receipt by the contractor to avoid contractor delay to the project.

2.8 INFORMATION ONLY SUBMITTALS

Three (3) copies of the submittal will be retained by the Contracting Officer and two (2) copies returned to the contractor.

Not all FIO submittals will be reviewed by the Government. This Government review will be a quality assurance review only of a sample of the entire number of submittals.

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.

FIO submittals noted for re-submittal to the Government for clarification or additional data are due immediately upon receipt by the contractor.

2.9 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 submittal data and/or attached sheets(s).

SIGNATURE: _____

TITLE: _____

DATE: _____

--End of Section--

SUBMITTAL REGISTER

CONTRACT NO.

TITLE AND LOCATION
Physical Fitness Center, Hunter Army Airfield, GA

CONTRACTOR

ACTIVITY NO	TRANSMITTAL NO	SPEC SECT	DESCRIPTION ITEM SUBMITTED	PARAGRAPH #	CLASSIFICATION	GOVT OR A/E REVWR	CONTRACTOR: SCHEDULE DATES			CONTRACTOR ACTION			APPROVING AUTHORITY					MAILED TO CONTR/ DATE RCD FRM APPR AUTH	REMARKS
							SUBMIT	APPROVAL NEEDED BY	MATERIAL NEEDED BY	ACTION CODE	DATE OF ACTION	DATE FWD TO APPR AUTH/ DATE RCD FROM CONTR	DATE FWD TO OTHER REVIEWER	DATE RCD FROM OTH REVIEWER	ACTION CODE	DATE OF ACTION		
(a)	(b)	(c)	(d)	(e)	(f)		(g)	(h)	(i)	(j)	(k)	(l)	(m)	(n)	(o)	(p)	(q)	(r)
		01525N	SD-07 Certificates															
			Accident Prevention Plan (APP)	1.4.4.1	G													
			Activity Hazard Analysis (AHA)	1.4.4.2	G													
			Site Safety and Health Plan		G													
			SD-11 Closeout Submittals															
			Daily Confined Space Entry	3.8														
			Permit															
			Reports	1.16														
			Crane Reports	1.4.5.1														
			Crane Critical Lift Plan	1.4.5.2														
			Certificate of Compliance	1.4.5.3														
			Noise Survey Result Report															
		01785	SD-01 Preconstruction Submittals															
			Continuous Commissioning Plan															
			(CCP); G, ED															
			Maintenance Management															
			personnel identification list with															
			credential/experience/resume															
			Comprehensive Facility															
			Management Plan; G, ED															
			SD-03 Product Data															
			Monthly report on records and															
			service work orders															
			SD-05 Design Data															

SUBMITTAL REGISTER

CONTRACT NO.

TITLE AND LOCATION
Physical Fitness Center, Hunter Army Airfield, GA

CONTRACTOR

ACTIVITY NO	TRANSMITTAL NO	SPEC SECT	DESCRIPTION ITEM SUBMITTED	PARAGRAPH #	CLASSIFICATION	GOVT OR A/E REVWR	CONTRACTOR: SCHEDULE DATES			CONTRACTOR ACTION			APPROVING AUTHORITY					MAILED TO CONTR/ DATE RCD FRM APPR AUTH	REMARKS
							SUBMIT	APPROVAL NEEDED BY	MATERIAL NEEDED BY	ACTION CODE	DATE OF ACTION	DATE FWD TO APPR AUTH/ DATE RCD FROM CONTR	DATE FWD TO OTHER REVIEWER	DATE RCD FROM OTH REVIEWER	ACTION CODE	DATE OF ACTION		
(a)	(b)	(c)	(d)	(e)	(f)		(g)	(h)	(i)	(j)	(k)	(l)	(m)	(n)	(o)	(p)	(q)	(r)
		01785	Contractor's intended															
			Computerized Maintenance															
			Management System (CMMS)															
			software															
			SD-10 Operation and Maintenance															
			Data															
			Final Systems Operation and															
			Maintenance Manuals (SOMM)															
		02091	SD-01 Preconstruction Submittals															
			Spill Prevention and Response		G	DO												
			Plan															
			SD-07 Certificates															
			Certification of Approved		G	DO												
			Recycling or Transfer Facility															
			SD-11 Closeout Submittals															
			PCB Articles and Hazardous		G	DO												
			Waste Lamps Disposition Report															
			Receipt of Materials at Transfer or		G	DO												
			Recycling Facility or TSDF															
		02115A	SD-03 Product Data															
			Work Plan	1.6.2	G	ED												
			Qualifications	1.4	G	RE												
			Salvage Rights	3.12.4														
			SD-06 Test Reports															
			Backfill Material	2.1	G													
			RE															

SUBMITTAL REGISTER

CONTRACT NO.

TITLE AND LOCATION
Physical Fitness Center, Hunter Army Airfield, GA

CONTRACTOR

ACTIVITY NO	TRANSMITTAL NO	SPEC SECT	DESCRIPTION ITEM SUBMITTED	PARAGRAPH #	CLASSIFICATION	GOVT OR A/E REVWR	CONTRACTOR: SCHEDULE DATES			CONTRACTOR ACTION			APPROVING AUTHORITY					MAILED TO CONTR/ DATE RCD FRM APPR AUTH	REMARKS
							SUBMIT	APPROVAL NEEDED BY	MATERIAL NEEDED BY	ACTION CODE	DATE OF ACTION	DATE FWD TO APPR AUTH/ DATE RCD FROM CONTR	DATE FWD TO OTHER REVIEWER	DATE RCD FROM OTH REVIEWER	ACTION CODE	DATE OF ACTION		
(a)	(b)	(c)	(d)	(e)	(f)		(g)	(h)	(i)	(j)	(k)	(l)	(m)	(n)	(o)	(p)	(q)	(r)
		02115A	Tank Contents Verification	3.2	G	RE												
			Contaminated Water Disposal	3.5.2	G	RE												
			Soil Examination, Testing, and Analysis	3.10	G	RE												
			Backfilling	3.11	G	RE												
			Tank Closure Report	3.14														

SECTION 01351A

SAFETY HEALTH AND EMERGENCY RESPONSE (HTRW/UST)

1.1 GENERAL

REFERENCES

The publications listed below form a part of this specification to the extent referenced. The publications are referred to the text by basic designation only.

AMERICAN CONFERENCE OF GOVERNMENTAL INDUSTRIAL HYGIENISTS (ACGIH)

ACGIH Limit Values	(1999) Threshold Limit Values for Chemical Substances and Physical Agents Biological Exposure Indices

AMERICAN NATIONAL STANDARDS INSTITUTE (ANSI)

ANSI Z358.1	(1998) Emergency Eyewash and Shower Equipment

AMERICAN PETROLEUM INSTITUTE (API)

API Pub 2219	(1999) Safe Operation of Vacuum Trucks in Petroleum Service, 2nd Edition
API RP 1604	(1996) Closure of Underground Petroleum Storage Tanks
API Std 2015	(1994) Safe Entry and Cleaning of Petroleum Storage Tanks

US NATIONAL ARCHIVES AND RECORDS ADMINISTRATION (NARA)

10 CFR 20	Standards for Protection Against Radiation
29 CFR 1904	Recording and Reporting Occupational Injuries and Illnesses
29 CFR 1910	Occupational Safety and Health Standards
29 CFR 1926	Safety and Health Regulations for Construction
29 CFR 171	General Information, Regulations, and Definitions

29 CFR 172	Hazardous Materials Table, Special Provisions, Hazardous Materials Communications Emergency Response Information, and Training Requirements

US ARMY CORPS OF ENGINEERS

USACE EM 385-1-1	(1996) US Army Corps of Engineers Safety and Health Requirements Manual
ER 385-1-92	(2000) Safety and Occupational Document Requirements for Hazardous, Toxic and Radioactive Waste (HTRW) Activities

NATIONAL INSTITUTE FOR OCCUPATIONAL SAFETY AND HEALTH (NIOSH)

NIOSH 85-115	(1985) Occupational Safety and Health Guidance Manual for Hazardous Waste Site Activities

1.2 DESCRIPTION OF WORK

This section requires contractors to implement practices and procedures for working safely and in compliance with OSHA and USACE regulations while performing cleanup activities on uncontrolled hazardous waste sites.

1.3 SAFETY AND HEALTH PROGRAM

The Contractor shall develop and implement a Safety and Health Program (SHP) which incorporates requirements in OSHA standards 29 CFR 1910, Section .120(b) and 29 CFR 1926, Section .65(b), and Section 01.A.07 of EM 385-1-1. The Safety and Health Program shall address the items in paragraph (b) of 29 CFR 1910.1201, 9 CFR 1926.65, and Appendix A of EM 385-1-1. These items are: Signature Sheet; Background Information; Statement of Safety and Health Policy; Responsibilities and Lines of Authority; Subcontractors and Suppliers; Training; Safety and Health Inspections; Safety and Health Expectations, Incentives Programs and Compliance; Accident Reporting; Medical Surveillance/Medical Support; Personal Protective Equipment; Standard Operating Procedures; and Corporate Plans Supporting Occupational Safety and Health.

1.4 SITE SAFETY AND HEALTH PLAN

The Contractor shall develop and implement a Site Safety and Health Plan (SSHP) meeting the requirements of Section 01.A.1O of EM 385-1-1 and 29 CFR 1910.1201 and 29 CFR 1926.65(h)(4). At a minimum, the SSHP shall address each element in Appendix C of ER 385-1-92 and shall incorporate an Activity Hazard Analysis meeting the requirements of 0l.A.l and Figure 1-1 of EM 385-1-1.

a. The SSHP shall be considered a living document and shall be updated as occupational safety and health conditions change during project execution and improved as occupational safety and health lessons are learned during the course of the project.

b. SSHP elements in Appendix C of ER 385-1-92 are:

1. Site Description and Contamination Characterization;
2. Activity Hazard Analysis;
3. Health and Safety Staff Organization, Qualifications, and Responsibilities for the Project;
4. Health and Safety Training Requirements for the Project;
5. Personal Protective Equipment;
6. Medical Surveillance Requirements for the Project;
7. Radiation Dosimetry, if applicable;
8. Exposure Monitoring/Air Sampling;
9. Heat Stress/Cold Stress Prevention;
10. Applicable elements of the Safety and Health Program edited to meet site specific conditions and site specific standard operating safety procedures, engineering controls, and work practices used to reduce exposure to contaminants and to prevent accidents;
11. Site Control Measures;
12. Personal Hygiene and Decontamination;
13. Equipment Decontamination;
14. Emergency Equipment and First Aid Requirements;
15. Emergency Reports and Contingency Procedures;
16. Accident Prevention;
17. Logs, Reports, and Record keeping.

1.4.1 Acceptance and Modifications

Prior to submittal, the SSHP shall be signed and dated by the Safety and Health Manager and the Site Superintendent. The SSHP shall be submitted for review 10 days after the Preconstruction Conference.

Deficiencies in the SSHP will be discussed at the mutual understanding safety conference, and the SSHP shall be revised to correct the deficiencies and resubmitted for acceptance.

Onsite work shall not begin until the SSHP has been accepted. A copy of the written SSHP shall be maintained onsite.

Changes and modifications to the accepted SSHP sha11 be made with the knowledge and concurrence of the Safety and Health Manager, the Site Superintendent, and the Contracting Officer.

Should any unforeseen hazard become evident during the performance of the work, the Site Safety and Health Officer (SSHO) shall bring such hazard to the attention of the Safety and Health Manager, the Site Superintendent, and the Contracting Officer, both verbally and in writing, for resolution as soon as possible. In the interim, necessary action shall be taken to establish and maintain safe working conditions in order to safeguard onsite personnel, visitors, the public, and the environment.

1.4.2 Availability

The SSHP shall be made available in accordance with 29 CFR 1910, Section .120(b)(1)(v), and 29 CFR 1926, Section .65(b)(l)(v).

1.5 STAFF ORGANIZATION, QUALIFICATIONS, AND RESPONSIBILITIES

1.5.1 Safety and Health Manager

The Safety and Health Manager shall be a safety professional certified by the Board of Certified Safety Professionals. The Safety and Health Manager shall have the following additional qualifications:

a. A minimum of 3 years' experience in developing and implementing safety and health programs at hazardous waste sites.

b. Documented experience in supervising professional and technician level personnel.

c. Working knowledge of state and Federal occupational safety and health regulations.

The Safety and Health Manager shall be responsible to do the following:

a. Develop, implement, oversee, and enforce the SSHP.

b. Sign and date the SSHP prior to submittal.

c. Conduct initial site-specific training.

d. Be present on site during the first 3 days of remedial activities and at the startup of each new major phase.

e. Visit the site at least one per week for the duration of activities, to audit the effectiveness of the SSHP.

f. Be available for emergencies.

g. Provide onsite consultation to ensure the SSHP is fully implemented.

h. Coordinate any modification to the SSHP with the Site Superintendent, the SSHO, and the Contracting Officer.

i. Review accident reports and results of daily inspections.

j. Serve as a member of the Contractor’s Quality Control staff.

k. Conduct accident investigations and prepare accident reports.

l. Review results of daily quality control inspections and document safety and health findings into the Daily Safety Inspection Log.

m. In coordination with site management and the Safety and Health Manager, recommend corrective actions for identified deficiencies and oversee those corrective actions.

1.6 PERSONS CERTIFIED IN FIRST AID AND CPR

At least two persons who are currently certified in first aid and CPR by the American Red Cross or other approved agency shall be onsite at all times during site operations. They shall be trained in universal precautions and the use of PPE as described in the Blood-borne Pathogens Standard of 29 CFR 1910, Section .1030. These persons may perform other duties but shall be immediately available to render first aid when needed.

1.7 HOT WORK

Hot work will not be permitted on or within tanks except as outlined herein.

Prior to conducting hot work, a hot work permit shall be prepared and submitted. An example format for a hot work permit shall be included in the SSHP. The permit shall describe compliance with the following procedures.

a. After the tank interior has been decontaminated, hot work may be conducted only when the tank is inverted, and to the extent necessary to begin dismantling the tank.

b. After decontamination of the tank interior, hot work shall not be performed unless monitoring indicates atmospheres within and immediately surrounding the tank is less than 8% oxygen inside the tank and less than 10% of the LFL outside the tank. Continuous monitoring shall continue until the hot work is completed.

c. The hot work prohibition includes welding, cutting, grinding, sawing, or other similar operations, which could be expected to potentially generate combustion-producing temperatures or sparks, or which could produce potentially hazardous fumes or vapors.

d. An individual at each hot work site shall be designated as a fire watch. This person's sole responsibility sha11 be to monitor the hot work and have immediate access to the fire extinguisher located at each hot work site.

e. A new permit shall be obtained at the start of each work shift during which hot work will be conducted.

PART 2 PRODUCTS (Not Applicable)

PART 3 EXECUTION (Not Applicable)

-- End of Section --

Section 01354

EROSION AND SEDIMENTATION CONTROL

PART 1

1.1 SUMMARY

The purpose of this narrative is to outline the requirements, enforcement, and violations for all Erosion and Sediment Control plans (E&S), Stormwater Management Notices of Intent (NOI), and Notices of Termination (NOT) to be submitted for all construction projects on Fort Stewart/Hunter Army Airfield.

1.1.1 Erosion and Sediment Control plans (E&S)

E&S must be submitted to the Directorate of Public Works (DPW) upon awarding of the contract, and they must be reviewed by USDA-NRCS. E&S must be approved before land-disturbance of any kind can proceed. (See Exhibit 1)

1.1.2 Notice of Intent (NOI)

The Contractor must send the NOI form, with the land-disturbance permit from USDA-NRCS, to Georgia EPD:

Coastal District, Brunswick Office
Georgia Environmental Protection Division
One Conservation Way
Brunswick, GA 31520-8687
(912) 264-7284

The NOI must be submitted 14 days in advance of any land disturbing activities. A land-disturbance permit requires three (3) signatures: a) USDA-NRCS, b) DPW representative, and c) Contractor responsible for the work. NOI is required for Stormwater management. (See Exhibit 2)

Copies of the NOI should be sent to:

DPW
Chief, Engineer Plans and Services Division (Mr. Vic Maudlen)
1117 Frank Cochran Drive, Building 1114
Fort Stewart, GA 31314-4940

DPW
Environmental Branch (Ms. Tressa M. Rutland)
1550 Frank Cochran Drive, Building 1137
Fort Stewart, GA 31314-4927

DPW
Engineer Plans and Services Division (USDA-NRCS/James Freeman)
1117 Frank Cochran Drive, Building 1114
Fort Stewart, GA 31314-4940

1.1.3 Notice of Termination (NOT)

The NOT must be submitted to, Georgia EPD:

Coastal District, Brunswick Office
Georgia Environmental Protection Division

One Conservation Way
Brunswick, GA 31520-8687
(912) 264-7284

The Contractor should submit the NOT upon the site being 70% stabilized. Concurrence is needed from the Contracting Officer, USDA-NRCS, and DPW Environmental. (See Exhibit 3)

Copies of the NOT should be sent to the same people/addresses identified for the NOI above.

1.1.4 Time line for documentation

E&S plan submitted to ER&S, DPW.
E&S plan reviewed NRCS.
Upon E&S plan approval, Contractor notified by DPW.
Contractor to send NOI to GA EPD 14 days prior to start date.

1.2 REFERENCES

The publication listed below form a part of this specification to the extent referenced. The publication is referred to in the text by basic designation only.

Manual for Erosion and Sediment Control of Georgia, 5th Edition - http://www.gaswcc.org/

Environmental Protection Agency - http://www.state.ga.us/dnr/environ/

PART 2

2.1 MINIMUM REQUIREMENTS FOR EROSION AND SEDIMENTATION CONTROL USING BEST MANAGEMENT PRACTICES

2.1.1 General Provisions

Excessive soil erosion and resulting sedimentation can take place during land-disturbing activities. Therefore, plans for those land-disturbing activities, which are not excluded by this ordinance, shall contain provisions for application of soil erosion and sedimentation control measures and practices. The provisions shall be incorporated into the erosion and sedimentation control plans. Soil erosion and sedimentation control measures and practices shall conform to the minimum requirements of Section 2.2 of this ordinance. The application of measures and practices shall apply to all features of the site, including street and utility installations, drainage facilities and other temporary and permanent improvements. Measures shall be installed to prevent or control erosion and sedimentation pollution during all stages of any land-disturbing activity.

2.2 MINIMUM REQUIREMENTS, BEST MANAGEMENT PRACTICES (BMP's)

2.2.1 Best management practices, as set forth in Section 2.2 of this ordinance shall be required for all land-disturbing activities. Proper design, installation, and maintenance of best management practices shall constitute a complete defense to any action by the Director or to any other allegation of noncompliance with paragraph (2) of this subsection or any substantially similar terms contained in a permit for the discharge of storm water issued pursuant to subsection (f) of Code Section 12-5- 30, the "Georgia Water Quality Control Act". As used in this subsection the terms "proper design" and "properly designed" mean designed to control soil

erosion and sedimentation for all rainfall events up to and including a 25-year, 24-hour rainfall event.

2.2.2 Failure to properly design, install, or maintain best management practices shall constitute a violation of any land-disturbing permit issued by Fort Stewart/Hunter Army Airfield DPW.

2.2.3 Fort Stewart/Hunter Army Airfield DPW may require, in accordance with regulations adopted by the Board, reasonable and prudent monitoring of the turbidity level of receiving waters into which discharges from land disturbing activities occur.

2.2.4 The rules and regulations, ordinances, or resolutions adopted pursuant to this chapter for the purpose of governing land-disturbing activities shall require, as a minimum, best management practices, including sound conservation and engineering practices to prevent and minimize erosion and resultant sedimentation, which are consistent with, and no less stringent than, those practices contained in the Manual for Erosion and Sediment Control in Georgia published by the Georgia Soil and Water Conservation Commission as of January 1 of the year in which the land-disturbing activity was permitted, as well as the following:

2.2.4.1 Stripping of vegetation, re-grading and other development activities shall be conducted in a manner so as to minimize erosion.

2.2.4.2 Cut-and-fill operations must be kept to a minimum, as defined by Contract.

2.2.4.3 Development plans must conform to topography and soil type, so as to create the lowest practical erosion potential.

2.2.4.4 Whenever feasible, natural vegetation shall be retained, protected, and supplemented, as called for by the design.

2.2.4.5 The disturbed area and the duration of exposure to erosive elements shall be kept to a practicable minimum.

2.2.4.6 Disturbed soil shall be stabilized as quickly as practicable.

2.2.4.7 Temporary vegetation or mulching shall be employed to protect exposed critical areas during development.

2.2.4.8 Permanent vegetation and structural erosion control practices shall be installed as soon as practicable.

2.2.4.9 To the extent necessary, sediment in run-off water must be trapped by the use of debris basins, sediment basins, silt traps, or similar measures until the disturbed area is stabilized. As used in this paragraph, a disturbed area is stabilized when it is brought to a condition of continuous compliance with the requirements of O.C.G.A. 12-7-1 et. seq.

2.2.4.10 Adequate provisions must be provided to minimize damage from surface water to the cut face of excavations or the sloping of fills.

2.2.4.11 Cuts and fills may not endanger adjoining property.

2.2.4.12 Fills may not encroach upon natural watercourses or constructed channels in a manner so as to adversely affect other property owners.

2.2.4.13 Grading equipment must cross flowing streams by means of bridges or culverts except when such methods are not feasible, provided, in any

case, that such crossings are kept to a minimum.

2.2.4.14 Land-disturbing activity plans for erosion and sedimentation control shall include provisions for treatment or control of any source of sediments and adequate sedimentation control facilities to retain sediments on site or preclude sedimentation of adjacent waters beyond the levels specified in Section IV B. 2. of this ordinance.

2.2.4.15 A 25-foot buffer along the banks of all state waters, as measured horizontally from the point where vegetation has been wrested by normal stream flow or wave action, except where the Director determines to allow a variance that is at least as protective of natural resources and the environment, where otherwise allowed by the Director pursuant to O.C.G.A. 12-2-8, or where a drainage structure or a roadway drainage structure must be constructed, provided that adequate erosion control measures are incorporated in the project plans and specifications, and are implemented; provided, however, the buffers of at least 25 feet established pursuant to part 6 of Article 5, Chapter 5 of Title 12, the "Georgia Water Quality Control Act", shall remain in force unless a variance is granted by the Director as provided in this paragraph. The following requirements shall apply to any such buffer:

a. No land-disturbing activities shall be conducted within a buffer and a buffer shall remain in its natural, undisturbed state of vegetation until all land-disturbing activities on the construction site are completed.
b. Once the final stabilization of the site is achieved, a buffer may be thinned or trimmed of vegetation as long as a protective vegetative cover remains to protect water quality and aquatic habitat and a natural canopy is left in sufficient quantity to keep shade on the stream bed; provided, however, that any person constructing a single-family residence, when such residence is constructed by or under contract with the owner for his or her own occupancy, may thin or trim vegetation in a buffer at any time as long as protective vegetative cover remains to protect water quality and aquatic habitat and a natural canopy is left in sufficient quantity to keep shade on the stream bed.

2.2.4.16 The fact that a land-disturbing activity for which a permit has been issued results in injury to the property of another shall neither constitute proof of nor create a presumption of a violation of the standards provided for in this ordinance or the terms of the permit.

PART 3

3.1 APPLICATION/PERMIT PROCESS

Fort Stewart/Hunter Army Airfield DPW shall review plans and detailed plans of Fort Stewart/Hunter Army Airfield that affect the tract to be developed and the area surrounding it.

3.2 APPLICATION REQUIREMENTS

3.2.1 No person shall conduct any land-disturbing activity within the jurisdictional boundaries of Fort Stewart/Hunter Army Airfield without first obtaining a permit from Fort Stewart/Hunter Army Airfield DPW to perform such activity.

3.2.2 The application for a permit shall be submitted to Fort Stewart/ Hunter Army Airfield DPW and must include the applicant’s erosion and sedimentation control plan with supporting data, as necessary. Said plans shall include, as a minimum, the data specified in Section 3.3 of this

ordinance. Soil erosion and sedimentation control plans shall conform to the provisions of Section 2.2 of this ordinance. Applications for a permit will not be accepted unless accompanied by four (4) copies of the applicant's soil erosion and sedimentation control plans.

3.2.3 Immediately upon receipt of an application and plan for a permit, Fort Stewart/Hunter Army Airfield DPW shall refer the application and plan to the USDA-NRCS for its review and approval or disapproval concerning the adequacy of the erosion and sedimentation control plan. The results of the USDA-NRCS review shall be forwarded to the Fort Stewart/Hunter Army Airfield DPW. No permit will be issued unless the plan has been approved by the USDA-NRCS, and any variances required by Section IV C. 15. & 16.

3.2.4 If a permit applicant has had two or more violations of previous permits, this ordinance section, or the Erosion and Sedimentation Act, as amended, within three years prior to the date of filing of the application under consideration, the Fort Stewart/Hunter Army Airfield DPW may deny the permit application.

3.3 PLAN REQUIREMENTS

3.3.1 General

Plans must be prepared to meet the minimum requirements as contained in Section 3.3 of this ordinance. Conformance with the minimum requirements may be attained through the use of design criteria in the current issue of the Manual for Erosion and Sediment Control in Georgia, published by the State Soil and Water Conservation Commission as a guide; or through the use of more stringent, alternate design criteria which conform to sound conservation and engineering practices. The Manual for Erosion and Sediment Control in Georgia is hereby incorporated by reference into this ordinance. The plan for the land-disturbing activity shall consider the interrelationship of the soil types, geological and hydrological characteristics, topography, watershed, vegetation, proposed permanent structures including roadways, constructed waterways, sediment control and storm water management facilities, local ordinances, and State laws.

3.3.2 Data Required for Site Plan

3.3.2.1 Notes or narrative located on the site plan, in general notes, or in erosion and sediment control notes.

3.3.2.2 Description of existing land use at project site and description of proposed project.

3.3.2.3 Name, address, and phone number of the property owner.

3.3.2.4 Name and phone number of 24-hour local contact who is responsible for erosion and sedimentation controls.

3.3.2.5 Size of project, or phase, under construction, in acres.

3.3.2.6 Activity schedule showing anticipated starting and completion dates for the project. Include the statement, in bold letters, that "The installation of erosion and sedimentation control measures and practices shall occur prior to or concurrent with land-disturbing activities."

3.3.2.7 Stormwater and sedimentation management systems storage capacity, hydrologic study, and calculations, including off-site drainage areas.

3.3.2.8 Vegetative plan for all temporary and permanent vegetative

measures, including species, planting dates, and seeding, fertilizer, lime, and mulching rates. The vegetative plan should show options for year-round seeding.

3.3.2.9 Detail drawings for all structural practices. Specifications may follow guidelines set forth in the Manual for Erosion and Sediment Control in Georgia.

3.3.2.10 Maintenance statement "Erosion and sedimentation control measures will be maintained at all times. Additional erosion and sedimentation control measures and practices will be installed if deemed necessary by onsite inspection."

3.3.2.11 Maps, drawings, and supportive computations shall bear the signature/seal of a registered or certified professional in engineering, architecture, landscape architecture, land surveying, or erosion and sedimentation control. The certified plans shall contain:

3.3.2.12 Graphic scale and north point or arrow indicating magnetic north.

3.3.2.13 Vicinity maps showing location of project and existing streets.

3.3.2.14 Boundary line survey.

3.3.2.15 Delineation of disturbed areas within project boundary.

3.3.2.16 Existing and planned contours, with an interval in accordance with the following:

Map Scale	Ground Slope	Contour Interval, ft.
1 inch = 100 ft	Flat 0-2%.	0.5 or 1
larger scale	Rolling 2-8%	1 or 2
	Steep 8% +	2, 5 or 10

3.3.2.17 Adjacent areas and features areas such as streams, lakes, residential areas, etc. which might be affected should be indicated on the plan.

3.3.2.18 Proposed structures or additions to existing structures and paved areas.

3.3.2.19 Delineate the 25-foot horizontal buffer adjacent to state waters and the specified width in MRPA areas.

3.3.2.20 Location of erosion and sedimentation control measures and practices using coding symbols from the Manual for Erosion and Sediment Control in Georgia, Chapter 6.

3.3.2.21 Maintenance of all soil erosion and sedimentation control practices, whether temporary or permanent, shall be at all times the responsibility of the property owner.

3.4 PERMITS

3.4.1 Permits shall be issued or denied as soon as practicable, but in any event not later than fifteen (15) days after receipt by Fort Stewart/Hunter Army Airfield DPW of a completed application.

3.4.2 No permit shall be issued by Fort Stewart/Hunter Army Airfield DPW unless the erosion and sedimentation control plan has been approved by USDA-NRCS and Fort Stewart/Hunter Army Airfield DPW has affirmatively determined

that the plan is in compliance with this ordinance and all ordinances and rules and regulations in effect within the jurisdictional boundaries of the Fort Stewart/Hunter Army Airfield DPW are met. If the permit is denied, the reason for denial shall be furnished to the applicant.

3.4.3 If the tract is to be developed in phases, then a separate permit shall be required for each phase.

3.4.4 The permit may be suspended, revoked, or modified by Fort Stewart/ Hunter Army Airfield DPW, as to all or any portion of the land affected by the plan, upon finding that the holder or his successor in the title is not in compliance with the approved erosion and sedimentation control plan or that the holder or his successor in title is in violation of this ordinance. A holder of a permit shall notify any successor in title to him as to all or any portion of the land affected by the approved plan of the conditions contained in the permit.

3.5 INSPECTIONS AND ENFORCEMENT

3.5.1 Fort Stewart/Hunter Army Airfield DPW, or USDA-NRCS representative, will periodically inspect the sites of land-disturbing activities for which permits have been issued to determine if the activities are being conducted in accordance with the plan and if the measures required in the plan are effective in controlling erosion and sedimentation. If, through inspection, it is deemed that a person engaged in land-disturbing activities as defined herein has failed to comply with the approved plan, with permit conditions, or with the provisions of this ordinance, a written Notice to comply shall be served upon that person. The notice shall set forth the measures necessary to achieve compliance and shall state the time within which such measures must be completed (fifteen days). If the person engaged in the land-disturbing activity fails to comply within the time specified, he shall be deemed in violation of this ordinance.

3.5.2 Fort Stewart/Hunter Army Airfield DPW, or USDA-NRCS representative, shall have the power to conduct such investigations as it may reasonably deem necessary to carry out duties as prescribed in this ordinance, and for this purpose to enter at reasonable times upon any site, for the purpose of investigation and inspecting the sites of land-disturbing activities.

3.5.3 No person shall refuse entry or access to any authorized representative or agent of Fort Stewart/Hunter Army Airfield DPW, or USDA-NRCS representative, who requests entry for the purposes of inspection, and who presents appropriate credentials; nor shall any person obstruct, hamper or interfere with any such representative while in the process of carrying out their official duties.

3.6 PENALTIES AND INCENTIVES

3.6.1 If any person commences any land-disturbing activity requiring a land-disturbing permit as prescribed in this ordinance without first obtaining said permit, the person shall be subject to a stop work order within the boundaries of Fort Stewart/Hunter Army Airfield.

3.7 STOP-WORK ORDERS

3.7.1 For the first violation of the provisions of this ordinance, Fort Stewart/Hunter Army Airfield DPW shall issue a written warning to the violator. The violator shall have a designated amount of time to correct the violation. If the violation is not corrected within allotted time, Fort Stewart/Hunter Army Airfield DPW shall issue a stop-work order requiring that land-disturbing activities be stopped until necessary corrective action

or mitigation has occurred; provided, however, that, if the violation presents an imminent threat to public health or waters of the state or if the land-disturbing activities are conducted without obtaining the necessary permit, Fort Stewart/Hunter Army Airfield DPW shall issue an immediate stop-work order in lieu of a warning.

3.7.2 For a third and each subsequent violation, Fort Stewart/Hunter Army Airfield DPW shall issue an immediate stop-work order.

3.7.3 All stop-work orders shall be effective immediately upon issuance and shall be in effect until the necessary corrective action or mitigation has occurred.

PART 4

4.1 DEFINITIONS

The following definitions shall apply in the interpretation and enforcement of this ordinance, unless otherwise specifically stated:

1. Best Management Practices (BMP's): A collection of structural practices and vegetative measures which, when properly designed, installed and maintained, will provide effective erosion and sedimentation control for all rainfall events up to and including a 25-year, 24-hour rainfall event.

2. Board: The Board of Natural Resources.

3. Buffer: The area of land immediately adjacent to the banks of state waters in its natural state of vegetation, which facilitates the protection of water quality and aquatic habitat.

4. Commission: The State Soil & Water Conservation Commission.

5. Cut: A portion of land surface or area from which earth has been removed or will be removed by excavation; the depth below original ground surface to excavated surface. Also known as excavation.

6. Department: The Department of Natural Resources.

7. Director: The Director of the Environmental Protection Division of the Department of Natural Resources.

8. Division: The Environmental Protection Division of the Department of Natural Resources.

9. Drainage Structure: A device composed of a virtually non-erodible material such as concrete, steel, plastic or other such material that conveys water from one place to another by intercepting the flow and carrying it to a release point for storm-water management, drainage control, or flood control purposes.

10. Erosion: The process by which land surface is worn away by the action of wind, water, ice or gravity.

11. Erosion and Sedimentation Control Plan: A plan for the control of soil erosion and sedimentation, resulting from a land-disturbing activity.

12. Fill: A portion of land surface to which soil or other solid material has been added; the depth above the original ground.

13. Finished Grade: The final elevation and contour of the ground after cutting or filling and conforming to the proposed design.

14. Grading: Altering the shape of ground surfaces to a predetermined condition; this includes stripping, cutting, filling, stockpiling and shaping or any combination thereof and shall include the land in its cut or filled condition.

15. Ground Elevation: The original elevation of the ground surface prior to cutting or filling.

16. Issuing Authority: DPW

17. Land-Disturbing Activity: Any activity which may result in soil erosion from water or wind and the movement of sediments into state waters or onto lands within the state, including, but not limited to, clearing, dredging, grading, excavating, transporting, and filling of land but not including agricultural practices as described in Section III, Paragraph 5.

18. Metropolitan River Protection Act (MRPA): A state law referenced as O.C.G.A. 12-5-440 et.seq., which addresses environmental and developmental matters in certain metropolitan river corridors and their drainage basins.

19. Natural Ground Surface: The ground surface in its original state before any grading, excavation or filling.

20. Nephelometric Turbidity Units (NTU): Numerical units of measure based upon photometric analytical techniques for measuring the light scattered by finely divided particles of a substance in suspension. This technique is used to estimate the extent of turbidity in water in which colloidally dispersed particles are present.

21. Permit: The authorization necessary to conduct a land-disturbing activity under the provisions of this ordinance.

22. Person: Any individual, partnership, firm, association, joint venture, public or private corporation, trust, estate, commission, board, public or private institution, utility, cooperative, state agency, municipality or other political subdivision of this State, any interstate body or any other legal entity.

23. Project: The entire proposed development project regardless of the size of the area of land to be disturbed.

24. Roadway Drainage Structure: A device such as a bridge, culvert, or ditch, composed of a virtually non-erodible material such as concrete, steel, plastic, or other such material that conveys water under a roadway by intercepting the flow on one side of a traveled way consisting of one or more defined lanes, with or without shoulder areas, and carrying water to a release point on the other side.

25. Sediment: Solid material, both organic and inorganic, that is in suspension, is being transported, or has been moved from its site of origin by air, water, ice, or gravity as a product of erosion.

26. Sedimentation: The process by which eroded material is transported and deposited by the action of water, wind, ice or gravity.

27. Stabilization: The process of establishing an enduring soil cover of vegetation by the installation of temporary or permanent structures for the purpose of reducing to a minimum the erosion process and the resultant

transport of sediment by wind, water, ice or gravity.

28. State Waters: Any and all rivers, streams, creeks, branches, lakes, reservoirs, ponds, drainage systems, springs, wells, and other bodies of surface or subsurface water, natural or artificial, lying within or forming a part of the boundaries of the State which are not entirely confined and retained completely upon the property of a single individual, partnership, or corporation.

29. Structural Erosion and Sedimentation Control Practices: Practices for the stabilization of erodible or sediment-producing areas by utilizing the mechanical properties of matter for the purpose of either changing the surface of the land or storing, regulating or disposing of runoff to prevent excessive sediment loss. Examples of structural erosion and sediment control practices are riprap, sediment basins, dikes, level spreaders, waterways or outlets, diversions, grade stabilization structures, sediment traps and land grading, etc. Such practices can be found in the publication Manual for Erosion and Sediment Control in Georgia.

30. Vegetative Erosion and Sedimentation Control Measures: Measures for the stabilization of erodible or sediment-producing areas by covering the soil with:

a. Permanent seeding, sprigging or planting, producing long-term vegetative cover; or

b. Temporary seeding, producing short-term vegetative cover; or

c. Sodding, covering areas with a turf of perennial sod-forming grass. Such measures can be found in the publication Manual for Erosion and Sediment Control in Georgia.

31. Watercourse: Any natural or artificial watercourse, stream, river, creek, channel, ditch, canal, conduit, culvert, drain, waterway, gully, ravine, or wash in which water flows either continuously or intermittently and which has a definite channel, bed and banks, and including any area adjacent thereto subject to inundation by reason of overflow or floodwater.

32. Wetlands: Those areas that are inundated or saturated by surface or ground water at a frequency and duration sufficient to support, and that under normal circumstances do support a prevalence of vegetation typically adapted for life in saturated soil conditions. Wetlands generally include swamps, marshes, bogs, and similar areas.

EXHIBIT 1

EROSION AND SEDIMENT CONTROL PLAN REVIEW CHECKLIST

Project Name _____ Date on Plans_____
Location - Fort Stewart/Hunter Army Airfield

Site plan:
1) Show graphic scale and north arrow.
2) Provide vicinity map showing site's relation to surrounding area.
3) Provide both existing and planned contours with contour lines drawn at an interval in accordance with the following:

Map Scale	Ground Slope	Contour Interval, ft
1 inch = 100 ft	FIat 0-2%	0.5 or 1
or larger scale	Rolling 2-8%	1 or 2
	Steep 8% +	2, 5 or 10

4) Delineate contributing drainage areas both on and off site. Include hydrology study and maps of drainage basins for both the pre- and post-developed conditions.
5) Delineate all state waters located on or within 200 feet of the protect site.
6) Show location of erosion and sediment practices using uniform coding symbols from the Manual for erosion and sediment Control in Georgia, Chapter 6, with legend.
7) Delineate 25-foot undisturbed buffers of state waters. Clearly note areas of impact.
8) Delineate all wetlands and provide regulatory documentation permitting any proposed impacts.
9) Include soil series and their delineation.
10) Describe adjacent areas — neighboring areas such as streams, lakes, residential areas, etc. which might be affected.

Narrative Notes and Other Information: Notes or narrative should be located on the site plan under erosion notes or under erosion and sediment control notes.
1) Provide description of existing land use at project site and description of proposed project.
2) Name and phone number of 24-hour local contact that is responsible for erosion and sediment controls.
3) Show signature and seal of qualified plan preparer.
4) Note total and disturbed acreage of the project or phase under construction.
5) Provide detailed construction activity schedule; show anticipated starting and completion dates for events, include vegetation and mulching timeline.
6) Clearly note the statement in bold letters, "The escape of sediment from the site shall be prevented by the installation of erosion and sediment control measures and practices prior to, or concurrent with, land-disturbing activities."
7) Provide 67 cubic yards per acre sediment storage. Include specific design information and calculation for all structural measures on site, such as temporary sediment basins, retrofitted detention ponds, and channels.
8) Show storm-drain pipe and weir velocities and provide appropriate outlet protection to accommodate discharges without erosion.
9) Provide vegetative plan, noting all temporary and permanent vegetative practices. Include species, planting dates and seeding, fertilizer, lime, and mulching rates. Vegetative plan shall be site specific for appropriate time of year, that seeding will take place and for the Fort Stewart/HAAF area.
10) Provide detailed drawings for all structural practices Specifications

must, at a minimum, meet guidelines set forth in the Manual for Erosion and Sediment Control in Georgia.
11) Clearly note maintenance statement, "Erosion control measures will be maintained at all times. If full implementation of the approved plan does not provide for effective erosion control, additional erosion and sediment control measures shall be implemented to control or treat the sediment source."

GaSWCC (AmeMed - 2000)

EXHIBIT 2

State of Georgia
Environmental Protection Division
For Coverage Under General Permit GAR100000
To Discharge Storm Water Associated With Construction Activity

PRIMARY PERMITTEE

I. SITE/OWNER/OPERATOR INFORMATION

Site Project Name: _____

Site Location and Street Address: _____

City: _____ County: _____

Subdivision Name: _____

Owner's Name: _____

Address: _____ City: _____ State: _____ Zip Code: _

Operator's Name: _____ Phone: _____

Address: _____ City: _____ State: _____ Zip Code: _

Facility Contact: _____ Phone: _____

II. SITE ACTIVITY INFORMATION

Start Date: _____ Completion Date: _____ Estimated Disturbed Acreage: ___

Land Disturbance Activity Permit Number: _____ Date Issued: _____

Date Building Permit Issued: _____

Type Construction Activity: Commercial Industrial Municipal Linear Utility Residential/Subdivision Development

Number of Secondary Permittees: _____

III. RECEIVING WATER INFORMATION

A. Name of Initial Receiving Water(s): _____

Trout Stream Warm Water Fisheries Stream

B. Name of Municipal Storm Sewer System Owner/Operator: _____

Name of Receiving Water(s): _____

Trout Stream Warm Water Fisheries Stream

C. Sampling of Outfall(s) Sampling of Receiving Stream(s) Trout Stream

Number of Outfalls: ___ Appendix B NTU Value: __ Surface Water Drainage Area: ___

IV. ATTACHMENTS

Indicate below the items attached to this Notice of Intent:

_____ Location map showing receiving stream(s), outfall(s) or combination thereof to be monitored.

_____ Erosion, Sedimentation and Pollution Control Plan (if project is greater than 50 acres).

_____ Comprehensive Monitoring Program (if the project is greater than 50 acres).

_____ List of known secondary permittees.

_____ Schedule for the timing of the major construction activities.

V. CERTIFICATIONS

1. I certify that the location of the receiving water(s) or outfall(s) or a combination of receiving water(s) and outfall(s) to be monitored is shown on a map or drawing of appropriate scale and a copy of this map or drawing are attached to this Notice.

2. I certify that the Erosion, Sedimentation, and Pollution Control Plan (Plan) has been prepared in accordance with Part IV of the General NPDES Permit GAR100000, the Plan will be implemented, and that such Plan will provide for compliance with this permit. If the site is greater than 50 acres of disturbed area, I certify that a copy of the Erosion, Sedimentation, and Pollution Plan is attached to the notice.

3. I certify that a copy of the Erosion, Sedimentation and Pollution Control Plan or the applicable portions of the Plan will be provided to each and every secondary permittee. A list of the secondary permittees known at the time of making this Notice is attached.

4. I certify that a schedule for the timing of the various major construction activities, if applicable, is attached to this Notice.

5. I certify that the receiving water(s) or the outfall(s) or a combination of receiving water(s) and outfall(s) will be monitored in accordance with the Comprehensive Monitoring Program.

6. I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based upon my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Owner's Printed Name: _____ Title: _____

Signature: _____ Date: _____

Operator's Printed Name: _____ Title: _____

Signature: _____ Date: _____

Instructions
Notice of Intent - *Primary Permittee*
For Storm Water Discharges
Associated With Construction Activity
To Be Covered Under The NPDES General Permit No. GAR100000
Who must file a Notice of Intent (NOI) Form

This Notice of Intent must be typed. Any NOI that contains illegible information will not be accepted, will be returned, and the site will not be granted Permit coverage. All information on this NOI must be submitted to be a valid Notice. Any information requested on the NOI that is not applicable to the owner and operator or to the site must be marked “N/A”.

The Owner and Operator of an activity that has a discharge of storm water from a site where construction activities occur must apply for a National Pollutant Discharge Elimination System (NPDES) Permit. The Georgia Environmental Protection Division has issued this General NPDES Permit for storm water discharges from construction activities on June 12, 2000, with an effective date of August 1, 2000. The Permit is available is available for review at EPD’s offices and on EPD’s web page at www.dnr.state.ga.us/epd. It is highly recommended that the permittee read and understand the terms and conditions of the Permit. New non-linear projects 250 acres or greater in size are not eligible for coverage under this Permit. Such projects should contact EPD at 404/675-6240 for application guidance. Contact EPD at the Regional Office or District Office shown on the next page for assistance in completing this NOI.

Where to file NOI Forms -- The NOI and attachments must be sent to the Regional Office or District Office shown on the next page.

Section I. Site / Primary Permittee Information
Enter the information required. The site/project name is the physical location of the construction activity. Should the site lack a street address, describe where the facility sufficient so one can locate the site. Should additional space is needed, attach the description to the notice.

The facility contact is the person who the primary permittee has assigned the responsibility for the daily on-site operational control. Please do not leave any blanks in this section.

Section II. Site Activity Information
The start date and completion date are expected for the construction activity for which this NOI is applicable.

Estimated disturbed acreage is the total number of disturbed acres the primary permittee will disturb.

Section III. Receiving Water Information
If the facility discharges storm water directly or indirectly (but not through a MS4) to the receiving water(s), enter the name(s) of the receiving water(s) and indicate whether the water(s) is a trout stream or a warm water fisheries stream. Attach to this notice a written description and a map of the location of the receiving water(s).

If the storm water discharges to a municipal separate storm sewer system (MS4), enter the name of the operator of the MS4 (e.g., city name or county name) and the name of the receiving water at the point of discharge from the MS4. A MS4 is defined as a conveyance or system of conveyances (including: roads with drainage systems, municipal streets, catch basins, curbs, gutters, ditches, man-made channels, or storm drains) that is owned or operated by a city or county which is designed or used for collecting or conveying storm water. It may be necessary to contact the city or county that operates the MS4 to determine the name of the receiving waters. Indicate whether the receiving water(s) is a trout stream or a warm water fisheries stream.

Section IV. Certifications
All applicants must sign this certification. Federal and State statutes provide specific requirements as to whom is authorized to sign Notice of Intents. Signing of a Notice of Intent by others is not a valid submittal. Please be aware Federal and State statues provide severe penalties for submitting false information on this application form. Federal and State regulations require this application to be signed as follows:

- For a corporation: by a responsible corporate officer;
  For a partnership or sole proprietorship: by a general partner or the proprietor; or
  For a municipality, state, Federal or other public facility: by either a principal executive officer or ranking elected official.

EXHIBIT 3

For Official Use only

NOTICE OF TERMINATION

State of Georgia
Environmental Protection Division
To Cease Coverage Under General Permit GAR100000
To Discharge Storm Water Associated With Construction Activity

I. SITE / PERMITTEE INFORMATION

Site/Project Name: _____

Site Location and Street Address: _____

City: _____ County: _____

Subdivision Name: _____ Lot Number: _____

Permittee Name: _____ Phone: _____

Address: _____ City: _____ State: ____ Zip Code: _____

Type of Permittee: Primary Secondary Tertiary

Facility Contact: _____ Phone: _____

If Applicable:

Primary Permittee's Name: _____ Phone: _____

Address: _____ City: _____ State: ____ Zip Code: _____

II. SITE ACTIVITY INFORMATION

Construction Activity Completed No Longer Owner / Operator of Construction Activity

Construction Activity: Commercial Industrial Municipal DOT Utility

Residential Primary Permittee of a Subdivision Development, or

Individual Lot, or

Individual Lot within a Surface Water Drainage Area

where the Primary Permittee has ceased Permit Coverage

Land Disturbance Activity Permit Number: _____ Date Issued: ____

Name of Initial Receiving Water(s): _____

Name of Municipal Storm Sewer System Owner/Operator: _____

Name of Receiving Waters: _____

III. ATTACHMENT

Indicate below if this item is attached to this Notice of Termination:
_____ Final monitoring report for receiving water(s) and/or stormwater outfalls.

IV. CERTIFICATIONS

1. I certify that a copy of the final monitoring report, if applicable, is attached to this Notice. This monitoring report shows the monitoring data for a receiving water(s) and/or storm water outfall(s) collected between the period of final stabilization and the filing of this Notice.

2. I certify under penalty of law that either: (a) all storm water discharges associated with construction activity from the portion of the construction activity where I was an Owner or Operator have ceased or have been eliminated; (b) all storm water discharges associated with construction activity from the identified site that are authorized by General NPDES Permit No. GAR 100000 have ceased; (c) I am no longer an Owner or Operator at the construction site and a new Owner or Operator has assumed operational control for those portions of the construction site where I previously had ownership or operational control; and/or if I am a primary permittee filing this Notice of Termination under Part VII.A.4. of this permit, I will notify by written correspondence to the subsequent legal title holder of any remaining lots that these lot Owners and /or Operators will become tertiary permittees for purposes of this permit and I will provide these tertiary permittees with the primary permittee's Erosion, Sedimentation and Pollution Control Plan. I understand that by submitting this Notice of Termination, that I am no longer authorized to discharge storm water associated with construction activity by the general permit, and that discharging pollutants in storm water associated with construction activity to waters of Georgia is unlawful under the Georgia Water Quality Control Act and the Clean Water Act where the discharge is not authorized by a NPDES permit.

3. I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based upon my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Printed Name:_____ Title:_____

Signature:_____ Date:_____

Instructions
Notice of Termination (NOT) For Storm Water Discharges
Associated With Construction Activity
NPDES General Permit No. GAR100000

Who must file a Notice of Termination (NOT) Form

This Notice of Termination must be typed. Any NOT that contains illegible information will not be accepted. All information on this NOT must be submitted to be a valid Notice. Any information requested on the NOT that is not applicable to the owner and operator or the site must be marked "N/A".

