

SOLICITATION, OFFER, AND AWARD <i>(Construction, Alteration, or Repair)</i>	1. SOLICITATION NO. W917PM-09-R-0076	2. TYPE OF SOLICITATION <input type="checkbox"/> SEALED BID (IFB) <input checked="" type="checkbox"/> NEGOTIATED (RFP)	3. DATE ISSUED 15-May-2009	PAGE OF PAGES 1 OF 169
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IMPORTANT - The "offer" section on the reverse must be fully completed by offeror.

4. CONTRACT NO.	5. REQUISITION/PURCHASE REQUEST NO. W26WKS91163062	6. PROJECT NO.
7. ISSUED BY AFGHANISTAN ENGINEER DISTRICT US ARMY CORPS OF ENGINEERS KABUL APO AE 09356	CODE W917PM	8. ADDRESS OFFER TO <i>(If Other Than Item 7)</i> CODE
TEL:	FAX:	TEL: FAX:
9. FOR INFORMATION CALL:	A. NAME EVAN B CARTER	B. TELEPHONE NO. <i>(Include area code) (NO COLLECT CALLS)</i>

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):*

NMH FUEL FACILITY, KABUL, AFGHANISTAN

Firm Fixed Price - Design Build Construction Project

Project Description: Design and construction of a new vehicle refueling point and removal of the existing refueling point at the ANA National Military Hospital at Kabul, Afghanistan

Magnitude of Construction: Betw een \$250,000 and \$500,000.

CONTRACT SPECIALIST: EVAN B. CARTER evan.b.carter@usace.army.mil

11. The Contractor shall begin performance w ithin 10 calendar days and complete it w ithin 270 calendar days after receiving award, notice to proceed. This performance period is mandatory, negotiable. *(See 52.211-10 _____ .)*

12 A. THE CONTRACTOR MUST FURNISH ANY REQUIRED PERFORMANCE AND PAYMENT BONDS? <i>(If "YES," indicate within how many calendar days after award in Item 12B.)</i> <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO	12B. CALENDAR DAYS
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13. ADDITIONAL SOLICITATION REQUIREMENTS:

A. Sealed offers in original and 2 copies to perform the w ork required are due at the place specified in Item 8 by 05:00 PM *(hour)* local time 04 Jun 2009 *(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 is, is not required.

C. All offers are subject to the (1) w ork 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 w ill not be considered and w ill 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 commutes 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)*

30B. SIGNATURE

30C. DATE

TEL:

EMAIL:

31B. UNITED STATES OF AMERICA
BY

31C. AWARD DATE

Section 00010 - Solicitation Contract Form

ITEM NO	SUPPLIES/SERVICES	QUANTITY	UNIT	UNIT PRICE	AMOUNT
0001	Design Program FFP AT THE NATIONAL MILITARY HOSPITAL IN KABUL AFGHANISTAN FOB: Destination MILSTRIP: W26WKS91163062 PURCHASE REQUEST NUMBER: W26WKS91163062				

NET AMT

ITEM NO	SUPPLIES/SERVICES	QUANTITY	UNIT	UNIT PRICE	AMOUNT
0001AA	SITE SURVEY / A/E DESIGN FFP FOB: Destination	1	Lump Sum		

NET AMT

ITEM NO	SUPPLIES/SERVICES	QUANTITY	UNIT	UNIT PRICE	AMOUNT
0001AB	MOBILIZATION & DEMOBILIZATION FFP FOB: Destination	1	Lump Sum		

NET AMT

ITEM NO	SUPPLIES/SERVICES	QUANTITY	UNIT	UNIT PRICE	AMOUNT
0001AC	AS-BUILT DRAWINGS FFP FOB: Destination	1	Lump Sum		

NET AMT

ITEM NO	SUPPLIES/SERVICES	QUANTITY	UNIT	UNIT PRICE	AMOUNT
0002	BUILDINGS & BUILDING COMPLEXES FFP FOB: Destination				

NET AMT

ITEM NO	SUPPLIES/SERVICES	QUANTITY	UNIT	UNIT PRICE	AMOUNT
0002AA	CONSTRUCT NEW VEHICLE REFUELING POINT FFP FOB: Destination	1	Lump Sum		

NET AMT

ITEM NO	SUPPLIES/SERVICES	QUANTITY	UNIT	UNIT PRICE	AMOUNT
0002AB	REMOVE EXISTING VEHICLE REFUELING POINT FFP FOB: Destination	1	Lump Sum		

					NET AMT

ITEM NO	SUPPLIES/SERVICES	QUANTITY	UNIT	UNIT PRICE	AMOUNT
0002AC	REMOVE CONTAMINATED SOIL & REFILL FFP FOB: Destination	1	Lump Sum		

					NET AMT

ITEM NO	SUPPLIES/SERVICES	QUANTITY	UNIT	UNIT PRICE	AMOUNT
0003	DBA INSURANCE FFP FOB: Destination	1	Lump Sum		

					NET AMT

SCHEDULE INFORMATION
PROPOSAL SCHEDULE NOTES

Provide a price for all items and the Government will evaluate the Contractor's entire proposal to determine which CLINs represent the lowest price to the Government.