When the facility/site has been finally stabilized and all storm water discharges from construction activities authorized by the NPDES General Permit No. GAR100000 have ceased or when the Owner/Operator of the site changes, the Owner/Operator of the facility/site must submit a Notice of Termination (NOT). Final stabilization means that all soil disturbing activities at the site have been completed, and that for unpaved areas and areas not covered by permanent structures, at least 70% of the soil surface is uniformly covered in permanent vegetation or equivalent permanent stabilization measures (such as the use of rip rap, gabions, permanent mulches or geotextiles) have been employed. Permanent vegetation shall consist of: planted trees, shrubs, perennial vines; a crop of perennial vegetation appropriate for the time of year and region; or a crop of annual vegetation and a seeding of target crop perennials appropriate for the region, such that within the growing season a 70% coverage by perennial vegetation shall be achieved. Final stabilization applies to each phase of construction. For linear construction projects on land used for agricultural or silvicultural purposes, final stabilization may be accomplished by stabilizing the disturbed land for its agricultural or silvicultural use. (General NPDES Permit Part VII.A and Part I.A.11)

Where to file NOT Forms - The NOT and attachments must be sent to the Regional Office or District Office shown on the next page.

Section I. Site / Permittee Information

Enter the information required. The site/project name is the physical location of the construction activity. Should the site lack a street address, describe where the facility sufficient so one can locate the site. Should additional space be needed, attach the description to the notice.

The facility contact is the person who the Owner and Operator has assigned the responsibility for the daily on-site operational control. Please do not leave any blanks in this section.

Section II. Site Activity Information

Indicate by marking the appropriate block whether this NOT is submitted due to completion of the construction activity or a change in the Owner and Operator of the construction activity.

Mark the appropriate box to indicate the class of construction activity that was conducted at the site. For residential sites, also mark the block as either a subdivision development <u>or</u> an individual lot.

Enter the Land Disturbance Activity (LDA) Permit Number assigned by the city government, county government, or EPD for the facility/site for which this NOT is being submitted. Enter N/A if a LDA Permit Number was not required for this facility/site.

Section III. Attachment

Indicate by marking with an "X" if this item is attached to this Notice.

Section IV. Certifications

All applicants must sign this Notice. Federal and State statutes provide specific requirements as to whom is authorized to sign Notice of Terminations. Signing of a Notice of Termination by others is not a valid submittal. Please be aware Federal and State statues provide severe penalties for submitting false information on this application form. Federal and State regulations require this application to be signed as follows:

- For a corporation: by a responsible corporate officer;
- For a partnership or sole proprietorship: by a general partner or the proprietor; or
- For a municipality, state, Federal or other public facility: by either a principal executive officer or ranking elected official.

SECTION 01355

ENVIRONMENTAL PROTECTION
02/02

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.

U.S. ARMY (DA)

AR 200-5	Pest Management

U.S. NATIONAL ARCHIVES AND RECORDS ADMINISTRATION (NARA)

33 CFR 328	Definitions
40 CFR 68	Chemical Accident Prevention Provisions
40 CFR 152 - 186	Pesticide Programs
40 CFR 260	Hazardous Waste Management System: General
40 CFR 261	Identification and Listing of Hazardous Waste
40 CFR 262	Standards Applicable to Generators of Hazardous Waste
40 CFR 279	Standards for the Management of Used Oil
40 CFR 302	Designation, Reportable Quantities, and Notification
40 CFR 355	Emergency Planning and Notification
49 CFR 171 - 178	Hazardous Materials Regulations

U.S. ARMY CORPS OF ENGINEERS (USACE)

EM 385-1-1	(1996) U.S. Army Corps on Engineers Safety and Health Requirements Manual
WETLAND MANUAL	Corps of Engineers Wetlands Delineation Manual Technical Report Y-87-1

1.2 DEFINITIONS

1.2.1 Environmental Pollution and Damage

Environmental pollution and damage is 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 humankind; or degrade the environment aesthetically, culturally and/or historically.

1.2.2 Environmental Protection

Environmental protection is the prevention/control of pollution and habitat disruption that may occur to the environment during construction. The control of environmental pollution and damage requires consideration of land, water, and air; biological and cultural resources; and includes management of visual aesthetics; noise; solid, chemical, gaseous, and liquid waste; radiant energy and radioactive material as well as other pollutants.

1.2.3 Contractor Generated Hazardous Waste

Contractor generated hazardous waste means materials that, if abandoned or disposed of, may meet the definition of a hazardous waste. These waste streams would typically consist of material brought on site by the Contractor to execute work, but are not fully consumed during the course of construction. Examples include, but are not limited to, excess paint thinners (i.e. methyl ethyl ketone, toluene etc.), waste thinners,excess paints, excess solvents, waste solvents, and excess pesticides, and contaminated pesticide equipment rinse water.

1.2.4 Installation Pest Management Coordinator

Installation Pest Management Coordinator (IPMC) is the individual officially designated by the Installation Commander to oversee the Installation Pest Management Program and the Installation Pest Management Plan.

1.2.5 Land Application for Discharge Water

The term "Land Application" for discharge water implies that the Contractor shall discharge water at a rate which allows the water to percolate into the soil. No sheeting action, soil erosion, discharge into storm sewers, discharge into defined drainage areas, or discharge into the "waters of the United States" shall occur. Land Application shall be in compliance with all applicable Federal, State, and local laws and regulations.

1.2.6 Pesticide

Pesticide is defined as any substance or mixture of substances intended for preventing, destroying, repelling, or mitigating any pest, or intended for use as a plant regulator, defoliant or desiccant.

1.2.7 Pests

The term "pests" means arthropods, birds, rodents, nematodes, fungi, bacteria, viruses, algae, snails, marine borers, snakes, weeds and other organisms (except for human or animal disease-causing organisms) that adversely affect readiness, military operations, or the well-being of personnel and animals; attack or damage real property, supplies, equipment, or vegetation; or are otherwise undesirable.

1.2.8 Surface Discharge

The term "Surface Discharge" implies that the water is discharged with possible sheeting action and subsequent soil erosion may occur. Waters that are surface discharged may terminate in drainage ditches, storm sewers, creeks, and/or "waters of the United States" and would require a permit to discharge water from the governing agency.

1.2.9 Waters of the United States

All waters which are under the jurisdiction of the Clean Water Act, as defined in 33 CFR 328.

1.2.10 Wetlands

Wetlands means those areas that are inundated or saturated by surface or ground water at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions. Wetlands generally include swamps, marshes, and bogs. Official determination of whether or not an area is classified as a wetland must be done in accordance with WETLAND MANUAL.

1.3 GENERAL REQUIREMENTS

The Contractor shall minimize environmental pollution and damage that may occur as the result of construction operations. The environmental resources within the project boundaries and those affected outside the limits of permanent work shall be protected during the entire duration of this contract. The Contractor shall comply with all applicable environmental Federal, State, and local laws and regulations. The Contractor shall be responsible for any delays resulting from failure to comply with environmental laws and regulations.

1.4 SUBCONTRACTORS

The Contractor shall ensure compliance with this section by subcontractors.

1.5 PAYMENT

No separate payment will be made for work covered under this section. The Contractor shall be responsible for payment of fees associated with environmental permits, application, and/or notices obtained by the Contractor. All costs associated with this section shall be included in the contract price. The Contractor shall be responsible for payment of all fines/fees for violation or non-compliance with Federal, State, Regional and local laws and regulations.

1.6 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-01 Preconstruction Submittals

Environmental Protection Plan; G, RE

The environmental protection plan.

1.7 ENVIRONMENTAL PROTECTION PLAN

Prior to commencing construction activities or delivery of materials to the site, the Contractor shall submit an Environmental Protection Plan for review and approval by the Contracting Officer. The purpose of the Environmental Protection Plan is to present a comprehensive overview of known or potential environmental issues which the Contractor must address during construction. Issues of concern shall be defined within the Environmental Protection Plan as outlined in this section. The Contractor shall address each topic at a level of detail commensurate with the environmental issue and required construction task(s). Topics or issues which are not identified in this section, but which the Contractor considers necessary, shall be identified and discussed after those items formally identified in this section. Prior to submittal of the Environmental Protection Plan, the Contractor shall meet with the Contracting Officer for the purpose of discussing the implementation of the initial Environmental Protection Plan; possible subsequent additions and revisions to the plan including any reporting requirements; and methods for administration of the Contractor's Environmental Plans. The Environmental Protection Plan shall be current and maintained onsite by the Contractor.

1.7.1 Compliance

No requirement in this Section shall be construed as relieving the Contractor of any applicable Federal, State, and local environmental protection laws and regulations. During Construction, the Contractor shall be responsible for identifying, implementing, and submitting for approval any additional requirements to be included in the Environmental Protection Plan.

1.7.2 Contents

The environmental protection plan shall include, but shall not be limited to, the following:

a. Name(s) of person(s) within the Contractor's organization who is(are) responsible for ensuring adherence to the Environmental Protection Plan.

b. Name(s) and qualifications of person(s) responsible for manifesting hazardous waste to be removed from the site, if applicable.

c. Name(s) and qualifications of person(s) responsible for training the Contractor's environmental protection personnel.

d. Description of the Contractor's environmental protection personnel training program.

e. An erosion and sediment control plan which identifies the type and location of the erosion and sediment controls to be provided. The plan shall include monitoring and reporting requirements to assure that the control measures are in compliance with the erosion and sediment control plan, Federal, State, and local laws and regulations.

f. Drawings showing locations of proposed temporary excavations or embankments for haul roads, stream crossings, material storage areas, structures, sanitary facilities, and stockpiles of excess or spoil materials including methods to control runoff and to contain materials on the site.

g. Traffic control plans including measures to reduce erosion of temporary roadbeds by construction traffic, especially during wet weather. Plan shall include measures to minimize the amount of mud transported onto paved public roads by vehicles or runoff.

h. Work area plan showing the proposed activity in each portion of the area and identifying the areas of limited use or nonuse. Plan should include measures for marking the limits of use areas including methods for protection of features to be preserved within authorized work areas.

i. Drawing showing the location of borrow areas.

j. The Spill Control plan shall include the procedures, instructions, and reports to be used in the event of an unforeseen spill of a substance regulated by 40 CFR 68, 40 CFR 302, 40 CFR 355, and/or regulated under State or Local laws and regulations. The Spill Control Plan supplements the requirements of EM 385-1-1

k. This plan shall include as a minimum:

1. The name of the individual who will report any spills or hazardous substance releases and who will follow up with complete documentation. This individual shall immediately notify the Contracting Officer and Installation Fire Department (911 Center) in addition to the legally required Federal, State, and local reporting channels (including the National Response Center 1-800-424-8802) if a reportable quantity is released to the environment. The plan shall contain a list of the required reporting channels and telephone numbers.

2. The name and qualifications of the individual who will be responsible for implementing and supervising the containment and cleanup.

3. Training requirements for Contractor's personnel and methods of accomplishing the training.

4. A list of materials and equipment to be immediately available at the job site, tailored to cleanup work of the potential hazard(s) identified.

5. The names and locations of suppliers of containment materials and locations of additional fuel oil recovery, cleanup, restoration, and material-placement equipment available in case of an unforeseen spill emergency.

6. The methods and procedures to be used for expeditious contaminant cleanup.

l. A non-hazardous solid waste disposal plan identifying methods and locations for solid waste disposal including clearing debris. The plan shall include schedules for disposal. The Contractor shall identify any subcontractors responsible for the transportation and disposal of solid waste. Licenses or permits shall be submitted for solid waste disposal sites that are not a commercial operating facility. Evidence of the disposal facility's acceptance of the solid waste shall be attached to this plan during the construction. The Contractor shall attach a copy of each of the Non-hazardous Solid Waste Diversion Reports to the disposal plan. The report shall be submitted on the first working day after the first quarter that non-hazardous solid waste has been disposed and/or diverted and shall be for the previous quarter (e.g. the first working day of January, April, July, and October). The report shall indicate the total amount of waste generated and total amount of waste diverted in cubic meters (yards) or tons along with the percent that was diverted.

m. A recycling and solid waste minimization plan with a list of measures to reduce consumption of energy and natural resources. The plan shall detail the Contractor's actions to comply with and to participate in Federal, State, Regional, and local government sponsored recycling programs to reduce the volume of solid waste at the source.

n. An air pollution control plan detailing provisions to assure that dust, debris, materials, trash, etc., do not become air borne and travel off the project site.

o. A contaminant prevention plan that: identifies potentially hazardous substances to be used on the job site; identifies the intended actions to prevent introduction of such materials into the air, water, or ground; and details provisions for compliance with Federal, State, and local laws and regulations for storage and handling of these materials. In accordance with EM 385-1-1, a copy of the Material Safety Data Sheets (MSDS) and the maximum quantity of each hazardous material to be on site at any given time shall be included in the contaminant prevention plan. As new hazardous materials are brought on site or removed from the site, the plan shall be updated.

p. A waste water management plan that identifies the methods and procedures for management and/or discharge of waste waters which are directly derived from construction activities, such as concrete curing water, clean-up water, dewatering of ground water, disinfection water, hydrostatic test water, and water used in flushing of lines. If a settling/retention pond is required, the plan shall include the design of the pond including drawings, removal plan, and testing requirements for possible pollutants. If land application will be the method of disposal for the waste water, the plan shall include a sketch showing the location for land application along with a description of the pretreatment methods to be implemented. If surface discharge will be the method of disposal, a copy of the permit and associated documents shall be included as an attachment prior to discharging the waste water. If disposal is to a sanitary sewer, the plan shall include documentation that the Waste Water Treatment Plant Operator has approved the flow rate, volume, and type of discharge.

q. A historical, archaeological, cultural resources biological resources and wetlands plan that defines procedures for identifying and

protecting historical, archaeological, cultural resources, biological resources and wetlands known to be on the project site: and/or identifies procedures to be followed if historical archaeological, cultural resources, biological resources and wetlands not previously known to be onsite or in the area are discovered during construction. The plan shall include methods to assure the protection of known or discovered resources and shall identify lines of communication between Contractor personnel and the Contracting Officer.

r. A pesticide treatment plan shall be included and updated, as information becomes available. The plan shall include: sequence of treatment, dates, times, locations, pesticide trade name, EPA registration numbers, authorized uses, chemical composition, formulation, original and applied concentration, application rates of active ingredient (i.e. pounds of active ingredient applied), equipment used for application and calibration of equipment. The Contractor is responsible for Federal, State, Regional and Local pest management record keeping and reporting requirements as well as any additional Installation specific requirements. The Contractor shall follow AR 200-5 Pest Management, Chapter 2, Section III "Pest Management Records and Reports" for data required to be reported to the Installation.

1.7.3 Appendix

Copies of all environmental permits, permit application packages, approvals to construct, notifications, certifications, reports, and termination documents shall be attached,as an appendix, to the Environmental Protection Plan.

1.8 PROTECTION FEATURES

This paragraph supplements the Contract Clause PROTECTION OF EXISTING VEGETATION, STRUCTURES, EQUIPMENT, UTILITIES, AND IMPROVEMENTS. Prior to start of any onsite construction activities, the Contractor and the Contracting Officer shall make a joint condition survey. Immediately following the survey, the Contractor shall prepare a brief report including a plan describing the features requiring protection under the provisions of the Contract Clauses, which are not specifically identified on the drawings as environmental features requiring protection along with the condition of trees, shrubs and grassed areas immediately adjacent to the site of work and adjacent to the Contractor's assigned storage area and access route(s), as applicable. This survey report shall be signed by both the the Contractor and the Contracting Officer upon mutual agreement as to its accuracy and completeness. The Contractor shall protect those environmental features included in the survey report and any indicated on the drawings, regardless of interference which their preservation may cause to the Contractor's work under the contract.

1.9 OMITTED

1.10 ENVIRONMENTAL ASSESSMENT OF CONTRACT DEVIATIONS

Any deviations, requested by the Contractor, from the drawings,plans and specifications which may have an environmental impact will be subject to approval by the Contracting Officer and may require an extended review, processing, and approval time. The Contracting Officer reserves the right to disapprove alternate methods, even if they are more cost effective, if

the Contracting Officer determines that the proposed alternate method will have an adverse environmental impact.

1.11 NOTIFICATION

The Contracting Officer will notify the Contractor in writing of any observed noncompliance with Federal, State or local environmental 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 the proposed corrective action and take such action when approved by the Contracting Officer. 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 equitable adjustments allowed to the Contractor for any such suspensions. This is in addition to any other actions the Contracting Officer may take under the contract, or in accordance with the Federal Acquisition Regulation or Federal Law.

1.11 NOTICE OF INTENT, NOTICE OF TERMINATION

The Contractor shall develop the required information, fill in, and submit to State of Georgia Environmental Protection Division the “Notice of Intent” form contained in Appendix H. The form shall be submitted in accordance with the regulations of the Environmental Protection Division. The Contractor shall also develop the required information, fill in, and submit the “Notice of Termination” form to the State of Georgia Environmental Protection Division.

PART 2 PRODUCTS (NOT USED)

PART 3 EXECUTION

3.1 ENVIRONMENTAL PERMITS AND COMMITMENTS

The Contractor shall be responsible for obtaining and complying with all environmental permits and commitments required by Federal, State, Regional, and local environmental laws and regulations.

3.2 LAND RESOURCES

The Contractor shall confine all activities to areas defined by the drawings and specifications. Prior to the beginning of any construction, the Contractor shall identify any land resources to be preserved within the work area. Except in areas indicated on the drawings or specified to be cleared, the Contractor shall not remove, cut, deface, injure, or destroy land resources including trees, shrubs, vines, grasses, topsoil, and land forms without approval. No ropes, cables, or guys shall be fastened to or attached to any trees for anchorage unless specifically authorized. The Contractor shall provide effective protection for land and vegetation resources at all times as defined in the following subparagraphs. Stone, soil, or other materials displaced into uncleared areas shall be removed by the Contractor.

3.2.1 Work Area Limits

Prior to commencing construction activities, the Contractor shall mark the areas that need not be disturbed under this contract. Isolated areas within the general work area which are not to be disturbed shall be marked or fenced. Monuments and markers shall be protected before construction operations commence. Where construction operations are to be conducted during darkness, any markers shall be visible in the dark. The Contractor's personnel shall be knowledgeable of the purpose for marking and/or protecting particular objects.

3.2.2 Landscape

Trees, shrubs, vines, grasses, land forms and other landscape features indicated and defined on the drawings to be preserved shall be clearly identified by marking, fencing, or wrapping with boards, or any other approved techniques. The Contractor shall restore landscape features damaged or destroyed during construction operations outside the limits of the approved work area.

3.2.3 Erosion and Sediment Controls

The Contractor shall be responsible for providing erosion and sediment control measures in accordance with Federal, State, and local laws and regulations. The erosion and sediment controls selected and maintained by the Contractor shall be such that water quality standards are not violated as a result of the Contractor's construction activities. The area of bare soil exposed at any one time by construction operations should be kept to a minimum. The Contractor shall construct or install temporary and permanent erosion and sediment control best management practices (BMPs) as indicated on the drawings. BMPs may include, but not be limited to, vegetation cover, stream bank stabilization, slope stabilization, silt fences, construction of terraces, interceptor channels, sediment traps, inlet and outfall protection, diversion channels, and sedimentation basins. Any temporary measures shall be removed after the area has been stabilized. The Contractor shall prepare an Erosion, Sedimentation and Pollution Control Plan and Comprehensive Monitoring Program in accordance with Hunter AAF requirements and shall submit it to the USDA-NRCS and shall submit NOI to the Georgia EPD.

3.2.4 Contractor Facilities and Work Areas

The Contractor's field offices, staging areas, stockpile storage, and temporary buildings shall be placed in areas designated on the drawings or as directed by the Contracting Officer. Temporary movement or relocation of Contractor facilities shall be made only when approved. Erosion and sediment controls shall be provided for on-site borrow and spoil areas to prevent sediment from entering nearby waters. Temporary excavation and embankments for plant and/or work areas shall be controlled to protect adjacent areas.

3.3 WATER RESOURCES

The Contractor shall monitor construction activities to prevent pollution of surface and ground waters. Toxic or hazardous chemicals shall not be applied to soil or vegetation unless otherwise indicated. All water areas affected by construction activities shall be monitored by the Contractor. For construction activities immediately adjacent to impaired surface waters, the Contractor shall be capable of quantifying sediment or pollutant loading

to that surface water when required by State or Federally issued Clean Water Act permits.

3.3.1 Cofferdams, Diversions, and Dewatering Operations

Construction operations for dewatering, removal of cofferdams, tailrace excavation, and tunnel closure shall be controlled at all times to maintain compliance with existing State water quality standards and designated uses of the surface water body. The Contractor shall comply with the State of Georgia water quality standards and anti-degradation provisions.

3.3.2 Omitted

3.3.3 Wetlands

The Contractor shall not enter, disturb, destroy, or allow discharge of contaminants into any wetlands.

3.4 AIR RESOURCES

Equipment operation, activities, or processes performed by the Contractor shall be in accordance with all Federal and State air emission and performance laws and standards.

3.4.1 Particulates

Dust particles; aerosols and gaseous by-products from construction activities; and processing and preparation of materials, such as from asphaltic batch plants; shall be controlled at all times, including weekends, holidays and hours when work is not in progress. The Contractor shall maintain excavations, stockpiles, haul roads, permanent and temporary access roads, plant sites, spoil areas, borrow areas, and other work areas within or outside the project boundaries free from particulates which would cause the Federal, State, and local air pollution standards to be exceeded or which would cause a hazard or a nuisance. Sprinkling, chemical treatment of an approved type, baghouse, scrubbers, electrostatic precipitators or other methods will be permitted to control particulates in the work area. Sprinkling, to be efficient, must be repeated to keep the disturbed area damp at all times. The Contractor must have sufficient, competent equipment available to accomplish these tasks. Particulate control shall be performed as the work proceeds and whenever a particulate nuisance or hazard occurs. The Contractor shall comply with all State and local visibility regulations.

3.4.2 Odors

Odors from construction activities shall be controlled at all times. The odors shall not cause a health hazard and shall be in compliance with State regulations and/or local ordinances.

3.4.3 Sound Intrusions

The Contractor shall keep construction activities under surveillance and control to minimize environment damage by noise.

3.4.4 Burning

Burning shall be prohibited on the Government premises.

3.6 CHEMICAL MATERIALS MANAGEMENT AND WASTE DISPOSAL

Disposal of wastes shall be as directed below, unless otherwise specified in other sections and/or shown on the drawings.

3.6.1 Solid Wastes

Solid wastes (excluding clearing debris) shall be placed in containers which are emptied on a regular schedule. Handling, storage, and disposal shall be conducted to prevent contamination. Segregation measures shall be employed so that no hazardous or toxic waste will become co-mingled with solid waste. The Contractor shall transport solid waste off Government property and dispose of it in compliance with Federal, State, and local requirements for solid waste disposal. A Subtitle D RCRA permitted landfill shall be the minimum acceptable off-site solid waste disposal option. The Contractor shall verify that the selected transporters and disposal facilities have the necessary permits and licenses to operate.

3.6.2 Chemicals and Chemical Wastes

Chemicals shall be dispensed ensuring no spillage to the ground or water. Periodic inspections of dispensing areas to identify leakage and initiate corrective action shall be performed and documented. This documentation will be periodically reviewed by the Government. Chemical waste shall be collected in corrosion resistant, compatible containers. Collection drums shall be monitored and removed to a staging or storage area when contents are within 150 mm (6 inches) of the top. Wastes shall be classified, managed, stored, and disposed of in accordance with Federal, State, and local laws and regulations.

3.6.3 Contractor Generated Hazardous Wastes/Excess Hazardous Materials

Hazardous wastes are defined in 40 CFR 261, or are as defined by applicable State and local regulations. Hazardous materials are defined in 49 CFR 171 - 178. The Contractor shall, at a minimum, manage and store hazardous waste in compliance with 40 CFR 262 and shall manage and store hazardous waste in accordance with the Installation hazardous waste management plan. The Contractor shall take sufficient measures to prevent spillage of hazardous and toxic materials during dispensing. The Contractor shall segregate hazardous waste from other materials and wastes, shall protect it from the weather by placing it in a safe covered location, and shall take precautionary measures such as berming or other appropriate measures against accidental spillage. The Contractor shall be responsible for storage, describing, packaging, labeling, marking, and placarding of hazardous waste and hazardous material in accordance with 49 CFR 171 - 178, State, and local laws and regulations. The Contractor shall transport Contractor generated hazardous waste off Government property within 60 days in accordance with the Environmental Protection Agency and the Department of Transportation laws and regulations. The Contractor shall dispose of hazardous waste in compliance with Federal, State and local laws and regulations. Spills of hazardous or toxic materials shall be immediately reported to the Contracting Officer and the Facility Environmental Office. Cleanup and cleanup costs due to spills shall be the Contractor's responsibility. The disposition of Contractor generated hazardous waste and excess hazardous materials are the Contractor's responsibility. As the generator, FS/HAAF

ENRD personnel shall assign the Generator an ID number and sign off on any hazardous wastes manifests.

3.6.4 Fuel and Lubricants

Storage, fueling and lubrication of equipment and motor vehicles shall be conducted in a manner that affords the maximum protection against spill and evaporation. Fuel, lubricants and oil shall be managed and stored in accordance with all Federal, State, Regional, and local laws and regulations. Used lubricants and used oil to be discarded shall be stored in marked corrosion-resistant containers and recycled or disposed in accordance with 40 CFR 279, State, and local laws and regulations. [There shall be no storage of fuel on the project site. Fuel must be brought to the project site each day that work is performed.] [Storage of fuel on the project site shall be accordance with all Federal, State, and local laws and regulations.]

3.6.5 Waste Water

Disposal of waste water shall be as specified below.

a. Waste water from construction activities, such as onsite material processing, concrete curing, foundation and concrete clean-up, water used in concrete trucks, forms, etc. shall not be allowed to enter water ways or to be discharged prior to being treated to remove pollutants. The Contractor shall dispose of the construction related waste water off-Government property in accordance with all Federal, State, Regional and Local laws and regulations.

b. For discharge of ground water, the Contractor shall surface discharge in accordance with all Federal, State, and local laws and regulations.

c. Water generated from the flushing of lines after disinfection or disinfection in conjunction with hydrostatic testing shall be discharged into the sanitary sewer with prior approval and/or notification to the Waste Water Treatment Plant's Operator.

3.7 RECYCLING AND WASTE MINIMIZATION

The Contractor shall participate in State and local government sponsored recycling programs. The Contractor is further encouraged to minimize solid waste generation throughout the duration of the project. The Contractor shall participate to the maximum extent possible the Installation recycling programs.

3.8 NON-HAZARDOUS SOLID WASTE DIVERSION REPORT

The Contractor shall maintain an inventory of non-hazardous solid waste diversion and disposal of construction and demolition debris. The Contractor shall submit a report through the Contracting Officer on the first working day after each fiscal year quarter, starting the first quarter that non-hazardous solid waste has been generated. The following shall be included in the report:

a. Construction and Demolition (C&D) Debris Disposed = in cubic yards or tons, as appropriate.

b. Construction and Demolition (C&D) Debris Recycled = in cubic yards or tons, as appropriate.

c. Total C&D Debris Generated = in cubic yards or tons, as appropriate.

d. Waste Sent to Waste-To-Energy Incineration Plant (This amount should not be included in the recycled amount) = in cubic cubic yards or tons, as appropriate.

3.9 HISTORICAL, ARCHAEOLOGICAL, AND CULTURAL RESOURCES

If during excavation or other construction activities any previously unidentified or unanticipated historical, archaeological, and cultural resources are discovered or found, all activities that may damage or alter such resources shall be temporarily suspended. Resources covered by this paragraph include but are not limited to: any human skeletal remains or burials; artifacts; shell, midden, bone, charcoal, or other deposits; rock or coral alignments, pavings, wall, or other constructed features; and any indication of agricultural or other human activities. Upon such discovery or find, the Contractor shall immediately notify the Contracting Officer so that the appropriate authorities may be notified and a determination made as to their significance and what, if any, special disposition of the finds should be made. The Contractor shall cease all activities that may result in impact to or the destruction of these resources. The Contractor shall secure the area and prevent employees or other persons from trespassing on, removing, or otherwise disturbing such resources.

3.10 BIOLOGICAL RESOURCES

The Contractor shall minimize interference with, disturbance to, and damage to fish, wildlife, and plants including their habitat. The Contractor shall be responsible for the protection of threatened and endangered animal and plant species including their habitat in accordance with Federal, State, Regional, and local laws and regulations.

3.11 INTEGRATED PEST MANAGEMENT

In order to minimize impacts to existing fauna and flora, the Contractor, through the Contracting Officer, shall coordinate with the Installation Pest Management Coordinator (IPMC) at the earliest possible time prior to pesticide application. The Contractor shall discuss integrated pest management strategies with the IPMC and receive concurrence from the IPMC through the COR prior to the application of any pesticide associated with these specifications. Installation Pest Management personnel shall be given the opportunity to be present at all meetings concerning treatment measures for pest or disease control and during application of the pesticide. For termiticide requirements see Section 02364 TERMITICIDE TREATMENT MEASURES FOR SUBTERRANEAN TERMITE CONTROL. The use and management of pesticides are regulated under 40 CFR 152 - 186.

3.11.1 Pesticide Delivery and Storage

Pesticides shall be delivered to the site in the original, unopened containers bearing legible labels indicating the EPA registration number and the manufacturer's registered uses. Pesticides shall be stored according to manufacturer's instructions and under lock and key when unattended.

3.11.2 Qualifications

For the application of pesticides, the Contractor shall use the services of a subcontractor whose principal business is pest control. The subcontractor shall be licensed and certified in the state where the work is to be performed.

3.11.3 Pesticide Handling Requirements

The Contractor shall formulate, treat with, and dispose of pesticides and associated containers in accordance with label directions and shall use the clothing and personal protective equipment specified on the labeling for use during all phases of the application. Material Safety Data Sheets (MSDS)shall be available for all pesticide products.

3.11.4 Application

Pesticides shall be applied by a State Certified Pesticide Applicator in accordance with EPA label restrictions and recommendation. The Certified Applicator shall wear clothing and personal protective equipment as specified on the pesticide label. Water used for formulating shall only come from locations designated by the Contracting Officer. The Contractor shall not allow the equipment to overflow. Prior to application of pesticide, all equipment shall be inspected for leaks, clogging, wear, or damage and shall be repaired prior to being used.

3.12 PREVIOUSLY USED EQUIPMENT

The Contractor shall clean all previously used construction equipment prior to bringing it onto the project site. The Contractor shall ensure that the equipment is free from soil residuals, egg deposits from plant pests, noxious weeds, and plant seeds. The Contractor shall consult with the USDA jurisdictional office for additional cleaning requirements.

3.13 MAINTENANCE OF POLLUTION FACILITIES

The Contractor shall maintain permanent and temporary pollution control facilities and devices for the duration of the contract or for that length of time construction activities create the particular pollutant.

3.14 MILITARY MUNITIONS

In the event the Contractor discovers or uncovers military munitions as defined in 40 CFR 260, the Contractor shall immediately stop work in that area and immediately inform the Contracting Officer.

3.15 TRAINING OF CONTRACTOR PERSONNEL

The Contractor's personnel shall be trained in all phases of environmental protection and pollution control. The Contractor shall conduct environmental protection/pollution control meetings for all Contractor personnel prior to commencing construction activities. Additional meetings

shall be conducted for new personnel and when site conditions change. The training and meeting agenda shall include: methods of detecting and avoiding pollution; familiarization with statutory and contractual pollution standards; installation and care of devices, vegetative covers, and instruments required for monitoring purposes to ensure adequate and continuous environmental protection/pollution control; anticipated hazardous or toxic chemicals or wastes, and other regulated contaminants; recognition and protection of archaeological sites, artifacts, wetlands, and endangered species and their habitat that are known to be in the area.

3.16 OMITTED

3.17 POST CONSTRUCTION CLEANUP

The Contractor shall clean up all areas used for construction in accordance with Contract Clause: "Cleaning Up". The Contractor shall, unless otherwise instructed in writing by the Contracting Officer, obliterate all signs of temporary construction facilities such as haul roads, work area, structures, foundations of temporary structures, stockpiles of excess or waste materials, and other vestiges of construction prior to final acceptance of the work. The disturbed area shall be graded, filled and the entire area seeded unless otherwise indicated.

-- End of Section --

SECTION 01415

METRIC MEASUREMENTS
09/01

1.1 GENERAL

If the Contractor chooses to use Metric measurements for the project, the following provisions shall apply.

1.2 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 E 380	(1993) Practice for Use of the International System of Units (SI)
ASTM E 621	(1994; R 1999el) Practice for Use of Metric (SI) Units in Building Design and Construction

1.3 GENERAL

This project includes metric units of measurements. The metric units used are the International System of Units (SI) developed and maintained by the General Conference on Weights and Measures (CGPM); the name International System of Units and the international abbreviation SI were adopted by the 11th CGPM in 1960. A number of circumstances require that both metric SI units and English inch-pound (I-P) units be included in a section of the specifications. When both metric and I-P measurements are included, the section may contain measurements for products that are manufactured to I-P dimensions and then expressed in mathematically converted metric value (soft metric) or, it may contain measurements for products that are manufactured to an industry recognized rounded metric (hard metric) dimensions but are allowed to be substituted by I-P products to comply with the law. Dual measurements are also included to indicate industry and/or Government standards, test values or other controlling factors, such as the code requirements where I-P values are needed for clarity or to trace back to the referenced standards, test values or codes.

1.4 USE OF MEASUREMENTS

Measurements shall be either in SI or I-P units as indicated, except for soft metric measurements or as otherwise authorized. When only SI or I-P measurements are specified for a product, the product shall be procured in the specified units (SI or I-P) unless otherwise authorized by the Contracting Officer. The Contractor shall be responsible for all associated labor and materials when authorized to substitute one system of units for another and for the final assembly and performance of the specified work and/or products.

1.4.1 Hard Metric

A hard metric measurement is indicated by an SI value with no expressed correlation to an I-P value. Hard metric measurements are often used for field data such as distance from one point to another or distance above the floor. Products are considered to be hard metric when they are manufactured to metric dimensions or have an industry recognized metric designation.

1.4.2 Soft Metric

a. A soft metric measurement is indicated by an SI value which is a mathematical conversion of the I-P value shown in parentheses (e.g. 38.1 mm (1-1/2 inches)). Soft metric measurements are used for measurements pertaining to products, test values, and other situations where the I-P units are the standard for manufacture, verification, or other controlling factor. The I-P value shall govern while the metric measurement is provided for information.

b. A soft metric measurement is also indicated for products that are manufactured in industry designated metric dimensions but are required by law to allow substitute I-P products. These measurements are indicated by a manufacturing hard metric product dimension followed by the substitute I-P equivalent value in parentheses (e.g., 190 x 190 x 390 mm (7-5/8 x 7-5/8 x 15-5/8 inches)).

1.4.3 Neutral

A neutral measurement is indicated by an identifier which has no expressed relation to either an SI or an I-P value (e.g., American Wire Gage (AWG) which indicates thickness but in itself is neither SI nor I-P).

1.5 COORDINATION

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 brought to the attention of the Contracting Officer for resolution.

1.6 RELATIONSHIP TO SUBMITTALS

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. The Contractor shall use ASTM E 380 and ASTM E 621 as the basis for establishing metric measurements required to be used in submittals.

-- End of Section --

SECTION 01451

CONTRACTOR QUALITY CONTROL

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.

2.1 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, which 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.

2.2 QUALITY CONTROL PLAN

2.2.1 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 60 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.

2.2.2 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. A complete list of all specified 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, approximate date of each test and name of commercial laboratory responsible for each test.

A composite listing of approved testing laboratories within the South Atlantic Division 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 (912) 652-5094 or (912) 652-5244. Fax requests can be made to Doug Saxon at number (912) 652-6016.

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.

2.2.3 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.

2.2.4 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.

2.3 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.

2.4 QUALITY CONTROL ORGANIZATION

2.4.1 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.

2.4.2 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 construction person with a minimum of 10 years' experience in related work. 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.

2.4.2.1 Safety and Health Manager

The Contractor shall submit for approval a Safety and Health Manager to serve as the Contractor's safety and health specialist to control the jobsite safety and health and to implement the Contractor's accident prevention plan. The Contractor's safety and health manager does not need to be on the jobsite at all times, but must be present periodically to ensure that the accident prevention plan, all activity hazard analyses, and any special health and safety requirements are properly and fully implemented. The safety and health manager may be an employee of either the prime contractor or a subcontractor, or may be an independent contractor or consultant. The safety and health manager shall receive direction and authority from the CQC System Manager and shall serve as a member of the CQC staff.

2.4.3 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: one (1) electrical, one (1) mechanical, and one (1) civil.

These individuals may be employees of either the prime or a subcontractor, as indicated below; must be responsible to the CQC System Manager; must be physically present at the construction site during work on their areas of responsibility; and have the necessary education and/or experience listed below. These individuals are to be either assigned full-time to the QC function, or may be assigned other duties, as indicated below. If they have other duties, they must dedicate adequate time to and satisfactorily perform their assigned quality control duties as described in the Quality Control Plan.

Experience Matrix

Area	Qualifications
a. Mechanical	Graduate Mechanical Engineer with 2 yrs related experience or person with 5 yrs related experience; must be an employee of the prime;

	must be full-time QC with no additional duties
b. Electrical	Graduate Electrical Engineer with 2 yrs related experience or person with 5 yrs related experience; may be an employee of either the prime or a subcontractor; may have other duties
*10 *11 c. Civil	Graduate Civil Engineer with 2 yrs related experience or person with 5 yrs related experience; must be an employee of the prime or a subcontractor; may have other duties

2.4.4 Additional Requirement

In addition to the above experience and education requirements the CQC System Manager and his entire staff shall have completed the course entitled "Construction Quality Management For Contractors." This course is offered on a quarterly basis within the Savannah District boundaries. CQC system Managers and staff 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.

2.4.5 Organizational Changes

The Contractor shall maintain the CQC staff at full strength at all times and be physically present at the construction site within 30 days after notice to proceed. 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.

2.5 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.

2.6 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:

2.6.1 Preparatory Phase

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 and 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 applicable contract drawings and details.

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 prior portion of the necessary to allow the work to be performed has been accepted by the Contracting Officer.

j. Discussion of the initial control phase.

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 subcontractor workers as to the acceptable level of workmanship required in order to meet contract specifications.

2.6.2 Initial Phase

The Government shall be notified at least 24 hours in advance of beginning the initial phase.

This phase shall be accomplished after a complete sample of the work for a definable feature of work is in progress or completed. The following shall be accomplished:

a. A check of work to ensure that it is in full compliance with technical 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. This initial sample of the work shall

serve as the sample for the remainder of the work. Compare with required sample panels, as appropriate. Resolve all differences.

d. Check safety to include compliance with and upgrading of the safety plan and activity hazard analysis. Review the activity analysis with each worker.

e. 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.

f. The initial phase should be repeated for each new crew to work onsite, or any time acceptable specified quality standards are not being met.

2.6.3 Follow-up Phase

Daily checks shall be performed to assure control activities, including control testing, are providing continued compliance with contract requirements and the acceptable sample of work established during the initial inspection, until all work is completed for this 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.

2.6.4 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.

2.7 TESTS

2.7.1 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.

2.7.2 Testing Laboratories

2.7.2.1 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.

2.7.2.2 Capability Recheck

If the selected laboratory fails the capability check, the Contractor will be assessed a charge (as appropriate determined by Contracting Officer) 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.

2.7.3 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.

2.7.4 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 a laboratory to be designated by the Contracting Officer.

2.8 COMPLETION INSPECTION

2.8.1 CQC Completion 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 and staff shall conduct a detailed, comprehensive inspection of the entire project and develop a list of deficiencies, items which are not totally completed or do not conform to the approved drawings and specifications, and any items remaining from the CQC deficiency tracking list.

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 and staff shall make a second follow-up inspection to ascertain that all deficiencies have been corrected. Once this is accomplished, the Contractor shall notify the Government that the CQC completion inspection punchlist has been completed.

2.8.2 Pre-Final Inspection

Notice shall be given to the Contracting Officer on the completion of the CQC inspection punchlist at least 14 days prior to completion to allow the scheduling of the prefinal inspection.

The Government will perform a verification inspection to assure that the facility is complete and ready for the prefinal inspection.

All mechanical and electrical systems testing must be completed and the Contractor must have performed the Government-witnessed acceptance testing prior to the scheduling of the prefinal 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, the user groups, and major commands may also be in attendance.

A Prefinal Punch List will be developed as a result of this inspection.

The Contractor's CQC System Manager shall ensure that all items on this Government prefinal punchlist have been corrected before notifying the Government that a Final inspection with the customer should be scheduled.

Any items noted on the Prefinal punchlist shall be corrected in a timely manner and the Contractor shall provide the Contracting Officer a schedule for completion of each item noted on the prefinal punchlist.

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.

2.8.3 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, the 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 Prefinal Inspection.

Notice shall be given to the Contracting Officer of the completion of the prefinal punchlist at least 14 days prior to completion to allow the final acceptance inspection to be scheduled. This notification 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 may 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."

2.9 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. Tests and/or control activities performed with results and references to specifications/drawings requirements. Field test report forms for all field testing including all mechanical and electrical systems (QA) acceptance tests. CQC shall maintain a test report folder to be submitted at final acceptance inspection.

e. The control phase should be identified (Preparatory, Initial, Follow-up). List deficiencies noted along with corrective action.

f. Quantity of materials received at the site with statement as to acceptability, storage, and reference to specifications/drawings requirements.

g. Submittals reviewed, with contract reference, by whom, and action taken.

h. Off-site surveillance activities, including actions taken.

i. Job safety evaluations stating what was checked, results, and instructions or corrective actions.

j. Instructions given/received and conflicts in plans and/or specifications.

k. 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.

2.10 SAMPLE FORMS

Sample forms enclosed at the end of Section 00800.

2.11 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.

--End of Section--

SECTION 01500

TEMPORARY CONSTRUCTION FACILITIES—MISCELLANEOUS ITEMS

1.1 GENERAL REQUIREMENTS

1.1.1 Site Plan

The Contractor shall prepare a site mobilization plan indicating the proposed location and dimensions of any area to be fenced and used by the Contractor, the location of the project sign, the number of trailers to be used, avenues of ingress/egress to the fenced area and details of the fence installation and submit the plan to the contracting officer for approval–prior to mobilization on the site. 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 Excavation and HOT (burning) Permits

Excavation and HOT (burning) permits require 10 working days advance written notice to the Contracting Officer and will be subject to the Contracting Officer's approval. Notice shall be accompanied with specific date and duration (start time/finish time) and a sketch showing the location of the proposed excavation or burning. For HOT (burning) permits see Section 01351.

1.1.3 Identification of Employees

All Contractor personnel shall have ID badges and vehicle passes or decals to enter the installation.

1.1.3.1 Contract Information Requirements

Fort Stewart and Hunter Army Airfield requires the following information to remain on file at the Fort Stewart Directorate of Contracting throughout the life of the contract. The Contractor must provide this information to the Contracting Officer at the Pre-Work and/or Pre-Construction Conference, and the Contracting Officer will provide the information to the Directorate of Contracting.

Contract Number
Contractor Title
Contract Location (Fort Stewart or Hunter Army Airfield)
Contract Dates (award, notice to proceed, and contract completion date)
Contractor Mailing Address
Point of Contact for the Contractor (name and phone number)
Point of Contact for the Corps of Engineers (name and phone number)

This requirement applies to construction contractors, AE/design contractors, and consultants and studies contractors.

Any time the Contract duration is changed, information as to the new contract completion date will have to be provided to the Directorate of Contracting.

1.1.3.2 ID Badges

The Contractor must prepare a letter to HQ, 3d Infantry Division (Mechanized) and Fort Stewart, Attention: Director of Contracting (Bernice Harper), 1042 William H. Wilson Avenue, Suite 219, Fort Stewart, Georgia, 31314-3324. Enclosures to the letter must include the personnel roster and the cover page of contract issued by US Army Corps of Engineers. The purpose of this letter is so that the Directorate of Contracting can verify that the Contractor has a contract on post and for how long.

The Contractor must prepare a second letter to HQ, 3d Infantry Division (Mechanized) and Fort Stewart, Attention: Civilian Personnel Advisory Center (Karen Bandera), 101 West Bultman Avenue, Suite 100, Fort Stewart, Georgia, 31314-3324. Enclosures to the letter must include employee information for each employee requiring access to the installation: full name, ssn, date of birth, weight, height, color of hair, color of eyes, sex, and identified as recovery personnel (yes/no). The purpose of this letter is so that the Civilian Personnel Advisory Center can prepare ID badges for each individual employee.

Each individual has to pick up his/her ID badge at Fort Stewart. The Civilian Personnel Advisory Center suggests that 4 or 5 people in groups, every couple of hours, should report for their ID badges.

ID badges are required to be worn at all times while on the installation.

ID badges shall immediately be delivered to the Contracting Officer for cancellation upon release of any employee.

1.1.3.3 Vehicle Registration

Vehicle decals will be required to enter the installation or the driver will be required to go to the Military Police Station for a permit which will require drivers license, proof of insurance, contract number, and point of contact for the company before being allowed to enter.

Individual employees must go to the vehicle registration building with written certification for the Contractor that the individual is an employee of the Contractor and that the vehicle registration is requested. Vehicle registration at Fort Stewart is at Building 285, and at Hunter Army Airfield is at Building 1240.

Data needed for vehicle registration: drivers license, proof of insurance, vehicle registration, and special power of attorney (if registering a vehicle for which the individual's name does not appear on the vehicle state registration).

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 the area construction limits. Contractor employee parking shall not interfere with existing and established parking requirements of the military installation.

1.2 AVAILABILITY AND USE OF UTILITY SERVICES

1.2.1 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 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.

1.2.2 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, meters and meter bases required to measure the amount of each utility used for the purpose of determining charges. The Contractor shall submit its proposed temporary power installation including tie-in to the contracting officer for review prior to installation. The Contractor shall notify the Contracting Officer, in writing, 5 working days before final electrical connection is desired so that a utilities contract can be established.

The Contractor shall perform a weekly electrical inspection by a qualified electrician, for all temporary electrical service and provide a report to the Contracting Officer.

1.2.3 Advance Deposit

not used

1.2.4 Final Meter Reading

Before completion of the work and final acceptance of the work by the Government, the Contractor shall notify the Contracting Officer, in writing, 5 working days before termination is desired. The Government will take a final meter reading. The Contractor shall then remove all the temporary distribution lines, meter and meter bases, and associated paraphernalia. The Contractor shall pay all outstanding utility bills before final acceptance of the work by the Government.

The amount of electric power consumed by the contractor after permanent power connection (for contractor use in testing, heating/cooling and lighting) shall be estimated by the government and contractor will be advised of the estimated kwh consumed monthly until acceptance of the facility.

1.2.5 Sanitation

The Contractor shall provide and maintain within the construction area minimum field-type sanitary facilities approved by the Contracting Officer. Government toilet facilities will not be available to Contractor's personnel.

1.2.6 Telephone

The Contractor shall make arrangements and pay all costs for telephone facilities desired with off post providers.

1.3 BULLETIN BOARD, PROJECT SIGN, AND PROJECT SAFETY SIGN

1.3.1 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.

1.3.2 Project Signs

The Contractor shall furnish and install a project sign at each project site, as selected by the Contracting Officer. The wording on the project sign must be approved 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. The 4' by 4' right-hand section shall be painted white (Color No. 37875, Fed. Std. 595a) with black (Color No. 37038, Fed. Std. 595a) lettering. The 2' by 4' left-hand section shall be painted red (Color No. 12199, Fed. Std. 595a) with white lettering. Eight additional signs of similar construction and finish shall be furnished and installed at locations selected by the Contracting Officer. These signs shall be 36 inches wide, 15 inches high, with red letters 2 inches high on a white background and shall read as follows:

"OFF LIMITS TO UNAUTHORIZED PERSONNEL"

1.4 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.

1.4.1 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 the Contractor, as approved by the Contracting Officer, shall promptly repair other materials. 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 12,000 pounds.

1.4.2 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.

1.5 CONTRACTOR'S TEMPORARY FACILITIES

1.5.1 Administrative Field Offices

The Contractor shall provide and maintain administrative field office facilities within the construction limits at the project site. Government office and warehouse facilities will not be available to the Contractor's personnel.

1.5.2 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 that 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.

1.5.3 Supplemental Storage Area

Upon Contractor's request, the Contracting Officer will designate another or supplemental area (if available) 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 be required at this site; and 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. The Government will not provide utilities to this area.

1.5.4 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 that, in the opinion of the Contracting Officer, require exterior painting or maintenance will not be allowed on the military property.

1.5.5 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.

1.5.6 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.

1.5.7 Utilities

All utilities will be metered and paid for by contractor.
*5

Rates to Charge Contractor:	Water: $~~.94~~0.7585 per 1000 Gallons
	Electricity: $.0799 per KWH
	Sewer: $~~1.08~~1.5433 per 1000 gallons

1.6 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.

1.7 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.

1.8 PARTNERING

Within 60 calendar days after NTP, the Government intends to propose a partnering relationship with the Contractor. This partnering relationship will attempt to draw on strengths of each organization to facilitate communications and minimize delays to achieve a quality product, within budget, and on schedule. Participation in such partnering activities may include attendance at weekly coordination meetings with the Government and cooperation in other efforts to promote the partnering relationship. The Government and the Contractor will equally share the total cost for the partnering conference and the partnering relationship, with no change in the contract price. Participation will not result in any change in the terms or price of the contract.

1.9 INITIAL MEETING WITH THE CONTRACTOR, MODIFICATION MARKUPS

An initial meeting with the Contractor will be held not later than 60 days after NTP and prior to the first modification on the contract. The meeting shall include the prime contractor and major sub-contractors. The purpose of the meeting will be to determine the applicable home office overhead (G&A), field office overhead, bond premium, and labor burden rates to be used on contract modifications.

A follow-up meeting to verify the data shall be held every 6 months.

The Contractor shall provide his detailed breakdown of costs. All costs must be in accordance with the costs elements that are allowable in FAR Part 31. The Contractor may provide a recent (within last 6 months) company audit with his breakdown of cost elements.

1.10 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. All costs in connection therewith shall be included in the contract price for the work.

1.11 TESTING LABORATORIES

Testing is required by the Contractor as part of his Quality Control Plan to verify contract compliance. This Quality Control Testing is to be conducted

by a project or commercial laboratory that has been found adequate and qualified by a Corps of Engineers Division Laboratory Inspection Team.

1.11.1 Approved Testing Laboratories

A composite listing of approved testing laboratories within the South Atlantic Division 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 (912) 652-5094 or (912) 652-5244. Fax requests can be made Doug Saxon (912) 652-6016.

1.11.2 Other Laboratory Services

The Contractor may engage the services of a laboratory other than those approved by the Corps of Engineers, 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' 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 the Contracting Officer.

1.12 CONTAMINATION

1.12.1 Site Evaluation

The job site has been evaluated for potential site contamination.

1.12.2 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 52.212-12 - 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.

1.13 CONSTRUCTION SCHEDULE RESTRAINTS - FORT STEWART AND HUNTER ARMY AIRFIELD, GA

1.13.1 Occupancy

All buildings listed to be demolished are fully occupied and will be occupied during construction (as noted in the sequence and phasing requirements below). 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.

1.13.2 Protection

The 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.

1.13.3 Phasing and Sequencing

1.13.3.1 General

In addition to the submittals required by clause SCHEDULES FOR CONSTRUCTION CONTRACTS 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 occupied 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).

1.13.3.2 Special Phasing and Coordination Restraints

Phasing and sequencing will be required prior to construction of any new facility and prior to demolition of any buildings.

New physical fitness center must be fully complete and operational before building 925 (existing physical fitness center) is available for abatement and demolition. User will require four weeks to move existing equipment from building 925 to the new physical fitness building <u>before</u> abatement and demolition shall start.

Above constraint will impact construction of the running track, bleachers, and associated site/utility work in the footprint and adjacent areas to building 925. Design phasing plan and construction NAS must account for this project delay.

1.13.4 Time of Performance

1.13.4.1 Access to Buildings

All work requiring access to occupied 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 36 hours in advance. For example, a request to work on a Saturday shall be submitted no later than Thursday at noon.

1.13.4.2 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).

1.13.5 Outages

Contractor's work requiring outages of utility systems or building systems will require 14 calendar days advance notice and will be subject to the approval of the Contracting Officer. Notice shall include type of outage, date, and time outage will commence and estimated duration of outage.

1.13.6 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.

1.13.7 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.

1.13.8 Entry

Entry to all areas, except the cantonment area, to be coordinated with Range Control, Building 7901 (intersection of Georgia Highway 144 and Fort Stewart Road 47) and the Provost Marshal's office.

1.13.9 Fire Zone

The Contractor is required to provide 72-hour notice to the Contracting Officer prior to the final programming of the fire zone information at the main fire station.

1.13.10 Excavated Debris

All excavated debris will be hauled off post. No landfills are available on Fort Stewart.

1.14 REQUEST FOR INFORMATION (RFI) SYSTEM

The Government has developed an electronic database, the Request for Information (RFI) System, to track and answer Contractor questions and requests for information and clarification 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 any WEB browser 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 training in the use of the software, which is a Lotus NOTES application. The Contractor will enter all requests indicating the question, recommended solution (if applicable), and needed response date. 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 to the Contractor, 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 the appropriate bid item.

1.15 RED ZONE MEETING

A Red Zone meeting shall be held when the contract, or each separate portion/facility of the contract, is 90 percent complete, or not less than 60 calendar days from the anticipated Prefinal Inspection date.

The ACO/COR, the Project Engineer, the PM, the DPW, the user, and other interested persons having action to result in a fully-operational facility will meet with the Contractor to develop a schedule for completion.

The items identified below will be discussed and scheduled, as applicable. Responsibility for completion of each will be discussed.

- project completion
- prefinal inspection
- use and possession prior to completion
- final inspection
- transfer/acceptance of the project
- items due to the DPW at transfer
- warranty plan with POC for implementation
- bar chart schedule for completion

- tie-in for utilities:
  - outages for tie-in
  - final meter readings
  - transfer of payment for utilities
  - permanent power
  - chilled water

heating water
natural gas
domestic water
sanitary sewer
EMCS

tie-in for communications:
telephone
data lines
other

Fire Department:
inspection of the entire fire protection and reporting system by the Fire Marshall
coordination of the fire reporting system within Post system
fire extinguishers (provided by the user or DPW)
operational testing for all fire protection and reporting systems

Not less than 30 work days prior to Prefinal Inspection, all mechanical and electrical systems must be completely installed and ready for QC control testing.

Not less than 15 work days prior to Prefinal Inspection, all mechanical and electrical systems must be ready for QA/acceptance testing.

Not less than 10 work days prior to Prefinal Inspection, the CQC must perform his completion inspection of each facility and prepare a detailed punchlist. The list should not exceed 20-to-50 minor items/deficiencies. The list should be submitted to the Government with a scheduled date for completion of each item. The Government will review the CQC punchlist and add items as needed, based on the QA continuing deficiency tracking list maintained throughout the contract period.

1.16 PROGRESS PHOTOGRAPHS

The Contractor shall, during the progress of the project, furnish the Contracting Officer progress digital photographs to depict progress of construction. The photographs 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 shall be taken from not less than ten positions for each month as selected by the Contracting Officer. They shall show, inasmuch as practicable, work accomplished during the previous month. 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 in the electronic file with the digital photos. 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.

1.17 SCAFFOLD TAGGING SYSTEM

The Contractor's onsite representative, responsible for implementation of the Accident Prevention Plan, must perform inspections and tagging for all scaffolds after erection and prior to each work shift prior to use. The Contractor's representative must establish a tagging system to indicate that the scaffold has been inspected and is safe for use. The tagging system should include a color tag, such as green for safe and red for unsafe. The

tag should provide a space for the Contractor's representative to sign daily after his inspection of the scaffold for safe use prior to the start of each work shift. Scaffolds without the proper tagging shall not be used.

1.18 SHOP DRAWINGS FOR MECHANICAL AND ELECTRICAL MATERIAL AND EQUIPMENT INSTALLATION SPACES

Detailed and comprehensive Shop Drawings are required to be submitted for approval to the Contracting Officer for all spaces where HVAC mechanical and electrical materials and equipment are installed. These spaces are, but not limited to, the following areas: above ceilings, mechanical room areas, plenum and chase areas, and electrical closets.

The Shop Drawings shall consist of a plan view for equipment layout (for the specific equipment to be provided) including assembly and installation details and electrical connection diagrams; ductwork layout showing the location of all supports and hangers, typical hanger details, gauge reinforcement, reinforcement spacing rigidity classification, and static pressure and seal classifications; and piping layout showing the location of all guides and anchors, the load imposed on each support or anchor, and typical support details.

The Shop Drawings shall include plan and all elevation views of all areas as required to demonstrate that the entire HVAC system, including all ductwork and equipment, has been coordinated with all other installation and trades and can be properly installed within the areas, and that all other systems may be properly installed, including clearances required for operation and maintenance.

The Shop Drawings shall be submitted for approval a minimum of 30 days prior to the scheduled date for installation of the mechanical and electrical material and equipment.

1.19 MASONRY SHOP DRAWINGS

Shop Drawings for masonry work shall be submitted for Government approval. The Shop Drawings shall include an elevation view for each and every masonry wall in the contract. This requirement is in addition to the requirements in Section 04200 SD-02 Shop Drawings.

No masonry work shall be started prior to the approval of the Masonry Shop Drawings.

1.20 CLEANUP

Construction debris, waste materials, packaging material and the like shall be removed from the work site daily. Any dirt or mud that is tracked onto paved or surfaced roadways shall be cleaned away. Materials resulting from demolition activities that 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.

1.21 LAYOUT OF FACILITIES AND BUILDINGS

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 utilize the services of a registered professional surveyor to layout and locate the final location of all buildings and associated support facilities. The Contractor shall submit for approval a written and sealed surveyors plot indicating the final locations.

1.22 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 topsoil and seeding as necessary.

1.23 REFERENCED STANDARDS (IN TECHNICAL SPECIFICATION SECTIONS)

The Contractor (QC representative) shall provide a hard copy of all referenced standards in the technical specification sections at the time of the preparatory inspection for each definable feature of work.

The Contractor shall submit for approval to the Contracting Officer evidence of his procedure for access to the reference standards for all technical specifications (i.e. ASTM, ACI, NFPA, etc.) and include this submittal in the Contractor’s Quality Control Plan.

1.24 ACCIDENT PREVENTION PLAN

In addition to the requirements in Division 01351, the Contractor shall submit an Accident Prevention Plan to the Government for review prior to the start of any work. The Accident Prevention Plan shall be in accordance with EM 385-1-1, and the format of the Accident Prevention Plan in EM 385-1-1, Appendix A, is as listed below.

An Accident Prevention Plan is, in essence, a safety and health policy and program document. The areas listed below are typically addressed in an Accident Prevention Plan, but the 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 Contractor'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.

In the Accident Prevention Plan, the Contractor shall provide information on how they intend to meet the requirements of major sections of EM 385-1-1. Particular attention shall be paid to excavations, scaffolding, medical and first aid requirements, sanitary, 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.

The Contractor shall consider the use of a corporate or consultant Certified Industrial Hygienist or Certified Safety Professional on either a full-time

or part-time basis to meet the overall safety and health program or any of the specific hazard plan or program requirements of EM 385-1-1.

Accident Prevention Plan outline:

1. SIGNATURE SHEET. Title, signature, and phone number of the following:
   a. plan preparer (corporate safety staff person, DC)
   b. plan approval (owner, company president, regional vice president) (HTRW activities require approval of a Certified Industrial Hygienist; a Certified Safety Professional 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; i.e. Chief of Operations, Corporate Chief of Safety, Corporate Industrial Hygienist, project manager or superintendent, project safety professional, etc.)

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).
   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 (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

7. SAFETY AND HEALTH INSPECTIONS. Provide details on:
   a. who will conduct safety inspections (project manager, safety professional, OC, 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 (i.e. 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. 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

1O. MEDICAL SUPPORT. Outline on-site medical support and off-site medical arrangements.

11. PERSONAL PROJECTIVE 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 (O1.E.01)
      -spill plans (01 .E.01, 06.A.02)
      -firefighting plan (01.E.01, 19.A.04)
      -posting of emergency telephone numbers (01.E.04)
      -wildfire prevention plan (09.K.O1)
      -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 (06.8.05 & specifications
   g. asbestos abatement plan (06.8.05 & 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 (27.8.02)
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) (28.8.01)
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, DrugFree Work Force)

-- End of Section --

SECTION 01525N

SAFETY REQUIREMENTS
08/03

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 the basic designation only.

AMERICAN NATIONAL STANDARDS INSTITUTE (ANSI)

ANSI A10.14	(1991) Construction and Demolition Operations - Requirements for Safety Belts, Harnesses, Lanyards and Lifelines for Construction and Demolition Use
ANSI Z359.1	(1992) Safety Requirements for Personal Fall Arrest Systems

ASME INTERNATIONAL (ASME)

ASME B30.5	(1994) Mobile Cranes
ASME B30.22	(1993) Articulating Boom Cranes

U.S. NATIONAL ARCHIVES AND RECORDS ADMINISTRATION (NARA)

29 CFR 1910.94	Ventilation
29 CFR 1910.120	Hazardous Waste Operations and Emergency Response
29 CFR 1926.65	Hazardous Waste Operations and Emergency Response
29 CFR 1926.502(f)	Warning Line Systems

U.S. ARMY CORPS OF ENGINEERS (USACE)

EM 385-1-1	(2003) Safety and Health Requirements Manual

NATIONAL FIRE PROTECTION ASSOCIATION (NFPA)

NFPA 10	(1995) Portable Fire Extinguishers
NFPA 70	(1999) National Electrical Code
NFPA 241	(1996) Safeguarding Construction, Alteration, and Demolition Operations

1.2 DEFINITIONS

a. Certified Industrial Hygienist. An industrial hygienist is an individual who is certified by the American Board of Industrial Hygiene.

b. Certified Safety Professional. A safety manager, safety specialist, or safety engineer that has passed the CSP exam administered by the Board of Certified Safety Professionals.

c. Competent Person. A competent person is one who is capable of identifying existing and predictable hazards in the surroundings or working conditions which are unsanitary, hazardous, or dangerous to employees, and who has authorization to take prompt corrective measures to eliminate them.

d. Confined Space. A space which by design has limited openings for entry and exit, unfavorable natural ventilation which could contain or produce dangerous air contaminants, and which is not intended for continuous employee occupancy. Confined spaces include, but are not limited to storage tanks, process vessels, pits, silos, vats, degreasers, reaction vessels, boilers, ventilation and exhaust ducts, sewers, tunnels, underground utility vaults, and pipelines.

e. First Aid. First aid is any one-time treatment, and any follow-up visit for the purpose of observation, of minor scratches, cuts, burns, splinters, and so forth, which do not ordinarily require medical care, even though provided by a physician or registered professional personnel.

f. Site Safety and Health Plan (SSHP). The SSHP is the term used in EM 385-1-1. "USACE" property and equipment specified in EM 385-1-1 should be interpreted as Government property and equipment.

g. Lost Workdays. The number of days (consecutive or not) after, but not including, the day of injury or illness during which the employee would have worked but could not do so; that is, could not perform all or part of his normal assignment during all or any part of the workday or shift; because of the occupational injury or illness.

h. Medical Treatment. Medical treatment includes treatment administered by a physician or by registered professional personnel under the standing orders of a physician. Medical treatment does not include first aid treatment even through provided by a physician or registered personnel.

i. Multi-employer work site (MEWS). A multi-employer work site, as defined by OSHA, is one in which many employers occupy the same site. The USACE considers the prime contractor to be the "controlling authority" for all work site safety and health of the subcontractors.

j. Operating Envelope. There is an "operating envelope" around any crane, and inside the envelope are the operator, riggers, rigging gear between the hook and the load, the load and the crane's supporting structure (ground, rail, etc.).

k. Qualified Person. One who, by possession of a recognized degree, certificate, or professional standing, or extensive knowledge, training, and experience, has successfully demonstrated his or her ability to solve or resolve problems related to the subject matter, the work or the project.

l. Recordable Occupational Injuries or Illnesses. Any occupational injuries or illnesses which result in:

(1) Fatalities, regardless of the time between the injury and death, or the length of the illness; or

(2) Lost Workday Cases, other than fatalities, that result in lost workdays, or

(3) Non-Fatal Cases without lost workdays which result in transfer to another job or termination of employment, or require medical treatment (other than first aid) or involve: loss of consciousness or restriction of work or motion. This category also includes any diagnosed occupational illnesses which are reported to the employer but are not classified as facilities or lost workday cases.

m. Safety Manager. The superintendent or other qualified or competent person who is responsible for the on-site safety required for the project. The contractor quality control person cannot be the safety manager, even through the QC has safety inspection responsibilities as part of the QC duties.

n. Serious Accidents. Any work-related incident, which results in, a fatality, in-patient hospitalization of three or more employees, or property damage in excess of $200,000.

o. Significant Accident. Any contractor accident which involves falls of (4 feet) or more, electrical accidents, confined space accidents, diving accidents, equipment accidents, crane accident or fire accidents, which, result in property damage of $10,000 or more, but less than $200,000; or when fire department or emergency medical treatment (EMT) assistance is required.

p. Weight Handling Equipment (WHE) Accident. A WHE accident occurs when any one or more of the six elements in the operating envelope fails to perform correctly during operation, including operation during maintenance or testing resulting in personnel injury or death; material or equipment damage; dropped load; derailment; two-blocking; overload; and collision, including unplanned contact between the load, crane, and/or other objects. A dropped load, derailment, two-blocking, overload and collision are considered accidents even though no material damage or injury occurs. A component failure (e.g., motor burnout, gear tooth failure, bearing failure) is not considered an accident solely due to material or equipment damage unless the component failure results in damage to other components (e.g., dropped boom, dropped load, roll over, etc.).

1.3 SUBMITTALS

Submit the following in accordance with Section 01330, "Submittal Procedures."

SD-07 Certificates

Accident Prevention Plan (APP); G

Activity Hazard Analysis (AHA); G

Site Safety and Health Plan; G

SD-11 Closeout Submittals

Daily Confined Space Entry Permit

Submit one copy of each permit attached to each Daily Production Report.

Reports

Submit reports as their incidence occurs, in accordance with the requirements of the paragraph entitled, "Reports."

Crane Reports

Crane Critical Lift Plan

Certificate of Compliance

Noise Survey Result Report

1.4 QUALITY ASSURANCE
*11
1.4.1 Deleted~~Safety Specialist~~

~~Provide a Safety Specialist at the work site to perform safety management, surveillance, inspections, and safety enforcement for the contractor. The Safety Specialist shall be the safety "competent person" as defined by EM 385-1-1. The Safety Specialist shall be at the work site at all times whenever work or testing is being performed, shall conduct daily safety inspections and shall have minimum duties other than safety management, inspections, and safety enforcement on this contract. The Safety Specialist shall assist the Safety Manager in preparing the various safety and health reports.~~

1.4.2 Qualifications

a. Qualifications of Safety Officer:

(1) Ability to manage the on-site contractor safety program through appropriate management controls.

(2) Ability to identify hazards and have the capability to expend resources necessary to abate the hazards.

(3) Must have worked on similar types of projects that are equal to or exceed the scope of the project assigned with the same responsibilities.

(4) Shall, as a minimum, have attended an OSHA training qualification class including at least 10 hours of classroom

instruction.

b. Qualifications of Qualified Person, Confined Space Entry. The qualified person shall be capable (by education and specialized training) of anticipating, recognizing, and evaluating employee exposure to hazardous substances or other unsafe conditions in a confined space. This person shall be capable of specifying necessary control and protective action to ensure worker safety.

c. Qualification of Crane Operators. Crane operators shall meet the requirements in EM 385-1-1, Appendix G.

1.4.3 Meetings

1.4.3.1 Preconstruction Conference

The safety manager shall attend the preconstruction conference.

1.4.3.2 Meeting on Work Procedures

a. Meet with Contracting Officer to discuss work procedures and safety precautions required by the APP. Ensure the participation of the contractor's superintendent, the quality control, and the CSP or CIH.

b. Meet with Contracting Officer to discuss work procedures and safety precautions required by the SSHP. Ensure the participation of the contractor's superintendent, the quality control, and the CSP or CIH.

1.4.3.3 Weekly Safety Meetings

Hold weekly at the project site. Attach minutes showing contract title, signatures of attendees and a list of topics discussed to the QC Contractor Quality Control daily report.

1.4.3.4 Work Phase Meetings

The appropriate AHA shall be reviewed and attendance documented by the Contractor at the preparatory, initial, and follow-up phases of quality control inspection.

1.4.3.5 New Employee Indoctrination

New employees will be informed of specific site hazards before they begin work. Documentation of this orientation shall be kept on file at the project site.

1.4.4 Certifications

1.4.4.1 Accident Prevention Plan (APP)

Submit the APP at least 15 calendar days prior to start of work at the job site, following Appendix A of EM 385-1-1. Make the APP site specific. Notice To Proceed will be given after Government finds the APP acceptable.

1.4.4.2 Activity Hazard Analysis (AHA)

Submit the AHA for review at least 15 calendar days prior to the start of

each phase. Format subsequent AHA as amendments to the APP. In accordance with contract quality control requirements each AHA will be reviewed during an on-site preparatory inspection.

1.4.4.3 Site Safety and Health Plan (SSHP)

Submit the SSHP for projects involving the handling of hazardous materials and allow 30 calendar days for review by USACE Savannah District Safety Office for health hazard review. The Contracting Officer will act on the SSHP only after it has been reviewed and accepted by the Safety Office or their designee.

1.4.5 Reports

1.4.5.1 Crane Reports

Submit crane inspection reports required in accordance with EM 385-1-1 and as specified herein with Daily Reports of Inspections.

1.4.5.2 Crane Critical Lift Plan

Submit crane critical lift plan EM 385-1-1 section 16 when crane loads meet or exceed 75 percent of the crane load capacity in any configuration.

1.4.5.3 Certificate of Compliance

The Contractor shall provide documentation and certification that all aspects of Appendices G, H, and I of EM 385-1-1, 2003 edition, Safety and Health Requirements Manual have been met for each crane entering Hunter Army Airfield under this contract. Certification shall also state that the crane and rigging gear meet applicable OSHA regulations (with the contractor citing which OSHA regulations are applicable, e.g., cranes used in construction, demolition, or maintenance shall comply with 29 CFR 1926. Certify on the Certificate of Compliance that the crane operator(s) is qualified and trained in the operation of the crane to be used. The Contractor shall also certify that all of its crane operators have been trained not to bypass safety devices (e.g., anti-two block devices) during lifting operations. The certification shall be available onsite.

1.5 ACCIDENT PREVENTION PLAN (APP)

Prepare the APP in accordance with the required and advisory provisions of EM 385-1-1 including Appendix A, "Minimum Basic Outline for Preparation of Accident Prevention Plan," and as modified herein. Include the associated AHA and other specific plans, programs and procedures listed on Pages A-3 and A-4 of EM 385-1-1, some of which are listed below.

1.5.1 Contents of the Accident Prevention Plan

a. Name and safety related qualifications of safety officer (including training and any certifications).

b. Qualifications of competent and of qualified persons.

c. Identity of the individual who will complete exposure data (hours worked); accident investigations, reports and logs; and immediate notification of accidents to include subcontractors.

d. Emergency response plan. Conform to EM 385-1-1, paragraph 01.E

and include a map denoting the route to the nearest emergency care facility with emergency phone numbers. Contractor may be required to demonstrate emergency response.

e. Confined Space Entry Plan. Identify the qualified person's name and qualifications, training, and experience. Delineate the qualified person's authority to direct work stoppage in the event of hazardous conditions. Include procedure for rescue by contractor personnel and the coordination with emergency responders. (If there is no confined space work, include a statement that no confined space work exists and none will be created.)

f. Hazardous Material Use. Provisions to deal with hazardous materials, pursuant to the Contract Clause "FAR 52.223-3, Hazardous Material Identification and Material Safety Data." And the following:

(1) Inventory of hazardous materials to be introduced to the site with estimated quantities. Include any nuclear materials, such as sealed sources for use in detection or inspection of workmanship, and all other radiologically active materials. Also include any explosive or detonation devices (such as explosive actuated tools). This inventory shall be updated throughout the phases of site work, adding or dropping materials to keep the list current. Dated revisions shall be submitted to the Contracting Officer as appendices to the APP.

(2) Plan for protecting personnel and property during the transport, storage and use of the materials.

(3) Emergency procedures for spill response and disposal, including a site map with approximate quantities on site at any given time. The site map will be attached to the inventory, showing where the hazardous substances are stored.

(4) Material Safety Data Sheets for inventoried materials not required in other section of this specification.

(5) Labeling system to identify contents on all containers on-site.

(6) Plan for communicating high health hazards to employees and adjacent occupants.

g. Hazardous Energy Control Plan. For hazardous energy sources, comply with EM 385-1-1, paragraph 12.A.07.

h. Critical Lift Plan. Weight handling critical lift plans shall be prepared and signed in accordance with EM 385-1-1, paragraph 16.c.18.

i. Alcohol and Drug Abuse Plan

(1) Describe plan for random checks and testing with pre-employment screening in accordance with the DFAR Clause subpart 252.223-7004, "Drug Free Work Force."

(2) Description of the on-site prevention program

j. Fall Protection and Prevention (FP&P) Plan. The plan shall be site specific and address all fall hazards in the work place. It shall address how to protect and prevent workers from falling to lower levels when they are exposed to fall hazards above 6 feet. A qualified person shall prepare the plan. The plan shall include fall protection and prevention systems, equipment and methods employed, responsibilities, rescue and escape equipment and operations, training requirements, and monitoring methods. FP&P Plan shall be revised as needed, but at a minimum of once every 6 months, to reflect any new changes during the course of construction, due to changes of personnel, equipment, systems or work habits.

k. Silica Exposure Reduction. The plan shall include specific procedures to prevent employee silica inhalation exposures.

l. Omitted.
m. Omitted.

n. Site Demolition Plan. The safety and health aspects prepared in accordance with Section 02220, "Demolition" (at minimum Work Plan, Demolition Plan, notifications and Close-out Report) and other referenced sources

o. Excavation Plan. The safety and health aspects prepared in accordance with Section 02315A, "Excavation, Filling, and Backfilling, for Buildings" and 02316, "Excavation, Trenching, and Backfilling for Utilities Systems."

p. Training Records and Requirements. List of mandatory training and certifications which are applicable to this project (e.g. explosive actuated tools, confined space entry, fall protection, crane operation, vehicle operator, forklift operators, personal protective equipment); list of requirements for periodic retraining/certification; outline requirements for supervisory and employee safety meetings.

q. Severe Weather Plan. Procedures of ceasing on-site operations during lightning or upon reaching maximum allowed wind velocities.

r. Emergency Lighting and Power Systems Plan (e.g. periodic testing of batteries for emergency lighting.)

1.5.2 Hazardous Material Use

Each hazardous material must receive approval prior to bringing onto the job site or prior to any other use in connection with this contract. Allow a minimum of 10 working days for processing of the request for use of a hazardous material. Any work or storage involving hazardous chemicals or materials must be done in a manner that will not expose government employees to any unsafe or unhealthful conditions. Adequate protective measures must be taken to prevent government employees from being exposed to any hazardous condition that could result from the work or storage. Approval by the Contracting Officer of protective measures and storage area is required prior to the start of the work.

1.6 ACTIVITY HAZARD ANALYSIS (AHA)

Prepare for each phase of the work. As a minimum, define activity being performed, sequence of work, specific hazards anticipated, control measures to eliminate or reduce each hazard to acceptable levels, training requirements for all involved, and the competent person in charge of that phase of work. For work with fall hazards, including fall hazards associated with scaffold erection and removal, identify the appropriate fall arrest systems. For work with materials handling equipment, address safeguarding measures related to materials handling equipment. For work requiring excavations, include excavation safeguarding requirements. The appropriate AHA shall be reviewed and attendance documented by the Contractor at the preparatory, initial, and follow-up phases of quality control inspection.

1.7 HEALTH AND SAFETY PLAN (HASP)

No subsurface hazardous waste materials, as defined by the Environmental Protection Agency (EPA) or Georgia Environmental Protection Division (Ga EPD) have been identified for this project. However, Fort Stewart/Hunter Army Airfield requires that all underground storage tanks (USTs), including heating fuel tanks, be removed under the Georgia Underground Storage Tank (GUST) Program. All GUST mandated testing and documentation shall be prepared and submitted to the Contracting Officer within 60 days of tank removal.

USACE defines uncharacterized UST sites as uncontrolled waste sites until proven (by analytical testing) to be uncontaminated sites. For this reason, removal of all USTs will be in compliance with 29 CFR 1926.65, 1910.120 and EM 385-1-1 waste site requirements. Prepare as required by 29 CFR 1910.120 and EM 385-1-1.

1.7.1 Qualified Personnel

Retain a Certified Industrial Hygienist (CIH) or a Certified Safety Professional (CSP) to prepare the SSHP, conduct activity hazard analyses, and prepare detailed plan for demolition, removal, and disposal of materials. The CIH or CSP shall be on call to provide tehnical assistance for the duration of contract.

1.7.2 Contents

In addition to the requirements of EM 385-1-1, Table 28-1, the SSHP must include:

a. Location, size, and details of control areas.

b. Location and details of decontamination systems.

c. Interface of trades involved in the construction.

d. Sequencing of work.

e. Disposal plan.

f. Sampling protocols.

g. Testing labs.

h. Protective equipment.

i. Pollution control.

j. Evidence of compliance with 29 CFR 1910.120 and 29 CFR 1926.65.

k. Training and certifications of CIH, CSP, Site Safety and Health Officer, or other competent persons.

1.8 DRUG PREVENTION PROGRAM

Conduct a proactive drug and alcohol use prevention program for all workers, prime and subcontractor, on the site. Ensure that no employees either use illegal drugs or consume alcohol during work hours. Ensure there are no employees under the influence of drugs or alcohol during work hours. After accidents, collect blood, urine or saliva specimens and test the injured employee's influence status. A copy of the test shall be made available to the Contracting Officer upon request.

1.9 FALL HAZARD PROTECTION AND PREVENTION PROGRAM

1.9.1 Scaffolds

Delineate the fall protection requirements necessary during the erection and dismantling operation of scaffolds used on the project in the Fall Protection and Prevention (FP&P) plan and activity hazard analysis for the phase of work.

1.9.2 Training

Institute a fall protection training program. As part of the Fall Hazard Protection and Prevention Program, Contractor shall provide training for each employee who might be exposed to fall hazards. Documentation is required

1.10 DUTIES OF THE SAFETY OFFICER

a. Ensure construction hazards are identified, documented, and corrected.

b. Maintain applicable safety reference material on the job site.

c. Maintain a log of safety inspections performed.

d. Attend the pre-construction conference as required.

e. Identify hazardous conditions and take corrective action. Failure to do so will result in a dismissal from the site, with a work stoppage pending approval of suitable replacement personnel.

1.11 DISPLAY OF SAFETY INFORMATION

Display the following information in clear view of the on-site construction personnel:

a. Map denoting the route to the nearest emergency care facility with emergency phone numbers.

b. AHA

c. Confined space entry permit.

1.12 SITE SAFETY REFERENCE MATERIALS

Maintain safety-related references applicable to the project, including those listed in the article "References." Maintain applicable equipment manufacturers' manuals.

1.13 OMITTED

1.14 EMERGENCY MEDICAL TREATMENT

Contractors will arrange for their own emergency medical treatment. Government has no responsibility to provide emergency medical treatment. However, if emergency medical care is rendered by Army medical services, charges may be billed to the Contractor.

1.15 OMITTED

1.16 REPORTS

1.16.1 Accident Reports

a. For recordable occupational injuries and illnesses, the Prime Contractor shall conduct an accident investigation to establish the root cause(s) of the accident, complete the Navy Contractor Significant Incident Report (CSIR) form and provide to the Contracting Officer within 5 calendar days of the accident. The Contracting Officer will provide a copy of the CSIR form.

b. For a weight handling equipment accident the Prime Contractor shall conduct an accident investigation to establish the root cause(s) of the accident, complete the WHE Accident Report form and provide to the Contracting Officer within 30 calendar days of the accident. The Contracting Officer will provide a blank copy of the WHE accident report form.

1.16.2 Notification

Notify the Contracting Officer as soon as practical, but not later than four hours, of any accident meeting the definition of Recordable Occupational Injuries or Illnesses or Significant Accidents. Information shall include contractor name; contract title; type of contract; name of activity, installation or location where accident occurred; date and time of accident; names of personnel injured; extent of property damage, if any; and brief description of accident (to include type of construction equipment used, PPE used, etc.).

1.16.3 Monthly Exposure Report

Monthly exposure reporting, to the Contracting Officer is required to be attached to the monthly billing request. This report is a compilation of employee-hours worked each month for all site workers, both prime and subcontractor.

1.16.4 OSHA Citations and Violations

Provide the Contracting Officer with a copy of each OSHA citation, OSHA

report and contractor response. Correct violations and citations promptly and provide written corrective actions to the Contracting Officer.

1.16.5 Crane Notification

Notify Contracting Officer at least 15 days prior to bringing any crane equipment on-site so that the contracting officer may arrange for any additional quality assurance spot checks necessary by the government.

1.17 HOT WORK

Prior to performing "Hot Work" (welding, etc.) or operating other flame-producing devices, the Contractor shall request a written permit from the Fire Division. CONTRACTORS ARE REQUIRED TO MEET ALL CRITERIA BEFORE A PERMIT IS ISSUED. The Contractor will provide at least two (@2) twenty (20) pound extinguishers for normal "Hot Work". All extinguishers shall be current inspection tagged, approved safety pin and tamper resistant seal. It is also mandatory to have a designated FIRE WATCH for any "Hot Work" done at this activity.

a. Oil painting materials (paint, brushes, empty paint cans, etc.), and all flammable liquids shall be removed from the building at quitting time. All painting materials and flammable liquids shall be stored outside in a suitable metal locker or box and will require re-submittal with non-hazardous materials.

b. Accumulation of trays, paper, shavings, sawdust,boxes and other packing materials shall be removed from the building at the close of each workday and such material disposed of in the proper containers located away from the building.

c. The storage of combustable supplies shall be a safe distance from structures.

d. Area outside of building undergoing work shall be cleaned of trash, paper, or other discarded combustables at the close of each workday.

e. All portable electric devices (saws, sanders, compressors, extension chord, lights, etc.) shall be disconnected at the close of each workday. When possible, the main electric swiotch in the building shall be deactivated.

f. When starting work in building or araes, Contractors shall require their personnel to familiarize themselves with the location of the nearest fire alarm boxes and place in memory the emergency Fire Division phone number. ANY FIRE, NO MATTER HOW SMALL, SHALL BE REPORTED.

PART 2 PRODUCTS

2.1 FALL PROTECTION ANCHORAGE

Fall protection anchorage, conforming to ANSI Z359.1.

2.2 CONFINED SPACE SIGNAGE

Provide permanent signs integral to or securely attached to access covers for new permit required confined spaces. Signs wording: "DANGER--PERMIT

REQUIRED CONFINED SPACE - DO NOT ENTER -" on bold letters a minimum of one inch in height and constructed to be clearly legible with all paint removed. The signal word "DANGER" shall be red and readable from 5 feet.

PART 3 EXECUTION

3.1 CONSTRUCTION

Comply with EM 385-1-1, NFPA 241, the accident prevention plan, the activity hazard analysis and other related submittals and activity fire and safety regulations.

3.1.1 Hazardous Material Exclusions

Notwithstanding any other hazardous material used in this contract, radioactive materials or instruments capable of producing ionizing/non-ionizing radiation as well as materials which contain asbestos, mercury or polychlorinated biphenyls, di-isocynates, lead-based paint are prohibited. Exceptions to the use of any of the above excluded materials may be considered by Contracting Officer upon written request by Contractor.

3.1.2 Unforeseen Hazardous Material

The design should have identified materials such as PCB, lead paint, and friable and nonfriable asbestos. If material, not indicated, that may be hazardous to human health upon disturbance during construction operations is encountered, stop that portion of work and notify the Contracting Officer immediately. If material is not hazardous or poses no danger, the Government will direct the Contractor to proceed without change. If material is hazardous and handling of the material is necessary to accomplish the work, the Government will issue a modification pursuant to "FAR 52.243-4, Changes" and "FAR 52.236-2, Differing Site Conditions."

3.2 PRE-OUTAGE COORDINATION MEETING

Contractors are required to apply for utility outages a minimum of 15 days in advance. As a minimum, the request should include the location of the outage, utilities being effected, duration of outage and any necessary sketches. Special requirements for electrical outage requests are contained elsewhere in this specification section. Once approved and prior to beginning work on the utility system requiring shut down, the Contractor shall attend a pre-outage coordination meeting with the Contracting Officer to review the scope of work and the lock out/tag out procedures for worker protection. No work will be performed on energized electrical equipment unless proven impassable. Working equipment "hot" must be considered the last option.

3.3 PERSONNEL PROTECTION

3.3.1 Hazardous Noise

Provide hazardous noise signs, and hearing protection, wherever equipment and work procedures produce sound-pressure levels greater than 85 dBA steady state or 140 dBA impulse, regardless of the duration of the exposure.

3.3.2 Fall Protection

Enforce use of the fall protection device designated for each specific work

activity in the AHA all times when an employee is on a surface 6 feet or more above lower levels. Personal fall arrest systems are required when working from an articulating or extendible boom, scissor lifts, swing stages, or suspended platform. Fall protection must comply with ANSI A10.14.

3.3.2.1 Personal Fall Arrest Device

Personal fall arrest device equipment, systems, subsystems, and components shall meet ANSI Z359.1, "Safety Requirements for Personal Fall Arrest Systems". Only a full-body harness with a shock absorbing lanyard or self-retracting lanyard is an acceptable personal fall arrest device. Body belts may only be used as a positioning device system such as steel reinforcing assembly and in conjunction with another fall arrest system. Harnesses shall have a fall arrest attachment, which is a connector, affixed to the body support (usually a D-ring) and specifically designated for attachment to the rest of the system. Only double locking snap hooks and carabiners shall be used. Webbing, straps, and ropes shall be made of synthetic fiber.

3.3.2.2 Fall Protection for Roofing Work

Fall protection controls shall be implemented based on the type of roof being constructed and work being performed. The roof area to be accessed shall be evaluated for its structural integrity including weight-bearing capabilities for the projected loading.

a. Low Sloped Roofs:

(1) For work within 6 feet of an edge, on low-slope roofs, personnel shall be protected from falling by use of personal fall arrest systems, guardrails, or safety nets. Safety monitoring system is not adequate fall protection and is not authorized.

(2) For work greater than 6 feet from an edge, warning lines shall be erected and installed in accordance with 29 CFR 1926.502(f).

b. Steep Roofs: Work on steep roofs requires personal fall arrest system, guardrails with toe-boards, or safety nets. This requirement also includes residential or housing type construction.

3.3.2.3 Safety Nets

If safety nets are used as the selected fall protection system on the project, they shall be provided at unguarded workplaces, over water, machinery, dangerous operations and leading edge work.

3.3.2.4 Existing Anchorage

Existing anchorages, used for attachment of personal fall arrest equipment, if to be used by the Contractor, shall be re-certified by the contractor's fall protection engineer (QP).

3.4 SCAFFOLDING

Employees shall be provided with a safe means of access to the work area on the scaffold. Climbing of any scaffold braces or supports not specifically designed for access is prohibited. Stair towers or ladders built into

scaffold systems in accordance with USACE EM 385-1-1 Appendix J are required for work platforms greater than 20 feet in height. Contractor shall ensure that employees that are qualified perform scaffold erection. Do not use scaffold without the capability of supporting at least four times the maximum intended load or without appropriate fall protection as delineated in the accepted fall protection plan. Minimum platform size shall be based on the platform not being greater in height than three times the dimension of the smallest width dimension for rolling scaffold. Some Baker type scaffolding has been found not to meet these requirements. Stationary scaffolds must be attached to structural building components to safeguard against tipping forward or backward. Special care shall be given to ensure scaffold systems are not overloaded. Outrigger brackets used to extend scaffold platforms on self supported scaffold systems for the storage of material is prohibited. The first tie-in shall be at the height equal to 4 times the width of the smallest dimension of the scaffold base.

3.5 EQUIPMENT

3.5.1 Material Handling Equipment

a. Material handling equipment such as forklifts shall not be modified with work platform attachments for supporting employees unless specifically delineated in the manufacturer's printed operating instructions.

b. The use of hooks on equipment for lifting of material must be in accordance with manufacturers printed instructions.

3.5.2 Weight Handling Equipment

a. Cranes must be equipped with:

(1) Load Indicating Devices (LIDs) and a Boom Angle or Radius Indicator,

(2) or Load-Moment Indicating Devices (LMIs).

(3) Anti-two-block prevention devices.

(4) Boom Hoist Hydraulic Relief Valve, Disconnect, or Shutoff (stops hoist when boom reaches a predetermined high angle).

(5) Boom Length Indicator (for telescoping booms).

(6) Device to prevent uncontrolled lowering of a telescoping hydraulic boom.

(7) Device to prevent uncontrolled retraction of a telescoping hydraulic boom.

b. The Contractor shall notify the Contracting Officer, in advance, of any cranes entering the activity so that necessary quality assurance spot checks can be coordinated.

c. The Contractor shall comply with the crane manufacturer's specifications and limitations for erection and operation of cranes and hoists used in support of the work. Erection shall be performed under the supervision of a designated person (as defined in ASME B30.5). All testing shall be performed in accordance with

the manufacturers recommended procedures.

d. The Contractor shall comply with ASME B30.5 for mobile cranes, and ASME B30.22 for articulating boom cranes.

e. The presence of Naval station safety and health inspectors does not relieve the Contractor of an obligation to comply with all applicable safety regulations. The Government will investigate all complaints of unsafe or unhealthful working conditions received in writing from contractor employees, federal civilian employees, or military personnel.

f. Each load shall be rigged/attached independently to the hook/master-link in such a fashion that the load cannot slide or otherwise become detached. Christmas-tree lifting (multiple rigged materials) is not allowed.

g. When operating in the vicinity of overhead transmission lines, operators and riggers shall be alert to this special hazard and shall follow the requirements of ASME B30.5 or ASME B30.22 as applicable.

h. Crane supported work platforms shall only be used in extreme conditions if the Contractor proves that using any other access to the work location would provide a greater hazard to the workers. Personnel shall not be lifted with a live hoist or friction crane.

i. A fire extinguisher having a minimum rating of 10BC and a minimum nominal capacity of 5lb of extinguishing agent shall be available at all operator stations or cabs of cranes. Portable fire extinguishers shall be inspected, maintained, and recharged as specified in NFPA 10, Standard for Portable Fire Extinguishers.

j. All employees shall be kept clear of loads about to be lifted and of suspended loads.

k. A weight handling equipment operator shall not leave his position at the controls while a load is suspended.

l. A Contractor Crane Operation Checklist shall be used by the CQC representative during oversight of contractor crane operations (refer to EM 385-1-1 Appendix H and Contracting Officer for copies).

m. Only contractor crane operators who have met the requirements of 29 CFR 1910.94, 29 CFR 1910.120, 29 CFR 1926.65, 29 CFR 1926.502(f), EM 385-1-1, ASME B30.5, and ASME B30.22 and other local and state requirements shall be authorized to operate the crane.

n. Cribbing shall be utilized by the Contractor when performing lifts on outriggers.

o. The crane hook/block must be positioned directly over the load. Side loading of the crane is prohibited.

p. A physical barricade must be positioned to prevent personnel from entering the tailswing area of the crane.

q. A substantial and durable rating chart containing legible letters

and figures shall be provided with each crane and securely mounted onto the crane cab in a location allowing easy reading by the operator while seated in the control station.

r. Certification records which include the date of inspection, signature of the person performing the inspection along with the serial number or other identifier of the crane which was inspected. This record will always be available for review by contracting officer personnel.

s. Written reports listing the load test procedures utilized along with any repairs or alterations performed on the crane will be available for review by the contracting officer personnel.

t. Contractor shall certify that all of the crane operators have been trained not to bypass safety devices (e.g. anti-two block devices) during lifting operations.

3.6 Excavations

The competent person for excavation performed as a result of contract work shall be on-site when work is being performed in excavation, and shall inspect excavations prior to entry by workers. The competent person must evaluate for all hazards, including atmospheric, that may be associated with the work, and shall have the resources necessary to correct hazards promptly. Prior to digging the appropriate digging permit must be obtained. All underground utilities in the work area must be positively identified by a utility locating service and coordinated with Hunter Army Airfield. The Contractor must physically verify underground utility locations by hand digging using wood or fiberglass handled tools when any adjacent construction work is expected to come within three feet of the underground system. If construction is parallel to an existing utility the utility shall be exposed by hand digging every 30 m (100 feet) if parallel within 5 feet of the excavation. Trench and shoring systems must be identified in the accepted safety plan and activity hazard analysis. Extreme care must be used when excavating near direct burial electric underground cables. Trenching machines with digging chain drives shall be operated only when the spotters/laborers are in plain view of the operator. Operator and spotters/laborers shall be provided training on the hazards of the digging chain drives with emphasis on the distance that needs to be maintained when the digging chain is operating. Documentation of the training shall be kept on file in the project site office or trailer.

3.7 ELECTRICAL

3.7.1 Conduct of Electrical Work

Underground electrical spaces must be certified safe for entry before entering to conduct work. Cable that is intended to be cut must be positively identified and de-energized prior to performing each cut. Positive cable identification must be made prior to submitting any outage request for electrical systems. Arrangements are to be coordinated with the Contracting Officer and Hunter Army Airfield for identification. The Contracting Officer will not accept an outage request until the Contractor satisfactorily documents that the circuits have been clearly identified.Perform all high voltage cutting remotely. When racking in or live switching of circuit breakers, no additional person other than the switch operator will be allowed in the space during the actual operation. Plan so that work near energized parts is minimized to the fullest extent

possible. Use of electrical outages clear of any energized electrical sources is the preferred method. When working in energized substations, only qualified electrical workers shall be permitted to enter. When work requires Contractor to work near energized circuits as defined by the NFPA 70, high voltage personnel must use personal protective equipment that includes, as a minimum, electrical hard hat, safety shoes, insulating gloves with leather protective sleeves, fire retarding shirts, coveralls, face shields, and safety glasses. Insulating blankets, hearing protection, and switching suits may be required, depending on the specific job and as delineated in the Contractor AHA.

3.7.2 Portable Extension Cords

Portable extension cords shall be sized in accordance with manufacturer ratings for the tool to be powered. All grounds will be intact with no visible sign of arching burns. Damaged extension cords shall not be used. Cords plugged into sawboxes shall be protected from the elements at the connection.

3.8 WORK IN CONFINED SPACES

Comply with the requirements in Section 06.I of EM 385-1-1. Any potential for a hazard in the confined space requires a permit system to be used.

a. Entry Procedures. Prohibit entry into a confined space by personnel for any purpose, including hot work, until the qualified person has conducted appropriate tests to ensure the confined or enclosed space is safe for the work intended and that all potential hazards are controlled or eliminated and documented. (See Section 06.I.05 of EM 385-1-1 for entry procedures.) All hazards pertaining to the space shall be reviewed with each employee during review of the AHA.

b. Forced air ventilation is required for all confined space entry operations and the minimum air exchange requirements must be maintained.

c. Ensure the use of rescue and retrieval devices in confined spaces greater than 5 feet in depth. Conform to Sections 06.I.09, 06.I.10 and 06.I.11 of EM 385-1-1.

d. Sewer wet wells require continuous atmosphere monitoring with audible alarm for toxic gas detection.

e. Include training information for employees who will be involved as entrant attendants for the work. Conform to Section 06.I.06 of EM 385-1-1.

f. Entry Permit. Use ENGFORM 5044-R or other form with the same minimum information for the Daily Confined Space Entry Permit, completed by the qualified person. Post the permit in a conspicuous place close to the confined space entrance.

3.9 CRYSTALLINE SILICA

Grinding, abrasive blasting, and foundry operations of construction materials containing crystalline silica, shall comply with OSHA regulations, such as 29 CFR 1910.94, and EM 385-1-1, (Appendix C). The Contractor shall develop and implement effective exposure control and

elimination procedures to include dust control systems, engineering controls, and establishment of work area boundaries, as well as medical surveillance, training, air monitoring, and personal protective equipment.

3.10 HOUSEKEEPING

3.10.1 Clean-up

All debris in work areas shall be cleaned up daily or more frequently as necessary. Construction debris may be temporarily located in an approved location, however garbage accumulation must be removed each day.

3.10.2 Dust Control

In addition to the dust control measures required elsewhere in the contract documents dry cutting of brick or masonry shall be prohibited. Wet cutting must address control of water run off.

3.11 ACCIDENT SCENE PRESERVATION

For serious accidents, and accidents involving weight handling equipment, ensure the accident site is secured and evidence is protected remaining undisturbed until released by the Contracting Officer.

3.12 FIELD QUALITY CONTROL

3.12.1 Inspections

Include safety inspection as a part of the daily Quality Control inspections required in Section 01451, "Contractor Quality Control."

3.13 FLAMMABLE AND COMBUSTIBLE LIQUID HANDLING AND STORAGE

3.13.1 Safety Gas Containers

Handling of flammable and combustible liquids shall be in safety containers with flame arresters, with not more than 5 gallons capacity, having a spring-closing lid and spout cover and designed to safely relieve internal pressures under fire exposures. Flammable and combustible Liquids shall be stored in separate NFPA approved storage cabinets 50 feet away from any sources of ignition with suitable NO SMOKING OR OPEN FLAME signs posted in all such areas.

-- End of Section --

SECTION 01572

CONSTRUCTION AND DEMOLITION WASTE MANAGEMENT
10/01

1.1 GOVERNMENT POLICY

Government policy is to apply sound environmental principles in the design, construction and use of facilities. As part of the implementation of that policy the Contractor shall: (1) practice efficient waste management when sizing, cutting, and installing products and materials and (2) use all reasonable means to divert construction and demolition waste from landfills and incinerators and to facilitate their recycling or reuse.

1.2 MANAGEMENT

The Contractor shall take a pro-active, responsible role in the management of construction and demolition waste and require all subcontractors, vendors, and suppliers to participate in the effort. Construction and demolition waste includes products of demolition or removal, excess or unusable construction materials, packaging materials for construction products, and other materials generated during the construction process but not incorporated into the work. In the management of waste consideration shall be given to the availability of viable markets, the condition of the material, the ability to provide the material in suitable condition and in a quantity acceptable to available markets, and time constraints imposed by internal project completion mandates. The Contractor shall be responsible for implementation of any special programs involving rebates or similar incentives related to recycling of waste. Revenues or other savings obtained for salvage, or recycling shall accrue to the Contractor. Firms and facilities used for recycling, reuse, and disposal shall be appropriately permitted for the intended use to the extent required by federal, state, and local regulations.

1.3 PLAN

A waste management plan shall be submitted within 15 days after contract award and prior to initiating any site preparation work. The plan shall include the following:

a. Name of individuals on the Contractor's staff responsible for waste prevention and management.

b. Actions that will be taken to reduce solid waste generation.

c. Description of the specific approaches to be used in recycling/reuse of the various materials generated, including the areas and equipment to be used for processing, sorting, and temporary storage of wastes.

d. Characterization, including estimated types and quantities, of the waste to be generated.

e. Name of landfill and/or incinerator to be used and the estimated costs for use, assuming that there would be no salvage or recycling on the project.

f. Identification of local and regional reuse programs, including non-profit organizations such as schools, local housing agencies, and organizations that accept used materials such as materials exchange networks and Habitat for Humanity.

g. List of specific waste materials that will be salvaged for resale, salvaged and reused, or recycled. Recycling facilities that will be used shall be identified.

h. Identification of materials that cannot be recycled/reused with an explanation or justification.

i. Anticipated net cost savings determined by subtracting Contractor program management costs and the cost of disposal from the revenue generated by sale of the materials and the incineration and/or landfill cost avoidance.