1. Offeror shall submit prices on all items. Scope of work on each items are described in Section 01010.

2. Only one contract for the entire schedule will be awarded under this solicitation. This project will be awarded to low bidder as a lump sum contract. This Proposal Schedule is an accounting tool for allocating funds to applicable budget.

3. Costs associated with this project shall include design and construction costs, site development, and utility installation.

4. DESIGN COSTS DEFINITION: Design costs shall consist of design analysis, drawings, and specifications of all facilities.

5. COST LIMITATION: The established design cost limitation for all Design Costs, as defined in paragraph 4, shall not exceed 6 percent of the total construction cost.

6. ORDER of WORK: The new vehicle refueling point shall be completed before removal of the existing refueling point and removal of the contaminated soil.

7. Period of performance is **270 calendar days** from receipt of notice to proceed and liquidated damages are assessed at **\$1,400.00 per day** for every day of delay past the period of performance of 270 calendar days until contract completion.

--END OF SECTION--

00010

Section 00100 - Bidding Schedule/Instructions to Bidders

CLAUSES INCORPORATED BY REFERENCE

52.204-6	Data Universal Numbering System (DUNS) Number	APR 2008
52.214-34	Submission Of Offers In The English Language	APR 1991
52.214-35	Submission Of Offers In U.S. Currency	APR 1991
52.215-1	Instructions to Offerors--Competitive Acquisition	JAN 2004
52.217-3	Evaluation Exclusive Of Options	APR 1984
52.236-28	Preparation of Proposals--Construction	OCT 1997
252.204-7001	Commercial And Government Entity (CAGE) Code Reporting	AUG 1999

CLAUSES INCORPORATED BY FULL TEXT

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)

52.215-20 REQUIREMENTS FOR COST OR PRICING DATA OR INFORMATION OTHER THAN COST OR PRICING DATA (OCT 1997)

(a) Exceptions from cost or pricing data. (1) In lieu of submitting cost or pricing data, offerors 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) Commercial item exception. For a commercial item exception, the offeror shall submit, at a minimum, information on prices at which the same item or similar items have previously been sold in the commercial market that is adequate for evaluating the reasonableness of the price for this acquisition. Such information may include--

(A) 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;

(B) 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;

(C) 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 offeror 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 provision, 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 offeror's determination of the prices to be offered in the catalog or marketplace.

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

(1) The offeror shall prepare and 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 contract award (except for unpriced actions such as letter contracts), the offeror shall submit a Certificate of Current Cost or Pricing Data, as prescribed by FAR 15.406-2.

(End of provision)

52.216-1 TYPE OF CONTRACT (APR 1984)

The Government contemplates award of a FIRM FIXED PRICE - CONSTRUCTION contract resulting from this solicitation.

(End of provision)

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
Please contact the Office of Federal Contract Compliance Programs as appropriate	Please contact the Office of Federal Contract Compliance Programs as appropriate

|

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 AFGHANISTAN.

(end of provision)

52.233-2 SERVICE OF PROTEST (SEP 2006)

(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 Government Accountability Office (GAO), shall be served on the Contracting Officer (addressed as follows) by obtaining written and dated acknowledgment of receipt from

US ARMY COPRS OF ENGINEERS
HOUSE 1, STREET 1, WEST WAZIR AKBAR KAHN
(BEHIND AMAN HIGH SCHOOL)
KABUL, AFGHANISTAN

(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)

52.252-1 SOLICITATION PROVISIONS INCORPORATED BY REFERENCE (FEB 1998)

This solicitation incorporates one or more solicitation provisions by reference, with the same force and effect as if they were given in full text. Upon request, the Contracting Officer will make their full text available. The offeror is cautioned that the listed provisions may include blocks that must be completed by the offeror and submitted with its quotation or offer. In lieu of submitting the full text of those provisions, the offeror may identify the provision by paragraph identifier and provide the appropriate information with its quotation or offer. Also, the full text of a solicitation provision may be accessed electronically at this/these address(es):

<http://www.arnet.gov/far/>

<http://farsite.hill.af.mil/VFDFARA.HTM>

(End of provision)

SECTION 00150

SECTION 00150 THE DESIGN/BUILD PROCESS

PART 1 - GENERAL

1. DESIGN/BUILD (DB) PROCESS

The facility shall be designed and built by a single DB contractor. The DB contractor may be a single firm or a team of firms that includes registered Architects and Engineers either employed by or subcontracted to the DB contractor. Licensing jurisdiction of Architects and Engineers of record shall be verifiable. The DB contractor shall be the Architect/Engineer-of-Record, whether the DB contractor utilizes services of licensed architects and engineers employed by its firm or subcontracts with independent architectural and/or engineering firm(s). The DB contractor shall be solely liable for design errors and/or omissions and should be insured as the A-E firm against design errors and omissions.

Section 00555, DESIGN CONCEPT DOCUMENTS identifies project documents furnished herewith to be used as the basis for the project design and construction documents. The successful Offeror shall be required to complete the design and construction documentation, and construct the project in compliance with these completed requirements.

2. OUTLINE DESCRIPTION OF THE DB PHASE

No work can begin on any phase of the process until an authorization Clearance for construction for that phase is issued.

2.1 PROPOSAL PHASE

The Proposal Phase includes the period from the time from the issuance of the Request for Proposals (RFP) through the selection process and the final award of the DB contract.

The proposals to be submitted include a Cost/Price Proposal. The Government will evaluate and award the DB contract to a single Offeror based upon lowest price.

2.2 DESIGN PHASE

The successful DB contractor shall develop and submit for formal review three submittals and the final design. The DB contractor is encouraged to develop and submit multiple cost saving proposals for innovative design alternatives.

2.2.1 The Design Phase will consist of two parts as follows:

a. Part 1 will be the basic services required to develop the first submittal which represents: 65% complete drawings and specifications for site preparation work, utility construction, paving, foundation, and approximately 65% complete drawings and specifications of all other required construction documents. Part I also includes incorporating the revisions identified in the First submittal review.

After approval of the Part 1 drawings and specification submittal, the Government may issue a Clearance for Construction letter to commence with the Build Phase for all site and off-site utilities, clearing, grubbing, rough grading the site, demolition work, parking lot base course, foundation, and structural framing.

A Pre-design meeting will be conducted to distribute as-built drawings to the DB contractor, finalize and clarify technical information, and clarify other necessary information.

b. Part 2 shall include all design services required to complete the second design submittal: 100% complete drawings and specifications for site preparation work, utility construction, paving, foundation, and approximately 99% complete drawings and specifications of all other required construction documents. Part 2 design shall not begin until an approval of the Part 1 submittal is issued.

c. Part 3 shall include all design services required to complete the third design submittal (100%). Part 3 design shall not begin until an approval of the Part 2 submittal is issued.

3. BUILD PHASE

The Build Phase will be initiated by an authorization letter.

The authorization letter will be provided separately by the Contracting Officer for each phase of the work. The Government may give the DB Contractor authorization for the Build Phase for portions of the work following review and approval of the First Design Submittal.

Weekly coordination meetings will be held at which, as a minimum, the DB Contractor's Project Manager, a representative of the Designer, the site Superintendent, and the Contractor's Quality Control Manager shall be present.

4. PROJECT SCHEDULE:

The following is an internal design schedule and is subject to modification by the Offeror to suit their particular method of operation. Overall time constraints are required and cannot be changed except by contract modification. Prospective offerors shall be required to submit a complete schedule for design and construction that meets or exceeds the overall time goals of the Government for this project.

Notice to Proceed

Following Award of Contract (upon receipt of
DBA insurance and SPOT registration and
written notification)

Design Phase

Services Pre-design Meeting

Within 7 days from NTP

Design Submittal Due

Within 30 days following NTP

Submittal Review Conference
(location TBD)

Within 7 days following submittal review

Incorporate Changes to Submittal
(Re-Submit for Review and Approval 100% design submittal)

Within 7 days following review conference

Build Phase

Authorization for Construction

Upon approval of design submittal

Total Design and Construction Period

270 days (performance period
includes design and construction phases)

4. LIQUIDATED DAMAGES:

Liquidated damages in the amount of **\$1,400.00** every calendar day of delay shall be assessed and charged to the Contractor.

All days are in calendar days.

PART 2 - PRODUCTS (NOT APPLICABLE)

PART 3 - EXECUTION (NOT APPLICABLE)

--END OF SECTION—
00150

SECTION 550

SECTION 00555 DESIGN CONCEPT DOCUMENTS

PART 1 GENERAL

1.1 GENREAL

This section identifies documents issued with this RFP which establish the concept or basis for the project design. These requirements are minimum standards and may be exceeded by the Offeror. Deviations from these concepts and standards may be approved if considered by the Government to be in its best interests.