1.4 RECORDS

Records shall be maintained to document the quantity of waste generated; the quantity of waste diverted through sale, reuse, or recycling; and the quantity of waste disposed by landfill or incineration. The records shall be made available to the Contracting Officer during construction, and a copy of the records shall be delivered to the Contracting Officer upon completion of the construction.

1.5 COLLECTION

The necessary containers, bins and storage areas to facilitate effective waste management shall be provided and shall be clearly and appropriately identified. Recyclable materials shall be handled to prevent contamination of materials from incompatible products and materials and separated by one of the following methods:

1.5.1 Source Separated Method.

Waste products and materials that are recyclable shall be separated from trash and sorted into appropriately marked separate containers and then transported to the respective recycling facility for further processing.

1.5.2 Co-Mingled Method.

Waste products and recyclable materials shall be placed into a single container and then transported to a recycling facility where the recyclable materials are sorted and processed.

1.5.3 Other Methods.

Other methods proposed by the Contractor may be used when approved by the Contracting Officer.

1.6 DISPOSAL

Except as otherwise specified in other sections of the specifications, disposal shall be in accordance with the following:

1.6.1 Reuse.

First consideration shall be given to salvage for reuse since little or no re-processing is necessary for this method, and less pollution is created when items are reused in their original form. Sale or donation of waste suitable for reuse shall be considered. Salvaged materials, other than those specified in other sections to be salvaged and reinstalled, shall not be used in this project.

1.6.2 Recycle.

Waste materials not suitable for reuse, but having value as being recyclable, shall be made available for recycling whenever economically feasible. The Contractor shall participate to the maximum extent possible in the Installation recycling programs.

1.6.3 Waste.

Materials with no practical use or economic benefit shall be disposed at a landfill or incinerator.

-- End of Section --

SECTION 01670

RECYCLED / RECOVERED MATERIALS

12/01

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.

U.S. NATIONAL ARCHIVES AND RECORDS ADMINISTRATION (NARA)

40 CFR 247	Comprehensive Procurement Guideline for Products Containing Recovered Materials

1.2 OBJECTIVES

Government procurement policy is to acquire, in a cost effective manner, items containing the highest percentage of recycled and recovered materials practicable consistent with maintaining a satisfactory level of competition without adversely affecting performance requirements or exposing suppliers' employees to undue hazards from the recovered materials. The Environmental Protection Agency (EPA) has designated certain items which must contain a specified percent range of recovered or recycled materials. EPA designated products specified in this contract comply with the stated policy and with the EPA guidelines. The Contractor shall make all reasonable efforts to use recycled and recovered materials in providing the EPA designated products and in otherwise utilizing recycled and recovered materials in the execution of the work.

1.3 EPA DESIGNATED ITEMS INCORPORATED IN THE WORK

Various sections of the specifications contain requirements for materials that have been designated by EPA as being products which are or can be made with recovered or recycled materials. These items, when incorporated into the work under this contract, shall contain at least the specified percentage of recycled or recovered materials unless adequate justification (non-availability) for non-use is provided. When a designated item is specified as an option to a non-designated item, the designated item requirements apply only if the designated item is used in the work.

1.4 EPA PROPOSED ITEMS INCORPORATED IN THE WORK

Products other than those designated by EPA are still being researched and are being considered for future Comprehensive Procurement Guideline (CPG) designation. It is recommended that these items, when incorporated in the work under this contract, contain the highest practicable percentage of recycled or recovered materials, provided specified requirements are also met.

1.5 EPA LISTED ITEMS USED IN CONDUCT OF THE WORK BUT NOT INCORPORATED IN THE WORK

There are many products listed in 40 CFR 247 which have been designated or proposed by EPA to include recycled or recovered materials that may be used by the Contractor in performing the work but will not be incorporated into the work. These products include office products, temporary traffic control products, and pallets. It is recommended that these non-construction products, when used in the conduct of the work, contain the highest practicable percentage of recycled or recovered materials and that these products be recycled when no longer needed.

-- End of Section --

SECTION 01780

CLOSEOUT SUBMITTALS

PART 1 GENERAL

1.1 SUBMITTALS

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 one set of electronic CADD drawing files in the specified format, two sets of blue-line prints, and one set of the approved working as-built drawings.

SD-03 Product Data

As-Built Record of Equipment and Materials;

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 design 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 and maintain current at all times at the jobsite 2 full size 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. CADD colors shall be the "base" colors of red, green, and blue. Color code for changes shall be as follows;

(1) Deletions (red) -Deleted graphic items (lines) shall be colored red with red lettering in notes and leaders.

(2) Additions (Green) -Added items shall be drawn in green with green lettering in notes and leaders.

(3) Special (Blue) -Items requiring special information, coordination, or special detailing or detailing notes shall be in blue.

b. The Contract Drawing files shall be renamed in a manner related to the contract number (i.e., 98-C-10.DGN) as instructed in the Pre-Construction conference. Marked-up changes shall be made only to those renamed files. All changes shall be made on the layer/level as the original item. There shall be no deletions of existing lines; existing lines shall be over struck in red. Additions shall be in green with line weights the same as the drawing. Special notes shall be in blue on layer #63.

c. 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 in letters at least 5 mm 3/16 inch high. All other contract drawings shall be marked either "AS-Built" drawing denoting no revisions on the sheet or "Revised As-Built" denoting one or more revisions. Original contract drawings shall be dated in the revision block.

d. 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), one set of mylars, two sets of blue-line prints and one set of the approved working as-built drawings. 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 Manually Prepared Drawings

Only personnel proficient in the preparation of manually prepared drawings shall be employed to modify the original contract drawing or prepare additional new drawings. Additions and corrections to the contract drawings shall be neat, clean and legible, shall be done to the same level of detail, and shall match the adjacent existing line work, and lettering being annotated in type, density, size and style. Drafting work shall be done using the same medium (pencil, plastic lead or ink) that was employed on the original contract drawings and with graphite lead on paper base material. The Contracting Officer will review as-built drawings for accuracy and conformance to the above specified drafting standards. Corrections, changes, additions, and deletions required shall meet these standards. The title block to be used for any new as-built drawings shall be similar to that used on the original drawings.

a. When final revisions have been completed, each drawing shall be lettered or stamped with the words "RECORD DRAWING AS-BUILT" followed by the name of the Contractor in letters at least 5 mm (3/16 inch) high. Original contract drawings shall be marked either "As-Built" drawings denoting no revisions on the sheet or "Revised As-Built" denoting one or more revisions. All 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 as-built drawings for that phase of work and submit two sets of blue-line 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 drawings 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 the completed final as-built drawings, two blue-line prints of these drawings and the return of the approved marked as-built prints. The drawings shall be complete in all details. Paper prints and reproducible drawings will become the property of the Government upon final approval. Failure to submit final as-built drawings and marked prints, as required herein, will 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.

1.2.1.6 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 full size 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 Section	Manufacturer and Catalog	Composition and Size	Where Used	Model and Serial Number

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.

1.3 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:

Name of item.

Model and serial numbers.

Location where installed.

Name and phone numbers of manufacturers or suppliers.

Names, addresses and telephone numbers of sources of spare parts.

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.

Cross-reference to warranty certificates as applicable.

Starting point and duration of warranty period.

Summary of maintenance procedures required to continue the warranty in force.

Cross-reference to specific pertinent operation and maintenance manuals.

Organization, names and phone numbers of persons to call for warranty service.

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.

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

(1) 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

(1) Leaky faucets.

Code 3-Interior

(1) Floors damaged.

(2) Paint chipping or peeling. (3) Casework.

Code 1-Roof Leaks

(1) Temporary repairs will be made where major damage to property is occurring.

Code 2-Roof Leaks

(1) 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)

(1) No water to facility.

Code 2-Water (Hot)

(1) 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.

Type of product/material _____.

Model number _____.

Serial number _____.

Contract number _____.

Warranty period from _____ to _____.

Inspector's signature _____.

Construction Contractor _____.

Address _____.

Telephone number _____.

Warranty contact _____.

Address _____.

Telephone number _____.

Warranty response time priority code _____.

WARNING -PROJECT PERSONNEL TO PERFORM ONLY OPERATIONAL MAINTENANCE DURING THE WARRANTY PERIOD.

1.4 MECHANICAL TESTING, ADJUSTING, BALANCING, AND COMMISSIONING

Prior to PRE-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 --

SECTION 01781

OPERATION AND MAINTENANCE DATA
12/01

PART 1 GENERAL

1.1 SUBMISSION OF OPERATION AND MAINTENANCE DATA

Submit Operation and Maintenance (O&M) Data specifically applicable to this contract and a complete and concise depiction of the provided equipment, product, or system. Organize and present information in sufficient detail to clearly explain O&M requirements at the system, equipment, component, and subassembly level. Include an index preceding each submittal. Submit in accordance with this section and Section 01330, "Submittal Procedures."

1.1.1 Package Quality

Documents must be fully legible. Poor quality copies and material with hole punches obliterating the text or drawings will not be accepted.

1.1.2 Package Content

Data package content shall be as shown in the paragraph titled "Schedule of Operation and Maintenance Data Packages." Comply with the data package requirements specified in the individual technical sections, including the content of the packages and addressing each product, component, and system designated for data package submission.

1.1.3 Changes to Submittals

Manufacturer-originated changes or revisions to submitted data shall be furnished by the Contractor if a component of an item is so affected subsequent to acceptance of the O&M Data. Changes, additions, or revisions required by the Contracting Officer for final acceptance of submitted data, shall be submitted by the Contractor within 30 calendar days of the notification of this change requirement.

1.2 TYPES OF INFORMATION REQUIRED IN O&M DATA PACKAGES

1.2.1 Operating Instructions

Include specific instructions, procedures, and illustrations for the following phases of operation:

1.2.1.1 Safety Precautions

List personnel hazards and equipment or product safety precautions for all operating conditions.

1.2.1.2 Operator Prestart

Include procedures required to set up and prepare each system for use.

1.2.1.3 Startup, Shutdown, and Post-Shutdown Procedures

Provide narrative description for Startup, Shutdown and Post-shutdown

operating procedures including the control sequence for each procedure.

1.2.1.4 Normal Operations

Provide narrative description of Normal Operating Procedures. Include Control Diagrams with data to explain operation and control of systems and specific equipment.

1.2.1.5 Emergency Operations

Include Emergency Procedures for equipment malfunctions to permit a short period of continued operation or to shut down the equipment to prevent further damage to systems and equipment. Include Emergency Shutdown Instructions for fire, explosion, spills, or other foreseeable contingencies. Provide guidance and procedures for emergency operation of all utility systems including required valve positions, valve locations and zones or portions of systems controlled.

1.2.1.6 Operator Service Requirements

Include instructions for services to be performed by the operator such as lubrication, adjustment, inspection, and recording gage readings.

1.2.1.7 Environmental Conditions

Include a list of Environmental Conditions (temperature, humidity, and other relevant data) that are best suited for the operation of each product, component or system. Describe conditions under which the item equipment should not be allowed to run.

1.2.2 Preventive Maintenance

Include the following information for preventive and scheduled maintenance to minimize corrective maintenance and repair.

1.2.2.1 Lubrication Data

Include preventative maintenance lubrication data, in addition to instructions for lubrication provided under paragraph titled "Operator Service Requirements":

a. A table showing recommended lubricants for specific temperature ranges and applications.

b. Charts with a schematic diagram of the equipment showing lubrication points, recommended types and grades of lubricants, and capacities.

c. A Lubrication Schedule showing service interval frequency.

1.2.2.2 Preventive Maintenance Plan and Schedule

Include manufacturer's schedule for routine preventive maintenance, inspections, tests and adjustments required to ensure proper and economical operation and to minimize corrective maintenance. Provide manufacturer's projection of preventive maintenance work-hours on a daily, weekly, monthly, and annual basis including craft requirements by type of craft. For periodic calibrations, provide manufacturer's specified frequency and procedures for each separate operation.

1.2.3 Corrective Maintenance (Repair)

Include manufacturer's recommended procedures and instructions for correcting problems and making repairs.

1.2.3.1 Troubleshooting Guides and Diagnostic Techniques

Include step-by-step procedures to promptly isolate the cause of typical malfunctions. Describe clearly why the checkout is performed and what conditions are to be sought. Identify tests or inspections and test equipment required to determine whether parts and equipment may be reused or require replacement.

1.2.3.2 Wiring Diagrams and Control Diagrams

Wiring diagrams and control diagrams shall be point-to-point drawings of wiring and control circuits including factory-field interfaces. Provide a complete and accurate depiction of the actual job specific wiring and control work. On diagrams, number electrical and electronic wiring and pneumatic control tubing and the terminals for each type, identically to actual installation configuration and numbering.

1.2.3.3 Maintenance and Repair Procedures

Include instructions and alist of tools required to repair or restore the product or equipment to proper condition or operating standards.

1.2.3.4 Removal and Replacement Instructions

Include step-by-step procedures and a list required tools and supplies for removal, replacement, disassembly, and assembly of components, assemblies, subassemblies, accessories, and attachments. Provide tolerances, dimensions, settings and adjustments required. Instructions shall include a combination of text and illustrations.

1.2.3.5 Spare Parts and Supply Lists

Include lists of spare parts and supplies required for maintenance and repair to ensure continued service or operation without unreasonable delays. Special consideration is required for facilities at remote locations. List spare parts and supplies that have a long lead-time to obtain.

1.2.4 Corrective Maintenance Work-Hours

Include manufacturer's projection of corrective maintenance work-hours including requirements by type of craft. Corrective maintenance that requires completion or participation of the equipment manufacturer shall be identified and tabulated separately.

1.2.5 Appendices

Provide information required below and information not specified in the preceding paragraphs but pertinent to the maintenance or operation of the product or equipment. Include the following:

1.2.6 Parts Identification

Provide identification and coverage for all parts of each component, assembly, subassembly, and accessory of the end items subject to replacement. Include special hardware requirements, such as requirement to use high-strength bolts and nuts. Identify parts by make, model, serial number, and source of supply to allow reordering without further identification. Provide clear and legible illustrations, drawings, and exploded views to enable easy identification of the items. When illustrations omit the part numbers and description, both the illustrations and separate listing shall show the index, reference, or key number that will cross-reference the illustrated part to the listed part. Parts shown in the listings shall be grouped by components, assemblies, and subassemblies in accordance with the manufacturer's standard practice. Parts data may cover more than one model or series of equipment, components, assemblies, subassemblies, attachments, or accessories, such as typically shown in a master parts catalog

1.2.6.1 Warranty Information

List and explain the various warranties and include the servicing and technical precautions prescribed by the manufacturers or contract documents in order to keep warranties in force. Include warranty information for primary components such as the compressor of air conditioning system.

1.2.6.2 Personnel Training Requirements

Provide information available from the manufacturers that is needed for use in training designated personnel to properly operate and maintain the equipment and systems.

1.2.6.3 Testing Equipment and Special Tool Information

Include information on test equipment required to perform specified tests and on special tools needed for the operation, maintenance, and repair of components.

1.2.6.4 Contractor Information

Provide a list that includes the name, address, and telephone number of the General Contractor and each Subcontractor who installed the product or equipment, or system. For each item, also provide the name address and telephone number of the manufacturer's representative and service organization most convenient to the project site. Provide the name, address, and telephone number of the product, equipment, and system manufacturers.

1.3 SCHEDULE OF OPERATION AND MAINTENANCE DATA PACKAGES

Furnish the O&M data packages specified in individual technical sections. The required information for each O&M data package is as follows:

1.3.1 Data Package 1

a. Safety precautions

b. Maintenance and repair procedures

c. Warranty information

d. Contractor information

e. Spare parts and supply list

1.3.2 Data Package 2

a. Safety precautions

b. Normal operations

c. Environmental conditions

d. Lubrication data

e. Preventive maintenance plan and schedule

f. Maintenance and repair procedures

g. Removal and replacement instructions

h. Spare parts and supply list

i. Parts identification

j. Warranty information

k. Contractor information

1.3.3 Data Package 3

a. Safety precautions

b. Normal operations

c. Emergency operations

d. Environmental conditions

e. Lubrication data

f. Preventive maintenance plan and schedule

g. Troubleshooting guides and diagnostic techniques

h. Wiring diagrams and control diagrams

i. Maintenance and repair procedures

j. Removal and replacement instructions

k. Spare parts and supply list

l. Parts identification

m. Warranty information

n. Testing equipment and special tool information

o. Contractor information

1.3.4 Data Package 4

a. Safety precautions

b. Operator prestart

c. Startup, shutdown, and post-shutdown procedures

d. Normal operations

e. Emergency operations

f. Operator service requirements

g. Environmental conditions

h. Lubrication data

i. Preventive maintenance plan and schedule

j. Troubleshooting guides and diagnostic techniques

k. Wiring diagrams and control diagrams

l. Maintenance and repair procedures

m. Removal and replacement instructions

n. Spare parts and supply list

o. Corrective maintenance man-hours

p. Parts identification

q. Warranty information

r. Personnel training requirements

s. Testing equipment and special tool information

t. Contractor information

1.3.5 Data Package 5

a. Safety precautions

b. Operator prestart

c. Start-up, shutdown, and post-shutdown procedures

d. Normal operations

e. Environmental conditions

f. Preventive maintenance plan and schedule

g. Troubleshooting guides and diagnostic techniques

h. Wiring and control diagrams

i. Maintenance and repair procedures

j. Spare parts and supply list

k. Testing equipments and special tools

l. Warranty information

m. Contractor information

PART 2 PRODUCTS

Not used.

PART 3 EXECUTION

Not used.

-- End of Section --

SECTION 01785

FIVE-YEAR MAINTENANCE REQUIREMENTS
04/03

PART 1 GENERAL

1.1 OVERVIEW

Reference National Defense Authorization Act for Fiscal Year 2002, Section 2813 and as modified by Section 2813 in the 2003 Act for "Demonstration Program on Reduction in Long Term Facility Operating, Maintenance and Energy Costs. The Physical Fitness Center, Hunter Army Airfield, GA, under the referenced DoD program investigating extending the life cycle of Government facilities due to historically poor and under budgeted maintenance programs by having the construction Contractor responsible for maintaining the facilities for a 5-year period immediately following construction. During and at conclusion of the initiatives, the DoD construction agencies are to report back to Congress regarding lessons learned that could be applied in the future.

1.1.1 Operations and Maintenance

During the Operations and Maintenance (O&M) phase of the contract, the Contractor shall maintain the facility and the facility systems of the project; perform systematic preventive maintenance (PM); provide for continuous commissioning of critical systems; and perform unscheduled maintenance or corrective maintenance as necessary to:

Assure continuous facility operations and prevent disruptions that could adversely affect the mission of the facility or complex and,

Prevent premature failure or deterioration of the facility, facility systems, and equipment constructed or installed under the construction phase of the contract.

Be responsible for the repair or replacement on all aspects of the building NOT defined under paragraph "Items Not Included as Contractors Responsibility".

Provide and install chemicals for the swimming pool as needed to keep the water clean and sanitary per State codes.

1.1.2 Driving Features

One of the driving features on this program is the notion that the Contractor shall place greater emphasis during design and construction on the quality of equipment selection, installation, and overall craftsmanship knowing that the Contractor is responsible for maintaining the facilities for 5 years after the Beneficial Occupancy Date (BOD).

1.1.3 Fixed Cost Environment

In order for the contract to be bid in a fixed cost environment, important aspects must be delineated with regard to what is, and what is not, covered by the Contractor during the 5-year maintenance period. In an attempt to provide a general direction, the following items outlined in paragraphs 1.1.3.1 and 1.1.3.2, although not totally inclusive, represent suitable information for pricing a fixed cost contract over the 5-year period. In

addition to information outlined within paragraph OVERVIEW, the Contractor is expected to consider the normal routine maintenance expectations for a building of similar size and function in determining the fixed maintenance costs over the life of the 5-year program in order to adequately define associated risks and costs in preparing a firm fixed price contract.

1.1.3.1 Items Included as Contractor's Responsibility

In general, the Contractor is responsible for everything inside the project site limits on maintenance activities. Exceptions that are not Contractor responsibilities are listed and outlined in paragraphs 1.1.3.2. Activities that are Contractor responsibilities fall into two categories:

Critical System items - any item in the Critical System category (regardless of cost, scheduled or unscheduled) will require prompt Contractor attention and continuous commissioning to keep equipment operating at peak efficiency.

*5

~~Non Critical System (Service Order work) maintenance activity will also be the Contractors responsibility once a service order is issued and notice to proceed has been issued. Work~~Non-critical system items - the Contractor shall be responsible to perform all preventive maintenance and unscheduled maintenance work on non-critical systems as part of his preventative maintenance plan. Unscheduled maintenance on non-critical systems will be done on a service order basis. Service order work can be identified by the Contractor, facility tenants or the Contracting Officer or designated representative. Service order work is paid under Bid Item 0006AF.~~ on items of work that are NOT part of critical systems. Contractor generated work is the result of requests made by operators and maintenance personnel, deficiencies noted during preventive maintenance or other specified inspections, in the course of work performance. In such cases the Contractor writes service order, submits to Government for approval. Approval granted, work to commence. (This type of item paid under different line item on bid schedule)~~

1.1.3.2 Items Not Included as Contractor's Responsibility:

*5

Landscape Maintenance items not included in ~~1.1.3.1~~3.2 or grass cutting.

Pest Control.

Normal custodial work (cleaning services, restocking consumable supplies, office and shop routine trash removal, etc.)

Repair or maintenance of non-contractor supplied materials and equipment (furniture, cardio vascular exercise machines, TV's, shop equipment, military equipment, etc.)

Government security systems and closed circuit TV system (Card access system).

1.1.4 Facility Operations

In order for the Contractor to assemble a fixed price proposal, it is important to delineate how the facility will function and operate. The purpose of the facility is for the moral welfare and readiness of soldiers.

Number of Full-Time Weekday Personnel: Three or four staff persons, unknown number of patrons daily.
Number of Weekend Personnel: Two staff members, unknown number of patrons.
Hours of Operation: Weekday - 0600 - 1900
Weekend - 0730 - 1700

1.2 OMITTED

1.3 PERFORMANCE PERIOD

*6

The Contractor shall operate the facilities systems of this project for a 5-year period beginning at ~~the Beneficial Occupancy Data (BOD)~~acceptance of the facility by the Government.

1.4 SPECIFIC REQUIREMENTS

The Contractor shall provide the following:

Operation, Preventive and Corrective Maintenance.

Continuous Commissioning of Critical Systems.

Unscheduled Maintenance Services.

A Facility Maintenance Manager (FMM) and appropriate supporting maintenance staff.

A Computerized Maintenance Management System (CMMS).

Systems Operations and Maintenance Manuals (SOMM).

Comprehensive Facility Management Plan (CFMP).

Successor Training Plan. A plan for and implementation of a transition to another organization for O&M of the facility after the initial 5-year O&M phase (O&M Successor).

1.5 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:

*5

SD-01 Prework Submittals

~~Continuous Commissioning Plan (CCP); G, ED~~

~~The Contractor shall submit for the Contracting Officer's approval the conditions to be evaluated and the performance criteria to be measured 30 days after acceptance of the facility. Following agreement between the Contracting Officer and the Contractor as the CCxP parameters involved, no other conditions or criteria shall apply to the CCxP. Upon acceptance of the facility the conditions and performance data shall be documented and will serve as the baseline criteria for future comparison.~~

Comprehensive Facility Management Plan; G, ~~ED~~RE

SD-03 Product Data

Monthly report on records and service work orders
Submit monthly reports that report all activities completed for the preceding month and projected for the upcoming month. The following will be addressed at a minimum:

For the month completed:
· Operational Issues.
· PM completed.
· Continuous Commissioning of Critical Systems completed.
· Unscheduled Maintenance completed by task and service order including cost.
· Alterations and New Work completed including cost.
· Any changes to the FMM or supporting maintenance staff.
· Any Deficiency Reports (DR) issued.

For the month ahead:
· PM scheduled.
· Continuous Commissioning of Critical Systems scheduled.
· Any other issues that require Government action to assure efficient operation of the facility or complex.

The report shall be presented written in an executive summary format and provided in three hard copies and one electronic copy three days prior to the scheduled monthly review.

*5 ~~SD-03 Product Data~~
~~Submit an a~~Annual report giving the Contractor's formal assessment pertaining to this maintenance and commissioning program. This report may include strong and weak points of the procedures and processes, lessons learned, cost efficiencies, suggested improvements, etc.

SD-05 Design Data

Contractor's intended Computerized Maintenance Management System (CMMS) software

SD-10 Operation and Maintenance Data

Final Systems Operation and Maintenance Manuals (SOMM)

1.6 CONTINUOUS COMMISSIONING OF CRITICAL SYSTEMS

1.6.1 Continuous Commissioning

Continuous commissioning is a concept of maintaining critical systems and critical facility components to assure that a system reaches its expected life expectancy and that efficiency of operations is maintained throughout a system's life. Continuous commissioning not only assures that the equipment is operating at peak efficiency at start-up, but that adjustment, for environmental and operational conditions, would keep the equipment and systems performing at maximum efficiency for the life of the contract.

1.6.2 Critical Systems

Critical systems are outlined in an effort to highlight those areas of the facility or systems that are perceived as a high threat to the overall facility short and long term operation and performance, and thing that affect the life cycle cost of the facility. As such, the Contractor is

encouraged to take extreme care in equipment selection, installation, and craftsmanship related to these items during construction as well as during the 5-year maintenance period.

The following have been identified as critical systems for the Physical Fitness Center, Hunter Army Airfield, GA:

Division 7 - Roofing Systems
Section 07416 - Structural Standing Seam Metal Roofing (SSSMR) System or Architectural Standing Seam Metal Roof
Section 07220 - Roof and Deck Insulation

Division 9 - Finishes
Section 09620A - Resilient Athletic Flooring
Section 09664 - Wood Athletic Flooring

Division 13 - Special Construction
Section 13851 - Fire Detection and Alarm System
Section 13930 - Wet Pipe Sprinkler System, Fire Protection

Division 14 - Mechanical
Section 14240- Elevators, Hydraulic
Pool water treatment and control system, complete

Division 15 - Mechanical
Section 15569 - Water Heating
Section 15601 - Central Refrigeration Equipment for Air Conditioning
Section 15700 - Unitary Heating and Cooling Equipment
Section 15895 - Air Supply, Distribution, Ventilation and Exhaust System Custom Air Handling Equipment
Section 15950 - HVAC Testing/Adjusting/Balancing
Section 15951 - Direct Digital Control for HVAC
Heating and Ventilation and Control System for Saunas

Division 16 - Electrical
Section 16415 - Electrical
Section 16770A - Radio and Public Address System

1.6.3 Formal Assessments

Formal assessments will be conducted during the 4th month of the O&M phase of this contract, after the 9th month, and 12th month and thereafter annually.

1.6.4 Required Actions

As a part of the Continuous Commissioning Program (CCxP), the Contractor shall take whatever actions are necessary to bring the critical systems back into the conditions and within the operating performance parameters that were identified in the baseline criteria. In the absence of measured baseline criteria, the maximum efficiency stated by the manufacturer shall be the performance standard.
The Contractor shall keep tract of all CCxP activities and costs in the CMMS.

1.7 UNSCHEDULED MAINTENANCE

1.7.1 General

*5

Unscheduled maintenance is corrective maintenance or repairs that involves repair or replacement for any building system or equipment that has failed ~~and is not identified as a critical system~~. The Contractor shall be required to perform unscheduled maintenance within the site boundaries of the facility. All events critical and non critical carried out by the Contractor shall be documented in the CMMS with the time for start to completion and cost readily identifiable. Quality assurance will be carried out by the Government as stated in Section 01451.

1.7.2 Cost and Time

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The cost and time for repairs for unscheduled maintenance critical and non-critical includes all elements of expense to the Contractor including labor, materials, overhead, and profit to complete the specific maintenance event and the time it took to accomplish. ~~Payments will be made monthly after review of service order(s) on the 25th of each month.~~

1.7.3 Service Orders to Document Work Performed

The Contractor shall issue a Service Order (SO) to the Government for all unscheduled maintenance activities. The service order is generated and tracked in the CMMS. The data must be well maintained for future reference and to establish a baseline for follow-on maintenance at the conclusion of this maintenance contract and to provide data for the Congressional report on projects in this program.

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1.7.3.1 Service Order Time and Cost on Non-Critical Systems

The service orders are to include the time to complete the action, a schedule of cost to include labor categories and labor hours, and materials necessary to complete the work. ~~If the work is within the scope of the contract, the cost $750 or less (labor and materials) per occurrence, the Contractor may proceed on his own initiative. Otherwise~~ T~~t~~he Contractor and the Government will review the proposed SO, and if acceptable, the Contracting Officer will direct the execution of the SO authorizing the Contractor to proceed. ~~Payments will be made monthly after review of service orders on the 25th of each month.~~

1.7.3.2 Service Order Reporting

Monthly management reports shall include the status of all SO's to include total expenditures and pending work. Service orders will be reviewed for accuracy and equitability of the data.

1.7.4 Emergency or Urgent Requirements

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Unscheduled maintenance requirements may be of an emergency, or urgent nature on ~~non-critical~~ systems. Services may be required outside normal duty hours and must be performed immediately to prevent loss of life, injury, loss or damage to property, or serious damage. Emergency services may also be required to eliminate or deal with hazardous conditions such as floods or power outages and sub-freezing building temperatures or storms. ~~Payment for this work will be handled with service orders.~~

1.7.4.1 Necessary Actions

The Contractor shall take the necessary actions to protect life, safety, health and property based on the following priorities:
*11
Priority 1 - Emergency response is required to correct conditions that impact life, safety and health of personnel or prevent loss or damage of Government property. The service order is received during normal working hours and requires a response within ~~1 hour~~4 hours and continuous effort until completion. If a priority 1 item is discovered during non-working hours, sufficient actions will be taken to stabilize and make the situation safe until work can commence the following workday. The Contractor shall take immediate action for gas leaks, water leaks and fire. The Constractor shall not depart the scene until the emergency situation has been arrested and essential services have been restored, (e.g., water, heat, power, alarm systems) or as directed by the Contracting Officer or designated representative.

Priority 2 - Urgent response is required to correct conditions that do not constitute an emergency but are essential. Response is required within 3 working days after reported and will be completed within 5 working days or as agreed to by the Contracting Officers' Representative.

Priority 3 - Routine response is required to correct conditions that do not constitute an emergency or urgent need. Response is required within 30 working days after reported and will be completed within 15 working days or as agreed to by the Contracting Officers' Representative.

1.8 OMITTED

1.9 HOURS OF OPERATION

1.9.1 Normal Hours

The Contractor shall perform routine repairs and maintenance between the hours of 0730 - 1600, Monday through Friday, except for observed Federal holidays.

1.9.2 Priority 1 Response

The Contractor shall respond to Priority 1 service orders on a 24 hours per day, 7 days per week basis. The Facility Maintenance Manager (FMM) or a designated alternate should be on call or present at site during normal duty hours, and available to respond to emergencies as needed during non-duty hours. The Facility Maintenance Manager (FMM) and any resources that need to be dispatched as required to meet the situation shall answer the call. In accordance with the Staffing Plan, the Contractor shall provide the Contracting Officer with the names and telephone numbers (home and cell phone) of the individual.

1.10 CONTRACTOR PERSONNEL QUALIFICATIONS, DUTIES, AND TRAINING

1.10.1 Contractor Staffing

The Contractor shall employ adequate manpower in order to satisfy all requirements of this contract.

1.10.2 Facility Maintenance Manager (FMM)

1.10.2.1 Performance of O&M Work
*11
The Contractor shall provide two ~~employees~~points of contact who shall be responsible for coordinating and performing quality control for the performance of the O&M work. One will be the FMM and the other the Alternate FMM. The name of the person and an alternate who shall act for the Contractor when the FMM is absent shall be designated in writing to the Contracting Officer.

1.10.2.2 Contacts

The Contractor shall provide to the Government before commencing work the names, addresses, business, home and/or cell phone numbers of the FMM and the Alternate FMM.

1.10.2.3 Alternative

The FMM and/or any alternate designated to act for the FMM, shall have full authority (through the contract execution period) to commit the Contractor to action on matters pertaining to the Contractor's administration of this contract.

1.10.3 Qualifications of the FMM

1.10.3.1 Experience

Personnel designated as the FMM must have a minimum of 5 years experience in operation and maintenance or closely related field, including the supervision of a subcontracted work-force responsible for maintenance and repair of electrical, plumbing, mechanical, structural, heating, cooling, power generation and energy monitoring control systems.

1.10.3.2 Alternate

The Alternate FMM shall have comparable experience and qualifications.

1.10.3.3 Language Skills

The FMM and alternate must be able to read, write, speak and understand English, fluently.

1.10.4 Duties of the FMM

1.10.4.1 Management Coordination

The FMM shall conduct overall management coordination and shall be the central point of contact with the Contracting Officer or the Contracting Officers' Representative for performance of all work under this contract.

1.10.4.2 Monitor Systems

The FMM shall monitor systems performance against desired benchmarks and proactively identify corrective actions as required.

1.10.4.3 Maintain Manuals, Records, and Files

The FMM shall maintain manuals and publications as part of a reference

library and maintain maintenance records and files.

1.10.4.4 Computer Skills

The FMM shall operate designated computers of the CMMS and input data into that system and have sufficient training to efficiently use the system.

1.10.4.5 Prepare Reports and Service Work Orders

The FMM shall prepare and submit to the Contracting Officer the reports, records and service work orders as specified herein.

1.10.4.6 Implement Subcontracts

The FMM shall implement subcontracts, if required, and maintain records of those subcontracts.

1.10.4.7 Training

The FMM shall provide training to successor Contractor and/or Government personnel on the O&M of the facilities and the facilities' systems/equipment.

1.10.5 Professional Qualifications

The Contractor shall ensure that employees and subcontractors have all applicable current and valid technical certifications (i.e. welding certificates, electrician licenses, etc.) before starting work.

1.10.6 Contract Maintenance Personnel

The maintenance staff must command a high degree of trust and confidence. The Contractor agrees to institute and maintain a program for achieving the objective of a drug-free work force as required by Clause 252.223.7004 DRUG-FREE WORK FORCE. All planned contract/subcontractor maintenance personnel will have the same security and screening requirements as personnel employed directly by the Contractor. The Contractor shall maintain accountability of the staff at all times.

1.10.6.1 Restrictions

The Government has the right to restrict the employment under the contract of any Contractor employee or prospective Contractor employee who is identified as a threat to the health, safety, security, general well being or operational mission of the installation and its population.

1.10.6.2 Government Employees

The Contractor shall not employ any person who is an employee of the United States Government if the employment of that person would create a conflict of interest nor shall the Contractor employ any person who is an employee of the Department of the Army, either military or civilian, unless such person seeks and receives approval in accordance with Department of Defense (DoD) Directive 5500.7-R (Standards of Conduct).

1.10.6.3 Off Duty Active Military Personnel

The Contractor is cautioned that off duty active military personnel hired under this contract may be subject to permanent change of station (PCS),

change in duty hours or deployment. Military reservists and National Guard members may be subject to recall to active duty. Their absence at any time shall not constitute an excuse for nonperformance under this contract.

1.10.6.4 Personnel Identification

The Contractor shall furnish and all Contractor personnel shall wear identification badges at all times with a current picture, company name, employee name and description. Badges shall be numbered consecutively and each badge shall be accounted for. A list of issued badge numbers and the corresponding names shall be submitted to the Contracting Officer at contract start date and shall be updated as changes occur.

PART 2 PRODUCTS

2.1 COMPUTERIZED MAINTENANCE MANAGEMENT SYSTEM (CMMS)

2.1.1 Software and Hardware Requirements

The Contractor shall acquire and utilize MAXIMO software as the Computerized Maintenance Management System (CMMS) or approved equal with appropriate hardware to support the installation support system. The Contractor shall operate and input all data required to establish records for the facilities, systems, and equipment.

2.1.2 Property

All computer hardware, software, historical data and systems under this section shall become the property of the Government at the conclusion of the contract period.

2.1.3 Protection of Data

The Contractor shall protect the CMMS data from loss and shall routinely back up all data to a storage medium protected against smoke, fire and water damage.

2.1.4 Housing CMMS and FMM

The Contractor may be required to house the CMMS and FMM in the Contractor's construction trailer until the facility is ready for occupancy. Upon BOD, the CMMS shall be relocated in the facility.

2.1.5 Standard CMMS Reports

Standard CMMS reports shall be provided upon request to the Contracting Officers' Representative.

2.1.6 Records and Data

All records and data maintained in the CMMS are the property of the Government and shall be made available to the Contracting Officers' Representative upon request. A complete copy of all records and data shall be provided to the Contracting Officers' Representative (in electronic format) upon completion or termination of this contract. Giving, sale or disclosure of this data to outside parties is not permitted.

2.1.7 Software Upgrades

The Contractor shall provide all manufacturer software upgrades as made available by the manufacturer for the duration of the contract and ensure data integrity after upgrade is made. If CMMS equipment is damaged by Contractor abuse or misuse, the Contractor shall be responsible for the resulting repair and/or replacement costs. The Contractor shall operate the system in accordance with the manufacturer's instructions and shall make data backups to assure continuing operations. The failure of the computer system shall not be a basis for work stoppages or claims by the Contractor.

2.2 MANAGEMENT SYSTEMS AND RECORD KEEPING

2.2.1 Management

Management of all PM shall be incorporated into the database, including all PM tasks with appropriate frequencies for each item listed in the Master Equipment List (MEL).

2.2.2 Management Plan

Management plans, schedules, reports and other data deriving from the development of the management plan shall be developed and recorded in the database.

2.2.3 Basic Accounting

All basic accounting shall be performed in the system, e.g. budget versus actual, purchase order tracking, etc.

2.2.4 Historical Records

All cumulative historical records shall be maintained in the system.

2.2.5 Inventory

All parts, supplies, and inventories used for PM and unscheduled maintenance shall be included in the database so as to allow inventory accounting, forecasting, and procurement efficiency.

2.3 INSPECTION REPORTS

The Contractor must be able to print out maintenance and inspection records of past months or years activities as well as current inspection reports and scheduled acrivities for all maintenance to include:

- The dates of such inspections
- Results of inspections
- Corrections required
- Corrections made

If corrections have not been made, the file shall include
- A schedule for completion of required work
- A note explaining why corrections have not been made
- A backlog of unscheduled and unscheduled maintenance requirements.

2.4 Government Access of the CMMS During the 5 Year Service contract phase

The Contractor shall assure that Government has access to the system for data query purposes only and quality control purposes. The Contractor shall conduct training of key Government personnel to assure proficiency in the CMMS.

PART 3 EXECUTION

3.1 CONTRACTOR RESPONSIBILITIES

Maintain the facility and facility systems in "like-new" working order.

Perform or provide systematic PM and unscheduled/corrective maintenance to ensure optimal efficiency and to prevent disruptions that could adversely affect the mission of the facility/complex.

Manage the operation of the facility maintenance program, including the implementation and maintenance of a Computerized Maintenance Management System (CMMS)to have records of activites and expenses.

Implement a Continuous Commissioning Program (CCxP)that measures and compares the condition and performance of each of the critical systems against the condition and performance at the time of the BOD.

Perform the routine maintenance on all specialty systems such as the swimming pool, whirlpool, saunas and running track per the PM plans.

This contract also includes the chemicals for the swimming pool and periodic testing and addition of chemicals to the swimming pool to keep it operating properly.

Manage or perform necessary actions to preserve warranties (during warranty periods).

Take all reasonable measures to prevent premature failure/deterioration of facilities and facility systems/equipment constructed/installed under the construction portion of this contract.

*5

3.2 Project Specific Maintenance Requirements, Refurbishment

In addition the following items shall be included in the Contractor's scheduled maintenace plans:

*5 *11

~~Architectural:~~

~~Repaint the interior of the entire building at the end of year four.~~

*5

~~Plumbing:~~
~~The Contractor shall repair or replace any non functioning fixtures, damaged or leaking pipes, valves, drains, backflow preventer (including service line to manhole).~~

~~Electrical:~~
~~The Contractor shall:~~

*5 *11

~~Relamp all fluorescent light fixtures on year five of the contract.~~

*5

~~Communications System:~~

~~The Contractor shall repair and replace any non-functioning Contractor installed conduits for communication or alarm systems to include but not limited to conduit, wiring and trace wires.~~

*5

~~HVAC System:~~
~~The Contractor shall:~~

~~Repair and replacement of non-functioning HVAC equipment to include but not limited to: air handling units, chillers, boilers, ductwork, fan coil units, and controls. Periodic cleanout of drip pans and cleanout of drain lines.~~

~~Clean fan coil units, lubricate bearings, and replace filters per manufacturers recommendations.~~

*5

~~Fire Protection and Alarm System:~~

~~The Contractor shall repair and replace any non functioning portions of fire protection and alarm systems to include but not limited to: post indicator valve, fire pump, sprinkler heads, detectors, piping, control panel and emergency power systems.~~

Site Work:
The Contractor shall:

*5 *11

~~Restripe parking lot on year 5 of contract.~~

~~Replace any shrubs or landscape plants that might die during the life of this contract and keep the planting beds free of unsightly weeds and growth.~~

~~Annually~~In year three and five, the Contractor shall pressure wash the building exterior, columns and screen walls and any surfaces having discoloring algae, mold, mildew, etc.

*5

~~Running Track:~~

~~The Contractor shall maintain the striping on the running track in clear visible condition, repainting as necessary. Check the running tracking SBR resin and EPDM surfacing mat for any problems in adhering to the base. Repair as necessary. Repair and replace any damages to exterior bleachers or hand rail systems, ensure there are no sharp edges.~~

3.3 SYSTEMS OPERATION AND MAINTENANCE MANUALS (SOMM)

3.3.1 Prepare Final SOMM

The Contractor shall prepare the final SOMM.

ORGANIZATION OF SOMM

GENERAL INFORMATION

1. The following paragraphs provide guidance for the overall intent and structure for completion of a Systems Operation Maintenance Manual.

2. It is the intent that the Contractor shall continuously build a SOMM. The Contractor shall continue to update the SOMM as the project develops.

3. It is the intent that the SOMM should compliment the CMMS and be jointly used in this operation. Redundancy of requirements shall revert to the CMMS system.

4. A standardized form format should be followed which makes it easy to review.

5. It is not the intent to duplicate operations and/or data retention. Where possible, all data should be consolidated for ease of use, updates and retrieval.

SOMM sections include:

A. SPECIFIC SYSTEM DESCRIPTION

1. This section identifies examples of facility and facility systems and/or major subsystems that comprise the critical functional areas of the building infrastructure.

2. For systems consisting of more than one unit or item of equipment, or where complexity must be explained, an illustration or flow diagram may be included. If one system interfaces with another system or subsystem, this section shall define how they interface.

3. Safety topics shall be covered and referenced to the operating procedures, if applicable.

4. A table of capabilities and limitations shall be prepared for the systems, if applicable. The table will include data such as gallons per minute, transfers per hour, boom capacity, rated ranges, resolution, accuracy, data-handling capability, etc. Additional tables shall be provided as needed to clearly illustrate the capabilities required of a given system or item of equipment that differ because of its configuration within the system. The word "differ", as used above, refers to capabilities other than normal or standard. The fact that the input, output, feedback, or control levels required are within the design specifications of the system or item of equipment is not a sufficient reason for omitting the system or item of equipment from the table.

5. Major equipment components shall be identified and located by describing each component that is significant to O&M, logistics, and safety.

B. THEORY OF OPERATION

1. This section addresses how the specific systems and/or major subsystems function to meet the design specifications..

2. The final manual shall contain a brief discussion of the theory of operation and a listing of all the functions of the system and shall show how the various facility subsystem functions are tied together to accomplish the overall system function. The description shall include an overall analysis of the principles of operation of the system

equipment and its functions, such as control interlocks, where such principles would not be obvious to a journeyman technician. Particular attention shall be paid to the interface between facility systems and other systems. The descriptions shall be sufficiently detailed to provide O&M personnel with the understanding necessary to adequately perform the system activities and to correctly interpret the results of these activities.

3. An introduction to each specific system has been made by the design team with pertinent data given for the Contractor's use.

C. OPERATIONS

1. The final manual shall include equipment and/or system layouts as required for clarity. Information to be provided or identified for reference, includes all piping, wiring, breakers, valves, dampers, controls, etc., complete with functional diagrams, schematics, isometrics, and data to explain the detailed operation and control of each individual piece of equipment and/or system components.

2. Layouts should show the location within the facility of controls, valves, switches, dampers, etc., by reference to site location, wing designation, floor, room number, or other clear and concise directions for locating the item.

3. Operator data may be identical to posted data and framed instructions, and may be included as part of the O&M manuals. The instructions will include:

a. Initial adjustments and control settings.

b. Precautions and pre-checks to be executed prior to startup of equipment and/or system, including safety devices, monitoring devices, and control sequence.

c. Step-by-step sequential procedures for startup and normal operation checks for optimal performance. Safety precautions and instructions that should be incorporated into the operating instructions and flagged for the attention of the operator. Procedures shall include test, normal, and automatic modes.

d. Procedures for normal and emergency shutdown of equipment and/or systems. The instructions shall include any procedures necessary for placing the equipment and/or system on standby or preparing the equipment and/or system for startup at a later time. Procedures shall include test, normal, and automatic modes.

e. Procedures for isolating individual equipment from the system and bringing individual equipment online once the system is operating.

f. Operational logs and records requirements.

D. PREVENTATIVE MAINTENANCE

1. Recommended procedures shall indicate preventative maintenance (i.e. lubrications, checks, adjustments, etc.) and good housekeeping practices which should be performed by operating personnel.

2. More complex maintenance procedures that would normally be performed only by trained maintenance personnel; will also be provided.

3. Schedules indicating timeframes or operating hours for initiating operator maintenance and adjustments and including manufacturer's recommended major maintenance requirements will be provided.

4. Safety precautions and instructions that should be followed during these procedures shall be incorporated into the maintenance procedures and flagged for the attention of personnel.

5. The procedures shall include necessary operating instructions for taking equipment offline, online, and putting equipment on standby.

6. The instructions shall address all material, equipment, and system data needed to perform maintenance work and shall include, but not be limited to the following: (as applicable)

a. Manufacturers' bulletins, catalogs, and descriptive data.

b. Certified performance curves.

c. Copies of approved test plans, including logs and records of performance acceptance test results and actual adjustments made during final acceptance and inspections.

d. System layouts, including block, wiring, control, and isometric diagrams.

e. Schematic items within the facility.

f. Interrelationships with other items of the system.

7. Emergency adjustments shall be included and flagged for the operator's attention

The instructions shall also include procedures for emergency repairs that could be performed by operating personnel.

E. TROUBLE ANALYSIS (TA)

1. Trouble Analysis procedures for locating and correcting trouble shall be presented in a step-by-step format.

2. Repair procedures may be keyed to a troubleshooting guide outlined as shown in three columns with the following headings:

Trouble/Symptom	Probable Cause(s)	Corrective Action
The indication or symptom of trouble, the instructions, including test hookups, necessary to determine the cause(s)		Procedures for restoring the system to operating condition, or cross reference to where the procedure is written in SOMM.

3. Information may also be in logic tree form, or in another clear tabular format with appropriate headings.

4. Trouble analysis shall be documented to the extent necessary to

locate the faulty piece of equipment within the system.

5. The procedures shall clearly indicate a major repair activity, which should be performed only in a shop or factory, as opposed to normal repair work, which may be performed onsite or with equipment online.

6. The procedures shall also clearly indicate the limit of repair work that may be performed by Government personnel during the warranty period without voiding the warranty provisions.

7. Safety precautions and instructions that should be followed during these procedures shall be incorporated into the repair documentation and flagged for the attention of personnel.

8. The Trouble Analysis section shall be cross-referenced to the appropriate Exhibits and other documents in the MP & SOMM.

F. UNSCHEDULED MAINTENANCE

1. Cross Referenced to Trouble Analysis and to applicable Exhibits, this section provides documentation on the procedures for isolation, replacement, checkout, and integration of the equipment within the system shall be provided.

2. Test, adjustment, and checkout data, required after replacement will be included.

G. REPAIR PARTS

1. The Contractor is to identify and provide all required repair parts. Just in time delivery shall be used where possible. Repair parts shall be stored on site, in designated areas, as defined in the O&M SOW.

2. A complete list of repair parts and supplies shall be maintained. The list shall include all parts and components of individual pieces of equipment and all parts and components of each system and shall identify such items as nomenclature of part, model number, circuit or component identification, etc., as applicable.

3. Parts and supplies lists shall be included within each volume of maintenance instructions.

4. A master list of repair parts and supplies recommended and or required by contract, from each manufacturer for one year of operation, including source of supply, shall be listed with each instruction.

5. The Contractor shall list the sources of supply for all parts and supplies, including name of supplier/manufacturer, address, and telephone number.

6. If the parts and suppliers are not normally stocked locally, necessary procurement lead-time shall also be a part of the listing.

H. SPECIAL TOOLS AND EQUIPMENT LIST

1. The Contractor is to identify and provide all special tools and test equipment.

2. A list of all special tools and test, diagnostic measurement, and equipment for system level maintenance for the facility shall be provided.

3. For the purpose of this specification, the phrase "special tools and test, measurement, and diagnostic equipment" is used to identify all nonstandard tools and equipment designed and developed by the manufacturer and others to perform maintenance, test/calibration, diagnostic/prognostic analysis, and other acceptance testing, and successful O&M.

4. Frequency and method of calibration shall be indicated for all special tools, equipment, and test equipment items that require calibration. Necessary standards shall be listed immediately after each item that requires calibration.

I. VENDOR DATA AND ACCEPTANCE TESTS

1. Vendor Data

a. A complete set of data, provided by the equipment manufacturer, required for operation, maintenance and checkout will be included and referenced to the appropriate specification's number.

b. Data may consist of manufacturer's brochures, O&M manuals, catalogs, drawings, service bulletins, and illustrated parts lists necessary to support the O&M of the end item of equipment and assemblies. This reprinted data shall be edited as necessary to make material project specific.