The extent of development of these requirements in no way relieves the successful Offeror from the responsibility of completing the design, construction documentation, and construction of the facility in conformance with applicable criteria and codes.

1.2 ENGINEERING AND DESIGN CRITERIA

General design requirements are set forth in this RFP herein. The Specification Divisions 02 thru 16 is the primary specifications criteria for the design and construction of the project. No design criteria will be furnished by the Afghanistan Engineer District except that which may be required for design and is not available from commercial sources or from the Construction Criteria Base (CCB) or 'Techinfo' website located at <http://www.wbdg.org/ccb/>. The references within CCB must be obtained by the A/E if the criteria are required or desired. All design, unless otherwise specified, shall be based on nationally recognized industry standard, criteria, and practice.

1.3 APPENDIX DOCUMENTS

See Appendices for further technical requirements, criteria, and parameters that are a part of this contract.

1.4 SPECIFICATIONS

Specifications included herein shall be utilized as design criteria and minimum standards for the corresponding construction work. The successful Offeror shall develop complete construction specifications using the criteria included in these specifications.

The Government will provide Division 1 specifications sections as required, to the successful Offeror; and these sections shall be included in the final construction specifications without change. The Design Build Contractor shall furnish these specifications on electronic media for the production of construction specifications when requested. These specifications shall be submitted together with other required contractor prepared project construction documents during the Second Design Submittal of the Design Phase, Part II.

1.5 ORDER OF PRECEDENCE

In case of conflict, duplication, or overlap of design criteria specified in the documents referenced in this section, the following order of precedence shall be followed:

1. Contract Award Document and referenced publications therein.
2. Written requirements supersede drawings.

1.6 MANDATORY CRITERIA

Portions of the design criteria documents provide mandatory criteria. Mandatory criteria consists of drawings, schematics, specifications, and other requirements which shall not be altered or modified for proposal submittal or subsequent final design except for minor adjustments for coordination or except for cost reduction proposals as specified in Section 00150 - THE DESIGN BUILD PROCESS. Non-mandatory criteria shall be considered minimum requirements and may be enhanced, improved, or substituted to better suit design requirements or to improve evaluation consideration. Mandatory requirements are as listed below. All other design criteria shall be considered non-mandatory.

Work Plan
Health and Safety Plan
Accident Prevention Plan
Contractor Quality Control Plan
Boundary survey plan
Topographic survey plan- Not Required
Any mandatory criteria referenced within Project Program.
Any other criteria listed herein which is listed, shown or implied as mandatory.

1.7 ADDITIONAL DOCUMENTS/CRITERIA FURNISHED BY THE GOVERNMENT

The following documents will be furnished to the Design/Build Contractor when requested by the Offeror or Contractor:

Design Criteria published by the Government such as Technical Manuals (TM), Engineer Manuals (EM), Engineer Technical Letters (ETL) and other documents related to the design referenced herein which are not available on the Internet, including the CCB website.

Commercial design criteria and specifications will not be furnished by the Government.

Conversion of electronic media to other formats shall be the responsibility of the Design Build Contractor.

PART 2 PRODUCTS (Not Applicable)

PART 3 EXECUTION (Not Applicable)

--END OF SECTION--
00550

Section 00600 - Representations & Certifications

CLAUSES INCORPORATED BY REFERENCE

52.203-11	Certification And Disclosure Regarding Payments To Influence Certain Federal Transactions	SEP 2007
52.222-22	Previous Contracts And Compliance Reports	FEB 1999
52.222-38	Compliance With Veterans' Employment Reporting Requirements	DEC 2001
252.209-7001	Disclosure of Ownership or Control by the Government of a Terrorist Country	JAN 2009
252.225-7031	Secondary Arab Boycott Of Israel	JUN 2005
252.225-7042	Authorization to Perform	APR 2003

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 provision _____ (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)

52.204-3 TAXPAYER IDENTIFICATION (OCT 1998)

(a) Definitions.

Common parent, as used in this provision, means that corporate entity that owns or controls an affiliated group of corporations that files its Federal income tax returns on a consolidated basis, and of which the offeror is a member.

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.

(b) All offerors must submit the information required in paragraphs (d) through (f) of this provision to comply with debt collection requirements of 31 U.S.C. 7701(c) and 3325(d), reporting requirements of 26 U.S.C. 6041, 6041A, and 6050M, and implementing regulations issued by the IRS. If the resulting contract is subject to the payment reporting requirements described in Federal Acquisition Regulation (FAR) 4.904, the failure or refusal by the offeror to furnish the information may result in a 31 percent reduction of payments otherwise due under the contract.