2. Acceptance Tests

a. A record of all System's Acceptance Tests shall be included in this section.

b. Any pertinent information relating to problems during testing shall be noted.

J. WARRANTY INFORMATION

1. The Contractor shall incorporate warranty information for each system as identified.

2. In addition to the general warranty required by the contract, the Systems Operation and Maintenance Manual shall include any specific warranties required by other sections of the Technical Specifications and other warranties normally provided with the particular piece of equipment or system.

3. Warranties that are normally provided by manufacturers and which are beyond the warranty for construction shall be specifically noted.

4. A summary of all warranties shall be available either in the CMMS or the SOMM, and include, but not be limited to the following information:

a. Specification Section

b. System identification

c. Subsystem or equipment identification

d. Term of warranty

e. Anticipated warranty inspection date with room for actual date.

f. Problems during the warranty period. Latent defects if they present themselves.

g. Copy of warranty or warranty data in the absence of an explicit warranty.

5. A master list of all warranties shall be included as defined under the O&M SOW.

K. MASTER EQUIPMENT LIST

1. The MEL identifies each major system, subsystem, and equipment item in generation breakdown order to the purchase end item level. The completed MEL shall contain as a minimum the following information:

a. Item nomenclature

b. Functional characteristics

c. Item identifier (tag number)

d. Specification number

e. Design/construction drawing number. (File number when available)

f. Manufacturer's name

g. Manufacturer's part number

h. Manufacturer's model/serial number

i. Location Plan

j. Current Warranty Status

2. The Contractor shall develop a projected and as-built Master Equipment List. Refer to Submittal Requirements of the Comprehensive Facility Management Plan (CFMP).

3. The Contractor shall develop and maintain a master O&M manual list identifying all of the equipment for which O&M manuals will be furnished under this contract.

4. Following setup of the O&M manual list, this master listing shall be updated monthly to reflect equipment additions, deletions, changes and alterations.

5. The O&M manual submittals shall be arranged in alphabetical order according to the type of equipment covered and by manufacturer's equipment noun name; and shall be cross-referenced to the systems involved. Each data submittal shall be dated and shall show the target or actual submittal date for O&M manuals for each item of equipment. For identical pieces of equipment within one system, only one set of O&M data for that equipment item will be required.

6. The Contracting Officer and Contractor shall work together to determine whether the above specified information as furnished by the Contractor is adequate and complete and to require such additional submittals by the Contractor as may be necessary to insure that adequate information has been furnished to provide the satisfactory operation and maintenance of the various items of equipment and fulfill the intent of the specifications.

7. Additional submittals or re-submittals supplementing incorrect or incomplete data shall be made within 30 calendar days after receiving notice by the Contracting Officer. All cost arising from these resubmissions shall be borne by the Contractor.

8. All system MELs will be incorporated by system and combined into a comprehensive list to be included in Volume 1, Comprehensive Management Plan of Appendix A - MP&SOMM.

9. Posted Data

a. The Contractor shall post data for equipment or systems, in addition to O&M manuals, and as required by other Technical Specifications sections.

b. The data shall consist of as-built schematics of all wiring, controls, piping, etc., as necessary for the operation of the equipment or system, and a condensed typewritten description of the system. The data may include approved shop drawings, layout drawings, riser, and block diagrams and shall indicate all necessary interrelation with other equipment and systems.

c. The data shall be presented in appropriate sized drawing sheets sealed with clear plastic laminate, collated and bound for clarity and convenience of locations. The framed data presentation and outline shall be acceptable to and provided at locations designated by the Contracting Officer.

10. Instructions
Instructions may be presented in one or several binders for clarity and convenience of location. The instruction presentation and outline shall be acceptable to the Contracting Officer prior to posting, and shall be provided at locations designated by the Contracting Officer.

L. EXHIBITS

1. Illustrations shall be incorporated to identify schematic drawings, riser diagrams, wiring requirements, etc., as required to provide a stand-alone comprehensive O&M manual.

2. The as-built drawings are to be kept on site for reference. All changes or additional information that arise during construction

and during the five year O&M period shall be recorded and kept as a part of the manual. All detailed information shall be presented in a clear, concise and comprehensive manner to fully explain the as-built conditions. The Contractor shall provide changes to the as-built drawings to the Contracting Officer of any work performed by contractors personnel which cause changes including, but not limited to, plant layout, piping or equipment design or detection of an error within 90 days of change.

3. An index of all illustrations and data shall be developed and presented in draft and for final approval in the submittal process.

3.3.2 Organization of SOMM

The SOMM shall be organized by building systems as follows.

INDEX OF VOLUMES - VOLUME DESCRIPTION

*5

1 Comprehensive Facility Management Plan
2 Architectural Systems
3 Plumbing Systems
4 Electrical Systems
5 Sommunications
6 Mechanical Systems
7 Fire Protection Systems
8 Specialty Systems

3.3.3 Organize

The Contractor shall organize each volume's contents using the O&M SOW for guidance. The Contractor shall revise all volumes, sections, chapters, etc. to provide a comprehensive and up-to-date manual incorporating as-built conditions, as-maintained and current manufacturer's data. OPERATIONS AND MAINTENANCE DATA requirements are covered in Section 01781.

3.3.4 Guidance

Each volume is designed to 'stand alone' - providing sufficient guidance and supporting material to allow a properly trained, journeyman technician to perform proper services.

3.3.5 Final SOMM

Preparation of the SOMM shall be under the direction of FMM or alternate. The final SOMM shall be submitted for Contracting Officer review and approval.

3.3.6 Government-Approved SOMM

The Government-approved SOMM shall be in place no later than 30 days prior to beneficial occupancy.

3.3.7 Editable Copy

Provide one copy of the Management Plan and System Operation and Maintenance Manual (MP & SOMM) in editable Microsoft Word format on compact disk. Also furnish the files in a searchable .pdf format, and four hard copies to the Contracting Officer.

3.4 COMPREHENSIVE FACILITY MANAGEMENT PLAN FOR END USER

3.4.1 General

The Contractor shall prepare a CFMP that integrates all the management activities required for the O&M phase of the contract.

3.4.2 Submittal

The CFMP shall be submitted in conjunction with the SOMM, in accordance with submittal requirements of the construction contract.

3.4.3 Minimum Requirements

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The following are the minimum components of the Comprehensive Facility Management Plan:

Continuous Commissioning Sub Plan - Para 1.5
Organization and Staffing Sub Plan - Para 3.5
Comprehensive Security Sub Plan - Para 3.6
Safety and Health Program Sub Plan - Para 3.7
Warranty Sub Plan - Para 3.8
Subcontract Maintenance Sub Plan - Para 3.9
Anti-Terrorism Force Protection - Para 3.10
Preventive Maintenance Sub Plan - Para 3.11
Quality Control (QC) Sub Plan - Para 3.12
Successor Training Sub Plan - Para 3.13.7

3.5 ORGANIZATION AND STAFFING PLAN

The Contractor shall prepare and maintain a written, current organizational and staffing plan. The plan shall indicate all categories of personnel employed by the Contractor and subcontractors as listed by system and the reporting relationships established therein.

3.6 COMPREHENSIVE SECURITY PLAN

3.6.1 Comprehensive Security Plan

The Contractor shall develop a comprehensive Security Plan based on the Department of Defense Industrial Security Program (reference DOD 5220.22-R).

3.6.2 Key Control

The FMM shall maintain key control of keys issued to the Contractor work force.

The Contractor shall establish and implement methods of ensuring that all keys issued to the Contractor by the Government are not lost or misplaced and are not used by unauthorized persons. No keys issued the Contractor by the Government shall be duplicated.

The Contractor shall immediately report the occurrences of a lost or duplicated key to the Contracting Officer and the Government Security Manager and Safety Officer.

In the event keys, other than master keys, are lost or duplicated, the

Contractor shall be required, upon direction of the Contracting Officer, to re-key or replace the affected lock or locks. The Contractor, at its option, may replace the affected lock or locks or perform re-keying at no cost to the Government. In the event a master key is lost or duplicated, the Government shall replace all locks and keys for that system, and new keys issued to the Contractor. The total replacement cost shall be deducted from the monthly payment due to the Contractor.

The Contractor shall prohibit the use of keys issued by the Government by any persons other than the Contractor's employees engaged in the performance of assigned work. The Contractor shall prohibit the opening of locked areas by the Contractor's employees to permit entrance of persons other than the Contractor's employees engaged in the performance of assigned work in those areas.

The Contractor shall establish and implement methods of ensuring that all lock combinations are not revealed to unauthorized persons. These procedures shall be included in the Contractor's Security Plan.

The Contractor shall not be allocated any keys to the facility exterior entrances. The Contractor must coordinate with the facility personnel for access. Once duties are complete, the Contractor shall ensure the space is secure and notify building owner they have completed the work within the secured area.

3.7 SAFETY AND HEALTH PROGRAM PLAN

3.7.1 Safety Procedures and Plan

The Contractor shall develop and submit to the Contracting Officer for review and approval a comprehensive safety program describing procedures and plans for preventing accidents and for preserving the life and health of Contractor and Government personnel in any way involved with the performance of this contract. The safety program, upon beneficial occupancy, shall comply with regulations as specified by the Occupational Safety and Health Administration (OSHA) and Engineering Manual 385-1-1.

3.7.2 Responsibilities and Procedures

The safety program section of the management plan shall, as a minimum, address responsibilities and procedures that all Contractor personnel must follow. The safety program shall address, as a minimum:

Fire safety (hazard prevention, reporting, evacuation layouts, and extinguishers)

Maintenance shop safety (protective clothing, protective equipment, storage of oils and lubricants, disposal of waste and contaminated oil, and use of acetylene torches, electric welders, and power equipment)

All other devices and procedures necessary to protect the employee and occupants.

3.7.3 Instructions

The Contractor shall ensure that all employees and occupants know, receive instruction on, and comply with all appropriate safety requirements.

3.7.4 Hazardous Material/Waste

The Contractor shall prepare a plan to ensure that all hazardous material/waste used or generated by any Contractor personnel is properly inventoried, stored, handled, packaged, and disposed of in an appropriate manner. The Contractor's planned procedures for hazardous material and waste disposal shall be submitted to the Contracting Officer for information 10 days prior to the assumption of the maintenance mission as a seperate submittal. The Contractor's responsibilities include:

Inspecting all shops, maintenance facilities, storage areas, and other facilities under Contractor control where hazardous substances, materials, and/or wastes are either generated or stored, thereby ensuring adequate handling, generation, and storage procedures and identifying any violations of the fire code ,National Fire Protection Association (NFPA), (NFPA 30, Flammable and Combustible Liquid) hazardous material/waste laws and/or regulations.

Recording all violations and corrective actions taken; transporting, storing, and handling hazardous substances in a safe and environmentally acceptable manner; and instituting a responsive alert and reporting procedure for use when a spill occurs.

Cooperating with Government agencies in order to ensure that the public health and welfare is adequately protected from discharge of oils and hazardous materials/waste.

The general guidance for disposal of waste is as follows:

Hazardous waste - Turned in to the installation designated points of reception.

Non-hazardous waste - Properly placed in the Government dumpster provided.

3.8 WARRANTY PLAN

3.8.1 Warranty Plan

Warranty plan identifies any existing and/or replacement equipment warranties, specifying the vendor offering the warranty, the length of the warranty and any special O&M requirements that must be met in order to preserve the warranty.

3.8.2 Schedule

A schedule shall be prepared for each system and summarized in a comprehensive schedule and located in the Comprehensive Facility Management Plan.

3.8.3 Maintenance Work

All maintenance work during the first year shall be done by or coordinated with the Contractor and manufacturer holding the warranty. The personnel shall meet the minimum service requirements and/or certifications recommended for that system or piece of equipment.

3.8.4 Warranties

Any warranties that have effective durations that extend beyond the combination of the construction period and the period of O&M shall be accrued to the Government.

3.9 SUBCONTRACT MAINTENANCE PLAN

3.9.1 Procedures

The subcontract maintenance plan outlines procedures and methodologies for accomplishing the maintenance of various systems and items of equipment by maintenance contracts.

3.9.2 Maintenance Plan

The subcontract maintenance plan also includes technical specifications/statements of work for those systems and equipment to be maintained by the Contractor, and a detailed cost estimate for the work described in the technical specifications.

3.9.3 Contracting Methods

It shall be the Contractors' option is to use just-in-time or on-call contracting methods for complex systems and equipment that require special skills or certifications to maintain i.e. (paved areas, fire alarm systems, etc.).

3.10 ANTI-TERRORISM FORCE PROTECTION

The Contractor shall become familiar with and follow all requirements of the Department of Defense Minimum Antiterrorism Standards for Buildings while at the facility.

At no time shall exterior equipment have panels or louvers removed and left without personnel working on the unit so that something could be hidden out of view inside the equipment.

At no time shall trash containers be moved closer to the building than 10 meters.

At no time shall locked exterior doors be held open, while personnel are not present.

Parking of Contractor vehicles shall only be in the designated parking area, Contractor shall not leave any vehicles unattended out of parking area.

3.11 PREVENTIVE MAINTENANCE PLAN

The Preventive Maintenance Plan (PMP) identifies the various types/levels of preventive maintenance that will be accomplished by the maintenance staff. The plan must reflect response times/categories for the various items of equipment and identify a generic procedure for the management of service orders.

3.11.1 Tasks and Frequencies

The PMP shall identify the PM tasks and frequencies for each item listed in

the Master Equipment List (MEL). This plan also identifies the skills (trades) required and man-hour estimates for performing the PM tasks.

3.11.2 Facility Systems/Equipment Assessments

Facility Systems/Equipment Assessments requirements shall be incorporated within the PMP. These shall include at a minimum:

Follow the PM plan for all specialty systems such as the swimming pool and running track.

Continuous assessments will be used to compare actual building systems performance against design parameters.

O&M Equipment Operational Assessment - This assessment identifies systems and equipment issues, identifies corrective actions (replacement, upgrade, or renovation), and provides cost estimates.

The Contractor shall update the PMP yearly after review of recent activity prepare and latest manufacutreres recommendations. The Contractor shall research equipment manufacturer's and industry recommendations for preventive maintenance requirements and ensure these requirements are included in the Master PM Schedule.

3.12 QUALITY CONTROL PLAN

3.12.1 Establish and Maintain

The Contractor shall establish and maintain a complete QC Plan to ensure the requirements of the contract are provided as specified. The QC Plan shall outline the process that the Contractor shall use to manage the level of performance.

3.12.2 Inspection System

The QC Plan shall include an inspection system covering all the services listed on the O&M SOW. It must specify the areas to be inspected, and the individual(s) who will perform the inspection.

3.12.3 Benchmarking

System performance benchmarking shall define methods for identifying and preventing deficiencies in the quality of service before the level of performance becomes unacceptable.

3.12.4 Performance

The Contractor shall review systems performance annually by analyzing on-site records of all inspections conducted by the Contractor and necessary corrective action taken. This documentation shall be made available to the Contracting Officers' Representative during the term of the contract and used to benchmark the productivity of the maintenance effort.

3.13 O&M SUCCESSOR

3.13.1 Last Three Months

The last 3 months of the contract execution period shall be used for an

orderly transition of responsibility to the successor that will execute the follow-on O&M program.

3.13.2 Initial Meeting

An initial meeting between the Contracting Officers' Representative and the FMM for both outgoing and incoming Contractors, shall be held to address phase-out requirements and responsibilities no later than three to six months prior to the end of the current O&M phase. Subsequent meetings will be held as determined by the Contracting Officer, but not less than weekly thereafter.

3.13.3 Transition Period

When the incumbent Contractor is also the successor Contractor, these required meetings shall not be waived; since orderly transition from one work specification to another will also require significant management involvement in the transition process.

3.13.4 Start-Up Procedures

The successor Contractor shall perform all start-up procedures.

3.13.5 Follow On Successor

The successor for the follow-on O&M program may be Government personnel.

3.13.6 Final Three Months

During the final 3 months of this contract, if the incumbent Contractor is not awarded the subsequent contract, the Contractor shall permit his successor and the successor's key personnel to observe and become familiar with any and all operations under this contract.

3.13.7 Successor Training

3.13.7.1 Training Plan And Execution

The Contractor shall schedule and provide training for the new personnel that will be assuming the operation and maintenance of the facility. All training will be videotaped by the Contractor giving the training.

The Contractor shall present a training plan for approval. Four (4) copies of the training plans for all required formal training shall be submitted to the Contracting Officer in draft form in one submittal. The Contractor shall provide training, printed instruction material, and training aids, in accordance with the approved plan.

The Contractor shall provide a draft and final training plan and schedule for approval. The plan shall provide the following information at a minimum:

a. Trades to be trained and skills required.
b. Instructional methods.
c. Materials, The MP&SOMM will be used as the primary training document for the training instructions.
d. Special training devices needed to support the program of instruction.
e. Attendees - planned and actual

f. A weekly outline of all scheduled training.

g. A day-to-day schedule showing time intervals, the major and subordinate subjects to be covered in each session, with location of training.

h. Identification and qualifications of proposed instructors.

i. A list of reference material to be provided by the Contractor to the trainees and a list of training materials such as operation and maintenance instructions, other written and visual aids, mockups, tools, etc.

All systems and subsystems requiring training of qualified personnel to properly operate and maintain those systems shall be identified. A task and skills analysis shall be documented to identify special skills required to operate and/or maintain critical, complex or specialized systems. After the skill requirements are approved, the actual training program shall be defined.

The Contracting Officer representatiave will review the Contractor's training plan for completeness. The Contracting Officer will require 30 days for review and approval of the plan or for disapproval and return to the Contractor for resubmission. Povide sufficient float time for any necessary resubmissions to preclude possible delays to the scheduled training.

3.13.7.2 Training Objective

The training objective is to enhance technical skills so that transfer of O&M responsibility for facilities unique systems/equipment will be efficient.

3.13.7.3 Verification of Training

Verification of training shall be provided to the Contracting Officer within 3 days after the completion of training. Verification shall include information such as name of craftsperson trained, system trained on, type of training, number of hours trained, etc.

3.13.7.4 Features

Training shall cover features unique to complex electrical and mechanical systems installed at the facility and CMMS features such as hardware and software. The MP&SOMM will be used as the primary training document for the training instructions.

3.14 GOVERNMENT PROVIDED FACILITIES AND SERVICES

The Government shall provide without cost to the Contractor, during the performance of the O&M portion of the contract, the facilities and services listed below:

3.14.1 Government-Furnished Facilities and Contractor Responsibilities

Maintenance support space furnished to the Contractor by the Government shall be in the following designated areas:

The Government shall furnish the Contractor with a designated area for equipment storage in Building 1020. The Contractor shall provide and create a secure storage cage area of not more than 9 feet x 12 feet for storage and separation of his equipment. After the completion of this

contract this equipment and area will revert to the Government.

The Contractor shall furnish and install storage bins and cabinets with the minimum emergency stock of replacement equipment, supplies and spare parts in Building 1020. The Contractor shall provide separate caging within the building to keep his material separate. At the conclusion of the contract period, the Contractor shall provide a complete inventory list along with projected stock to last 1 full year from the point of termination.

The Contractor shall maintain the area clean, neat and orderly at all times and keep it secure.

The Contractor shall provide his own office furnishings (desk, chair, file storage, etc) and tools and supplies and shop equipment necessary for the operation of the facility. Location of office to be determined at a later date. This equipment will remain the property of the Contractor at the expiration or termination of this contract with the exception of the Computer Maintenance Management System software and associated hardware. These items will become the property of the Government after the completion of the contract. All storage bins and cabinets with the minimum emergency stock of replacement equipment, supplies and spare parts inventory, to last 1 year, shall also become the property of the Government at the conclusion of this contract.

3.14.2 Government-Furnished Services

3.14.2.1 Services

The Government will provide to the Contractor all water, sewage, custodial, electrical and data services required for the performance of this contract.

3.14.2.2 Telephone Service

Commercial telephone service acquired by the Contractor for Contractor use shall be paid for by the Contractor.

3.14.2.3 Failure to Furnish Utilities

Failure of the Government to furnish utilities at any time during the performance of the contract because of outages or other interruptions in service shall not be considered by the Contractor as a basis for a claim against the Government.

3.15 GOVERNMENT QUALITY ASSURANCE (QA)

3.15.1 Evaluate

The Government will evaluate the Contractor's performance under this contract in accordance with the Federal Acquisition Regulation (FAR) Inspection of Services clause.

3.15.2 Record Results

The Government will record all surveillance observations and inspection results. When an observation or inspection indicates deficient performance, the Contracting Officers' Representative will prepare a Deficiency Report (DR).

3.15.3 Inspections

The Contractor shall accompany the Government and User on walk-through inspections of the facility. The Contractor shall document all observations and prepare a final report of the observations organized by facility system. This report will be provided to the Contracting Officer in three hard copies and one electronic copy within 10 days after completion of the walk-through.

3.15.4 Deficiency Reports (DR)

3.15.4.1 Performance

If the Contractor's performance is found to be unsatisfactory and not in compliance with the requirements specified in this contract, the Government will issue a DR within 3 days.

3.15.4.2 Acknowledgement

Upon presentation of a Deficiency Report (DR) by the Government, the Contractor shall immediately sign the DR, acknowledging its receipt. Within 3 working days of receipt of a DR, the Contractor shall explain in writing to the Government either:

How performance does conform to the requirements of the contract;
How performance will be returned to conformity;
How reoccurrence of the problem will be prevented in the future.

3.15.5 Meetings

3.15.5.1 Monthly Reviews

The Contractor will be required to attend monthly reviews with the Contracting Officers' Representative and User.

3.15.5.2 Additional Meetings

The Contracting Officer may require additional meetings whenever a DR is issued until the Contracting Officers' Representative deems that satisfactory performance of the O&M phase of the contract and full and acceptable implementation is achieved.

3.15.5.3 Minutes

The minutes of all meetings will be prepared by the Contractor and shall be signed by the FMM, Contracting Officers' Representative, and the Contracting Officer if in attendance.

3.16 CONTRACTOR CLEAN-UP

The Contractor shall, at all times, keep the work areas free from accumulation of waste material, rubbish, tools, scaffolding, equipment, and materials. Upon completion of the task, or nightly, the Contractor shall leave the work area and premises in a clean, neat, safe and workmanlike condition. The Contractor is responsible for disposing of both hazardous and non-hazardous job-related waste material in accordance with the local installation procedures.

Exhibit SOW-1

Definitions and Abbreviations

A	Advisory
ADP	Automated Data Processing
AHU	Air Handling Unit
ASHRAE	American Society of Heating, Refrigerating, and Air Conditioning Engineers
ASME	American Society of Mechanical Engineers
BAS	Building Automation System
BOD	Beneficial Occupancy Date
CADD	Computer-Aided Drafting and Design
CCP	Continuous Commissioning Program
CCTV	Closed-Circuit TV
CFMP	Comprehensive Facilities Management Plan
CFR	Code of Federal Regulations
CLIN	Contract Line Item Numbers
CMMS	Computerized Maintenance Management System
CO	Contracting Officer
COR	Contracting Officer's Representatives
DoD	Department of Defense
DR	Deficiency Report
FAR	Federal Acquisition Regulation
FMM	Facility Maintenance Manager
FTE	Full-Time Employees
HVAC	Heating, Ventilation, and Air Conditioning
IAW	In accordance with
LAN	Local Area Network
M	Mandatory
MP&SOMM	Management Plan & Systems Operation Maintenance Manual
MEL	Master Equipment List
MEP	Military Equipment Parking
NFPA	National Fire Protection Association
NTP	Notice to Proceed
O&M	Operation and Maintenance
O&M SOW	Operation and Maintenance Statement of Work
OJT	On-the-Job Training
OMS	Organizational Maintenance Shop
OSHA	Occupational Safety and Health Administration
PCS	Permanent Change of Station
PE	Professional Engineer
PL	Public Law
PM	Preventive Maintenance
PMP	Preventive Maintenance Plan
QA	Quality Assurance
QAR	Quality Assurance Representative
QC	Quality Control
SO	Service Order
SOMM	System Operation and Maintenance Manual
SOW	Statement Of Work
SSMRS	Standing-Seam Metal Roofing System
TA	Trouble Analysis
USARC	United States Army Reserve Center
WO	Work Order

Beneficial Occupancy Date (BOD)
Date of final acceptance of facility by the Government.

Exhibit SOW-1

Breakdown
The stoppage or collapse of equipment or a facility, or a component thereof, that requires corrective action to restore to an operation condition.

Building Exterior
The exterior surface of a building, including all walks, roofs, attached patios, overhangs, and entranceways.

Deficiency Report (DR)
Formal, written documentation of Contractor non-performance or lack of performance for contract work.

Contracting Officer (CO)
A person duly appointed with the authority to enter into and administer contracts on behalf of the Government.

Contracting Officer Representative (COR).
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.

Defective Service
Poor performance or nonperformance as specified by contract requirements.

End Item
The individual component part listed in the manufacturer's parts listing. End item, component part, and /or individual item are used interchangeably.

Government Property
All property owned or leased to the Government or acquired by the Government under terms of the contract. Government property includes both Government furnished property and Contractor acquired property as defined in FAR 45.101.

Government Property Administrator
An authorized representative of the Contracting Officer appointed in writing to administer contract requirements and obligations relative to Government property (FAR 45.101.)

Maintenance Backlog
Equipment repair that has not been completed in the specified time.

Maintenance
The routine recurring work required to keep the facility and its systems in such a condition that it can be used continuously at its designated capacity and efficiency. Maintenance includes work done to prevent damage which would be more costly to restore than prevent. Maintenance includes work to sustain components.

Mandatory (M) Documents
Directives with which the Contractor is obliged to comply.

Materials
Materials, parts, and supplies necessary for the maintenance and repair of facilities and equipment.

National Fire Protection Association (NFPA)

Exhibit SOW-1
An organization that published pamphlets on fire protection and safety, which are accepted by local, State and Federal Governments and considered directive in nature for this statement of work.

O&M Equipment and Facilities
Equipment and construction normally used to maintain general building environment and services (heating, ventilating, and air-conditioning (HVAC); electrical distribution systems; lighting; plumbing; building hardware and furnishings; etc.), except those items intended to perform a specific function not related to maintaining the building environment.

Preventive Maintenance (PM)
The systematic planned care, servicing, and inspection of equipment, utility plants and systems, buildings and structures, and ground facilities for the purpose of detecting and correcting incipient failures, preventing failures, and making minor repairs. Manufacturer's product literature/data sheets are to be used as principal guidance for determining minimal/recommended periodic maintenance missions.

Quality Assurance (QA)
Those actions taken by the Government to assure services meet the requirements of the Statement of Work (SOW) and all other service outputs.

Quality Assurance Review
Periodic examinations to ensure compliance with the Contractor's procedures, plans, schedules, and contract requirements (includes the recording of narrative audit results).

Quality Assurance Representative
A Government person responsible for surveillance of Contractor performance.

Quality Assurance Surveillance Plan (QASP)
An organized written document used for quality assurance surveillance. The document contains specific methods to perform surveillance of the Contractor.

Quality Control
Those actions taken by a Contractor to control the performance of services so that they meet the requirements of the SOW.

Random Sampling
A sampling method in which each service output in a lot has an equal chance of being selected.

Repair
The restoration of a real property asset to its originally constructed or installed condition, or if that restoration is not practical, to a condition that satisfactorily meets the intended purpose. Repair means the application of maintenance services in order to restore serviceability of an item by correcting specific damage, fault, malfunction, or failure in a part, subassembly, module (component or assembly), end item, or system.

Sample
A sample consists of one or more service outputs drawn from a lot. The number of outputs in the sample is the sample size.

Sampling Guide
The part of the surveillance plan, which contains all the information, needed to perform surveillance of the service output(s) by the random sampling

Exhibit SOW-1
method of surveillance.

Scheduled Maintenance
Systematic and periodic servicing and inspection of equipment and components to maintain operational efficiency and replace worn or failed parts.

Service Order (SO)
Used to authorize and manage scheduled and unscheduled repair jobs.

Shall
This word is used in conjunction with the contract and specifies that a provision is binding.

Unscheduled Maintenance
Corrective Maintenance that involves repair or replacement for any building system or equipment not included in the Continuous Commissioning Program.

Work Order (WO)
Used to authorize and manage new construction or modification jobs.

Will.
This word is used to express a declaration of purpose on the part of the Government.

-- End of Section --

SECTION 02091

PCB BALLASTS, TRANSFORMERS AND HAZARDOUS BUILDING MATERIALS
REMOVAL AND RECYLING
08/03

PART 1 GENERAL

Buildings 925 is scheduled for demolition. Building No. 925 is a single-story concrete block frame structure. Most original walls are constructed of concrete masonry block units (CMU). Newer interior partition walls have been added at some point in time and are constructed of wood framing covered with gypsum drywall or plywood. Four racquetball courts were added at some date. The floor system is concrete slab on grade with multiple covering types. The roof systems are of three basic designs; built up tar and felt on the flat portions, shingled on the peaked sections and rolled roofing on the curved section. The buildings primary use is as gymnasium and recreation facility. For details on type, locations, and estimated quantities of hazardous building materials see the accompanying Hazardous Building Materials Survey report dated July 2003.

1.1 Electrical Fixtures

Electrical fixtures, classed as 'Hazardous Waste Lamps' (HWL) found in these buildings include (but may not be limited to) fluorescent downlight with compact fluorescence, troffers with 2 and 4 lamp fluorescents ranging in length from 20 inches to 8 feet, tube, square and round styles, interior and exterior fixtures, battery backup emergency fixtures, and exterior high intensity direct (HID) fixtures. These types and quantities may vary due to changes since the time of the initial survey, and are to be used as estimataing guidelines only. These fixtures are to be removed prior to demolition after all asbestos containing materials have been removed. Fixtures are regulated based upon the presence of PCB containing electrical equipment. HWLs are regulated due to the mercury contained in the lamps. Not all buildings and all rooms of the buildings were available for inspection. All ballasts were assumed PCB ballast without inspection. Lighted exit signs, when found, were assumed to be fluorescent replacements, although some may be incandescent. Numbers provided here are estimates based upon the type of building and building usage. Incidental spare bulbs found in utility rooms and closets are included in this estimate. Utility (streetlight) metal halide lamps are not included in this estimate. The Contractor shall verify number and type of HWLs and ballasts to be removed and recycled. Estimated quantities are listed in the accompanying Hazardous Building Materials Survey Report, July 2003.

The State of Georgia and the Federal EPA considers unbroken mercury containing lamps as universal waste. Unbroken lamps shall be packed and shipped with applicable Department of Transportation Labeling. They do not need full hazardous materials manifesting. They do require a Universal Waste "Bill of Lading" and a state of Georgia "Universal Waste" (GAU) number. Broken HWL are considered "Hazardous Waste" and RCRA and DOT requirements apply.

1.2 MERCURY CONTAINING ITEMS

Mercury-containing switches are present in the project area. These shall be removed prior to demolition and disposed of as recovered, recycled or

hazardous wastes. Recovery and recycling is the preferred method of handling these materials. Manifests shall be prepared for all forms of disposal.

1.3 PCB CONTAINING/CONTAMINATED ITEMS

Transformers, capacitors, electrical light ballasts, electromagnets, switches, and voltage regulators are considered PCB Articles, subclassed as PCB Equipment. They shall also be removed and recycled or disposed of as required by local, state and federal regulations. All capacitors are assumed to contain PCBs unless a label or chemical analysis states that they do not. PCB ballasts must be disposed of as hazardous wastes and may not be re-sold to subsequent users.

1.4 COMPRESSED REFRIGERANT

Rooftop and window unit air conditioning units are present. In addition there are three chilled drinking water fountains. All of these units are assumed to contain refrigerant gas that shall be recovered prior to demolition. The installation shall be consulted as to whether they wish to remove for re-use, any of the refrigerant cooling compounds. The Contractor shall be responsible for documenting refrigerant removed by the installation and what was left for their removal and disposal. Details of disposition shall be furnished to the Contracting Officer and to the Installation.

1.5 SMOKE DETECTORS

There are numerous smoke detectors in the buildings. Smoke detectors may contain hazardous materials such as chemical batteries, electronic boards, or radioactive materials. Smoke detectors have been noted in the building, however it is not known whether they are located in any of the air ducts. The Contractor shall remove all smoke detectors that contain hazardous materials (or remove the hazardous components) and dispose of as required by local, state, and federal regulations.

1.6 METALLIC LEAD ITEMS

All lead-items such as poured lead seals, counter weights, etc. that are within the demolition area, shall be removed and disposed of prior to demolition. Estimated quantities are included in the Hazardous Building Materials Survey located in a separate volume.

1.7 LEAD-BASED PAINT

Under the state of Georgia no hazardous materials shall be disposed of in a landfill. Building 925 has been tested using the Toxicity Characteristic Leaching Procedure (TCLP) and it has been determine that Building 925's debris does not contain leachable lead over the regulatory limit of 5 mg/L. Debris may be disposed of in an off -base construction and debris (C&D) landfill. No individual testing (paint chip testing) of painted materials was conducted. Demolition dusts could contain lead levels above OSHA acceptable limits. The Contractor shall ensure that appropriate personal protective equipment, including respiratory protection, is provided.

Painted concrete may be recycled into a bound matrix, such as concrete or asphalt mixes without further testing. However, any painted concrete must be tested and the lead content be below regulatory limits before it can be used as road prep base material or in other similar environmental uses.

1.8 MISCELLANEOUS HAZARDOUS BUILDING MATERIALS

Should the Contractor discover any previously unidentified hazardous building materials, he shall immediately notify the Contracting Officer with the type and quantity of materials encountered. The Contractor shall be reimbursed for Contracting Officer- approved testing and accepted quantity, removal and disposal. Additional quantities, (greater than 10 percent of estimated quantity) of already identified materials shall be reimbursed at the same rate as the previously identified material. Materials or quantities (differences greater than 10% less than estimated quantities) not found by the Contractor shall incur a benefit back to the Government.

1.9 WORK REQUIREMENTS

The Contractor shall provide all personnel, transportation, services, materials, equipment, technical and management support required to perform the requirements as defined in this specification. The Contractor shall document the results of all recycling and disposal efforts.

1.10 DEFINITIONS

1.10.1 Certified Recycling Facility (CRF)

A facility that can validate that recyclable materials received are manufactured into new materials for commercial sale or are reused onsite by the facility.

1.10.2 Georgia EPD

Georgian Environmental Protection Division of the Department of Natural Resources.

1.10.3 Hazardous Materials Transporter

A person engaged in the off-site transportation of waste mercury-containing lamps, or PCB ballasts and transformers by air, rail, highway or water.

1.10.4 PCB Ballasts

Light ballasts weighing less than 50 pounds that may contain polychlorinated biphenyls (PCBs).

1.10.5 Hazardous Waste Lamps (HWL)

Any type of high- or low-pressure lighting device that is unprocessed, contains mercury, and generates light through the discharge of electricity either directly or indirectly through a fluorescing coating. Includes fluorescent lamps, mercury lamps, metal halide lamps and high-pressure sodium lamps.

1.10.6 Waste Mercury-Containing Lamp Transfer Facility

Any transportation-related facility including loading docks, parking areas, storage areas and other similar areas where shipments of waste mercury-containing lamps are held during the normal course of transportation for 10 days or less.

1.11 REFERENCES, PUBLICATIONS AND FORMS

The Contractor shall comply with the issue or version (including all changes and amendments) of Federal, State and local environmental statutes and regulations in effect on the day of issuance of this contract, including the applicable portions of the documents cited in the basic contract. References include but are not limited to the following.

Environmental Protection Agency 40 CFR Parts 260, 261, 264, 265, 268, 270 and 273

Environmental Protection Agency, Resource Conservation and Recovery Act (RCRA) (40 CFR 266).

Environmental Protection Agency, Disposal of Polychlorinated Biphenyls (PCBs) Federal Register vol. 63 29 June 1998, p. 25283 together with 40 CFR 761.

Hazardous Waste Management System: Modification of the Hazardous Waste Program; Hazardous Waste Lamps, Final Rule Federal Register Vol. 64 No. 128, July 6 1999 Rules and Regulations

Occupational Health and Safety (OSHA) 29 CFR 1926.65 Hazardous Waste and Emergency Response

Occupational Health and Safety (OSHA) 29 CFR 1926 Safety and Health Requirements for Construction; Lead in Construction

1.12 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-01 Preconstruction Submittals

Spill Prevention and Response Plan; G, DO

Three separately bound copies including the names of workers responsible for handling of PCB articles and HWLs. Submittal shall include the requirements of 29 CFR 1926.65 Emergency Responders and all applicable training and certifications.

SD-07 Certificates

Certification of Approved Recycling or Transfer Facility; G, DO

To be submitted 30 days prior to the removal of recyclable from the site (reference paragraph 3.1.e. 3.1.f) and any time the Contractor changes facilities.

SD-11 Closeout Submittals

PCB Articles and Hazardous Waste Lamps Disposition Report; G, DO

Three separately bound copies of all logs, invoices, forms, notices, manifests, bills of lading or other shipping documents shall be submitted

at the completion of the removal operations specified in this section.

Receipt of Materials at Transfer or Recycling Facility or TSDF; G, DO

To be submitted no later than 30 days from the date of shipment (reference paragraph 3.1.e. 3.1.f).

PART 2 PRODUCTS

2.1 GOVERNMENT-FURNISHED ITEMS AND SERVICES

The Government shall not provide any materials or services under this specification.

2.2 CONTRACTOR-FURNISHED ITEMS AND SERVICES

The Contractor shall furnish everything required to meet the conditions of this specification.

2.2.1 Equipment, Materials and Tools

The Contractor shall furnish all labor, equipment, materials, supplies, containers, labels, tools, vehicles and supervision necessary to perform the work defined in this specification.

2.2.2 Equipment

All equipment which is used by the Contractor to collect, transfer, transport, containerize and otherwise handle hazardous building materials shall meet all applicable federal and state requirements. Appropriate and permitted vehicles must be used to collect and transport the recyclable hazardous materials to the appropriate transfer and recycling/reclaim facilities.

2.2.3 Materials

The Contractor shall provide appropriate collection containers for the safe collection and shipment of hazardous building materials. Containers for waste mercury-containing lamps shall accommodate 4-foot and 8-foot tube lengths as well as other sized and shaped lamps, and for the collection and shipment of small PCB ballasts and transformers. Containers provided by the Contractor shall meet the requirements of the receiving certified recycling facility and the Department of Transportation (DOT). The Contractor shall also provide appropriate shipping labels for these containers.

2.2.4 Labeling Collection Containers

Logo decals and descriptive labels (i.e. "Used Mercury-Containing lamps" or "PCB Ballasts") shall initially be placed by the Contractor on all containers used to collect these materials respectively. Used Mercury-containing lamps shall not be considered hazardous waste while intact.

2.2.5 Transportation

The Contractor shall provide permitted transportation for the collection, transfer, removal and transport of hazardous building materials from the installation to appropriate recycling and reclamation facilities.

2.2.6 Forms and Notifications

It is the responsibility of the Contractor to determine which forms must be completed for compliance with State, Federal, and local requirements. The Contractor shall complete and submit these forms. Copies of all notification forms shall be included in the PCB ARTICLES AND HAZARDOUS WASTE LAMPS DISPOSITION REPORT.

PART 3 EXECUTION

3.1 SPECIFIC TASKS

a. The Contractor shall perform hazardous building materials recycling/recovery/disposal. These materials are to be recycled within the United States.

b. The Contractor, along with the Contracting Officer or his designated representative, shall determine a fixed quantity of said materials to be removed from the buildings prior to commencement of work. Broken HWL shall be noted at this time. Estimates provided here are to be verified by the Contractor prior to bid submittal.

c All waste mercury-containing lamps shall be delivered to a certified recycling facility (CRF), which has been approved prior to use by the Contracting Officer or his representative, where they shall be disassembled, reclaimed and prepared for marketing as a raw material in a manner that constitutes recycling as defined in the Resource Conservation and Recovery Act (RCRA) (40 CFR 266).

d. PCB ballasts and transformers shall be delivered to a certified recycling facility (CRF) which has been approved prior to use by the Contracting Officer, where they shall be disassembled. PCB-contaminated liquids shall be incinerated in accordance with 40 CFR 720. All other parts of the ballast shall be reclaimed, reused or prepared for marketing as a raw material in a manner that constitutes recycling as defined in RCRA (40 CFR 266).

e. The Contractor must submit copies of manifests, bills of lading and other receipts for every shipment transported off-site to a transfer facility or recycling facility. All copies must show name, address and phone number of receiving facility, as well as weight in pounds of materials being received. Receipts must be only for materials removed at the installation under this contract. The Contractor, in accordance with RCRA regulations and the newly adopted State and Federal standards for mercury-containing lamps, must fulfill all applicable transportation and record keeping requirements.

f. The Contractor shall ensure that all mercury-containing lamps, PCB ballasts, transformers, and other hazardous building materials are transported by a permitted hazardous materials transporter directly to a permitted transfer facility or permitted recycling facility, completing proper DOT shipping documentation and obtaining signature of transfer on shipping documentation from the Contracting Officer prior to leaving the site.

g. The Contractor shall take all precautions against breakage of mercury-containing lamps. If any mercury-containing lamps are broken during handling by the Contractor, they are considered to be hazardous waste and handled in accordance RCRA regulation. The Contractor shall be responsible for all costs associated with the cleanup and disposal of hazardous waste generated by the Contractor's employees if intact lamps are broken while being collected and transported.

h. It is the Contractor's responsibility to clean up any pre-existing broken HWL. This material is to be treated, shipped and disposed of as hazardous waste and shall meet all of the requirements (personal protective equipment, hazard posting, site control, emergency responder training, medical clearance to wear a respirator, etc., as stated in OSHA's Hazardous Waste Site and Emergency Responder, 29 CFR 1926.65). Prior to removal activities, the Contractor shall walk the buildings scheduled for demolition with the Contracting Officer to determine the number of broken HWLs. The Contractor shall submit an estimate for the clean-up and disposal costs of broken HWL and will be reimbursed by the Government. All other breakage caused by the removal and handling of the HWLs shall be the Contractor's responsibility and will not be reimbursable, as the Government will not have generated it.

-- End of Section --

SECTION 02115A

UNDERGROUND STORAGE TANK REMOVAL
02/02

PART 1 GENERAL

1.1 REFERENCES

The publications listed below form a part of this section to the extent referenced. The publications are referenced in the text by basic designation only.

AMERICAN PETROLEUM INSTITUTE (API)

API Pub 2217A	(1997) Guidelines for Work in Inert Confined Spaces in the Petroleum Industry
API Pub 2219	(1999) Safe Operation of Vacuum Trucks in Petroleum Service, 2nd Edition
API RP 1604	(1996) Closure of Underground Petroleum Storage Tanks
API RP 2003	(1998) Protection Against Ignitions Arising out of Static, Lightning, and Stray Currents
API Std 2015	(1994) Safe Entry and Cleaning of Petroleum Storage Tanks

AMERICAN SOCIETY FOR TESTING AND MATERIALS (ASTM)

ASTM D 2487	(2000) Classification of Soils for Engineering Purposes (Unified Soil Classification System)

U.S. NATIONAL ARCHIVES AND RECORDS ADMINISTRATION (NARA)

40 CFR 261	Identification and Listing of Hazardous Waste
40 CFR 262	Standards Applicable to Generators of Hazardous Waste
40 CFR 264	Standards for Owners and Operators of Hazardous Waste Treatment, Storage, and Disposal Facilities
40 CFR 265	Interim Status Standards for Owners and Operators of Hazardous Waste Treatment, Storage, and Disposal Facilities
40 CFR 266	Standards for the Management of Specific Hazardous Wastes and Specific Types of Hazardous Waste Management Facilities

40 CFR 268	Land Disposal Restrictions
40 CFR 279	Standards for the Management of Used Oil
40 CFR 280	Technical Standards and Corrective Action Requirements for Owners and Operators of Underground Storage Tanks (UST)

1.2 MEASUREMENT AND PAYMENT

Compensation for removal of [contaminated soil] [and] [pumpable liquids] shall be paid as a unit cost. This unit cost includes testing, excavation, stockpiling, transportation and disposal of the contaminated soil and backfilling with non-contaminated soil. Payment for all other work shall be under the base bid for the tank removal and shall constitute full payment for all work defined in the contract documents including testing of the contents, excavation and disposal of the tank, and testing of the underlying soil.

1.3 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-03 Product Data

Work Plan; G, ED (EN-GG).

The Work Plan within 30 days after notice to proceed. The Contractor shall allow 30 days in the schedule for the Government's review and approval. No adjustment for time or money will be made for resubmittals required as a result of noncompliance.

Qualifications; G, RE.

A document indicating that the Contractor meets the specified requirements.

Salvage Rights.

A record of the disposition of salvaged materials at the end of the contract.

SD-06 Test Reports

Backfill Material; G; RE.
Tank Contents Verification; G, RE.
Contaminated Water Disposal; G, RE.
Soil Examination, Testing, and Analysis; G, RE.

Reports including the chain-of-custody records.

Backfilling; G, RE.

Copies of all laboratory and field test reports.

Tank Closure Report.

Four copies of the report for each UST site opened, prepared in a standard 3-ring binder, within 14 days of completing work at each site. Each binder shall be labeled with contract number, project name, location and tank number; each binder shall be indexed. A copy of the report shall be furnished to the Installation Environmental Coordinator.

1.4 QUALIFICATIONS

The Contractor shall have a minimum of 2 years of tank removal experience and shall be certified by the State of Georgia for tank removal work.

1.4.1 Laboratory Services

For laboratory services the Contractor shall be validated in accordance with state certification requirements and Section 01450A CHEMICAL DATA QUALITY CONTROL.

1.4.2 Support Staff

The Contractor shall identify all staff involved for the various components, including personnel collecting and shipping samples. The qualifications of these staff members shall be detailed by the Contractor.

1.5 REGULATORY REQUIREMENTS

1.5.1 Permits and Licenses

The Contractor, as required or as directed by the Contracting Officer, shall obtain local, state, or federal permits and licenses that directly impact the Contractor's ability to perform the work prior to commencing removal operations.

1.5.2 Statutes and Regulations

Tank closures shall be carried out in accordance with 40 CFR 280, 40 CFR 262, 40 CFR 264, and 40 CFR 265 as well as the applicable local and State of Georgia regulations. Hazardous material shall be transported in accordance with Section 02120A TRANSPORTATION AND DISPOSAL OF HAZARDOUS MATERIALS.

1.6 PROJECT/SITE CONDITIONS

The work shall consist of removal, decontamination and disposal of two, 500-gallon underground storage tanks and associated piping and ancillary equipment. The tanks are constructed of steel and are at the locations shown on the drawings. The tanks were used for storing fuel oil. Residue remaining in the tank is considered a special waste. Existing native soils are predominantly SC. Groundwater has been encountered within 10 feet of the surface. The Contractor shall verify the actual conditions prior to submitting a bid. The site is not a hazardous waste site but shall be given special consideration due to the nature of the materials and hazards present until closure activities are complete.

1.6.1 Sequencing and Scheduling

The Contractor shall notify the Installation Environmental Coordinator and

the Contracting Officer 7 days prior to tank removal. The Contractor shall be responsible for contacting the Implementation Agency (IA) in accordance with the applicable reporting requirements.

1.6.2 Work Plan

The Contractor shall develop, implement, maintain, and supervise as part of the work, a comprehensive plan for tank removal and related operations. As a minimum the plan shall include, but not be limited to, excavation, removal, and ultimate disposal of the tank, its contents, and any contaminated materials. The Work Plan shall be based on work experience, on the requirements of this specification, and on the following references:

a. API RP 1604.

b. API Std 2015.

c. API RP 2003.

d. API Pub 2217A.

e. API Pub 2219.

No work at the site, with the exception of site inspections and mobilization, shall be performed until the Work Plan is approved. At a minimum, the Work Plan shall include:

a. Discussion of the removal approach, tank cleaning, and tank cutting procedures.

b. A Sampling and Analysis Plan prepared in accordance with Section 01450A CHEMICAL DATA QUALITY CONTROL.

c. Methods to be employed for product, sludge, vapor, and pumpable liquid removal; purging and inerting; and storage methods proposed for control of surface water.

d. Treatment options.

e. Identification of waste, tank and contaminated soil transporters and means of transportation.

f. Treatment, disposal, and alternate facilities, and means of treatment, disposal or remediation.

g. Borrow source.

h. Spill prevention plan.

i. Spill contingency plan.

j. Decontamination procedures, shoring plan, and safety measures in accordance with Section 01351A SAFETY, HEALTH, AND EMERGENCY RESPONSE (HTRW/UST).

PART 2 PRODUCTS

2.1 BACKFILL MATERIAL

Backfill material shall be obtained from off site. Backfill shall be classified in accordance with ASTM D 2487 as GW, GP, GM, GC, SW, SP, SM, SC, MH, CL, or CH and shall be free from roots and other organic matter, trash, debris, snow, ice or frozen materials. If off-site materials are used, soil classification test results shall be approved prior to bringing the material onsite. The testing frequency for backfill material shall be 1 per 1000 cubic yards or a minimum of 1 test. Non-contaminated material removed from the excavation shall be used for backfill in accordance with Paragraph BACKFILLING.

PART 3 EXECUTION

3.1 GENERAL REQUIREMENTS

3.1.1 Safety Guidelines

Personnel shall abide by the safety guidelines specified in Section 01351A SAFETY, HEALTH, AND EMERGENCY RESPONSE (HTRW/UST).

3.1.2 Burning and Explosives

Use of explosives or burning debris will not be allowed.

3.1.3 Protection of Existing Structures and Utilities

The Contractor shall take all necessary precautions to avoid damage to existing structures, their appurtenances, monitoring wells, or utilities that may be affected by work activities. Any damage to utilities resulting from the Contractor's operations shall be repaired at no expense to the Government. The Contractor shall coordinate with the installation to locate underground utilities prior to beginning construction. Utilities encountered which were not previously shown or otherwise located shall not be disturbed without approval from the Contracting Officer.

3.1.4 Shoring

Shoring requirements shall be provided in accordance with Section 01351A SAFETY, HEALTH, AND EMERGENCY RESPONSE (HTRW/UST).