(c) The TIN may be used by the Government to collect and report on any delinquent amounts arising out of the offeror's relationship with the Government (31 U.S.C. 7701(c)(3)). If the resulting contract is subject to the payment reporting requirements described in FAR 4.904, the TIN provided hereunder may be matched with IRS records to verify the accuracy of the offeror's TIN.

(d) 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.

(e) 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-----

(f) Common parent.

Offeror is not owned or controlled by a common parent as defined in paragraph (a) of this provision.

Name and TIN of common parent:

Name-----

TIN-----

(End of provision)

52.204-8 ANNUAL REPRESENTATIONS AND CERTIFICATIONS (FEB 2009)

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

(2) The small business size standard is \$31.5 Million.

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

(b)(1) If the clause at 52.204-7, Central Contractor Registration, is included in this solicitation, paragraph (d) of this provision applies.

(2) If the clause at 52.204-7 is not included in this solicitation, and the offeror is currently registered in CCR, and has completed the ORCA electronically, the offeror may choose to use paragraph (d) of this provision instead of completing the corresponding individual representations and certifications in the solicitation. The offeror shall indicate which option applies by checking one of the following boxes:

Paragraph (d) applies.

Paragraph (d) does not apply and the offeror has completed the individual representations and certifications in the solicitation.

(c)(1) The following representations or certifications in ORCA are applicable to this solicitation as indicated:

(i) 52.203-2, Certificate of Independent Price Determination. This provision applies to solicitations when a firm-fixed-price contract or fixed-price contract with economic price adjustment is contemplated, unless--

(A) The acquisition is to be made under the simplified acquisition procedures in Part 13;

(B) The solicitation is a request for technical proposals under two-step sealed bidding procedures; or

(C) The solicitation is for utility services for which rates are set by law or regulation.

(ii) 52.203-11, Certification and Disclosure Regarding Payments to Influence Certain Federal Transactions. This provision applies to solicitations expected to exceed \$100,000.

(iii) 52.204-3, Taxpayer Identification. This provision applies to solicitations that do not include the clause at 52.204-7, Central Contractor Registration.

(iv) 52.204-5, Women-Owned Business (Other Than Small Business). This provision applies to solicitations that--

(A) Are not set aside for small business concerns;

(B) Exceed the simplified acquisition threshold; and

(C) Are for contracts that will be performed in the United States or its outlying areas.

(v) 52.209-5, Certification Regarding Responsibility Matters. This provision applies to solicitations where the contract value is expected to exceed the simplified acquisition threshold.

(vi) 52.214-14, Place of Performance--Sealed Bidding. This provision applies to invitations for bids except those in which the place of performance is specified by the Government.

(vii) 52.215-6, Place of Performance. This provision applies to solicitations unless the place of performance is specified by the Government.

(viii) 52.219-1, Small Business Program Representations (Basic & Alternate I). This provision applies to solicitations when the contract will be performed in the United States or its outlying areas.

(A) The basic provision applies when the solicitations are issued by other than DoD, NASA, and the Coast Guard.

(B) The provision with its Alternate I applies to solicitations issued by DoD, NASA, or the Coast Guard.

(ix) 52.219-2, Equal Low Bids. This provision applies to solicitations when contracting by sealed bidding and the contract will be performed in the United States or its outlying areas.

(x) 52.222-22, Previous Contracts and Compliance Reports. This provision applies to solicitations that include the clause at 52.222-26, Equal Opportunity.

(xi) 52.222-25, Affirmative Action Compliance. This provision applies to solicitations, other than those for construction, when the solicitation includes the clause at 52.222-26, Equal Opportunity.

(xii) 52.222-38, Compliance with Veterans' Employment Reporting Requirements. This provision applies to solicitations when it is anticipated the contract award will exceed the simplified acquisition threshold and the contract is not for acquisition of commercial items.

(xiii) 52.223-1, Biobased Product Certification. This provision applies to solicitations that require the delivery or specify the use of USDA-designated items; or include the clause at 52.223-2, Affirmative Procurement of Biobased Products Under Service and Construction Contracts.

(xiv) 52.223-4, Recovered Material Certification. This provision applies to solicitations that are for, or specify the use of, EPA-designated items.

(xv) 52.225-2, Buy American Act Certificate. This provision applies to solicitations containing the clause at 52.225-1.

(xvi) 52.225-4, Buy American Act--Free Trade Agreements—Israeli Trade Act Certificate. (Basic, Alternate I, and Alternate II) This provision applies to solicitations containing the clause at 52.225-3.

(A) If the acquisition value is less than \$25,000, the basic provision applies.

(B) If the acquisition value is \$25,000 or more but is less than \$50,000, the provision with its Alternate I applies.

(C) If the acquisition value is \$50,000 or more but is less than \$67,826, the provision with its Alternate II applies.

(xvii) 52.225-6, Trade Agreements Certificate. This provision applies to solicitations containing the clause at 52.225-5.

(xviii) 52.225-20, Prohibition on Conducting Restricted Business Operations in Sudan--Certification.

(xix) 52.226-2, Historically Black College or University and Minority Institution Representation. This provision applies to--

(A) Solicitations for research, studies, supplies, or services of the type normally acquired from higher educational institutions; and

(B) For DoD, NASA, and Coast Guard acquisitions, solicitations that contain the clause at 52.219-23, Notice of Price Evaluation Adjustment for Small Disadvantaged Business Concerns.

(2) The following certifications are applicable as indicated by the Contracting Officer:

(Contracting Officer check as appropriate.)

----(i) 52.219-19, Small Business Concern Representation for the Small Business Competitiveness Demonstration Program.

----- (ii) 52.219-21, Small Business Size Representation for Targeted Industry Categories Under the Small Business Competitiveness Demonstration Program.

----- (iii) 52.219-22, Small Disadvantaged Business Status.

----- (A) Basic.

----- (B) Alternate I.

----- (iv) 52.222-18, Certification Regarding Knowledge of Child Labor for Listed End Products.

----- (v) 52.222-48, Exemption from Application of the Service Contract Act to Contracts for Maintenance, Calibration, or Repair of Certain Equipment Certification.

----- (vi) 52.222-52 Exemption from Application of the Service Contract Act to Contracts for Certain Services-- Certification.

-----**(vii)** 52.223-9, with its Alternate I, Estimate of Percentage of Recovered Material Content for EPA-Designated Products (Alternate I only).

-----**(viii)** 52.223-13, Certification of Toxic Chemical Release Reporting.

-----**(ix)** 52.227-6, Royalty Information.

----- **(A)** Basic.

----- **(B)** Alternate I.

-----**(x)** 52.227-15, Representation of Limited Rights Data and Restricted Computer Software.

(d) The offeror has completed the annual representations and certifications electronically via the Online Representations and Certifications Application (ORCA) website at <http://orca.bpn.gov>. After reviewing the ORCA database information, the offeror verifies by submission of the offer that the representations and certifications currently posted electronically that apply to this solicitation as indicated in paragraph (c) of this provision have been entered or updated within the last 12 months, are current, accurate, complete, and applicable to this solicitation (including the business size standard applicable to the NAICS code referenced for this solicitation), as of the date of this offer and are incorporated in this offer by reference (see FAR 4.1201); except for the changes identified below (offeror to insert changes, identifying change by clause number, title, date). These amended representation(s) and/or certification(s) are also incorporated in this offer and are current, accurate, and complete as of the date of this offer.

FAR Clause	Title	Date	Change
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Any changes provided by the offeror are applicable to this solicitation only, and do not result in an update to the representations and certifications posted on ORCA.

(End of Provision)

52.209-5 CERTIFICATION REGARDING RESPONSIBILITY MATTERS (DEC 2008)

(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, violating Federal criminal tax laws, 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.; and

(D) Have [ballot], have not [ballot], within a three-year period preceding this offer, been notified of any delinquent Federal taxes in an amount that exceeds \$3,000 for which the liability remains unsatisfied.

(1) Federal taxes are considered delinquent if both of the following criteria apply:

(i) The tax liability is finally determined. The liability is finally determined if it has been assessed. A liability is not finally determined if there is a pending administrative or judicial challenge. In the case of a judicial challenge to the liability, the liability is not finally determined until all judicial appeal rights have been exhausted.

(ii) The taxpayer is delinquent in making payment. A taxpayer is delinquent if the taxpayer has failed to pay the tax liability when full payment was due and required. A taxpayer is not delinquent in cases where enforced collection action is precluded.

(2) Examples. (i) The taxpayer has received a statutory notice of deficiency, under I.R.C. Sec. 6212, which entitles the taxpayer to seek Tax Court review of a proposed tax deficiency. This is not a delinquent tax because it is not a final tax liability. Should the taxpayer seek Tax Court review, this will not be a final tax liability until the taxpayer has exercised all judicial appeal rights.