3.2 TANK CONTENTS VERIFICATION

Sampling and analysis shall be conducted in accordance with the approved Sampling and Analysis Plan and Section 01450A CHEMICAL DATA QUALITY CONTROL.

3.2.1 Sampling

Tank product, pumpable liquids, and sludge shall be sampled by the Contractor. If the data is not adequate, additional sampling and analysis to the extent required by the approved facility receiving the material shall be the responsibility of the Contractor. Meeting all regulatory requirements, including the preparation of hazardous materials and waste for transportation shall be the responsibility of the Contractor.

3.2.2 Analysis

Tank contents shall be tested by the Contractor for the parameters listed herein. Analyses shall include total petroleum hydrocarbons (TPH), benzene, ethylbenzene, toluene and xylene (BETX), and lead.

3.2.3 Characterization

Prior to removing any of the tank contents, the contents shall be characterized to determine if the tank contents must be disposed in a special manner based on local, state, and Federal disposal regulations. Tank product, pumpable liquids, and sludge shall be characterized in accordance with 40 CFR 261 and 40 CFR 279. The waste contents determination and accompanying test results for each phase present in the tank shall be submitted to the Contracting Officer. The Contractor shall be responsible for any additional requirements identified by the disposal facility. The tank contents shall not be removed until approval is given by the Contracting Officer.

3.3 CLEARING, GRUBBING AND REMOVALS

Clearing and grubbing shall be in accordance with Section 02230A CLEARING AND GRUBBING. Areas designated for clearing and grubbing as shown on the drawings shall be cleared of all trees, stumps, down timber, brush, rubbish, roots larger than 3 inches in diameter, and matted roots prior to commencing operations. Concrete or asphalt pavement shall be saw cut at the limits of removal, broken and removed with the resulting debris disposed at the location shown on the drawings. Chain link fence shall be removed and salvaged for reuse.

3.4 TOPSOIL

Topsoil shall meet the requirements in Section 02300A EARTHWORK. Uncontaminated topsoil shall be stripped and stockpiled separately for reuse at a location approved by the Contracting Officer if it meets the requirements of clean fill given in Paragraph BACKFILLING. Additional topsoil in excess of that produced by excavation shall be obtained off-site. All areas disturbed by tank removal operations, other than areas to receive pavement or similar surface under this contract, shall be topsoiled. Topsoil shall be used wherever shown or stated on the drawings.

3.5 PREPARATIONS FOR EXCAVATION

Before excavating, the Contractor shall drain product piping back to the tank and remove all product from the tank; and the tank shall be purged and vented in accordance with API RP 1604, and as specified herein.

3.5.1 Removal of Product, Pumpable Liquids, and Sludge

Tank product, pumpable liquids, and sludge shall be contained, and stored onsite, prior to disposal. Contaminated water shall be treated as specified. Tank product, pumpable liquids, and sludge shall be analyzed and segregated to recover reusable products by the Contractor prior to being transported to the treatment, storage and disposal (TSD) facility. Tank product, pumpable liquids, and sludge shall be removed and disposed of by the Contractor. No Government facilities shall be used for permanent storage or disposal of the wastes. Temporary storage on Government facilities will be allowed only until testing is complete, manifests (if necessary) are complete, and transportation is arranged. The Contractor

shall be responsible for obtaining all required permits. Usable product shall be the property of the Contractor. The Contractor shall provide approved containers, vehicles, equipment, labor, signs, labels, placards and manifests and associated land disposal restriction notices and notifications, necessary for accomplishment of the work, including materials necessary for cleaning up spills that could occur from tank removal operations.

3.5.2 Contaminated Water Disposal

3.5.2.1 Sampling, Analysis, and Containment

Contaminated water shall be sampled and analyzed both prior to and after treatment. Contaminated water produced from excavation operations and tank pumping treated onsite, shall be analyzed for pH; benzene, ethylbenzene, toluene, and xylene (BETX); total lead; and total petroleum hydrocarbons (TPH). Sampling and analysis shall be performed prior to disposal for every 50,000 gallons of contaminated water treated. Analysis for contaminated water to be taken to an off-site treatment facility shall conform to the requirements of the treatment facility with documentation of all analyses performed furnished to the Contracting Officer in accordance with paragraph RECORDS. Contaminated water shall be contained, stored onsite, and analyzed prior to being transported to the approved treatment, storage and disposal facility and disposed of by the Contractor in accordance with applicable Federal and state disposal regulations. The Contractor shall provide approved containers, vehicles, equipment, labor, signs, labels, placards and manifests and associated land disposal notices and notifications, necessary for accomplishment of the work. Sampling and analyses of contaminated water and treated water and the Contractor and laboratory quality assurance program shall be in accordance with Section 01450A CHEMICAL DATA QUALITY CONTROL.

3.5.2.2 Treatment

Contaminated water shall be treated onsite by oil water separation, filtering, air stripping, activated carbon, or other means as approved by the Contracting Officer. If contaminated water is to be treated onsite, the proposed treatment shall be specified in the Work Plan and submitted for approval. Temporary storage and treatment equipment shall be installed in the general vicinity of the tanks at a location approved by the Contracting Officer. Treated effluent shall be sampled and analyzed and the results approved by the Contracting Officer before discharge to the sanitary sewer. Effluent shall be treated and discharged in accordance with the discharge permit.

3.6 PURGING AND INERTING

After the tank and piping contents have been removed, but prior to excavation beyond the top of the tank, the Contractor shall disconnect all the piping (except the piping needed to purge or inert the tank). Flammable and toxic vapors shall be purged from the tank or the tank made inert in accordance with API RP 1604, with the exceptions that filling with water shall not be used and, if dry ice is employed, the Contractor shall use a minimum of 3 pounds per 100 gallons of tank volume. The tank atmosphere shall be continuously monitored for combustible vapors if the tank is purged, or continuously monitored for oxygen if the tank is inerted.

3.7 EXCAVATION

Excavation areas, as well as work near roadways, shall be marked in accordance with Section 01351A SAFETY, HEALTH, AND EMERGENCY RESPONSE (HTRW/UST).

3.7.1 Exploratory Trenches

Exploratory trenches shall be excavated as necessary to determine the tank location, limits and the location of ancillary equipment.

3.7.2 Tank Excavation

Excavation around the perimeter of the tank shall be performed limiting the amount of potentially petroleum contaminated soil that could be mixed with previously uncontaminated soil. Petroleum contaminated soil shall be segregated in separate stockpiles. The Contractor shall maintain around the tank an excavation of sufficient size to allow workers ample room to complete the work, but also protect the workers from sliding or cave-ins. Sheeting, bracing, or shoring shall be installed in the absence of adequate side slopes if there is a need for workers to enter the excavated area. Surface water shall be diverted to prevent direct entry into the excavation. Dewatering of the excavation may require a discharge permit by the State and shall be limited to allow adequate access to the tank and piping, to assure a safe excavation, and to ensure that compaction and moisture requirements are met during backfilling. Dewatering may result in the production of petroleum contaminated water and/or free product. Free product shall be recovered from the groundwater only as part of necessary dewatering.

3.7.3 Piping Excavation

Excavation shall be performed as necessary to remove tank piping and ancillary equipment in accordance with paragraphs: Shoring, Tank Excavation, and Open Excavations.

3.7.4 Open Excavations

Open excavations and stockpile areas shall be secured while awaiting confirmation test results from the soil beneath the tank. The excavation shall be backfilled as soon as possible after tank and contaminated soil removals have been completed and confirmation samples have been taken. The Contractor shall divert surface water around excavations to prevent water from directly entering into the excavation.

3.7.5 Stockpiles

Uncontaminated excavated soil shall be stockpiled and used for backfill in the tank excavation prior to using borrow material. Excavated material that is regulated by the state as a hazardous waste for volatile and possibly semi-volatile hydrocarbons depending on the performance criteria for the field screening method and which has an obvious petroleum odor or as required by the State of Georgia or implementing agency shall be considered contaminated and shall be placed in containers such as drums, roll-offs or dumpsters for sampling in accordance with paragraph Stockpiled Material Sampling. Uncontaminated soil shall be stockpiled separately from the contaminated soil, a safe distance away from, but adjacent to, the excavation. The container cover shall prevent rain or surface water from coming into contact with the contaminated soil, as well as limit the escape

of the volatile constituents in the container.

3.8 REMOVAL OF PIPING, ANCILLARY EQUIPMENT, AND TANK

3.8.1 Piping and Ancillary Equipment

All piping and ancillary equipment shall be disconnected from the tank. The piping shall be removed completely or as directed by the Contracting Officer. All tank ancillary equipment and piping connections shall be capped, except those connections necessary to inert the tank within the excavation zone. The piping exterior and ancillary equipment shall be cleaned to remove all soil and inspected for signs of corrosion and leakage. The Contractor shall ensure no spillage of the piping contents occurs, as specified in the Work Plan, and as required in paragraph SPILLS. If the soil under and around the tank pad is contaminated, the tank pad shall be removed and disposed of off-site at an approved waste facility. If the soil under and around the tank pad is not contaminated, the tank pad shall remain in place.

3.8.2 Tank

The tank shall be removed from the excavation and the exterior cleaned to remove all soil and inspected for signs of corrosion, structural damage, or leakage. All materials coming into contact with the tank, or in the vicinity of the excavation such as shovels, slings and tools shall be of the non-sparking type. After removal from the excavation, the tank shall be placed on a level surface adjacent to the tank excavation and secured with wood blocks to prevent movement.

3.8.3 Contaminated Soil, Tank and Piping Excavation Examination

After the tank has been removed from the ground, the adjacent and underlying soil shall be examined for any evidence of leakage. The soil shall be visually inspected for staining after removal of all obviously contaminated soil, then screened for the presence of volatile and/or semi-volatile contamination using a real time vapor monitoring instrument. Petroleum contaminated soil not regulated by the state as hazardous waste shall be transported off-site for disposal. The Contracting Officer shall determine the extent of the contaminated soil to be removed from each site but shall not exceed 4 [cubic yards] per site. The Contractor shall report any evidence indicating that the amount of contaminated soil may exceed the individual site limit specified, to the Contracting Officer the same day it is discovered. If minimal additional excavation is required, the Contracting Officer may allow the Contractor to proceed. If extensive contamination is encountered, the excavation shall be sampled and backfilled in accordance with paragraph BACKFILLING. After the known contaminated soil is removed, the excavation shall be sampled and analyzed in accordance with Section 01450A CHEMICAL DATA QUALITY CONTROL.

3.9 TANK CLEANING

3.9.1 Exterior

Soil shall be removed from the exterior of the tank, piping, and associated equipment to eliminate soil deposition on roadways during transportation to a temporary storage area, ensure markings will adhere to the surfaces, and simplify tank cutting. Soil shall be removed using non-sparking tools. Removed uncontaminated soil and soil not regulated by the state as a hazardous waste shall be recovered and used as backfill in the former tank

excavation. Soil believed to be contaminated shall be removed and containerized with other contaminated soil removed from the excavation.

3.9.2 Temporary Storage

If the tank is stored after the tank exterior is cleaned and ancillary equipment is removed, and prior to being cut into sections, the tank shall be labeled as directed in API RP 1604, placed on blocks, and temporarily stored on a flat area adjacent to the excavation. Prior to cleaning the tank interior the tank atmosphere shall be monitored for combustible vapors and purged or inerted if combustible vapors are detected.

3.9.3 Interior

The tank interior shall be cleaned using a high pressure (greater than 500 psi), low volume (less than 2 gpm) water spray or steam cleaned until all loose scale and sludge is removed, and contamination, in the form of a sheen, is no longer visible in the effluent stream. The interior surfaces of piping shall also be cleaned, to the extent possible, using the same method used for cleaning the tank. Contaminated water generated from interior cleaning operations (of both piping and tank) shall not exceed the following quantities for each UST cleaned:

UST VOLUME (GALLONS)	PERCENT OF UST VOLUME
1,000 or less	5
10,000 or less	5 or 100 gal., whichever is less
20,000 or less	1 or 150 gal., whichever is less
greater than 20,000	1 or 250 gal., whichever is less

All contaminated water resulting from cleaning operations shall be handled in accordance with paragraph Contaminated Water Disposal. Cleaning shall be accomplished eliminating, to the greatest extent possible, the need for personnel to enter the tank. Cleaning shall be done using specially designed tank cleaning equipment which allows the tank to be cleaned prior to cutting into sections without requiring personnel to enter the tank or, if less specialized equipment is used, the tank shall be partially dissected to overcome confined space entry hazards. This work shall be accomplished in accordance with Section 01351A SAFETY, HEALTH, AND EMERGENCY RESPONSE (HTRW/UST).

3.10 SOIL EXAMINATION, TESTING, AND ANALYSIS

3.10.1 Tank Excavation Sampling Procedures

After soil known to be contaminated has been removed or after soil excavation is complete, the excavation shall be sampled with procedures, number, location, and methodology in accordance with state regulations and Section 01450A CHEMICAL DATA QUALITY CONTROL. Samples may be obtained from the pits using a backhoe with a Shelby tube attached to the bucket. Sample preservation and analytical procedures shall conform to Section 01450A CHEMICAL DATA QUALITY CONTROL.

3.10.2 Stockpiled Material Sampling

Sampling locations, number and specific procedures shall be as required by the disposal facility.

3.10.3 Analysis

Soil samples from the excavation and stockpiled material shall be tested in accordance with the approved Sampling and Analysis Plan, and Section 01450A CHEMICAL DATA QUALITY CONTROL for the following parameters: total petroleum hydrocarbon (TPH) and benzene, ethylbenzene, toluene, xylene (BETX). Copies of all test results shall be provided to the Contracting Officer.

3.11 BACKFILLING

The tank area and any other excavations shall be backfilled as soon as possible after tank and contaminated soil removals have been completed and confirmation samples have been taken. Contaminated soil removal shall be complete after the bottom of the tank excavation is determined to have soil contamination levels below the state standards of 100 ppm TPH. The excavation shall be dewatered if necessary. Stockpiled material subjected to chemical confirmation testing shall be used as backfill if it is found to conform to the requirements of clean fill per appropriate regulations. Backfill consisting of clean fill shall be placed in layers with a maximum loose thickness of 8 inches, and compacted to 90 percent maximum density for cohesive soils and 95 percent maximum density for cohesionless soils.

3.12 DISPOSAL REQUIREMENTS

3.12.1 Treatment, Disposal, and Recycling

Disposal of hazardous or special wastes shall be in accordance with all local, State, and Federal solid and hazardous waste laws and regulations; the RCRA; Section 02120A TRANSPORTATION AND DISPOSAL OF HAZARDOUS MATERIALS; and conditions specified herein. This work shall include all necessary personnel, labor, transportation, packaging, detailed analyses (if required for disposal, manifesting or completing waste profile sheets), equipment, and reports. Product and pumpable liquids removed from the tank shall be recycled to the greatest extent practicable. Each tank disposed of in this manner shall be manifested as required by the State of Georgia to document delivery and acceptance at the disposal facility.

3.12.2 Tank and Ancillary Equipment Disposal

After the tank, piping, and ancillary equipment have been removed from the excavation and the tank cleaned, the tank shall be cut into sections with no dimension greater than 5 feet. Tank and piping sections shall be disposed of in a State approved off-site disposal facility. The tank shall be cut into sections prior to being taken from the tank removal site. The Contractor shall not sell the tank intact. Ancillary equipment shall be disposed of at an approved off-site disposal facility. Piping shall be disconnected from the tank and removed unless otherwise indicated.

3.12.3 Transportation of Wastes

Transportation shall be provided in accordance with Department of Transportation (DOT) Hazardous Material Regulations and State and local requirements, including obtaining all necessary permits, licenses, and approvals. Evidence that a State licensed waste transporter is being used shall be included in the SUBMITTALS.

3.12.4 Salvage Rights

The Contractor shall retain the rights to salvage value of recycled or

reclaimed product and metal not turned in to the DRMO or otherwise identified, so long as the requirements of 40 CFR 266 and 40 CFR 279, or the applicable State requirements are met. At the end of the contract, the Contractor shall provide documentation on the disposition of salvaged materials.

3.12.5 Records

Records shall be maintained of all waste determinations, including appropriate results of analyses performed, substances and sample location, the time of collection, and other pertinent data as required by 40 CFR 280, Section 74 and 40 CFR 262 Subpart D, and Section 01450A CHEMICAL DATA QUALITY CONTROL. Transportation, treatment, disposal methods and dates, the quantities of waste, the names and addresses of each transporter and the disposal or reclamation facility, shall also be recorded and available for inspection, as well as copies of the following documents:

a. Manifests.

b. Waste analyses or waste profile sheets.

c. Certifications of final treatment/disposal signed by the responsible disposal facility official.

d. Land disposal notification records required under 40 CFR 268for hazardous wastes.

Records shall be provided in accordance with Section 02120A TRANSPORTATION AND DISPOSAL OF HAZARDOUS MATERIALS. Following contract close out, the records shall become the property of the Government.

3.12.6 Hazardous/Special Waste Manifests

Manifesting shall conform to the requirements specified in Section 02120A TRANSPORTATION AND DISPOSAL OF HAZARDOUS MATERIALS.

3.12.7 Documentation of Treatment or Disposal

The wastes, other than recyclable or reclaimable product or metal, shall be taken to a treatment, storage, or disposal facility which has EPA or appropriate state permits and hazardous or special waste identification numbers and complies with the provisions of the disposal regulations. [Documentation of acceptance of special waste by] [The original return copy of the hazardous waste manifest, signed by the owner or operator of] a facility legally permitted to treat or dispose of those materials shall be furnished to the Contracting Officer not later than 5 working days following the delivery of those materials to the facility; and a copy shall be included in the Tank Closure Report. A statement of agreement from the proposed treatment, storage or disposal facility and certified transporters to accept hazardous or special wastes shall be furnished in the Work Plan. If the Contractor selects a different facility than is identified in the Work Plan, documentation shall be provided for approval to certify that the facility is authorized and meets the standards specified in 40 CFR 264.

3.13 SPILLS

Immediate containment actions shall be taken as necessary to minimize effect of any spill or leak. Cleanup shall be in accordance with applicable Federal, State, local laws and regulations, and district policy

at no additional cost to the Government. Refer to Section 02120A TRANSPORTATION AND DISPOSAL OF HAZARDOUS MATERIALS for spill response and reporting requirements.

3.14 TANK CLOSURE REPORT

Tank Closure Reports shall include the following information as a minimum:

a. A cover letter signed by a Professional Engineer registered in the State of Georgia certifying that all services involved have been performed in accordance with the terms and conditions of this specification.

b. A narrative report describing what was encountered at each site, including:

(1) condition of the UST.

(2) any visible evidence of leaks or stained soils.

(3) results of vapor monitoring readings.

(4) actions taken including quantities of materials treated or removed.

(5) reasons for selecting sample locations.

(6) sample locations.

(7) collection data such as time of collection and method of preservation.

(8) reasons for backfilling site.

(9) whether or not groundwater was encountered.

c. Copies of all analyses performed for disposal.

d. Copies of all waste analyses or waste profile sheets.

e. Copies of all certifications of final disposal signed by the responsible disposal installation official.

f. Information on who sampled, analyzed, transported, and accepted all wastes encountered, including copies of manifests, waste profile sheets, land disposal restriction, notification and certification forms, certificates of disposal, and other pertinent documentation.

g. Copies of all analyses performed for confirmation that underlying soil is not contaminated, with copies of chain-of-custody for each sample. Analyses shall give the identification number of the sample used. Sample identification numbers shall correspond to those provided on the one-line drawings.

h. Scaled one-line drawings showing tank locations, limits of excavation, limits of contamination, underground utilities within 50 feet, sample locations, and sample identification numbers.

i. Progress Photographs. The Contractor shall take a minimum of 4 views of the site showing such things as the location of each tank, entrance/exit road, and any other notable site condition before work begins. After work has been started at the site, the Contractor shall photographically record activities at each work location daily. Photographs shall be 3 x 5 inches and shall include:

(1) Soil removal, handling, and sampling.

(2) Unanticipated events such as discovery of additional contaminated areas.

(3) Soil stockpile area.

(4) Tank.

(5) Site or task-specific employee respiratory and personal protection.

(6) Fill placement and grading.

(7) Post-construction photographs. After completion of work at each site, the Contractor shall take a minimum of four (4) views of the site. Prints shall illustrate the condition and location of work and the state of progress. The photographs shall be mounted and enclosed back-to-back in a double face plastic sleeve punched to fit standard three ring binders. Each color print shall show an information box, 1-1/2 x 3-1/2 inches. The information box for the 3 x 5 inch photographs shall be scaled down accordingly, or taped to the bottom of the photo. The box shall be typewritten and arranged as follows:

Project No. Contract No.

Location
Contractor/Photographer

Photograph No. Date/Time:

Description

Direction of View

-- End of Section --

SECTION 13280A

ASBESTOS ABATEMENT
7/03

PART 1 GENERAL

This specification includes asbestos abatement activities and requirements in accordance with 40 CFR Part 61, Subpart M (USEPA); Class I, Class II, Class III, and Class IV abatement operations Class II operations per 29 CFR 1926, .1101(OSHA); training requirements in accordance with OSHA 29 CFR 1926, .1101 and 40 CFR 763 (USEPA); selectable optional air monitoring requirements in accordance with 40 CFR 763; and is supplemented by Engineer Pamphlet (EP) 1110-1-11, "Asbestos Abatement Guideline Detail Sheets". This specification has been developed to be used with a comprehensive set of Asbestos Abatement Detail Sheets in EP 1110-1-11. The EP provides guidance instructions on the selection and use of 2 types of Detail Sheets: SET-UP DETAILS (describing the containment and control methods to be used) and RESPONSE ACTION DETAILS (describing the abatement technique to be employed (removal, encapsulation, encasement, enclosure or repair) and the specific work task item to be abated (ex. removal of acoustical ceiling plaster)). The SET-UP DETAILS and RESPONSE ACTION DETAILS pages can be obtained from the Internet at See http://www.hnd.army.mil "TECHINFO" or http://www.usace.army.mil/inet/usace-docs/eng-phamphlets/ep1110-1-11/enture.pdf)

Each RESPONSE ACTION DETAIL references the applicable SET-UP DETAIL to be used. All Detail Sheets are identified by numeric designation. In the Contractor's Asbestos Abatement and Hazard Control Plan each individual asbestos abatement work task, to include pertinent information for the task and the appropriate Detail Sheets, will be summarized from paragraph DESCRIPTION OF WORK, Table 1. The completed DESCRIPTION OF WORK forms shall be included in the Contractor's Asbestos Abatement and Hazard Control Plan. The designer must be an EPA Certified Asbestos Project Designer. Demolition and/or renovation of structures that contain nonfriable Category I or II ACM that would be left in place during demolition is governed by 40 CFR Part 61, Subpart M and state requirements. The USEPA has published guidance documents that will assist in this decision process. They include EPA 340/1-92/010(1992), "Guidelines for Catastrophic Emergency Situations Involving Asbestos"; 340/1-92/013(1992), "A Guide to Normal Demolition Practices Under the Asbestos NESHAP"; and EPA document dated 1994, "Asbestos/NESHAP Demolition Decision Tree". Consult with the USEPA regional office, USEPA regulations, state regulator and state requirements, and the Army guidance referenced in EP 1110-1-11 for the specific survey, assessment and decision steps to take prior to making a decision to leave nonfriable ACM in-place during building demolition, or to remove it prior to demolition. Friable ACM shall always be removed prior to any building demolition. The USEPA has delegated the responsibility of approving landfills for the disposal of asbestos to most states. Verify with the state in which the project is located whether the state, USEPA, region, or local agency has jurisdiction and what the requirements are. For OSHA Class I asbestos abatement operations that involve the abatement of less than 1 square meter (10 square feet) or 8 linear meters (25 linear feet); Class II operations; Class III operations; or outdoor abatement operations; an enclosed containment regulated area (to include full containment, single or double bulkhead containment, or mini-containment) may not be required.

The location of the item to be abated, type of material, and potential hazard must be reviewed and a judgment made by the designer as to whether or not a modified containment area, glovebag, or outdoor technique may be safely used. In a case where an enclosed containment regulated area is not required, many of the provisions in this specification should be deleted.

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 NATIONAL STANDARDS INSTITUTE (ANSI)

ANSI Z87.1	(1989; Errata; Z87.1a) Occupational and Educational Eye and Face Protection
ANSI Z88.2	(1992) Respiratory Protection
ANSI Z9.2	(1979; R 1991) Fundamentals Governing the Design and Operation of Local Exhaust Systems

AMERICAN SOCIETY FOR TESTING AND MATERIALS (ASTM)

ASTM C 732	(1995) Aging Effects of Artificial Weathering on Latex Sealants
ASTM D 1331	(1989; R 1995) Surface and Interfacial Tension of Solutions of Surface-Active Agents
ASTM D 2794	(1993; R 1999el) Resistance of Organic Coatings to the Effects of Rapid Deformation (Impact)
ASTM D 4397	(1996) Polyethylene Sheeting for Construction, Industrial, and Agricultural Applications
ASTM D 522	(1993a) Mandrel Bend Test of Attached Organic Coatings
ASTM E 119	(2000) Fire Tests of Building Construction and Materials
ASTM E 1368	(2000) Visual Inspection of Asbestos Abatement Projects
ASTM E 736	(1992) Cohesion/Adhesion of Sprayed Fire-Resistive Materials Applied to Structural Members
ASTM E 84	(2000a) Surface Burning Characteristics of Building Materials
ASTM E 96	(2000) Water Vapor Transmission of Materials

COMPRESSED GAS ASSOCIATION (CGA)

CGA G-7	(1990) Compressed Air for Human Respiration
CGA G-7.1	(1997) Commodity Specification for Air

GEORGIA DEPARTMENT OF NATURAL RESOURCES ENVIRONMENTAL PROTECTION DIVISION (http://www.dnr.state.ga.us/dnr/environ)

Chap.391-3-14	(JUNE 1996) Asbestos Removal and Encapsulation
Chap. 391-3-14	(Revsion, June 1998 with April 1999 Guidance Letter) Asbestos Notification Requirements for Demolition, Renovation or Abatement

NATIONAL FIRE PROTECTION ASSOCIATION (NFPA)

NFPA 701	(1999) Methods of Fire Tests for Flame-Resistant Textiles and Films

NATIONAL INSTITUTE FOR OCCUPATIONAL SAFETY AND HEALTH (NIOSH)

NIOSH Pub No. 84-100	(1984; Supple 1985, 1987, 1988 & 1990) NIOSH Manual of Analytical Methods

U.S. ARMY CORPS OF ENGINEERS (USACE)

EM 385-1-1	(2003) U.S. Army Corps of Engineers Safety and Health Requirements Manual

U.S. 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

U.S. NATIONAL ARCHIVES AND RECORDS ADMINISTRATION (NARA)

29 CFR 1910	Occupational Safety and Health Standards
29 CFR 1926	Safety and Health Regulations for Construction
40 CFR 61	National Emission Standards for Hazardous Air Pollutants
40 CFR 763	Asbestos
42 CFR 84	Approval of Respiratory Protective Devices

49 CFR 107	Hazardous Materials Program Procedures
49 CFR 171	General Information, Regulations, and Definitions
49 CFR 172	Hazardous Materials Table, Special Provisions, Hazardous Materials Communications, Emergency Response Information, and Training Requirements
49 CFR 173	Shippers - General Requirements for Shipments and Packagings

UNDERWRITERS LABORATORIES (UL)

UL 586	(1996; Rev thru Aug 1999) High-Efficiency, Particulate, Air Filter Units

1.2 DEFINITIONS

a. Adequately Wet: A term defined in 40 CFR 61, Subpart M, and EPA 340/1-90/019 meaning to sufficiently mix or penetrate with liquid to prevent the release of particulate. If visible emissions are observed coming from asbestos-containing material (ACM), then that material has not been adequately wetted. However, the absence of visible emissions is not sufficient evidence of being adequately wetted.

b. Aggressive Method: Removal or disturbance of building material by sanding, abrading, grinding, or other method that breaks, crumbles, or disintegrates intact asbestos-containing material (ACM).

c. Amended Water: Water containing a wetting agent or surfactant with a surface tension of at least 29 dynes per square centimeter when tested in accordance with ASTM D 1331.

d. Asbestos: Asbestos includes chrysotile, amosite, crocidolite, tremolite asbestos, anthophylite asbestos, actinolite asbestos, and any of these minerals that have been chemically treated and/or altered.

e. Asbestos-Containing Material (ACM): Any materials containing more than one percent asbestos.

f. Asbestos Fiber: A particulate form of asbestos, 5 micrometers or longer, with a length-to-width ratio of at least 3 to 1.

g. Authorized Person: Any person authorized by the Contractor and required by work duties to be present in the regulated areas.

h. Building Inspector: Individual who inspects buildings for asbestos and has EPA Model Accreditation Plan (MAP) "Building Inspector" training; accreditation required by 40 CFR 763, Subpart E, Appendix C.

i. Certified Industrial Hygienist (CIH): An Industrial Hygienist certified in the practice of industrial hygiene by the American Board of Industrial Hygiene.

j Certified Safety Specialist (CSP): A Safety Professional certified in the practice of occupational health and safety by the Board of Certified Safety Professionals.

k. Class I Asbestos Work: Activities defined by OSHA involving the removal of thermal system insulation (TSI) and surfacing ACM.

l. Class II Asbestos Work: Activities defined by OSHA involving the removal of ACM which is not thermal system insulation or surfacing material. This includes, but is not limited to, the removal of asbestos - containing wallboard, floor tile and sheeting, roofing and siding shingles, and construction mastic. Certain "incidental" roofing materials such as mastic, flashing and cements when they are still intact are excluded from Class II asbestos work. Removal of small amounts of these materials which would fit into a glovebag may be classified as a Class III job.

m. Class III Asbestos Work: Activities defined by OSHA that involve repair and maintenance operations, where ACM, including TSI and surfacing ACM, is likely to be disturbed. Operations may include drilling, abrading, cutting a hole, cable pulling, crawling through tunnels or attics and spaces above the ceiling, where asbestos is actively disturbed or asbestos-containing debris is actively disturbed.

n. Class IV Asbestos Work: Maintenance and custodial construction activities during which employees contact but do not disturb ACM and activities to clean-up dust, waste and debris resulting from Class I, II, and III activities. This may include dusting surfaces where ACM waste and debris and accompanying dust exists and cleaning up loose ACM debris from TSI or surfacing ACM following construction.

o. Clean room: An uncontaminated room having facilities for the storage of employees' street clothing and uncontaminated materials and equipment.

p. Competent Person: In addition to the definition in 29 CFR 1926, Section .32(f), a person who is capable of identifying existing asbestos hazards as defined in 29 CFR 1926, Section .1101, selecting the appropriate control strategy, has the authority to take prompt corrective measures to eliminate them and has EPA Model Accreditation Plan (MAP) "Contractor/Supervisor" training; accreditation required by 40 CFR 763, Subpart E, Appendix C.

q. Contractor/Supervisor: Individual who supervises asbestos abatement work and has EPA Model Accreditation Plan "Contractor/Supervisor" training; accreditation required by 40 CFR 763, Subpart E, Appendix C.

r. Critical Barrier: One or more layers of plastic sealed over all openings into a regulated area or any other similarly placed

physical barrier sufficient to prevent airborne asbestos in a regulated area from migrating to an adjacent area.

s. Decontamination Area: An enclosed area adjacent and connected to the regulated area and consisting of an equipment room, shower area, and clean room, which is used for the decontamination of workers, materials, and equipment that are contaminated with asbestos.

t. Demolition: The wrecking or taking out of any load-supporting structural member and any related razing, removing, or stripping of asbestos products.

u. Disposal Bag: A 0.15 mm (6 mil) thick, leak-tight plastic bag, pre-labeled in accordance with 29 CFR 1926, Section .1101, used for transporting asbestos waste from containment to disposal site.

v. Disturbance: Activities that disrupt the matrix of ACM, crumble or pulverize ACM, or generate visible debris from ACM. Disturbance includes cutting away small amounts of ACM, no greater than the amount which can be contained in 1 standard sized glovebag or waste bag, not larger than 1.5 m (60 inches) in length and width in order to access a building component.

w. Equipment Room or Area: An area adjacent to the regulated area used for the decontamination of employees and their equipment.

x. Employee Exposure: That exposure to airborne asbestos that would occur if the employee were not using respiratory protective equipment.

y. Fiber: A fibrous particulate, 5 micrometers or longer, with a length to width ratio of at least 3 to 1.

z. Friable ACM: A term defined in 40 CFR 61, Subpart M and EPA 340/1-90/018 meaning any material which contains more than 1 percent asbestos, as determined using the method specified in 40 CFR 763, Subpart E, Appendix A, Section 1, Polarized Light Microscopy (PLM), that when dry, can be crumbled, pulverized, or reduced to powder by hand pressure. If the asbestos content is less than 10 percent, as determined by a method other than point counting by PLM, the asbestos content is verified by point counting using PLM.

aa. Glovebag: Not more than a 1.5 by 1.5 m (60 by 60 inch) impervious plastic bag-like enclosure affixed around an asbestos-containing material, with glove-like appendages through which material and tools may be handled.

bb. High-Efficiency Particulate Air (HEPA) Filter: A filter capable of trapping and retaining at least 99.97 percent of all mono-dispersed particles of 0.3 micrometers in diameter.

cc. Homogeneous Area: An area of surfacing material or thermal system insulation that is uniform in color and texture.

dd. Industrial Hygienist: A professional qualified by education, training, and experience to anticipate, recognize, evaluate, and develop controls for occupational health hazards.

ee. Intact: ACM which has not crumbled, been pulverized, or otherwise deteriorated so that the asbestos is no longer likely to be bound with its matrix. Removal of "intact" asphaltic, resinous, cementitious products does not render the ACM non-intact simply by being separated into smaller pieces.

ff. Model Accreditation Plan (MAP): USEPA training accreditation requirements for persons who work with asbestos as specified in 40 CFR 763, Subpart E, Appendix C.

gg. Modification: A changed or altered procedure, material or component of a control system, which replaces a procedure, material or component of a required system.

hh. Negative Exposure Assessment: A demonstration by the Contractor to show that employee exposure during an operation is expected to be consistently below the OSHA Permissible Exposure Limits (PELs).

ii. NESHAP: National Emission Standards for Hazardous Air Pollutants. The USEPA NESHAP regulation for asbestos is at 40 CFR 61, Subpart M.

jj. Nonfriable ACM: A NESHAP term defined in 40 CFR 61, Subpart M and EPA 340/1-90/018 meaning any material containing more than 1 percent asbestos, as determined using the method specified in 40 CFR 763, Subpart E, Appendix A, Section 1, Polarized Light Microscopy, that, when dry, cannot be crumbled, pulverized or reduced to powder by hand pressure.

kk. Nonfriable ACM (Category I): A NESHAP term defined in 40 CFR 61, Subpart E and EPA 340/1-90/018 meaning asbestos-containing packings, gaskets, resilient floor covering, and asphalt roofing products containing more than 1 percent asbestos as determined using the method specified in 40 CFR 763, Subpart F, Appendix A, Section 1, Polarized Light Microscopy.

ll. Nonfriable ACM (Category II): A NESHAP term defined in 40 CFR 61, Subpart E and EPA 340/1-90/018 meaning any material, excluding Category I nonfriable ACM, containing more than 1 percent asbestos, as determined using the methods specified in 40 CFR 763, Subpart F, Appendix A, Section 1, Polarized Light Microscopy, that when dry, cannot be crumbled, pulverized, or reduced to powder by hand pressure.

mm. Permissible Exposure Limits (PELs):

(1) PEL-Time weighted average(TWA): Concentration of asbestos not in excess of 0.1 fibers per cubic centimeter of air (f/cc) as an 8 hour time weighted average (TWA), as determined by the method prescribed in 29 CFR 1926, Section .1101, Appendix A, or the current version of NIOSH Pub No. 84-100 analytical method 7400.

(2) PEL-Excursion Limit: An airborne concentration of asbestos not in excess of 1.0 f/cc of air as averaged over a sampling period of 30 minutes as determined by the method prescribed in 29 CFR 1926, Section .1101, Appendix A, or the current version of NIOSH Pub No. 84-100 analytical method 7400.

nn. Regulated Area: An OSHA term defined in 29 CFR 1926, Section .1101 meaning an area established by the Contractor to demarcate areas where Class I, II, and III asbestos work is conducted; also any adjoining area where debris and waste from such asbestos work accumulate; and an area within which airborne concentrations of asbestos exceed, or there is a reasonable possibility they may exceed, the permissible exposure limit.

oo. Removal: All operations where ACM is taken out or stripped from structures or substrates, and includes demolition operations.

pp. Repair: Overhauling, rebuilding, reconstructing, or reconditioning of structures or substrates, including encapsulation or other repair of ACM attached to structures or substrates. If the amount of asbestos so "disturbed" cannot be contained in 1 standard glovebag or waste bag, Class I precautions are required.

qq. Spills/Emergency Cleanups: Cleanup of sizable amounts of asbestos waste and debris which has occurred, for example, when water damage occurs in a building, and sizable amounts of ACM are dislodged. A Competent Person evaluates the site and ACM to be handled, and based on the type, condition and extent of the dislodged material, classifies the cleanup as Class I, II, or III. Only if the material was intact and the cleanup involves mere contact of ACM, rather than disturbance, could there be a Class IV classification.

rr. Surfacing ACM: Asbestos-containing material which contains more than 1% asbestos and is sprayed-on, troweled-on, or otherwise applied to surfaces, such as acoustical plaster on ceilings and fireproofing materials on structural members, or other materials on surfaces for acoustical, fireproofing, or other purposes.

ss. Thermal system insulation (TSI) ACM: ACM which contains more than 1% asbestos and is applied to pipes, fittings, boilers, breeching, tanks, ducts, or other interior structural components to prevent heat loss or gain or water condensation.

tt. Transite: A generic name for asbestos cement wallboard and pipe.

uu. Worker: Individual (not designated as the Competent Person or a supervisor) who performs asbestos work and has completed asbestos worker training required by 29 CFR 1926, Section .1101, to include EPA Model Accreditation Plan (MAP) "Worker" training; accreditation required by 40 CFR 763, Subpart E, Appendix C, if required by the OSHA Class of work to be performed or by the state where the work is to be performed.

1.3 DESCRIPTION OF WORK

NOTE: Review the Notes under PART 1 GENERAL. For each individual ACM abatement work task, consult with the customer, review EP 1110-1-11 and

enter the required work task data on Table 1, at the end of this Section, as described in the Notes section of the Table. There will be one data sheet for each abatement work task. Attach to each work task data sheet the selected Response Action Detail Sheet and its referenced Set-up Detail Sheets. Select applicable bracketed items in this section.
Discovery of Unexpected Asbestos: Suspect asbestos containing material that is discovered during demolition (in particular buildings constructed no later than 1980), which was previously inaccessible, must be sampled and analyzed for its asbestos content. The designer should anticipate additional sampling and analysis. The number of additional samples should be based on the extent of demolition and previous survey data. Insert the number of bulk samples anticipated in the bracket in paragraph Unexpected Discovery of Asbestos. Sampling activities undertaken to determine the presence of additional ACM should be conducted by personnel who have successfully completed the EPA Model Accreditation (MAP) "Building Inspector" course required by 40 CFR 763, Subpart E, Appendix C.

The work covered by this section includes the removal of asbestos-containing materials (ACM) which are encountered during demolition activities associated with this project and</TAI> describes procedures and equipment required to protect workers and occupants of the regulated area from contact with airborne asbestos fibers and ACM dust and debris. Activities include OSHA Class I and Class II work operations involving ACM. The work also includes containment, storage, transportation and disposal of the generated ACM wastes. More specific operational procedures shall be detailed in the required Accident Prevention Plan and its subcomponents, the Asbestos Hazard Abatement Plan and Activity Hazard Analyses required in paragraph SAFETY AND HEALTH PROGRAM AND PLANS.

Quantities in the Asbestos Survey Report includes quantities identified by a previous ACM Survey performed by Air Safe, Inc. These quantities were verified by the USACE Asbestos Inspector. No other report other than the USACE report, which is attached to this project, shall be used as a source of information in preparing proposal documents. Should any additional asbestos containing material be suspected by the Contractor, it shall be brought to the attention of the Contracting Officer.

Building 925. Building No. 925 is a single-story concrete block frame structure. Most original walls are constructed of concrete masonry block units (CMU). Newer interior partition walls have been added at some point in time and are constructed of wood framing covered with gypsum drywall or plywood. Four racquetball courts were added at some date. The floor system is concrete slab on grade with multiple covering types. The roof systems are of three basic designs; built-up tar and felt on the flat portions, shingled on the peaked sections and rolled roofing on the curved section. The building's primary use is as a gymnasium and recreation facility. Building 925 contains both new and old abandoned-in-place HVAC and utility lines. The Contractor shall closely examine the drawings and the site conditions to ensure that all identified asbestos containing materials have been removed. Rooms on the building floor plans are arbitrarily numbered for identification in this report only.

1.3.1 Abatement Work Tasks

The specific ACM to be abated is identified on the detailed plans, in the survey report, and project drawings. Details on location and description of type of asbestos is found in the Asbestos Survey Report.

1.3.2 Unexpected Discovery of Asbestos

For any previously untested building components suspected to contain asbestos and located in areas impacted by the work, the Contractor shall notify the Contracting Officer (CO) who will have the option of ordering up to 10 bulk samples to be obtained at the Contractor's expense and delivered to a laboratory accredited under the National Institute of Standards and Technology (NIST) "National Voluntary Laboratory Accreditation Program (NVLAP)" and analyzed by PLM at no additional cost to the Government. Any additional components identified as ACM that have been approved by the Contracting Officer for removal shall be removed by the Contractor and will be paid for by an equitable adjustment to the contract price under the CONTRACT CLAUSE titled "changes". Sampling activities undertaken to determine the presence of additional ACM shall be conducted by personnel who have successfully completed the EPA Model Accreditation Plan (MAP) "Building Inspector" training course required by 40 CFR 763, Subpart E, Appendix C.

1.4 SUBMITTALS

Government approval is required for submittals with a "G" designation; submittals not having a "G" designation are for information only. “G” may be reviewed by USACE Field Construction Personnel. All pre-abatement "G" submittals shall be compiled into one plan to be reviewed by the Savannah District Safety and Occupational Health Office. 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-03 Product Data

Respiratory Protection Program; G

Records of the respirator program.

Cleanup and Disposal; G

Waste shipment records. Weigh bills and delivery tickets shall be furnished for information only. Copies of all post abatement waste and disposal documents shall be included in the close out report and also submitted with post work documentation with other SPiRiT required documentation.

Detailed Drawings; G

Descriptions, detail project drawings, and site layout to include worksite containment area techniques as prescribed on applicable SET-UP DETAIL SHEETS, local exhaust ventilation system locations, decontamination units and load-out units, other temporary waste storage facility, access tunnels, location of temporary utilities (electrical, water, sewer) and boundaries of each regulated area.

Materials and Equipment; G

Manufacturer's catalog data for all materials and equipment to be used in the work, including brand name, model, capacity, performance characteristics and any other pertinent information.

Specific products shall be marked with ink and not highlighted with a marker. Test results and certificates from the manufacturer of encapsulants substantiating compliance with performance requirements of this specification. Material Safety Data Sheets for all chemicals to be used onsite in the same format as implemented in the Contractor's HAZARD COMMUNICATION PROGRAM. Data shall include, but shall not be limited to, the following items:

a. High Efficiency Filtered Air (HEPA) local exhaust equipment

b. Vacuum cleaning equipment

c. Pressure differential monitor for HEPA local exhaust equipment

d. Air monitoring equipment

e. Respirators (Includes abatement respirators as well as respirators used for abatement area set-up and lockdown when using hazardous products such as spray adhesives and lock down materials.

f. Personal protective clothing and equipment

(1) Coveralls
(2) Underclothing
(3) Other work clothing
(4) Foot coverings
(5) Hard hats
(6) Eye protection
(7) Other items required and approved by Contractors Designated IH and Competent Person

g. Glovebag

h. Duct Tape

i. Disposal Containers

(1) Disposal bags
(2) Fiberboard drums
(3) Paperboard boxes

j. Sheet Plastic

(1) Polyethylene Sheet - General
(2) Polyethylene Sheet - Flame Resistant
(3) Polyethylene Sheet - Reinforced

k. Wetting Agent

(1) Amended Water
(2) Removal encapsulant

l. Strippable Coating

m. Prefabricated Decontamination Unit

n. Other items

o. Chemical encapsulant

p. Chemical encasement materials

q. Material Safety Data Sheets (for all chemicals proposed)

Qualifications; G

A written report providing evidence of qualifications for personnel, facilities and equipment assigned to the work as detailed in paragraph 1.5 of this section.

Training Program; G

A copy of the written project site-specific training material as indicated in 29 CFR 1926, Section .1101 that will be used to train onsite employees. The training document shall be signed by the Contractor's Designated IH and Competent Person.

Medical Requirements; G

Physician's written opinion. Physician’s statement must include the full name and an identifying employee number (not a full Social Security number, although the last 4 digits may be used), the printed physician’s name, address and telephone number. The Statement must include the type of work (asbestos), type of clearance and the type of respirator that can be worn.

Encapsulants; G

Certificates stating that encapsulants meet the applicable specified performance requirements. All encapsulants must have MSDs submitted as well as product spec and application data.

SD-06 Test Reports

Exposure Assessment and Air Monitoring; G

Initial exposure assessments, negative exposure assessments, air-monitoring results and documentation. Negative assessments from previous work must be fully described and completely documented to reflect the TWA and excursion level fiber level experienced on the previous project and that which is for anticipated for the current job task (TSI removal, VAT removal, etc.).

Local Exhaust Ventilation; G

Pressure differential recordings.

Licenses, Permits and Notifications; G

Licenses, permits, and notifications.

SD-07 Certificates

Vacuum, Filtration and Ventilation Equipment; G

Manufacturer's certifications showing compliance with ANSI Z9.2 for:

a. Vacuums.

b. Water filtration equipment.

c. Ventilation equipment.

d. Other equipment required to contain airborne asbestos fibers.

1.5 QUALIFICATIONS

1.5.1 Written Qualifications and Organization Report

The Contractor shall furnish a written qualifications and organization report providing evidence of qualifications of the Contractor, Contractor's Project Supervisor, Designated Competent Person, supervisors and workers; Designated IH (person assigned to project and firm name); independent testing laboratory (including name of firm, principal, and analysts who will perform analyses); all subcontractors to be used including disposal transportation and disposal facility firms, subcontractor supervisors, subcontractor workers; and any others assigned to perform asbestos abatement and support activities. The report shall include an organization chart showing the Contractor's staff organization for this project by name and title, chain of command and reporting relationship with all subcontractors. The report shall be signed by the Contractor, the Contractor's onsite project manager, Designated Competent Person, Designated IH, designated testing laboratory and the principals of all subcontractors to be used. The Contractor shall include the following statement in the report: "By signing this report I certify that the personnel I am responsible for during the course of this project fully understand the contents of 29 CFR 1926, Section .1101, 40 CFR 61, Subpart M, and the federal, state and local requirements specified in paragraph SAFETY AND HEALTH PROGRAM AND PLANS for those asbestos abatement activities that they will be involved in."

1.5.2 Specific Requirements

The Contractor shall designate in writing, personnel meeting the following qualifications:

a. Designated Competent Person: The name, address, telephone number, and resume of the Contractor's Designated Competent Person shall be provided. Evidence that the full-time Designated Competent Person is qualified in accordance with 29 CFR 1926, Sections .32 and .1101, has EPA Model Accreditation Plan (MAP) "Contractor/Supervisor" training accreditation required by 40 CFR 763, Subpart E, Appendix C, and is experienced in the administration and supervision of asbestos abatement projects, including exposure assessment and monitoring, work practices, abatement methods, protective measures for personnel, setting up and inspecting asbestos abatement work areas, evaluating the integrity of containment barriers, placement and operation of local exhaust systems, ACM generated waste containment and disposal procedures, decontamination units installation and maintenance

requirements, site safety and health requirements, notification of other employees onsite, etc. The duties of the Competent Person shall include the following: controlling entry to and exit from the regulated area; supervising any employee exposure monitoring required by 29 CFR 1926, Section .1101; ensuring that all employees working within a regulated area wear the appropriate personal protective equipment (PPE), are trained in the use of appropriate methods of exposure control, and use the hygiene facilities and decontamination procedures specified; and ensuring that engineering controls in use are in proper operating conditions and are functioning properly. The Designated Competent Person shall be responsible for compliance with applicable federal, state and local requirements, the Contractor's Accident Prevention Plan and Asbestos Hazard Abatement Plan. The Designated Competent Person shall provide, and the Contractor shall submit, the "Contractor/Supervisor" course completion certificate and the most recent certificate for required refresher training with the employee "Certificate of Worker Acknowledgment" required by this paragraph. The Contractor shall submit evidence that this person has a minimum of [2 years] of on-the-job asbestos abatement experience as an OSHA competent person. The Designated Competent Person shall be onsite at all times during the conduct of this project.

b. Project and Other Supervisors: The Contractor shall provide the name, address, telephone number, and resume of the Project Supervisor and other supervisors who have responsibility to implement the Accident Prevention Plan, including the Asbestos Hazard Abatement Plan and Activity Hazard Analyses, the authority to direct work performed under this contract and verify compliance, and have EPA Model Accreditation Plan (MAP) "Contractor/Supervisor" training accreditation required by 40 CFR 763, Subpart E, Appendix C. The Project Supervisor and other supervisors shall provide, and the Contractor shall submit, the "Contractor/Supervisor" course completion certificate and the most recent certificate for required refresher training with the employee "Certificate of Worker Acknowledgment" required by this paragraph. The Contractor shall submit evidence that the Project Supervisor has a minimum of 2 years of on-the-job asbestos abatement experience as a project supervisor and the other supervisors have a minimum of 1 year on-the-job asbestos abatement experience commensurate with the responsibilities they will have on this project.

c. Designated Industrial Hygienist: The Contractor shall provide the name, address, telephone number, resume and other information specified below for the Industrial Hygienist (IH) selected to prepare the Contractor's Asbestos Hazard Abatement Plan, prepare and perform training, direct air monitoring and assist the Contractor's Competent Person in implementing and ensuring that safety and health requirements are complied with during the performance of all required work. The Designated IH shall be a person who is board certified in the practice of industrial hygiene as determined and documented by the American Board of Industrial Hygiene (ABIH), has EPA Model Accreditation Plan (MAP) "Contractor/Supervisor" training accreditation required by 40 CFR 763, Subpart E, Appendix C, and has a minimum of 2 years of comprehensive experience in planning and overseeing asbestos

abatement activities. The Designated IH shall provide, and the Contractor shall submit, the "Contractor/Supervisor" course completion certificate and the most recent certificate for required refresher training with the employee "Certificate of Worker Acknowledgment" required by this paragraph in the Training submittal. The Designated IH shall be completely independent from the Abatement Contractor according to federal, state, or local regulations; that is, shall not be the Abatement Contractor's employee or be an employee or principal of a firm in a business relationship with the Contractor negating such independent status. A copy of the Designated IH's current valid ABIH certification shall be included. The Designated IH shall visit the site at least twice per month for the duration of asbestos activities and shall be available for emergencies. In addition, the Designated IH shall prepare, and the Contractor shall submit, the name, address, telephone numbers and resumes of additional IH's and industrial hygiene technicians (IHT) who will be assisting the Designated IH in performing onsite tasks. IHs and IHTs supporting the Designated IH shall have a minimum of 2 years of practical onsite asbestos abatement experience. The formal reporting relationship between the Designated IH and the support IHs and IHTs, the Designated Competent Person, and the Contractor shall be indicated in the Asbestos Abatement and Hazard Control Plan submittal.

d. Asbestos Abatement Workers: Asbestos abatement workers shall meet the requirements contained in 29 CFR 1926, Section .1101, 40 CFR 61, Subpart M, and other applicable federal, state and local requirements. Worker training documentation shall be provided as required on the "Certificate of Workers Acknowledgment" in this paragraph.

e. Worker Training and Certification of Worker Acknowledgment: Training documentation will be required for each employee who will perform OSHA Class I, Class II, Class III, or Class IV asbestos abatement operations. Such documentation shall be submitted on a Contractor generated form titled "Certificate of Workers Acknowledgment", to be completed for each employee in the same format and containing the same information as the example certificate at the end of this section. Training course completion certificates (initial and most recent update refresher) required by the information checked on the form shall be attached. In addition a copy of the EPA training certificate including employee’s full name and identifying number (which must match physician’s statement ID number).

f. Physician: The Contractor shall provide the name, medical qualifications, address, telephone number and resume of the physician who will or has performed the medical examinations and evaluations of the persons who will conduct the asbestos abatement work tasks. The physician shall be currently licensed by the state where the workers will be or have been examined, have expertise in pneumoconiosis and shall be responsible for the determination of medical surveillance protocols and for review of examination/test results performed in compliance with 29 CFR 1926, Section .1101 and paragraph MEDICAL REQUIREMENTS. The physician shall be familiar with the site's hazards and the scope of this project.

g. First Aid and CPR Trained Persons: The names of at least 2 persons who are currently trained in first aid and CPR by the American Red Cross or other approved agency shall be designated and shall be onsite at all times during site operations. They shall be trained in universal precautions and the use of PPE as described in the Bloodborne Pathogens Standard of 29 CFR 1910, Section .1030 and shall be included in the Contractor's Bloodborne Pathogen Program. These persons may perform other duties but shall be immediately available to render first aid when needed. A copy of each designated person's current valid First Aid and CPR certificate shall be provided.

h. Independent Testing Laboratory: The Contractor shall provide the name, address and telephone number of the independent testing laboratory selected to perform the sample analyses and report the results. The testing laboratory shall be completely independent from the Contractor as recognized by federal, state or local regulations. Written verification of the following criteria, signed by the testing laboratory principal and the Contractor, shall be submitted in the Asbestos Abatement and Hazard Control Plan:

(1) Phase contrast microscopy (PCM): The laboratory is fully equipped and proficient in conducting PCM of airborne samples using the methods specified by 29 CFR 1926, Section .1101, OSHA method ID-160, the most current version of NIOSH Pub No. 84-100 Method 7400, and NIOSH Pub No. 84-100 Method 7402, transmission electron microscopy (TEM); the laboratory is currently judged proficient (classified as acceptable) in counting airborne asbestos samples by PCM by successful participation in each of the last 4 rounds in the American Industrial Hygiene Association (AIHA) Proficiency Analytical Testing (PAT) Program; the names of the selected microscopists who will analyze airborne samples by PCM with verified documentation of their proficiency to conduct PCM analyses by being judged proficient in counting samples as current participating analysts in the AIHA PAT Program, and having successfully completed the Asbestos Sampling and Analysis course (NIOSH 582 or equivalent) with a copy of course completion certificate provided; when the PCM analysis is to be conducted onsite, documentation shall be provided certifying that the onsite analyst meets the same requirements.

(2) Polarized light microscopy (PLM): The laboratory is fully equipped and proficient in conducting PLM analyses of suspect ACM bulk samples in accordance with 40 CFR 763, Subpart E, Appendix E; the laboratory is currently accredited by NIST under the NVLAP for bulk asbestos analysis and will use analysts (names shall be provided) with demonstrated proficiency to conduct PLM to include its application to the identification and quantification of asbestos content.

(3) Transmission electron microscopy (TEM): The laboratory is fully equipped and proficient in conducting TEM analysis of airborne samples using the mandatory method specified by 40 CFR 763, Subpart E, Appendix E; the laboratory is currently accredited by NIST under the NVLAP for airborne sample analysis of asbestos by TEM; the laboratory will use analysts (names shall be provided)

that are currently evaluated as competent with demonstrated proficiency under the NIST NVLAP for airborne sample analysis of asbestos by TEM.

(4) PCM/TEM: The laboratory is fully equipped and each analyst (name shall be provided) possesses demonstrated proficiency in conducting PCM and TEM analysis of airborne samples using NIOSH Pub No. 84-100 Method 7400 PCM and NIOSH Pub No. 84-100 Method 7402 (TEM confirmation of asbestos content of PCM results) from the same filter.

i. Disposal Facility, Transporter: The Contractor shall provide written evidence that the landfill to be used is approved for asbestos disposal by the state and local regulatory agencies. Copies of signed agreements between the Contractor (including subcontractors and transporters) and the asbestos waste disposal facility to accept and dispose of all asbestos containing waste generated during the performance of this contract shall be provided. Qualifications shall be provided for each subcontractor or transporter to be used, indicating previous experience in transport and disposal of asbestos waste to include all required state and local waste hauler requirements for asbestos. The Contractor and transporters shall meet the DOT requirements of 49 CFR 171, 49 CFR 172, and 49 CFR 173 as well as registration requirements of 49 CFR 107 and other applicable state or local requirements. The disposal facility shall meet the requirements of 40 CFR 61, Sections .154 or .155, as required in 40 CFR 61, Section .150(b), and other applicable state or local requirements.

1.5.3 Federal, State or Local Citations on Previous Projects

The Contractor and all subcontractors shall submit a statement, signed by an officer of the company, containing a record of any citations issued by Federal, State or local regulatory agencies relating to asbestos activities (including projects, dates, and resolutions); a list of penalties incurred through non-compliance with asbestos project specifications, including liquidated damages, overruns in scheduled time limitations and resolutions; and situations in which an asbestos-related contract has been terminated (including projects, dates, and reasons for terminations). If there are none, a negative declaration signed by an officer of the company shall be provided.

1.6 REGULATORY REQUIREMENTS

In addition to detailed requirements of this specification, work performed under this contract shall comply with EM 385-1-1, applicable federal, state, and local laws, ordinances, criteria, rules and regulations regarding handling, storing, transporting, and disposing of asbestos waste materials. This includes, but is not limited to, OSHA standards, 29 CFR 1926, especially Section .1101, 40 CFR 61, Subpart M and 40 CFR 763. Matters of interpretation of standards shall be submitted to the appropriate administrative agency for resolution before starting work. Where the requirements of this specification, applicable laws, criteria, ordinances, regulations, and referenced documents vary, the most stringent requirements shall apply. The following state and local laws, rules and regulations regarding demolition, removal, encapsulation, construction alteration,

repair, maintenance, renovation, spill/emergency cleanup, housekeeping, handling, storing, transporting and disposing of asbestos material apply.

1.7 SAFETY AND HEALTH PROGRAM AND PLANS

The Contractor shall develop and submit a written comprehensive site-specific Accident Prevention Plan at least 30 days prior to the preconstruction conference. The Accident Prevention Plan shall address requirements of EM 385-1-1, Appendix A, covering onsite work to be performed by the Contractor and subcontractors. The Accident Prevention Plan shall incorporate an Asbestos Hazard Abatement Plan, and Activity Hazard Analyses as separate appendices into 1 site specific Accident Prevention Plan document. Any portions of the Contractor's overall Safety and Health Program that are referenced in the Accident Prevention Plan, e.g., respirator program, hazard communication program, confined space entry program, etc., shall be included as appendices to the Accident Prevention Plan. The plan shall take into consideration all the individual asbestos abatement work tasks identified in Table 1. The plan shall be prepared, signed (and sealed, including certification number if required), and dated by the Contractor's Designated IH, Competent Person, and Project Supervisor.

1.7.1 Asbestos Hazard Abatement Plan Appendix

The Asbestos Hazard Abatement Plan appendix to the Accident Prevention Plan shall include, but not be limited to, the following:

a. The personal protective equipment to be used;

b. The location and description of regulated areas including clean and dirty areas, access tunnels, and decontamination unit (clean room, shower room, equipment room, storage areas such as load-out unit);

c. Initial exposure assessment in accordance with 29 CFR 1926, Section .1101;

d. Level of supervision;

e. Method of notification of other employers at the worksite;

f. Abatement method to include containment and control procedures;

g. Interface of trades involved in the construction;

h. Sequencing of asbestos related work;

i. Storage and disposal procedures and plan;

j. Type of wetting agent and asbestos encapsulant to be used;

k. Location of local exhaust equipment;

l. Air monitoring methods (personal, environmental and clearance);

m. Bulk sampling and analytical methods (if required);

n. A detailed description of the method to be employed in order to control the spread of ACM wastes and airborne fiber concentrations;

o. Fire and medical emergency response procedures;

p. The security procedures to be used for all regulated areas.

1.7.2 Activity Hazard Analyses Appendix

Activity Hazard Analyses, for each major phase of work, shall be submitted and updated during the project. The Activity Hazard Analyses format shall be in accordance with EM 385-1-1 (Figure 1-1). The analysis shall define the activities to be performed for a major phase of work, identify the sequence of work, the specific hazards anticipated, and the control measures to be implemented to eliminate or reduce each hazard to an acceptable level. Work shall not proceed on that phase until the Activity Hazard Analyses has been accepted and a preparatory meeting has been conducted by the Contractor to discuss its contents with everyone engaged in the activities, including the onsite Government representatives. The Activity Hazard Analyses shall be continuously reviewed and, when appropriate, modified to address changing site conditions or operations.

1.8 PRECONSTRUCTION CONFERENCE AND ONSITE SAFETY

The Contractor and the Contractor's Designated Competent Person, Project Supervisor, and Designated IH shall meet with the Contracting Officer prior to beginning work at a safety preconstruction conference to discuss the details of the Contractor's submitted Accident Prevention Plan to include the Asbestos Hazard Abatement Plan and Activity Hazard Analyses appendices. Deficiencies in the Accident Prevention Plan will be discussed and the Accident Prevention Plan shall be revised to correct the deficiencies and resubmitted for acceptance. The Contracting Officer, prior to the start of work, shall identify any changes required in the specification as a result of the Accident Prevention Plan specifically in the plan to allow for free discussion and acceptance. Onsite work shall not begin until the Accident Prevention Plan has been accepted. A copy of the written Accident Prevention Plan shall be maintained onsite. Changes and modifications to the accepted Accident Prevention Plan shall be made with the knowledge and concurrence of the Designated IH, the Project Supervisor, Designated Competent Person, and the Contracting Officer. Should any unforeseen hazard become evident during the performance of the work, the Designated IH shall bring such hazard to the attention of the Project Supervisor, Designated Competent Person, and the Contracting Officer, both verbally and in writing, for resolution as soon as possible. In the interim, all necessary action shall be taken by the Contractor to restore and maintain safe working conditions in order to safeguard onsite personnel, visitors, the public, and the environment. Once accepted by the Contracting Officer, the Accident Prevention Plan, including the Asbestos Hazard Abatement Plan and Activity Hazard Analyses will be enforced as if an addition to the contract. Disregarding the provisions of this contract or the accepted Accident Prevention Plan will be cause for stopping of work, at the discretion of the Contracting Officer, until the matter has been rectified.

1.9 SECURITY

Fenced and locked security area] shall be provided for each regulated area. A logbook shall be kept documenting entry into and out of the regulated area. Entry into regulated areas shall only be by personnel authorized by the Contractor and the Contracting Officer. Personnel authorized to enter

regulated areas shall be trained, be medically evaluated, and wear the required personal protective equipment for the specific regulated area to be entered.

1.10 MEDICAL REQUIREMENTS

Medical requirements shall conform to 29 CFR 1926, Section .1101.

1.10.1 Medical Examinations

Before being exposed to airborne asbestos fibers, workers shall be provided with a medical examination as required by 29 CFR 1926, Section .1101 and other pertinent state or local requirements. This requirement shall have been satisfied within the last 12 months. The same medical examination shall be given on an annual basis to employees engaged in an occupation involving asbestos and within 30 calendar days before or after the termination of employment in such occupation. X-ray films of asbestos workers shall be identified to the consulting radiologist and medical record jackets shall be marked with the word "asbestos."

1.10.1.1 Information Provided to the Physician

The Contractor shall provide the following information in writing to the examining physician:

a. A copy of 29 CFR 1926, Section .1101 and Appendices D, E, G, and I;

b. A description of the affected employee's duties as they relate to the employee's exposure;

c. The employee's representative exposure level or anticipated exposure level;

d. A description of any personal protective and respiratory equipment used or to be used;

e. Information from previous medical examinations of the affected employee that is not otherwise available to the examining physician.

1.10.1.2 Written Medical Opinion

For each worker, a written medical opinion prepared and signed by a licensed physician indicating the following:

a. Summary of the results of the examination.

b. The potential for an existing physiological condition that would place the employee at an increased risk of health impairment from exposure to asbestos.

c. The ability of the individual to wear personal protective equipment, including respirators, while performing strenuous work tasks under cold and/or heat stress conditions.

d. A statement that the employee has been informed of the results of the examination, provided with a copy of the results, informed of

the increased risk of lung cancer attributable to the combined effect of smoking and asbestos exposure, and informed of any medical condition that may result from asbestos exposure.

1.10.2 Medical and Exposure Records

NOTE: Medical records will be retained at least 50 years. Some states require longer retention periods. Check with the state in which the project is located for the required retention time and edit accordingly.

Complete and accurate records shall be maintained of each employee's medical examinations, medical records, and exposure data, as required by 29 CFR 1910, Section .1910.20 and 29 CFR 1926, Section .1101 for a period of [50] years after termination of employment. Records of the required medical examinations and exposure data shall be made available, for inspection and copying, to the Assistant Secretary of Labor for Occupational Safety and Health (OSHA) or authorized representatives of the employee and an employee's physician upon request of the employee or former employee. A copy of the required medical certification for each employee shall be maintained on file at the worksite for review, as requested by the Contracting Officer or the representatives.

1.11 TRAINING PROGRAM

1.11.1 General Training Requirements

The Contractor shall establish a training program as specified by EPA Model Accreditation Plan (MAP), training requirements at 40 CFR 763, Subpart E, Appendix C, the State of Georgia, Chap.391-3-14 (JUNE 1996& 1998rev) Asbestos Removal and Encapsulation OSHA requirements at 29 CFR 1926, Section .1101(k)(9), and this specification. Contractor employees shall complete the required training for the type of work they are to perform and such training shall be documented and provided to the Contracting Officer as specified in paragraph QUALIFICATIONS.

1.11.2 Project Specific Training

Prior to commencement of work, the Contractor’s Designated IH and Competent Person shall instruct each worker in the following project specific training:

a. The hazards and health effects of the specific types of ACM to be abated;

b. The content and requirements of the Contractor's Accident Prevention Plan to include the Asbestos Hazard Abatement Plan and Activity Hazard Analyses and site-specific safety and health precautions;

c. Hazard Communication Program;

d. Hands-on training for each asbestos abatement technique to be employed;

e. Heat and/or cold stress monitoring specific to this project;

f. Air monitoring program and procedures;

g. Medical surveillance to include medical and exposure record-keeping procedures;

h. The association of cigarette smoke and asbestos-related disease;

i. Security procedures;

j. Specific work practice controls and engineering controls required for each Class of work in accordance with 29 CFR 1926, Section .1101.

1.12 RESPIRATORY PROTECTION PROGRAM

The Contractor's Designated IH shall establish in writing, and implement a respiratory protection program in accordance with 29 CFR 1926, Section .1101, 29 CFR 1910, Section .134, ANSI Z88.2, CGA G-7, CGA G-7.1 and DETAIL SHEET 12. The Contractor's Designated IH shall establish minimum respiratory protection requirements based on measured or anticipated levels of airborne asbestos fiber concentrations encountered during the performance of the asbestos abatement work. The Contractor's respiratory protection program shall include, but not be limited to, the following elements:

a. The company policy, used for the assignment of individual responsibility, accountability, and implementation of the respiratory protection program.

b. The standard operating procedures covering the selection and use of respirators. Respiratory selection shall be determined by the hazard to which the worker is exposed.

c. Medical evaluation of each user to verify that the worker may be assigned to an activity where respiratory protection is required.

d. Training in the proper use and limitations of respirators.

e. Respirator fit-testing, i.e., quantitative, qualitative and individual functional fit checks.

f. Regular cleaning and disinfection of respirators.

g. Routine inspection of respirators during cleaning and after each use when designated for emergency use.

h. Storage of respirators in convenient, clean, and sanitary locations.

i. Surveillance of regulated area conditions and degree of employee exposure (e.g., through air monitoring).

j. Regular evaluation of the continued effectiveness of the respiratory protection program.

k. Recognition and procedures for the resolution of special problems as they affect respirator use (e.g., no facial hair that comes between the respirator face piece and face or interferes with valve function; prescription eye wear usage; contact lenses usage; etc.).

l. Proper training in putting on and removing respirators.

1.12.1 Respiratory Fit Testing

A qualitative or quantitative fit test conforming to 29 CFR 1926, Section 1101, Appendix C shall be conducted by the Contractor's Designated IH for each Contractor worker required to wear a respirator, and for the Contracting Officer and authorized visitors who enter a regulated area where respirators are required to be worn. A respirator fit test shall be performed for each worker wearing a negative-pressure respirator prior to initially wearing a respirator on this project and every 12 months thereafter. The qualitative fit tests may be used only for testing the fit of half-mask respirators where they are permitted to be worn, or of full-facepiece air purifying respirators where they are worn at levels at which half-facepiece air purifying respirators are permitted. If physical changes develop that will affect the fit, a new fit test for the worker shall be performed. Functional fit checks shall be performed by employees each time a respirator is put on and in accordance with the manufacturer's recommendation.

1.12.2 Respirator Selection and Use Requirements

The Contractor shall provide respirators, and ensure that they are used as required by 29 CFR 1926, Section .1101 and in accordance with the manufacturer's recommendations. Respirators shall be jointly approved by the Mine Safety and Health Administration and the National Institute for Occupational Safety and Health (MSHA/NIOSH), or by NIOSH, under the provisions of 42 CFR 84, for use in environments containing airborne asbestos fibers. Personnel who handle ACM, enter regulated areas that require the wearing of a respirator, or who are otherwise carrying out abatement activities that require the wearing of a respirator, shall be provided with approved respirators that are fully protective of the worker at the measured or anticipated airborne asbestos concentration level to be encountered. For air-purifying respirators, the particulate filter portion of the cartridges or canister approved for use in airborne asbestos environments shall be high-efficiency particulate air of P-100, N-100 or R-100, (formerly HEPA). The initial respirator selection and the decisions regarding the upgrading or downgrading of respirator type shall be made by the Contractor's Designated IH based on the measured or anticipated airborne asbestos fiber concentrations to be encountered. Recommendations made by the Contractor's Designated IH to downgrade respirator type shall be submitted in writing to the Contracting Officer. The Contractor's Designated Competent Person in consultation with the Designated IH, shall have the authority to take immediate action to upgrade or downgrade respiratory type when there is an immediate danger to the health and safety of the wearer. Respirators shall be used in the following circumstances:

a. During all Class I asbestos jobs.

b. During all Class II work where the ACM is not removed in a substantially intact state.

c. During all Class II and III work which is not performed using wet methods. Respirators need not be worn during removal of ACM from sloped roofs when a negative exposure assessment has been made and ACM is removed in an intact state.

d. During all Class II and III asbestos jobs where the Contractor does not produce a negative exposure assessment.

e. During all Class III jobs where TSI or surfacing ACM is being disturbed.

f. During all Class IV work performed within regulated areas where employees performing other work are required to wear respirators.

g. During all work where employees are exposed above the PEL-TWA or PEL-Excursion Limit.

h. In emergencies

1.12.3 Class I Work

The Contractor shall provide: (1) a tight-fitting, powered air purifying respirator equipped with high efficiency filters, or (2) a full-facepiece supplied air respirator operated in the pressure demand mode, equipped with HEPA egress cartridges, or (3) an auxiliary positive pressure self-contained breathing apparatus, for all employees within the regulated area where Class I work is being performed; provided that a negative exposure assessment has not been produced, and that the exposure level will not exceed 1 f/cc as an 8-hour time weighted average. A full-facepiece supplied air respirator, operated in the pressure demand mode, equipped with an auxiliary positive pressure self-contained breathing apparatus shall be provided under such conditions, if the exposure assessment indicates exposure levels above 1 f/cc as an 8-hour time weighted average.

1.12.4 Class II and III Work

The Contractor shall provide an air purifying respirator, other than a disposable respirator, equipped with high-efficiency filters whenever the employee performs Class II and III asbestos jobs where the Contractor does not produce a negative exposure assessment; and Class III jobs where TSI or surfacing ACM is being disturbed.

1.12.5 Sanitation

Employees who wear respirators shall be permitted to leave work areas to wash their faces and respirator facepieces whenever necessary to prevent skin irritation associated with respirator use.

1.13 HAZARD COMMUNICATION PROGRAM

A hazard communication program shall be established and implemented in accordance with 29 CFR 1926, Section .59. Material safety data sheets (MSDSs) shall be provided for all hazardous materials brought onto the worksite. One copy shall be provided to the Contracting Officer and 1 copy shall be included in the Contractor's Hazard Communication Program.

1.14 LICENSES, PERMITS AND NOTIFICATIONS

1.14.1 General Legal Requirements

Necessary licenses, permits and notifications shall be obtained in conjunction with the project's asbestos abatement, transportation and disposal actions and timely notification furnished of such actions as required by federal, state, regional, and local authorities. The Contractor shall notify the state's environmental protection agency responsible for asbestos air emissions and the Contracting Officer in writing, at least 10 days prior to the commencement of work, in accordance with 40 CFR 61, Subpart M, and state and local requirements to include the mandatory "Notification of Demolition and Renovation Record" form and other required notification documents. Notification shall be by Certified Mail, Return Receipt Requested. The Contractor shall furnish copies of the receipts to the Contracting Officer, in writing, prior to the commencement of work. Local fire department shall be notified 3 days before fireproofing material is removed from a building and the notice shall specify whether or not the material contains asbestos. A copy of the rental company's written acknowledgment and agreement shall be provided as required by paragraph RENTAL EQUIPMENT. For licenses, permits, and notifications that the Contractor is responsible for obtaining, the Contractor shall pay any associated fees or other costs incurred.

1.14.2 Litigation and Notification

The Contractor shall notify the Contracting Officer if any of the following occur:

a. The Contractor or any of the subcontractors are served with notice of violation of any law, regulation, permit or license which relates to this contract;

b. Proceedings are commenced which could lead to revocation of related permits or licenses; permits, licenses or other Government authorizations relating to this contract are revoked;

c. Litigation is commenced which would affect this contract;

d. The Contractor or any of the subcontractors become aware that their equipment or facilities are not in compliance or may fail to comply in the future with applicable laws or regulations.

1.15 PERSONAL PROTECTIVE EQUIPMENT

Three complete sets of personal protective equipment shall be made available to the Contracting Officer and authorized visitors for entry to the regulated area. Contracting Officer and authorized visitors shall be provided with training equivalent to that provided to Contractor employees in the selection, fitting, and use of the required personal protective equipment and the site safety and health requirements. Contractor workers shall be provided with personal protective clothing and equipment and the Contractor shall ensure that it is worn properly. The Contractor's Designated IH and Designated Competent Person shall select and approve all the required personal protective clothing and equipment to be used.

1.15.1 Respirators

Respirators shall be in accordance with paragraph RESPIRATORY PROTECTION PROGRAM.

1.15.2 Whole Body Protection

Personnel exposed to airborne concentrations of asbestos that exceed the PELs, or for all OSHA Classes of work for which a required negative exposure assessment is not produced, shall be provided with whole body protection and such protection shall be worn properly. The Contractor's Designated IH and Competent Person shall select and approve the whole body protection to be used. The Competent Person shall examine work suits worn by employees at least once per work shift for rips or tears that may occur during performance of work. When rips or tears are detected while an employee is working, rips and tears shall be immediately mended, or the work suit shall be immediately replaced. Disposable whole body protection shall be disposed of as asbestos contaminated waste upon exiting from the regulated area. Reusable whole body protection worn shall be either disposed of as asbestos contaminated waste upon exiting from the regulated area or be properly laundered in accordance with 29 CFR 1926, Section .1101. Whole body protection used for asbestos abatement shall not be removed from the worksite by a worker to be cleaned. Recommendations made by the Contractor's Designated IH to downgrade whole body protection shall be submitted in writing to the Contracting Officer. The Contractor's Designated Competent Person, in consultation with the Designated IH, has the authority to take immediate action to upgrade or downgrade whole body protection when there is an immediate danger to the health and safety of the wearer.

1.15.2.1 Coveralls

Disposable-impermeable or disposable-breathable coveralls with a zipper front shall be provided. Sleeves shall be secured at the wrists, and foot coverings secured at the ankles. See DETAIL SHEET 13.

1.15.2.2 Underwear

Disposable underwear shall be provided. If reusable underwear are used, they shall be disposed of as asbestos contaminated waste or laundered in accordance with 29 CFR 1926, Section .1101. Asbestos abatement workers shall not remove contaminated reusable underwear worn during abatement of ACM from the site to be laundered.

1.15.2.3 Work Clothing

An additional coverall shall be provided when the abatement and control method employed does not provide for the exit from the regulated area directly into an attached decontamination unit. Remote (detached) decontamination units must provide a restricted walk way between abatement area and decontamination unit. The walkway shall, at minimum, shall be a disposable extruded plastic fencing corridor and contain asbestos restriction and warning signs while in use. The corridor can be no more than 25 feet from the abatement area. Cloth work clothes for wear under the protective coverall, and foot coverings, shall be provided when work is being conducted in low temperature conditions. Cloth work clothes shall be either disposed of as asbestos contaminated waste or properly laundered in accordance with 29 CFR 1926, Section .1101.

1.15.2.4 Gloves

Gloves shall be provided to protect the hands. Where there is the potential for hand injuries (i.e., scrapes, punctures, cuts, etc.) a suitable glove shall be provided and used.

1.15.2.5 Foot Coverings

Cloth socks shall be provided and worn next to the skin. Footwear, as required by OSHA and EM 385-1-1, that is appropriate for safety and health hazards in the area shall be worn. Rubber boots shall be used in moist or wet areas. Reusable footwear removed from the regulated area shall be thoroughly decontaminated or disposed of as ACM waste. Disposable protective foot covering shall be disposed of as ACM waste. If rubber boots are not used, disposable foot covering shall be provided.

1.15.2.6 Head Covering

Hood type disposable head covering shall be provided. In addition, protective head gear (hard hats) shall be provided as required. Hard hats shall only be removed from the regulated area after being thoroughly decontaminated.

1.15.2.7 Protective Eye Wear

Eye protection provided shall be in accordance with ANSI Z87.1.

1.16 HYGIENE FACILITIES AND PRACTICES

The Contractor shall establish a decontamination area for the decontamination of employees, material and equipment. The Contractor shall ensure that employees enter and exit the regulated area through the decontamination area.

1.16.1 Shower Facilities

Shower facilities, when provided, shall comply with 29 CFR 1910, Section .141(d)(3).

1.16.2 3-Stage Decontamination Area

A temporary negative pressure decontamination unit that is adjacent and attached in a leak-tight manner to the regulated area shall be provided as described in SET-UP DETAIL SHEET Numbers 22 and 23. Utilization of prefabricated units shall have prior approval of the Contracting Officer. The decontamination unit shall have an equipment room and a clean room separated by a shower that complies with 29 CFR 1910, Section .141 (unless the Contractor can demonstrate that such facilities are not feasible. See 1.15.2.3 of this section). Equipment and surfaces of containers filled with ACM shall be cleaned prior to removing them from the equipment room or area. Surfaces of the equipment room shall be wet wiped 2 times after each shift. Materials used for wet wiping shall be disposed of as asbestos contaminated waste. Two separate lockers shall be provided for each asbestos worker, one in the equipment room and one in the clean room. Should sufficient hot water be unavailable, the Contractor shall provide a minimum 160 L (40 gal.) electric water heater with minimum recovery rate of 80 L (20 gal.) per hour and a temperature controller for each showerhead. The Contractor shall provide a minimum of two showers. Instantaneous type in-line water heater may be incorporated at each shower head in lieu of hot water heater, upon

approval by the Contracting Officer. Flow and temperature controls shall be located within the shower and shall be adjustable by the user. The wastewater pump shall be sized for 1.25 times the showerhead flow-rate at a pressure head sufficient to satisfy the filter head loss and discharge line losses. The pump shall supply a minimum 1.6 L/s (25 gpm) flow with 10.7 m (35 ft.) of pressure head. Used shower water shall be collected and filtered to remove asbestos contamination. Filters and residue shall be disposed of as asbestos contaminated material, per DETAIL SHEETS 9 and 14. Filtered water shall be discharged to the sanitary system. Wastewater filters shall be installed in series with the first stage pore size of 20 microns and the second stage pore size of 5 microns. The floor of the decontamination unit's clean room shall be kept dry and clean at all times. Water from the shower shall not be allowed to wet the floor in the clean room. Surfaces of the clean room and shower shall be wet-wiped 2 times after each shift change with a disinfectant solution. Proper housekeeping and hygiene requirements shall be maintained. Soap and towels shall be provided for showering, washing and drying. Any cloth towels provided shall be disposed of as ACM waste or shall be laundered in accordance with 29 CFR 1926, Section .1101.

1.16.3 Load-Out Unit

A temporary load-out unit that is adjacent and connected to the regulated area and access tunnel if needed, shall be provided as described in DETAIL SHEET Number 20 and 25. Utilization of prefabricated units shall have prior approval of the Contracting Officer. The load-out unit shall be attached in a leak-tight manner to each regulated area. Surfaces of the load-out unit and access tunnel shall be adequately wet-wiped 2 times after each shift change. Materials used for wet wiping shall be disposed of as asbestos contaminated waste.

1.16.4 Single Stage Decontamination Area

A decontamination area (equipment room/area) shall be provided for Class I work involving less than 7.5 m (25 feet) or 0.9 square meters (10 square feet) of TSI or surfacing ACM, and for Class II and Class III asbestos work operations where exposures exceed the PELs or where there is no negative exposure assessment produced before the operation. The equipment room or area shall be adjacent to the regulated area for the decontamination of employees, material, and their equipment that is contaminated with asbestos. The equipment room or area shall consist of an area covered by an impermeable drop cloth on the floor or horizontal working surface. The area must be of sufficient size to accommodate cleaning of equipment and removing personal protective equipment without spreading contamination beyond the area. Surfaces of the equipment room shall be wet wiped 2 times after each shift. Materials used for wet wiping shall be disposed of as asbestos contaminated waste.

1.16.5 Decontamination Requirements for Class IV Work

The Contractor shall ensure that employees performing Class IV work within a regulated area comply with the hygiene practice required of employees performing work which has a higher classification within that regulated area, or the Contractor shall provide alternate decontamination area facilities for employees cleaning up debris and material which is TSI or surfacing ACM.

1.16.6 Decontamination Area Entry Procedures

The Contractor shall ensure that employees entering the decontamination area through the clean room or clean area:

a. Remove street clothing in the clean room or clean area and deposit it in lockers.

b. Put on protective clothing and respiratory protection before leaving the clean room or clean area.

c. Pass through the equipment room to enter the regulated area.

1.16.7 Decontamination Area Exit Procedures

The Contractor shall ensure that the following procedures are followed:

a. Before leaving the regulated area, respirators shall be worn while employees remove all gross contamination and debris from their work clothing using a HEPA vacuum.

b. Employees shall remove their protective clothing in the equipment room and deposit the clothing in labeled impermeable bags or containers (see Detail Sheets 9 and 14) for disposal and/or laundering.

c. Employees shall not remove their respirators in the equipment room.

d. Employees shall shower prior to entering the clean room. If a shower has not been located between the equipment room and the clean room or the work is performed outdoors, the Contractor shall ensure that employees engaged in Class I asbestos jobs: a) Remove asbestos contamination from their work suits in the equipment room or decontamination area using a HEPA vacuum before proceeding to a shower that is not adjacent to the work area; or b) Remove their contaminated work suits in the equipment room, without cleaning worksuits, and proceed to a shower that is not adjacent to the work area.

e. After showering, employees shall enter the clean room before changing into street clothes.

1.16.8 Lunch Areas

The Contractor shall provide lunch areas in which the airborne concentrations of asbestos are below 0.01 f/cc.

1.16.9 Smoking

Smoking, if allowed by the Contractor, shall only be permitted in designated areas approved by the Contracting Officer.

1.17 REGULATED AREAS

All Class I, II, and III asbestos work shall be conducted within regulated areas. The regulated area shall be demarcated to minimize the number of persons within the area and to protect persons outside the area from

exposure to airborne asbestos. Where critical barriers or negative pressure enclosures are used, they shall demarcate the regulated area. Access to regulated areas shall be limited to authorized persons. The Contractor shall control access to regulated areas, ensure that only authorized personnel enter, and verify that Contractor required medical surveillance, training and respiratory protection program requirements are met prior to allowing entrance.

1.18 WARNING SIGNS AND TAPE

Warning signs and tape printed bilingually, if applicable otherwise in English and in pictographs and graphics shall be provided at the regulated boundaries and entrances to regulated areas. The Contractor shall ensure that all personnel working in areas contiguous to regulated areas comprehend the warning signs. Signs shall be located to allow personnel to read the signs and take the necessary protective steps required before entering the area. Warning signs, as shown and described in DETAIL SHEET 11, shall be in vertical format conforming to 29 CFR 1910 and 29 CFR 1926, Section .1101, a minimum of 500 by 350 mm (20 by 14 inches), and displaying the following legend in the lower panel:

DANGER
ASBESTOS
CANCER AND LUNG DISEASE HAZARD
AUTHORIZED PERSONNEL ONLY
RESPIRATORS AND PROTECTIVE CLOTHING ARE REQUIRED IN THIS AREA

Spacing between lines shall be at least equal to the height of the upper of any two lines. Warning tape shall be provided as shown and described on DETAIL SHEET 11. Decontamination unit signage shall be as shown and described on DETAIL SHEET 15.

1.19 WARNING LABELS

Warning labels shall be affixed to all asbestos disposal containers used to contain asbestos materials, scrap, waste debris, and other products contaminated with asbestos. Containers with preprinted warning labels conforming to requirements are acceptable. Warning labels shall be as described in DETAIL SHEET 14, shall conform to 29 CFR 1926, Section .1101 and shall be of sufficient size to be clearly legible displaying the following legend:

DANGER
CONTAINS ASBESTOS FIBERS
AVOID CREATING DUST
CANCER AND LUNG DISEASE HAZARD

1.20 LOCAL EXHAUST VENTILATION

Local exhaust ventilation units shall conform to ANSI Z9.2 and 29 CFR 1926, Section .1101. Filters on local exhaust system equipment shall conform to ANSI Z9.2 and UL 586. Filter shall be UL labeled.

1.21 TOOLS

Vacuums shall be leak proof to the filter, equipped with HEPA filters, of sufficient capacity and necessary capture velocity at the nozzle or nozzle

attachment to efficiently collect, transport and retain the ACM waste material. Power tools shall not be used to remove ACM unless the tool is equipped with effective, integral HEPA filtered exhaust ventilation capture and collection system, or has otherwise been approved for use by the Contracting Officer. Residual asbestos shall be removed from reusable tools prior to storage and reuse. Reusable tools shall be thoroughly decontaminated prior to being removed from regulated areas.

1.22 RENTAL EQUIPMENT

If rental equipment is to be used, written notification shall be provided to the rental agency, concerning the intended use of the equipment, the possibility of asbestos contamination of the equipment and the steps that will be taken to decontaminate such equipment. A written acceptance of the terms of the Contractor's notification shall be obtained from the rental agency.

1.23 AIR MONITORING EQUIPMENT

The Contractor's Designated IH shall approve air monitoring equipment to be used to collect samples. The equipment shall include, but shall not be limited to:

a. High-volume sampling pumps that can be calibrated and operated at a constant airflow up to 16 liters per minute when equipped with a sampling train of tubing and filter cassette.

b. Low-volume, battery powered, body-attachable, portable personal pumps that can be calibrated to a constant airflow up to approximately 3.5 liters per minute when equipped with a sampling train of tubing and filter cassette, and a self-contained rechargeable power pack capable of sustaining the calibrated flow rate for a minimum of 10 hours. The pumps shall also be equipped with an automatic flow control unit which shall maintain a constant flow, even as filter resistance increases due to accumulation of fiber and debris on the filter surface.

c. Single use standard 25 mm diameter cassette, open face, 0.8 micron pore size, mixed cellulose ester membrane filters and cassettes with 50 mm electrically conductive extension cowl, and shrink bands, to be used with low flow pumps in accordance with 29 CFR 1926, Section .1101 for personal air sampling.

d. Single use standard 25 mm diameter cassette, open face, 0.45 micron pore size, mixed cellulose ester membrane filters and cassettes with 50 mm electrically conductive cowl, and shrink bands, to be used with high flow pumps when conducting environmental area sampling using NIOSH Pub No. 84-100 Methods 7400 and 7402, (and the transmission electric microscopy method specified at 40 CFR 763 if required).

e. Appropriate plastic tubing to connect the air-sampling pump to the selected filter cassette.

f. A flow calibrator capable of calibration to within plus or minus 2 percent of reading over a temperature range of minus 20 to plus 60

degrees C (minus 4 to plus 140 degrees F) and traceable to a NIST primary standard.

1.24 EXPENDABLE SUPPLIES

1.24.1 Glovebag

Glovebags shall be provided as described in 29 CFR 1926, Section .1101 and SET-UP DETAIL SHEET 10. The glovebag assembly shall be 0.15 mm (6 mil) thick plastic, prefabricated and seamless at the bottom with preprinted OSHA warning label.

1.24.2 Duct Tape

Industrial grade duct tape of appropriate widths suitable for bonding sheet plastic and disposal container shall be provided.

1.24.3 Disposal Containers

Leak-tight (defined as solids, liquids, or dust that cannot escape or spill out) disposal containers shall be provided for ACM wastes as required by 29 CFR 1926 Section .1101 and DETAIL SHEETS 9A, 9B, 9C and 14.

1.24.4 Disposal Bags

Leak-tight bags, 0.15 mm (6 mil) thick, shall be provided for placement of asbestos generated waste as described in DETAIL SHEET 9A.

1.24.5 Fiberboard Drums

Fiberboard drums shall be used if bags are to be collected outside the load out area.

1.24.6 Cardboard Boxes

Heavy-duty corrugated cardboard boxes, coated with plastic or wax to retard deterioration from moisture, shall be provided as described in DETAIL SHEET 9C, if required by state and local requirements. Boxes shall fit into selected ACM disposal bags. Filled boxes shall be sealed leak-tight with duct tape.

1.24.7 Sheet Plastic

Sheet plastic shall be polyethylene of 0.15 mm (6 mil) minimum thickness and shall be provided in the largest sheet size necessary to minimize seams, as indicated on the project drawings. Film shall be clear for work areas and black for personal decontamination areas and conform to ASTM D 4397, except as specified below:

1.24.7.1 Flame Resistant

Where a potential for fire exists, flame-resistant sheets shall be provided. Film shall be shall conform to the requirements of NFPA 701.

1.24.7.2 Reinforced

Reinforced sheets shall be provided where high skin strength is required, such as where it constitutes the only barrier between the regulated area and the outdoor environment. The sheet stock shall consist of translucent, nylon-reinforced or woven-polyethylene thread laminated between 2 layers of polyethylene film. Film shall meet flame resistant standards of NFPA 701.

1.24.8 Amended Water

Amended water shall meet the requirements of ASTM D 1331.

1.24.9 Mastic Removing Solvent

Mastic removing solvent shall be nonflammable and shall not contain methylene chloride, glycol ether, or halogenated hydrocarbons. Solvents used onsite shall have a flash point greater than 60 degrees C. (140 degrees F.)

1.24.10 Leak-tight Wrapping

Two layers of 0.15 mm (6 mil) minimum thick polyethylene sheet stock shall be used for the containment of removed asbestos-containing components or materials such as reactor vessels, large tanks, boilers, insulated pipe segments and other materials too large to be placed in disposal bags as described in DETAIL SHEET 9B. Upon placement of the ACM component or material, each layer shall be individually leak-tight sealed with duct tape.

1.24.11 Viewing Inspection Window

Where feasible, a minimum of 1 clear, 3 mm (1/8 inch) thick, acrylic sheet, 450 by 610 mm (18 by 24 inches), shall be installed as a viewing inspection window at eye level on a wall in each containment enclosure. The windows shall be sealed leak-tight with industrial grade duct tape.

1.24.12 Wetting Agents

Removal encapsulant (a penetrating encapsulant) shall be provided when conducting removal abatement activities that require a longer removal time or are subject to rapid evaporation of amended water. The removal encapsulant shall be capable of wetting the ACM and retarding fiber release during disturbance of the ACM greater than or equal to that provided by amended water. Performance requirements for penetrating encapsulants are specified in paragraph ENCAPSULANTS.

1.24.13 Strippable Coating

Strippable coating in aerosol cans shall be used to adhere to surfaces and to be removed cleanly by stripping, at the completion of work. This work shall only be done in well ventilated areas.

1.25 MISCELLANEOUS ITEMS

A sufficient quantity of other items, such as, but not limited to: scrapers, brushes, brooms, staple guns, tarpaulins, shovels, rubber squeegees, dust pans, other tools, scaffolding, staging, enclosed chutes, wooden ladders, lumber necessary for the construction of containments, UL approved temporary electrical equipment, material and cords, ground fault circuit interrupters, water hoses of sufficient length, fire extinguishers,

first aid kits, portable toilets, logbooks, log forms, markers with indelible ink, spray paint in bright color to mark areas, project boundary fencing, etc., shall be provided.

PART 2 PRODUCTS

2.1 ENCAPSULANTS

Encapsulants shall conform to USEPA requirements, shall contain no toxic or hazardous substances and no solvent and shall meet the following requirements:

ALL ENCAPSULANTS

Requirement	Test Standard
Flame Spread - 25, Smoke Emission - 50	ASTM E 84
Combustion Toxicity Zero Mortality	Univ. of Pittsburgh Protocol
Life Expectancy, 20 yrs Accelerated Aging Test	ASTM C 732
Permeability, Min. 23 ng per Pa-sec-square m	ASTM E 96

Additional Requirements for Bridging Encapsulant

Requirement	Test Standard
Cohesion/Adhesion Test, 730 N/m	ASTM E 736
Fire Resistance, Negligible affect on fire resistance rating over 3 hour test (Classified by UL for use over fibrous and cementitious sprayed fireproofing)	ASTM E 119
Impact Resistance, Min. 4.7 N-m (Gardner Impact Test)	ASTM D 2794
Flexibility, no rupture or cracking (Mandrel Bend Test)	ASTM D 522

Additional Requirements for Penetrating Encapsulant

Requirement	Test Standard
Cohesion/Adhesion Test, 730 N/m	ASTM E 736
Fire Resistance, Negligible affect on fire resistance rating over 3 hour test (Classified by UL for use over fibrous and cementitious sprayed fireproofing)	ASTM E 119
Impact Resistance, Min. 4.7 N-m (Gardner Impact Test)	ASTM D 2794
Flexibility, no rupture or cracking (Mandrel Bend Test)	ASTM D 522

Additional Requirements for Lockdown Encapsulant

Requirement	Test Standard
Fire Resistance, Negligible affect on fire resistance rating over 3 hour test (Tested with fireproofing over encapsulant applied directly to steel member)	ASTM E 119
Bond Strength, 1.5 kN/m (Tests compatibility with cementitious and fibrous fireproofing)	ASTM E 736

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ALL ENCAPSULANTS

Requirement	Test Standard
Flame Spread - 25, Smoke Emission - 50	ASTM E 84
Combustion Toxicity Zero Mortality	Univ. of Pittsburgh Protocol
Life Expectancy, 20 yrs Accelerated Aging Test	ASTM C 732
Permeability, Minimum 0.4 perms	ASTM E 96

Additional Requirements for Bridging Encapsulant

Requirement	Test Standard
Cohesion/Adhesion Test, 50 pounds of force/foot	ASTM E 736
Fire Resistance, Negligible affect on fire resistance rating over 3 hour test (Classified by UL for use over fibrous and cementitious sprayed fireproofing)	ASTM E 119
Impact Resistance, Minimum 43 in-lb (Gardner Impact Test)	ASTM D 2794
Flexibility, no rupture or cracking (Mandrel Bend Test)	ASTM D 522

Additional Requirements for Penetrating Encapsulant

Requirement	Test Standard
Cohesion/Adhesion Test, 50 pounds of force/foot	ASTM E 736
Fire Resistance, Negligible affect on fire resistance rating over 3 hour test(Classified by UL for use over fibrous and cementitious sprayed fireproofing)	ASTM E 119
Impact Resistance, Minimum 43 in-lb (Gardner Impact Test)	ASTM D 2794
Flexibility, no rupture or	ASTM D 522

cracking (Mandrel Bend Test)

Additional Requirements for Lockdown Encapsulant

Requirement	Test Standard
Fire Resistance, Negligible affect on fire resistance rating over 3 hour test(Tested with fireproofing over encapsulant applied directly to steel member)	ASTM E 119
Bond Strength, 100 pounds of force/foot (Tests compatibility with cementitious and fibrous fireproofing)	ASTM E 736

2.2 OMITTED

2.3 RECYCLABLE MATERIALS

The Contractor shall comply with EPA requirements in accordance with Section 01670 RECYCLED / RECOVERED MATERIALS or as described in SPiRiT requirements for this project.

PART 3 EXECUTION

3.1 GENERAL REQUIREMENTS

Asbestos abatement work tasks shall be performed as shown on the detailed plans and drawings, as summarized in paragraph DESCRIPTION OF WORK and including Table 1 and the Contractor's Accident Prevention Plan, Asbestos Hazard Abatement Plan, and the Activity Hazard Analyses. The Contractor shall use the engineering controls and work practices required in 29 CFR 1926, Section .1101(g) in all operations regardless of the levels of exposure. Personnel shall wear and utilize protective clothing and equipment as specified. The Contractor shall not permit eating, smoking, drinking, chewing or applying cosmetics in the regulated area. All hot work (burning, cutting, welding, etc.) shall be conducted under controlled conditions in conformance with 29 CFR 1926, Section .352, Fire Prevention. Personnel of other trades, not engaged in asbestos abatement activities, shall not be exposed at any time to airborne concentrations of asbestos unless all the administrative and personal protective provisions of the Contractor's Accident Prevention Plan are complied with. Power to the regulated area shall be locked-out and tagged in accordance with 29 CFR 1910, and temporary electrical service with ground fault circuit interrupters shall be provided as needed. Temporary electrical service shall be disconnected when necessary for wet removal. The Contractor shall stop abatement work in the regulated area immediately when the airborne total fiber concentration: (1) equals or exceeds 0.01 f/cc, or the pre-abatement concentration, whichever is greater, outside the regulated area; or (2) equals or exceeds 1.0 f/cc inside the regulated area. The Contractor shall correct the condition to the satisfaction of the Contracting Officer, including visual inspection and air sampling. Work shall resume only upon notification by the Contracting Officer. Corrective actions shall be documented.

3.2 PROTECTION OF ADJACENT WORK OR AREAS TO REMAIN

Asbestos abatement shall be performed without damage to or contamination of adjacent work or area. Where such work or area is damaged or contaminated, as verified by the Contracting Officer using visual inspection or sample analysis, it shall be restored to its original condition or decontaminated by the Contractor at no expense to the Government, as deemed appropriate by the Contracting Officer. This includes inadvertent spill of dirt, dust or debris in which it is reasonable to conclude that asbestos may exist. When these spills occur, work shall stop in all effected areas immediately and the spill shall be cleaned. When satisfactory visual inspection and air sampling analysis results are obtained and have been evaluated by the Contractor's Designated IH and the Contracting Officer, work shall proceed.