(ii) The IRS has filed a notice of Federal tax lien with respect to an assessed tax liability, and the taxpayer has been issued a notice under I.R.C. Sec. 6320 entitling the taxpayer to request a hearing with the IRS Office of Appeals contesting the lien filing, and to further appeal to the Tax Court if the IRS determines to sustain the lien filing. In the course of the hearing, the taxpayer is entitled to contest the underlying tax liability because the taxpayer has had no prior opportunity to contest the liability. This is not a delinquent tax because it is not a final tax liability. Should the taxpayer seek tax court review, this will not be a final tax liability until the taxpayer has exercised all judicial appeal rights.

(iii) The taxpayer has entered into an installment agreement pursuant to I.R.C. Sec. 6159. The taxpayer is making timely payments and is in full compliance with the agreement terms. The taxpayer is not delinquent because the taxpayer is not currently required to make full payment.

(iv) The taxpayer has filed for bankruptcy protection. The taxpayer is not delinquent because enforced collection action is stayed under 11 U.S.C. 362 (the Bankruptcy Code).

(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) Principal, for the purposes of this certification, means an officer, director, owner, partner, or a person 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).

(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)

52.230-1 COST ACCOUNTING STANDARDS NOTICES AND CERTIFICATION (OCT 2008)

Note: This notice does not apply to small businesses or foreign governments. This notice is in three parts, identified by Roman numerals I through III.

Offerors shall examine each part and provide the requested information in order to determine Cost Accounting Standards (CAS) requirements applicable to any resultant contract.

If the offeror is an educational institution, Part II does not apply unless the contemplated contract will be subject to full or modified CAS coverage pursuant to 48 CFR 9903.201-2(c)(5) or 9903.201-2(c)(6), respectively.

I. DISCLOSURE STATEMENT--COST ACCOUNTING PRACTICES AND CERTIFICATION

(a) Any contract in excess of \$650,000 resulting from this solicitation will be subject to the requirements of the Cost Accounting Standards Board (48 CFR Chapter 99), except for those contracts which are exempt as specified in 48 CFR 9903.201-1.

(b) Any offeror submitting a proposal which, if accepted, will result in a contract subject to the requirements of 48 CFR Chapter 99 must, as a condition of contracting, submit a Disclosure Statement as required by 48 CFR 9903.202. When required, the Disclosure Statement must be submitted as a part of the offeror's proposal under this solicitation unless the offeror has already submitted a Disclosure Statement disclosing the practices used in connection with the pricing of this proposal. If an applicable Disclosure Statement has already been submitted, the offeror may satisfy the requirement for submission by providing the information requested in paragraph (c) of Part I of this provision.

CAUTION: In the absence of specific regulations or agreement, a practice disclosed in a Disclosure Statement shall not, by virtue of such disclosure, be deemed to be a proper, approved, or agreed-to practice for pricing proposals or accumulating and reporting contract performance cost data.

(c) Check the appropriate box below:

(1) Certificate of Concurrent Submission of Disclosure Statement.

The offeror hereby certifies that, as a part of the offer, copies of the Disclosure Statement have been submitted as follows: (i) original and one copy to the cognizant Administrative Contracting Officer (ACO) or cognizant Federal agency official authorized to act in that capacity (Federal official), as applicable, and (ii) one copy to the cognizant Federal auditor.

(Disclosure must be on Form No. CASB DS-1 or CASB DS-2, as applicable. Forms may be obtained from the cognizant ACO or Federal official and/or from the loose-leaf version of the Federal Acquisition Regulation.)

Date of Disclosure Statement: _____ Name and Address of Cognizant ACO or Federal Official Where Filed: _____

The offeror further certifies that the practices used in estimating costs in pricing this proposal are consistent with the cost accounting practices disclosed in the Disclosure Statement.

(2) Certificate of Previously Submitted Disclosure Statement.

The offeror hereby certifies that the required Disclosure Statement was filed as follows:

Date of Disclosure Statement: _____ Name and Address of Cognizant ACO or Federal Official Where Filed: _____

The offeror further certifies that the practices used in estimating costs in pricing this proposal are consistent with the cost accounting practices disclosed in the applicable Disclosure Statement.

(3) Certificate of Monetary Exemption.

The offeror hereby certifies that the offeror, together with all divisions, subsidiaries, and affiliates under common control, did not receive net awards of negotiated prime contracts and subcontracts subject to CAS totaling more than \$50 million (of which at least one award exceeded \$1 million) in the cost accounting period immediately preceding the period in which this proposal was submitted. The offeror further certifies that if such status changes before an award resulting from this proposal, the offeror will advise the Contracting Officer immediately.