3.3 OBJECTS

3.3.1 Removal of Mobile Objects

Mobile objects, furniture, and equipment will be removed from the area of work by the Government before asbestos abatement work begins. Mobile objects or furnishings that the Contractor wishes to recycle or recover must be pre-cleaned before removal. DETAIL SHEET 27, contains a summary of Contractor's required handling, cleaning and storage of mobile objects, furniture and equipment.. Mobile objects and furnishings identified in DETAIL SHEET 27 may be considered contaminated with asbestos fibers. Mobile objects and furnishings shall be precleaned using HEPA filtered vacuum followed by wet wiping or steam cleaning. Carpets, draperies, and other items which may not be suitable for onsite wet cleaning methods shall be properly laundered in accordance with 29 CFR 1926, Section .1101]

3.3.2 Stationary Objects

Stationary objects, furniture, and equipment that will be recycled or recovered by the Contractor shall be precleaned using HEPA vacuum followed by adequate wet wiping. Stationary objects and furnishings shall be covered with 2 layers of polyethylene and edges sealed with duct tape if they are not removed prior to abatement.

3.3.3 Reinstallation of Mobile Objects

At the conclusion of the asbestos abatement work in each regulated area, and after meeting the final clearance requirements for each regulated area, objects previously removed shall be transferred back to the cleaned area from which they came in accordance with the storage code designation for that material as shown on DETAIL SHEET 27, and reinstalled.

3.4 BUILDING VENTILATION SYSTEM AND CRITICAL BARRIERS

Building ventilating systems supplying air into or returning air out of a regulated area shall be isolated by airtight seals to prevent the spread of contamination throughout the system. Air-tight critical barriers shall be installed on building ventilating openings located inside the regulated area that supply or return air from the building ventilation system or serve to exhaust air from the building. The critical barriers shall consist of 2 layers of polyethylene. Edges to wall, ceiling and floor surfaces shall be sealed with industrial grade duct tape. Critical barriers shall be installed as shown on drawings and appended SET-UP DETAIL SHEETS.

3.5 PRECLEANING

Surfaces shall be cleaned by HEPA vacuum prior to establishment of containment.

3.6 METHODS OF COMPLIANCE

3.6.1 Mandated Practices

The Contractor shall employ proper handling procedures in accordance with 29 CFR 1926 and 40 CFR 61, Subpart M, and the specified requirements. The specific abatement techniques and items identified shall be detailed in the Contractor's Asbestos Hazard Abatement Plan including, but not limited to, details of construction materials, equipment, and handling procedures. The Contractor shall use the following engineering controls and work practices in all operations, regardless of the levels of exposure:

a. Vacuum cleaners equipped with HEPA filters to collect debris and dust containing ACM.

b. Wet methods or wetting agents to control employee exposures during asbestos handling, mixing, removal, cutting, application, and cleanup; except where it can be demonstrated that the use of wet methods is unfeasible due to, for example, the creation of electrical hazards, equipment malfunction, and in roofing.

c. Prompt clean-up and disposal in leak-tight containers of wastes and debris contaminated with asbestos.

d. Inspection and repair of polyethylene in work and high traffic areas.

e. Cleaning of equipment and surfaces of containers filled with ACM prior to removing them from the equipment room or area.

3.6.2 Control Methods

The Contractor shall use the following control methods to comply with the PELs:

a. Local exhaust ventilation equipped with HEPA filter dust collection systems;

b. Enclosure or isolation of processes producing asbestos dust;

c. Ventilation of the regulated area to move contaminated air away from the breathing zone of employees and toward a filtration or collection device equipped with a HEPA filter;

d. Use of other work practices and engineering controls;

e. Where the feasible engineering and work practice controls described above are not sufficient to reduce employee exposure to or below the PELs, the Contractor shall use them to reduce employee exposure to the lowest levels attainable by these controls and shall

supplement them by the use of respiratory protection that complies with paragraph, RESPIRATORY PROTECTION PROGRAM.

3.6.3 Unacceptable Practices

The following work practices and engineering controls shall not be used for work related to asbestos or for work which disturbs ACM, regardless of measured levels of asbestos exposure or the results of initial exposure assessments:

a. High-speed abrasive disc saws that are not equipped with point of cut ventilator or enclosures with HEPA filtered exhaust air.

b. Compressed air used to remove asbestos, or materials containing asbestos, unless the compressed air is used in conjunction with an enclosed ventilation system designed to capture the dust cloud created by the compressed air.

c. Dry sweeping, shoveling, or other dry clean-up of dust and debris containing ACM.

d. Employee rotation as a means of reducing employee exposure to asbestos.

3.6.4 Class I Work Procedures

In addition to requirements of paragraphs Mandated Practices and Control Methods, the following engineering controls and work practices shall be used:

a. A Competent Person shall supervise the installation and operation of the control system.

b. For jobs involving the removal of more than 7.5 m (25 feet) or 0.9 square meters (10 square feet) of TSI or surfacing material, the Contractor shall place critical barriers over all openings to the regulated area.

c. HVAC systems shall be isolated in the regulated area by sealing with a double layer of plastic or air-tight rigid covers.

d. Impermeable dropcloths (0.15 mm (6 mil) or greater thickness) shall be placed on surfaces beneath all removal activity.

e. Objects within the regulated area shall be handled as specified in paragraph OBJECTS.

f. Where a negative exposure assessment has not been provided or where exposure monitoring shows the PEL was exceeded, the regulated area shall be ventilated to move contaminated air away from the employee's breathing zone toward a HEPA unit or collection device.

3.6.5 Specific Control Methods for Class I Work

In addition to requirements of paragraph Class I Work Procedures, Class I asbestos work shall be performed using the control methods identified in the subparagraphs below.

3.6.5.1 Negative Pressure Enclosure (NPE) System

The NPE system shall be as shown in the appropriate SETUP DETAIL SHEETS 2, 3 4 or 8. The system shall provide at least 4 air changes per hour inside the containment. The local exhaust unit equipment shall be operated 24 hours per day until the containment is removed, and shall be leak-proof to the filter and equipped with HEPA filters. Air movement shall be directed away from the employees and toward a HEPA filtration device. The NPE shall be smoke tested for leaks at the beginning of each shift. Local exhaust equipment shall be sufficient to maintain a minimum pressure differential of minus 0.5 mm (0.02 inch) of water column relative to adjacent, unsealed areas. Pressure differential shall be monitored continuously, 24 hours per day, with an automatic manometric recording instrument. Pressure differential recordings shall be provided daily on the same day collected. Readings shall be reviewed by the Contractor's Designated Competent Person and IH prior to submittal. The Contracting Officer shall be notified immediately if the pressure differential falls below the prescribed minimum. The building ventilation system shall not be used as the local exhaust system for the regulated area. The local exhaust system shall terminate outdoors unless an alternate arrangement is allowed by the Contract Officer. All filters used shall be new at the beginning of the project and shall be periodically changed as necessary and disposed of as ACM waste.

3.6.5.2 Glovebag Systems

Glovebag systems shall be as shown in SETUP DETAIL SHEET 10. The glovebag system shall be used to remove ACM from straight runs of piping and elbows and other connections. Glovebags shall be used without modification and shall be smoke-tested for leaks and any leaks sealed prior to use. Glovebags shall be installed to completely cover the circumference of pipe or other structures where the work is to be done. Glovebags shall be used only once and shall not be moved. Glovebags shall not be used on surfaces that have temperatures exceeding 66 degrees C. (150 degrees F.) Prior to disposal, glovebags shall be collapsed by removing air within them using a HEPA vacuum. Before beginning the operation, loose and friable material adjacent to the glovebag operation shall be wrapped and sealed in 2 layers of plastic or otherwise rendered intact. At least 2 persons shall perform Class I glovebag removal. Asbestos regulated work areas shall be established as specified and shown on detailed drawings and plans for glovebag abatement. Designated boundary limits for the asbestos work shall be established with rope or other continuous barriers and all other requirements for asbestos control areas shall be maintained, including area signage and boundary warning tape as specified in SET-UP DETAIL SHEET 11.

a. In addition to requirements for negative pressure glovebag systems above, the Contractor shall attach HEPA vacuum systems or other devices to the bag to prevent collapse during removal of ACM from straight runs of piping and elbows and other connections.

b. The negative pressure glove boxes used to remove ACM from pipe runs shall be fitted with gloved apertures and a bagging outlet and constructed with rigid sides from metal or other material which can withstand the weight of the ACM and water used during removal. A negative pressure shall be created in the system using a HEPA filtration system. The box shall be smoke tested for leaks prior to each use.

3.6.5.3 Mini-Enclosures

Single bulkhead containment may be used in areas of low traffic and reduced opportunity to be punctured, cut or otherwise compromised. Double bulkhead containment and Mini-containment (small walk-in enclosure)] as shown in SETUP DETAIL SHEETS 5, 6 and 7 accommodating no more than 2 persons, may be used if the disturbance or removal can be completely contained by the enclosure with the following specifications and work practices. The mini-enclosure shall be inspected for leaks and smoke tested before each use. Air movement shall be directed away from the employee's breathing zone within the mini-enclosure.

3.6.5.4 Wrap and Cut Operation

Wrap and cut operations shall be as shown in SETUP DETAIL SHEET 9B or 10. Prior to cutting pipe, the asbestos-containing insulation shall be wrapped with polyethylene and securely sealed with duct tape to prevent asbestos becoming airborne as a result of the cutting process. The following steps shall be taken: install glovebag, strip back sections to be cut 150 mm (6 inches) from point of cut, and cut pipe into manageable sections.

3.6.6 Class II Work

In addition to the requirements of paragraphs Mandated Practices and Control Methods, the following engineering controls and work practices shall be used:

a. A Competent Person shall supervise the work.

b. For indoor work, critical barriers shall be placed over all openings to the regulated area.

c. Impermeable dropcloths shall be placed on surfaces beneath all removal activity.

3.6.7 Specific Control Methods for Class II Work

In addition to requirements of paragraph Class II Work, Class II work shall be performed using the following methods:

3.6.7.1 Vinyl and Asphalt Flooring Materials

When removing vinyl and asphalt flooring materials which contain ACM, the Contractor shall use the following practices as shown in RESPONSE ACTION DETAIL SHEETS 56, 57, 58, 59, 60, 61, 62, 63, or 64. Resilient sheeting shall be removed by adequately wet methods. Tiles shall be removed intact (if possible); wetting is not required when tiles are heated and removed intact. Flooring or its backing shall not be sanded. Scraping of residual adhesive and/or backing shall be performed using wet methods. Mechanical chipping is prohibited unless performed in a negative pressure enclosure. Dry sweeping is prohibited. The Contractor shall use vacuums equipped with HEPA filter, disposable dust bag, and metal floor tool (no brush) to clean floors. The Contractor shall note that removal of non-friable asbestos materials, such has asbestos containing mastic, is not required, however the flooring must be disposed of as asbestos contaminated waste. Documentation from land fill must state this.

3.6.7.2 Roofing Material

When removing roofing materials which contain ACM as described in 29 CFR 1926, Section .1101(g)(8)(ii), the Contractor shall use the following practices as shown in RESPONSE ACTION DETAIL SHEET 74 or 75. Roofing material shall be removed in an intact state. Wet methods shall be used to remove roofing materials that are not intact, or that will be rendered not intact during removal, unless such wet methods are not feasible or will create safety hazards. When removing built-up roofs, with asbestos-containing roofing felts and an aggregate surface, using a power roof cutter, all dust resulting from the cutting operations shall be collected by a HEPA dust collector, or shall be HEPA vacuumed by vacuuming along the cut line. Asbestos-containing roofing material shall not be dropped or thrown to the ground, but shall be lowered to the ground via covered, dust-tight chute, crane, hoist or other method approved by the Contracting Officer. Any ACM that is not intact shall be lowered to the ground as soon as practicable, but not later than the end of the work shift. While the material remains on the roof it shall be kept wet or placed in an impermeable waste bag or wrapped in plastic sheeting. Intact ACM shall be lowered to the ground as soon as practicable, but not later than the end of the work shift. Unwrapped material shall be transferred to a closed receptacle precluding the dispersion of dust. Critical barriers shall be placed over roof level heating and ventilation air intakes. The Contractor shall note that removal of non-friable asbestos materials, such has asbestos containing mastic, is not required, however the roofing must be disposed of as asbestos contaminated waste. Documentation from the land fill must state this.

3.6.7.3 Cementitious Siding and Shingles or Transite Panels

When removing cementitious asbestos-containing siding, shingles or transite panels the Contractor shall use the following practices shown in RESPONSE ACTION DETAIL SHEETS 81, 82, or 83. Intentionally cutting, abrading or breaking siding, shingles, or transite panels is prohibited. Each panel or shingle shall be sprayed with amended water prior to removal. Nails shall be cut with flat, sharp instruments. Unwrapped or unbagged panels or shingles shall be immediately lowered to the ground via covered dust-tight chute, crane or hoist, or placed in an impervious waste bag or wrapped in plastic sheeting and lowered to the ground no later than the end of the work shift.

3.6.7.4 Gaskets

Gaskets shall be thoroughly wetted with amended water prior to removal and immediately placed in a disposal container. If a gasket is visibly deteriorated and unlikely to be removed intact, removal shall be undertaken within a glovebag. Any scraping to remove residue shall be performed wet.

3.6.7.5 Other Class II Jobs

The Contractor shall use the following work practices when performing Class II removal of ACM: The material shall be thoroughly wetted with amended water prior and during its removal. The material shall be removed in an intact state. Cutting, abrading or breaking the material is prohibited. The ACM removed shall be immediately bagged or wrapped.

3.6.8 Specific Control Methods for Class III Work

Class III asbestos work shall be conducted using engineering and work practice controls which minimize the exposure to employees performing the asbestos work and to bystander employees. The work shall be performed using wet methods and, to the extent feasible, using local exhaust ventilation. The Contractor shall use impermeable dropcloths and shall isolate the operation, using mini-enclosures or glovebag systems, where the disturbance involves drilling, cutting, abrading, sanding, chipping, breaking, or sawing of TSI or surfacing material.

3.6.9 Specific Control Methods for Class IV Work

Class IV jobs shall be conducted using wet methods, HEPA vacuums, and prompt cleanup of debris containing ACM. Employees cleaning up debris and waste in a regulated area where respirators are required shall wear the selected respirators.

3.6.10 Alternative Methods for Roofing Materials and Asphaltic Wrap

The Contractor shall use the following engineering controls and work practices when removing, repairing, or maintaining intact pipeline asphaltic wrap, or roof cements, mastics, coatings, or flashings which contain asbestos fibers encapsulated or coated by bituminous or resinous compounds. If during the course of the job the material does not remain intact, the Contractor shall use the procedures described in paragraph Roofing Material. Before work begins, and as needed during the job, the Designated Competent Person shall conduct an inspection and determine that the roofing material is intact and will likely remain intact. The material shall not be sanded, abraded, or ground. Manual methods which would render the material non-intact shall not be used. Roofing material shall not be dropped or thrown to the ground but shall be lowered via covered, dust-tight chute, crane, hoist or other method approved by the Contracting Officer. All such material shall be removed from the roof as soon as practicable, but not later than the end of the work shift. Removal or disturbance of pipeline asphaltic wrap shall be performed using wet methods.

3.6.11 Cleaning After Asbestos Removal

After completion of all asbestos removal work, surfaces from which ACM has been removed shall be wet wiped or sponged clean, or cleaned by some equivalent method to remove all visible residue. Run-off water shall be collected and filtered through a dual filtration system. A first filter shall be provided to remove fibers 20 micrometers and larger, and a final filter provided that removes fibers 5 micrometers and larger. After the gross amounts of asbestos have been removed from every surface, remaining visible accumulations of asbestos on floors shall be collected using plastic shovels, rubber squeegees, rubber dustpans, and HEPA vacuum cleaners as appropriate to maintain the integrity of the regulated area. When TSI and surfacing material has been removed, workmen shall use HEPA vacuum cleaners to vacuum every surface. Surfaces or locations which could harbor accumulations or residual asbestos dust shall be checked after vacuuming to verify that no asbestos-containing material remains; and shall be re-vacuumed as necessary to remove the ACM.

3.6.12 Class I Asbestos Work Response Action Detail Sheets

Every attempt has been made to identify all Class I asbestos containing materials. In the event some materials were not identified, the following list shall be used to determine removal methods. In addition the following Class I Asbestos Work Response Action Detail Sheet methods shall be used to remove the ACM specified on Table 1:

a. Troweled Wall Plaster on Masonry: See Sheet 32

b. Troweled Wall Plaster on Stud Wall: See Sheet 33

c. Troweled Ceiling Plaster on Structural Substrate: See Sheet 35

d. Troweled Ceiling Plaster on Hung Ceiling: See Sheet 36

e. Acoustical Wall Plaster on Masonry: See Sheet 42

f. Acoustical Ceiling Plaster (Non-Asbestos Substrate): See Sheet 44

g. Asbestos Decorative Paint on Plaster: See Sheet 46

h. Asbestos-contaminated Masonry for Masonry Chimney: See Sheet 50

i. Asbestos-contaminated Masonry Wall or Thermal Insulation: See Sheet 51

j. Fireproofing or Thermal Surface Insulation: See Sheet 68

k. Acoustical Ceiling Insulation: See Sheet 70

l. Exterior Asbestos Stucco: See Sheet 79

m. Duct Insulation: Duct work insulation removal shall not begin without the written authorization of the Contracting Officer stating that the HVAC system to be worked on is either isolated or inoperative and locked out of service. Forced air circulation is not permitted in ductwork while abatement work is in progress. See Sheet 101

n. Pipe Insulation (Using a Glovebag): See Sheet 87

o. Horizontal Pipe Insulation (Using a Containment Area): See Sheet 88

p. Pipe Insulation (Using a Mini-Containment Area): See Sheet 89

q. Storage Tank and Boiler Breeching Insulation: See Sheet 93. Written approval shall be obtained from the Contracting Officer before start of work on tanks and boiler breeching. The Contracting Officer will ensure that tanks and boilers have been valved off or shut down and allowed a sufficient amount of time to cool down. Insulation shall be sprayed with a mist of amended water or removal encapsulant. Amended water or removal encapsulant shall be allowed to saturate material to substrate. Bands or wires holding breeching or insulation to equipment shall be cut. Cover jackets shall be slit at seams, and sections removed and hand-placed in a polyethylene disposable bag. Exposed surfaces shall be continuously sprayed with amended water to minimize airborne dust.

Insulation on tanks and boiler breeching shall not be allowed to drop to the floor. Residue shall be removed from tank and boiler surfaces. A water stream shall be used to dislodge insulation in joints or irregular spaces that cannot be reached with tools. Lagging on piping and insulation on fittings shall be removed. A penetrating encapsulant shall be sprayed on all exposed tank, boiler and boiler breeching surfaces.

r. Troweled Wall Plaster on Studs: See Sheet 30

s. Troweled Ceiling or Wall Plaster on Masonry: See Sheet 31

t. Acoustical Ceiling on Wall Plaster: See Sheet 41

u. Interior Stucco: See Sheet 78

v. Exterior Stucco: See Sheet 80

w. Pipe and Fitting Insulation (using Glovebag): See Sheet 86

x. Storage Tank and Boiler Breeching: See Sheet 92

y. Duct Insulation: See Sheet 100.

3.6.13 Class II Asbestos Work Response Action Detail Sheets

Every attempt has been made to identify all Class II asbestos containing materials. In the event some materials were not identified, the following list shall be used to determine removal methods. In addition, the following Class II Asbestos Work Response Action Detail Sheet methods shall be used to remove the ACM specified on Table 1:

a. Light Curtain: See Sheet 47

b. Interior Asbestos Cement, Fiberboard and Drywall Panels: See Sheet 48

c. Suspended Asbestos Cement Ceiling Tile: See Sheet 52

d. Asbestos Cement Architectural Products: See Sheet 53

e. Glued-on Acoustical Ceiling and Wall Tile: See Sheet 55

f. Suspended Acoustical Ceiling Tile: See Sheet 54

g. Vinyl or Vinyl Asbestos Tile Adhered to Concrete Floor System by Asbestos-Containing Adhesive: See Sheet 56

h. Vinyl or Vinyl Asbestos Tile Adhered to Wood Floor System by Asbestos Containing Adhesive: See Sheet 60

i. Vinyl Asbestos Tile Adhered to Concrete Floor System by Asbestos Containing Adhesive: See Sheet 57

j. Vinyl Asbestos Tile Adhered to Concrete Floor System by Asbestos Free Adhesive: See Sheet 58

k. Vinyl Asbestos Tile and Chemical Dissolution of Asbestos-Containing Adhesives on Concrete Floor System: See Sheet 59

l. Vinyl Asbestos Tile Adhered to Wood Floor System by Asbestos-Containing Adhesive: See Sheet 61

m. Vinyl Asbestos Tile Adhered to Wood Floor System by Asbestos Free Adhesive: See Sheet 62

n. Sheet Flooring Adhered Wood Floor System: See Sheet 63

o. Asbestos-Containing Sheet Flooring Adhered to Concrete Floor System by Asbestos-Containing Adhesive: See Sheet 64

p. Carpeting (Asbestos-Containing or Contaminated): See Sheet 65

q. Miscellaneous Asbestos-Containing Materials: See Sheet 45

r. Built-Up Roofing and Flashing: See Sheet 74

s. Roof, Shingles and Underlayment: See Sheet 75

t. Asbestos Cement Siding: See Sheet 81

u. Asbestos Cement Roofing: See Sheet 82

v. Asbestos-Containing Walkway Cover: See Sheet 83

w. Asbestos-Contaminated Metal Siding: See Sheet 84

x. Asbestos Cement Sunscreen Louvers: See Sheet 85

y. Electrical Wiring and Fixtures: See Sheet 95

z. Asbestos Insulated Electrical Fixture: See Sheet 96

aa. Boiler Firebox Insulation: The asbestos-containing boiler firebox lining shall be removed from out-of-service boilers before the boiler is dismantled: See Sheet 97.

3.6.14 Abatement of Asbestos Contaminated Soil

Asbestos contaminated soil shall be removed from areas to a minimum depth of 50 mm (2 inches). Soil shall be thoroughly dampened with amended water and then removed by manual shoveling into labeled containers. The workers shall be closely monitored for heat exhaustion. The minimum ventilation shall be 8 air changes per hour through a local exhaust HEPA system. See DETAIL SHEET 73.

3.6.15 Omitted

3.6.16 Encapsulation of ACM

Prior to applying any encapsulant, the entire surface area shall be inspected for loose, or damaged asbestos material:

a. Penetrating Encapsulation: Permanent penetrating encapsulants shall not be used.

b. Bridging Encapsulation: Prior to applying the bridging encapsulant, the pre-encapsulation inspection shall be performed. The surface shall be encapsulated in sections of 93 square meters (1000 square feet) or less as recommended by the encapsulant manufacturer. Upon completion of each section, the dry thickness of the bridging encapsulation shall be measured. Additional bridging encapsulant shall be applied to obtain the desired encapsulant thickness. Additional coats shall blend with the original bridging encapsulant.

3.6.17 Omitted
3.6.18 Omitted
3.6.19 Omitted
3.6.20 Omitted

3.6.21 Sealing Contaminated Items Designated for Disposal

Contaminated architectural, mechanical, and electrical appurtenances such as Venetian blinds, full height partitions, carpeting, duct work, pipes and fittings, radiators, light fixtures, conduit panels, and other contaminated items designated for removal shall be coated with an asbestos lockdown encapsulant at the demolition site before being removed from the asbestos control area. These items shall be vacuumed prior to application of the lockdown encapsulant. The asbestos lockdown encapsulant shall be tinted a contrasting color and shall be spray applied by airless method. Thoroughness of sealing operation shall be visually gauged by the extent of colored coating on exposed surfaces.

3.7 FINAL CLEANING AND VISUAL INSPECTION

Upon completion of abatement, the regulated area shall be cleaned by collecting, packing, and storing all gross contamination; see SET-UP DETAIL SHEETS 9, 14 and 20. A final cleaning shall be performed using HEPA vacuum and wet cleaning of all exposed surfaces and objects in the regulated area. Upon completion of the cleaning, the Contractor shall conduct a visual pre-inspection of the cleaned area in preparation for a final inspection before final air clearance monitoring and recleaning, as necessary. Upon completion of the final cleaning, the Contractor and the Contracting Officer shall conduct a final visual inspection of the cleaned regulated area in accordance with ASTM E 1368 and document the results on the Final Cleaning and Visual Inspection as specified on the SET-UP DETAIL SHEET 19. If the Contracting Officer rejects the clean regulated area as not meeting final cleaning requirements, the Contractor shall reclean as necessary and have a follow-on inspection conducted with the Contracting Officer. Recleaning and follow-up reinspection shall be at the Contractor's expense.

3.8 LOCKDOWN

Prior to removal of plastic barriers and after clean-up of gross contamination and final visual inspection, a post removal (lockdown) encapsulant shall be spray applied to ceiling, walls, floors, and other surfaces in the regulated area.

3.9 EXPOSURE ASSESSMENT AND AIR MONITORING

3.9.1 General Requirements For Exposure

Exposure assessment, air monitoring and analysis of airborne concentration of asbestos fibers shall be performed in accordance with 29 CFR 1926, Section .1101, the Contractor's air monitoring plan, and as specified. Personal exposure air monitoring (collected at the breathing zone) that is representative of the exposure of each employee who is assigned to work within a regulated area shall be performed by the Contractor's Designated IH. Breathing zone samples shall be taken for at least 25 percent of the workers in each shift, or a minimum of 2, whichever is greater. Air monitoring results at the 95 percent confidence level shall be calculated as shown in Table 2 at the end of this section. The Contractor shall provide an onsite independent testing laboratory with qualified analysts and appropriate equipment to conduct sample analyses of air samples using the methods prescribed in 29 CFR 1926, Section .1101, to include NIOSH Pub No. 84-100 Method 7400. Preabatement and abatement environmental air monitoring shall be performed by the Contractor's Designated IH. Final clearance environmental air monitoring, shall be performed by the Contractor's Designated IH. Environmental and final clearance air monitoring shall be performed using NIOSH Pub No. 84-100 Method 7400 (PCM) with optional confirmation of results by NIOSH Pub No. 84-100 Method 7402 (TEM) However, in dirty or high fibrous dust laden areas, the EPA TEM Method specified in 40 CFR 763 shall be used instead of PCM in order to prevent unnecessary post abatement cleaning. For environmental and final clearance, air monitoring shall be conducted at a sufficient velocity and duration to establish the limit of detection of the method used at 0.005 f/cc. Aggressive sampling as per AHERA protocol shall be used. Confirmation of asbestos fiber concentrations (asbestos f/cc) from environmental and final clearance samples collected and analyzed by NIOSH Pub No. 84-100 Method 7400 (total f/cc) may be conducted using TEM in accordance with NIOSH Pub No. 84-100 Method 7402. When such confirmation is conducted, it shall be from the same sample filter used for the NIOSH Pub No. 84-100 Method 7400 PCM analysis. For all Contractor required environmental or final clearance air monitoring, confirmation of asbestos fiber concentrations, using NIOSH Pub No. 84-100 Method 7402, shall be at the Contractor's expense. Monitoring may be duplicated by the Government at the discretion of the Contracting Officer. Results of breathing zone samples shall be posted at the job site and made available to the Contracting Officer. The Contractor shall maintain a fiber concentration inside a regulated area less than or equal to 0.1 f/cc expressed as an 8 hour, time-weighted average (TWA) during the conduct of the asbestos abatement. If fiber concentration rises above 0.1 f/cc, work procedures shall be investigated with the Contracting Officer to determine the cause. At the discretion of the Contracting Officer, fiber concentration may exceed 0.1 f/cc but shall not exceed 1.0 f/cc expressed as an 8-hour TWA. The Contractor's workers shall not be exposed to an airborne fiber concentration in excess of 1.0 f/cc, as averaged over a sampling period of 30 minutes. Should either an environmental concentration of 1.0 f/cc expressed as an 8-hour TWA or a personal excursion concentration of 1.0 f/cc expressed as a 30-minute sample occur inside a regulated work area, the Contractor shall stop work immediately, notify the Contracting Officer, and implement additional engineering controls and work practice controls to reduce airborne fiber levels below prescribed limits in the work area. Work shall not restart until authorized by the Contracting Officer.

3.9.2 Initial Exposure Assessment

The Contractor's Designated IH shall conduct an exposure assessment immediately before or at the initiation of an asbestos abatement operation to ascertain expected exposures during that operation. The assessment shall be completed in time to comply with the requirements which are triggered by exposure data or the lack of a negative exposure assessment, and to provide information necessary to assure that all control systems planned are appropriate for that operation. The assessment shall take into consideration both the monitoring results and all observations, information or calculations which indicate employee exposure to asbestos, including any previous monitoring conducted in the workplace, or of the operations of the Contractor which indicate the levels of airborne asbestos likely to be encountered on the job. For Class I asbestos work, until the employer conducts exposure monitoring and documents that employees on that job will not be exposed in excess of PELs, or otherwise makes a negative exposure assessment, the Contractor shall presume that employees are exposed in excess of the PEL-TWA and PEL-Excursion Limit.

3.9.3 Negative Exposure Assessment

The Contractor shall provide a negative exposure assessment for the specific asbestos job which will be performed. The negative exposure assessment shall be provided within 30 days of the initiation of the project and conform to the following criteria:

a. Objective Data: Objective data demonstrating that the product or material containing asbestos minerals or the activity involving such product or material cannot release airborne fibers in concentrations exceeding the PEL-TWA and PEL-Excursion Limit under those work conditions having the greatest potential for releasing asbestos.

b. Prior Asbestos Jobs: Where the Contractor has monitored prior asbestos jobs for the PEL and the PEL-Excursion Limit within 9 months of the current job, the monitoring and analysis were performed in compliance with asbestos standard in effect; the data were obtained during work operations conducted under workplace conditions closely resembling the processes, type of material, control methods, work practices, and environmental conditions used and prevailing in the Contractor's current operations; the operations were conducted by employees whose training and experience are no more extensive than that of employees performing the current job; and these data show that under the conditions prevailing and which will prevail in the current workplace, there is a high degree of certainty that the monitoring covered exposure from employee exposures will not exceed the PEL-TWA and PEL-Excursion Limit.

c. Initial Exposure Monitoring: The results of initial exposure monitoring of the current job, made from breathing zone air samples that are representative of the 8-hour PEL-TWA and 30-minute short-term exposures of each employee. The monitoring covered exposure from operations which are most likely during the performance of the entire asbestos job to result in exposures over the PELs.

3.9.4 Independent Environmental Monitoring

The Government reserves the right to retained an independent air monitoring firm to perform during abatement and/or final clearance air monitoring. The air monitoring contractor will be provided a copy of the RFP that includes this abatement work. The abatement contractor will provide the air monitoring contractor with an up-to-date copy of the accepted Asbestos Hazard Abatement Plan, Accident Prevention Plan and pertinent detailed drawings. The air monitoring contractor is required to comply with the abatement contractor's safety and health requirements. The abatement contractor will coordinate all onsite activities with the air monitoring contractor, the COR, and other affected parties as directed by the COR. The abatement contractor will provide the air monitoring contractor with an up-to-date schedule of abatement contractor work activities. The air monitoring contractor will coordinate with the abatement contractor and the COR during the performance Government required air monitoring. The abatement contractor is responsible for performing exposure assessment and personal air monitoring of abatement contractor's work. The air monitoring contractor is responsible for performing these tasks for its employee.

3.9.5 Preabatement Environmental Air Monitoring

Preabatement environmental air monitoring shall be established - 3 days prior to the masking and sealing operations for each regulated area to determine background concentrations before abatement work begins. As a minimum, preabatement air samples shall be collected using NIOSH Pub No. 84-100 Method 7400, PCM at these locations: outside the building; inside the building, but outside the regulated area perimeter; and inside each regulated work area. One sample shall be collected for every 185 square meters (2000 square feet) of floor space. At least 2 samples shall be collected outside the building: at the exhaust of the HEPA unit; and downwind from the abatement site. The PCM samples shall be analyzed within 24 hours; and if any result in fiber concentration greater than 0.01 f/cc, asbestos fiber concentration shall be confirmed using NIOSH Pub No. 84-100 Method 7402 (TEM).

3.9.6 Environmental Air Monitoring During Abatement

Until an exposure assessment is provided to the Contracting Officer, environmental air monitoring shall be conducted at locations and frequencies that will accurately characterize any evolving airborne asbestos fiber concentrations. The assessment shall demonstrate that the product or material containing asbestos minerals, or the abatement involving such product or material, cannot release airborne asbestos fibers in concentrations exceeding 0.01 f/cc as a TWA under those work conditions having the greatest potential for releasing asbestos. The monitoring shall be at least once per shift at locations including, but not limited to, close to the work inside a regulated area; preabatement sampling locations; outside entrances to a regulated area; close to glovebag operations; representative locations outside of the perimeter of a regulated area; inside clean room; and at the exhaust discharge point of local exhaust system ducted to the outside of a containment (if used). If the sampling outside regulated area shows airborne fiber levels have exceeded background or 0.01 f/cc, whichever is greater, work shall be stopped immediately, and the Contracting Officer notified. The condition causing the increase shall be corrected. Work shall not restart until authorized by the Contracting Officer.

3.9.7 Final Clearance Air Monitoring

Prior to conducting final clearance air monitoring, the Contractor and the Contracting Officer shall conduct a final visual inspection of the regulated area where asbestos abatement has been completed. The final visual inspection shall be as specified in SET-UP DETAIL SHEET 19. Final clearance air monitoring shall not begin until acceptance of the Contractor's final cleaning by the Contracting Officer. The Contractor's Designated IH shall conduct final clearance air monitoring using aggressive air sampling techniques as defined in EPA 560/5-85-024 or as otherwise required by federal or state requirements. The sampling and analytical method used will be NIOSH Pub No. 84-100Method 7400 (PCM) and Table 3 with confirmation of results by NIOSH Pub No. 84-100 Method 7402 (TEM) for areas with minimal non-asbestos dusts and fibers. and the EPA TEM Method specified at 40 CFR 763 and Table 4. for areas with high dirt and free or loose non-asbestos fibers.

3.9.7.1 Final Clearance Requirements, NIOSH PCM Method

For PCM sampling and analysis using NIOSH Pub No. 84-100 Method 7400, the fiber concentration inside the abated regulated area, for each airborne sample, shall be less than 0.01 f/cc. The abatement inside the regulated area is considered complete when every PCM final clearance sample is below the clearance limit. If any sample result is greater than 0.01 total f/cc, the asbestos fiber concentration (asbestos f/cc) shall be confirmed from that same filter using NIOSH Pub No. 84-100 Method 7402 (TEM) at Contractor's expense. If any confirmation sample result is greater than 0.01 asbestos f/cc, abatement is incomplete and cleaning shall be repeated. Upon completion of any required recleaning and resampling retesting shall be conducted.

3.9.7.2 Final Clearance Requirements, EPA TEM Method

For EPA TEM sampling and analysis, using the EPA Method specified in 40 CFR 763, abatement inside the regulated area is considered complete when the arithmetic mean asbestos concentration of the 5 inside samples is less than or equal to 70 structures per square millimeter (70 S/mm). When the arithmetic mean is greater than 70 S/mm, the 3 blank samples shall be analyzed. If the 3 blank samples are greater than 70 S/mm, resampling shall be done. If less than 70 S/mm, the 5 outside samples shall be analyzed and a Z-test analysis performed. When the Z-test results are less than 1.65, the decontamination shall be considered complete. If the Z-test results are more than 1.65, the abatement is incomplete and cleaning shall be repeated. Upon completion of any required recleaning, resampling with results to meet the above clearance criteria shall be done.

3.9.7.3 Air Clearance Failure

If clearance sampling results fail to meet the final clearance requirements, the Contractor shall pay all costs associated with the required recleaning, resampling, and analysis, until final clearance requirements are met.

3.9.8 Air-Monitoring Results and Documentation

Air sample fiber counting shall be completed and results provided within 24 hours (breathing zone samples), and 24 hours (environmental/clearance

monitoring) after completion of a sampling period. The Contracting Officer shall be notified immediately of any airborne levels of asbestos fibers in excess of established requirements. Written sampling results shall be provided within 3 working days of the date of collection. The written results shall be signed by testing laboratory analyst, testing laboratory principal and the Contractor's Designated IH. Results shall be reported in final calculation form and not as raw data in order that direct correlation with regulatory standards can be made. The air sampling results shall be documented on a Contractor's daily air monitoring log. The daily air monitoring log shall contain the following information for each sample:

a. Sampling and analytical method used;

b. Date sample collected;

c. Sample number;

d. Sample type: BZ = Breathing Zone (Personal), P = Preabatement, E = Environmental, C = Abatement Clearance;

e. Location/activity/name where sample collected;

f. Sampling pump manufacturer, model and serial number, beginning flow rate, end flow rate, average flow rate (L/min);

g. Calibration date, time, method, location, name of calibrator, signature;

h. Sample period (start time, stop time, elapsed time (minutes);

i. Total air volume sampled (liters);

j. Sample results (f/cc and S/mm square) if EPA methods are required for final clearance;

k. Laboratory name, location, analytical method, analyst, confidence level. In addition, the printed name and a signature and date block for the Industrial Hygienist (IHT) who conducted the sampling and for the Industrial Hygienist (CIH/CSP) who reviewed the daily air monitoring log verifying the accuracy of the information.

3.10 CLEARANCE CERTIFICATION

When asbestos abatement is complete, ACM waste is removed from the regulated areas, and final cleanup is completed, the Contracting Officer will certify the areas as safe before allowing the warning signs and boundary warning tape to be removed. After final clean-up and acceptable airborne concentrations are attained, but before the HEPA unit is turned off and the containment removed, the [Contractor shall] [Government will] remove all pre-filters on the building HVAC system and provide new pre-filters. The Contractor shall dispose of such filters as asbestos contaminated materials. HVAC, mechanical, and electrical systems shall be re-established in proper working order. The Contractor and the Contracting Officer shall visually inspect all surfaces within the containment for residual material or accumulated debris. The Contractor shall reclean all areas showing dust or residual materials. The Contracting Officer will certify in writing that the area is safe before unrestricted entry is permitted. The Government

will have the option to perform monitoring to certify the areas are safe before entry is permitted.

3.11 CLEANUP AND DISPOSAL

3.11.1 Title to ACM Materials

ACM material resulting from abatement work, except as specified otherwise, shall become the property of the Contractor and shall be disposed of as specified and in accordance with applicable federal, state and local regulations.

3.11.2 Collection and Disposal of Asbestos

All ACM waste shall be collected and including contaminated wastewater filters, scrap, debris, bags, containers, equipment, and asbestos contaminated clothing, shall be collected and placed in leak-tight containers such as double plastic bags (see DETAIL SHEET 9A); sealed double wrapped polyethylene sheet (see DETAIL 9B); sealed fiberboard boxes (see DETAIL SHEET 9C); or other approved containers. Waste within the containers shall be wetted in case the container is breeched. Asbestos-containing waste shall be disposed of at an EPA, state and local approved asbestos landfill off Government property. For temporary storage, sealed impermeable containers shall be stored in an asbestos waste load-out unit or in a storage/transportation conveyance (i.e., dumpster, roll-off waste boxes, etc.) in a manner acceptable to and in an area assigned by the Contracting Officer. Procedure for hauling and disposal shall comply with 40 CFR 61, Subpart M, state, regional, and local standards.

3.11.3 Scale Weight Measurement

Scales used for measurement shall be public scales. Weighing shall be at a point nearest the work at which a public scale is available. Scales shall be standard truck scales of the beam type; scales shall be equipped with the type registering beam and an "over and under" indicator; and shall be capable of accommodating the entire vehicle. Scales shall be tested, approved and sealed by an inspector of the State of Georgia. Scales shall be calibrated and resealed as often as necessary and at least once every three months to ensure continuous accuracy. Vehicles used for hauling ACM shall be weighed empty daily at such time as directed and each vehicle shall bear a plainly legible identification mark.

3.11.4 Weigh Bill and Delivery Tickets

Copies of weigh bills and delivery tickets shall be submitted to the Contracting Officer during the progress of the work. The Contractor shall furnish the Contracting Officer scale tickets for each load of ACM weighed and certified. These tickets shall include tare weight; identification mark for each vehicle weighed; and date, time and location of loading and unloading. Tickets shall be furnished at the point and time individual trucks arrive at the worksite. A master log of all vehicle loading shall be furnished for each day of loading operations. Before the final statement is allowed, the Contractor shall file with the Contracting Officer certified weigh bills and/or certified tickets and manifests of all ACM actually disposed by the Contractor for this contract.

3.11.5 Asbestos Waste Shipment Record

The Contractor shall complete and provide the Contracting Officer final completed copies of the Waste Shipment Record for all shipments of waste material as specified in 40 CFR 61, Subpart M and other required state waste manifest shipment records, within 3 days of delivery to the landfill. Each Waste Shipment Record shall be signed and dated by the Contractor, the waste transporter and disposal facility operator.

TABLE 1

INDIVIDUAL WORK TASK DATA ELEMENTS

Sheet_____ of _____

There is a separate data sheet for each individual work task.

1. WORK TASK DESIGNATION NUMBER _____
2. LOCATION OF WORK TASK_____
_____
3. BRIEF DESCRIPTION OF MATERIAL TO BE ABATED:_____
_____

a. Type of Asbestos _____
b. Percent asbestos content _____%

4. ABATEMENT TECHNIQUE TO BE USED_____
5. OSHA ASBESTOS CLASS DESIGNATION FOR WORK TASK_____
6. EPA NESHAP FRIABILITY DESIGNATION FOR WORK TASK
Friable _____ Non-friable Category I _____
Non-friable Category II_____
7. FORM _____ and CONDITION OF ACM: GOOD_____ FAIR_____ POOR_____
8. QUANTITY: METERS_____, SQUARE METERS_____
8a. QUANTITY: LINEAR FT._____, SQUARE FT._____
9. RESPONSE ACTION DETAIL SHEET NUMBER FOR WORK TASK_____
10. SET-UP DETAIL SHEET NUMBERS
FOR WORK TASK _____, _____, _____, _____,
_____, _____, _____, _____.

NOTES:

(1) Numeric sequence of individual work tasks (1,2,3,4, etc.) for each regulated area. Each category of EPA friability/OSHA class has a separate task.
(2) Specific location of work (building, floor, area, e.g., Building 1421, 2nd Floor, Rm 201)
(3) A description of material to be abated (example: horizontal pipe, cement wall panels, tile, stucco, etc.) type of asbestos (chrysotile, amosite, crocidolite, etc.); and % asbestos content.
(4) Technique to be used: Removal = REM; Encapsulation = ENCAP; Encasement = ENCAS; Enclosure = ENCL; Repair = REP.
(5) Class designation: Class I, II, III, or IV (OSHA designation).
(6) Friability of materials: Check the applicable EPA NESHAP friability designation.
(7) Form: Interior or Exterior Architectural = IA or EA; Mechanical/Electrical = ME.
Condition: Good = G; Fair = F; Poor = P.
(8) Quantity of ACM for each work task in meters or square meters.
(8a) Quantity of ACM for each work task in linear feet or square feet.
(9) Response Action Detail Sheet specifies the material to be abated and the methods to be used. There is only one Response Action Detail Sheet for each abatement task.
(10) Set-up Detail Sheets indicate containment and control methods used in support of the response action (referenced in the selected Response Action Detail Sheet).

TABLE 2

FORMULA FOR CALCULATION OF THE 95 PERCENT CONFIDENCE LEVEL
(Reference: NIOSH 7400)

Fibers/cc(01.95 percent CL) = X + [(X) * (1.645) * (CV)]

Where: X = ((E)(AC))/((V)(1000))

E = ((F/Nf) - (B/Nb))/Af

CV = The precision value; 0.45 shall be used unless the analytical laboratory provides the Contracting Officer with documentation (Round Robin Program participation and results) that the laboratory's precision is better.

AC = Effective collection area of the filter in square millimeters

V = Air volume sampled in liters

E = Fiber density on the filter in fibers per square millimeter

F/Nf = Total fiber count per graticule field

B/Nb = Mean field blank count per graticule field

Af = Graticule field area in square millimeters

TWA = C1/T1 + C2/T2 = Cn/Tn

Where: C = Concentration of contaminant

T = Time sampled.

TABLE 3

NI0SH METHOD 7400

PCM ENVIRONMENTAL AIR SAMPLING PROTOCOL (NON-PERSONAL)

Sample Location	Minimum No. of Samples	Filter Pore Size (Note 1)	Min. Vol. (Note 2) (Liters)	Sampling Rate (liters/min.)
Inside Abatement Area	0.5/140 Square Meters (Notes 3 & 4)	0.45 microns	3850	2-16
Each Room in 1 Abatement Area Less than 140 Square meters		0.45 microns	3850	2-16
Field Blank	2	0.45 microns	0	0
Laboratory Blank	1	0.45 microns	0	0

Notes:

1. Type of filter is Mixed Cellulose Ester.

2. Ensure detection limit for PCM analysis is established at 0.005 fibers/cc.

3. One sample shall be added for each additional 140 square meters. (The corresponding I-P units are 5/1500 square feet).

4. A minimum of 5 samples are to be taken per abatement area, plus 2 field blanks.

TABLE 4

EPA AHERA METHOD: TEM AIR SAMPLING PROTOCOL

Location Sampled	Minimum No. of Samples	Filter Pore Size	Min. Vol. (Liters)	Sampling Rate (liters/min.)
Inside Abatement Area	5	0.45 microns	1500	2-16
Outside Abatement Area	5	0.45 microns	1500	2-16
Field Blank	2	0.45 microns	0	0
Laboratory Blank	1	0.45 microns	0	0

Notes:

1. Type of filter is Mixed Cellulose Ester.

2. The detection limit for TEM analysis is 70 structures/square mm.

CERTIFICATE OF WORKER'S ACKNOWLEDGMENT

PROJECT NAME _____ CONTRACT NO. _____
PROJECT ADDRESS _____
CONTRACTOR FIRM NAME _____
EMPLOYEE'S NAME _____,_____,_____,
(Print) (Last) (First) (MI)

Employee Number: _____,

WORKING WITH ASBESTOS CAN BE DANGEROUS. INHALING ASBESTOS FIBERS HAS BEEN LINKED WITH TYPES OF LUNG DISEASE AND CANCER. IF YOU SMOKE AND INHALE ASBESTOS FIBERS, THE CHANCE THAT YOU WILL DEVELOP LUNG CANCER IS GREATER THAN THAT OF THE NONSMOKING PUBLIC.

Your employer's contract for the above project requires that you be provided and you complete formal asbestos training specific to the type of work you will perform and project specific training; that you be supplied with proper personal protective equipment including a respirator, that you be trained in its use; and that you receive a medical examination to evaluate your physical capacity to perform your assigned work tasks, under the environmental conditions expected, while wearing the required personal protective equipment. These things are to be done at no cost to you. By signing this certification, you are acknowledging that your employer has met these obligations to you. The Contractor's Designated Industrial Hygienist will check the block(s) for the type of formal training you have completed. Review the checked blocks prior to signing this certification.

FORMAL TRAINING:
_____ a. For Competent Persons and Supervisors: I have completed EPA's Model Accreditation Program (MAP) training course, "Contractor/Supervisor", that meets this State's requirements.

b. For Workers:
_____ (1) For OSHA Class I work: I have completed EPA's MAP training course, "Worker", that meets this State's requirements.
_____ (2) For OSHA Class II work (where there will be abatement of more than one type of Class II materials, i.e., roofing, siding, floor tile, etc.): I have completed EPA's MAP training course, "Worker", that meets this State's requirements.
(3) For OSHA Class II work (there will only be abatement of one type of Class II material):
_____ (a) I have completed an 8-hour training class on the elements of 29 CFR 1926, Section .1101(k)(9)(viii), in addition to the specific work practices and engineering controls of 29 CFR 1926, Section .1101(g) and hands-on training.
_____ (b) I have completed EPA's MAP training course, "Worker", that meets this State's requirements.
_____ (4) For OSHA Class III work: I have completed at least a 16-hour course consistent with EPA requirements for training of local education agency maintenance and custodial staff at 40 CFR 763, Section .92(a)(2) and the elements of 29 CFR 1926, Section .1101(k)(9)(viii), in addition to the specific work practices and engineering controls at 29 CFR 1926, Section .1101, and hands-on training.

_____ (5) For OSHA Class IV work: I have completed at least a 2-hr course consistent with EPA requirements for training of local education agency maintenance and custodial staff at 40 CFR 763, (a)(1), and the elements of 29 CFR 1926, Section .1101(k)(9)(viii), in addition to the specific work practices and engineering controls at 29 CFR 1926, Section .1101(g) and hands-on training.

_____ c. Workers, Supervisors and the Designated Competent Person: I have completed annual refresher training as required by EPA's MAP that meets this State's requirements.

PROJECT SPECIFIC TRAINING:
_____ I have been provided and have completed the project specific training required by this Contract. My employer's Designated Industrial Hygienist and Designated Competent Person conducted the training.

RESPIRATORY PROTECTION:
_____ I have been trained in accordance with the criteria in the Contractor's Respiratory Protection program. I have been trained in the dangers of handling and breathing asbestos dust and in the proper work procedures and use and limitations of the respirator(s) I will wear. I have been trained in and will abide by the facial hair and contact lens use policy of my employer.

RESPIRATOR FIT-TEST TRAINING:
_____ I have been trained in the proper selection, fit, use, care, cleaning,maintenance, and storage of the respirator(s) that I will wear. I have been fit-tested in accordance with the criteria in the Contractor's Respiratory Program and have received a satisfactory fit. I have been assigned my individual respirator. I have been taught how to properly perform positive and negative pressure fit-check upon donning negative pressure respirators each time.

MEDICAL EXAMINATION:
_____ I have had a medical examination within the last twelve months which was paid for by my employer. The examination included: health history, pulmonary function tests, and may have included an evaluation of a chest x-ray. A physician made a determination regarding my physical capacity to perform work tasks on the project while wearing personal protective equipment including a respirator. I was personally provided a copy and informed of the results of that examination. My employer's Industrial Hygienist evaluated the medical certification provided by the physician and checked the appropriate blank below. The physician determined that there:

_____ were no limitations to performing the required work tasks.
_____ were identified physical limitations to performing the required work tasks.

Date of the medical examination _____

Employee Signature _____ date _____
Contractor's Industrial
Hygienist Signature _____ date _____
-- End of Section --