(4) Certificate of Interim Exemption.

The offeror hereby certifies that (i) the offeror first exceeded the monetary exemption for disclosure, as defined in (3) of this subsection, in the cost accounting period immediately preceding the period in which this offer was submitted and (ii) in accordance with 48 CFR 9903.202-1, the offeror is not yet required to submit a Disclosure Statement. The offeror further certifies that if an award resulting from this proposal has not been made within 90 days after the end of that period, the offeror will immediately submit a revised certificate to the Contracting Officer, in the form specified under subparagraph (c)(1) or (c)(2) of Part I of this provision, as appropriate, to verify submission of a completed Disclosure Statement.

CAUTION: Offerors currently required to disclose because they were awarded a CAS-covered prime contract or subcontract of \$50 million or more in the current cost accounting period may not claim this exemption (4). Further, the exemption applies only in connection with proposals submitted before expiration of the 90-day period following the cost accounting period in which the monetary exemption was exceeded.

II. COST ACCOUNTING STANDARDS--ELIGIBILITY FOR MODIFIED CONTRACT COVERAGE

If the offeror is eligible to use the modified provisions of 48 CFR 9903.201-2(b) and elects to do so, the offeror shall indicate by checking the box below. Checking the box below shall mean that the resultant contract is subject to the Disclosure and Consistency of Cost Accounting Practices clause in lieu of the Cost Accounting Standards clause.

() The offeror hereby claims an exemption from the Cost Accounting Standards clause under the provisions of 48 CFR 9903.201-2(b) and certifies that the offeror is eligible for use of the Disclosure and Consistency of Cost Accounting Practices clause because during the cost accounting period immediately preceding the period in which this proposal was submitted, the offeror received less than \$50 million in awards of CAS-covered prime contracts and subcontracts. The offeror further certifies that if such status changes before an award resulting from this proposal, the offeror will advise the Contracting Officer immediately.

CAUTION: An offeror may not claim the above eligibility for modified contract coverage if this proposal is expected to result in the award of a CAS-covered contract of \$50 million or more or if, during its current cost accounting period, the offeror has been awarded a single CAS-covered prime contract or subcontract of \$25 million or more.

III. ADDITIONAL COST ACCOUNTING STANDARDS APPLICABLE TO EXISTING CONTRACTS

The offeror shall indicate below whether award of the contemplated contract would, in accordance with subparagraph (a)(3) of the Cost Accounting Standards clause, require a change in established cost accounting practices affecting existing contracts and subcontracts.

() YES () NO

(End of clause)

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)

AI 26.6

AI 26.6 Projected Afghan and Third Country National (TCN) Employment (5 Nov 07)

Projected Afghan Employment

Collecting & Reporting Employment Statistics

The purpose of this clause is to collect data on the projected number of Afghans employed for the term of the contract. Offerors are required to identify in the space provided below the total projected number of that will be directly employed in the performance of this contract.

Employment is the total number of Afghan persons expected to be on the payroll (contractors, subcontractors, sub-subcontractors) employed full or part time who received pay for any part of the term of the contract. Temporary and intermittent employees are included, as are any workers who are on paid sick leave, on paid holiday, R&R leave or who work during only part of the pay period." Enter into spaces provided in item #1. Next enter in the spaces provided in item #2 what is the average number employed throughout the term of the contract. Item #3 An "Afghan-Based Company" is a company (including a subsidiary company) whose principal place of business is

located within Afghanistan.

1. Total Afghan (Afghan Residents) Employed:

Afghan: Men _____

Afghan: Females _____

Total: _____

2. Average Afghans (Afghan Residents) Employed:

Afghan: Men _____

Afghan: Females _____

Total: _____

1. Is your company an “Afghan-Based” company? Yes ___ No ___. If no, what country is your company registered/incorporated: _____.

2. Afghan Company Certification. The offeror _____ is or _____ is not an Afghan owned firm. If the firm is Afghan owned, the Ministry of Trade registration/license number is: _____.

(End)

Section 00700 - Contract Clauses

CLAUSES INCORPORATED BY REFERENCE

52.202-1	Definitions	JUL 2004
52.203-3	Gratuities	APR 1984
52.225-14	Inconsistency Between English Version And Translation Of Contract	FEB 2000
52.227-4	Patent Indemnity-Construction Contracts	DEC 2007
52.228-3	Worker's Compensation Insurance (Defense Base Act)	APR 1984
52.229-6	Taxes--Foreign Fixed-Price Contracts	JUN 2003
52.232-5	Payments under Fixed-Price Construction Contracts	SEP 2002
52.232-17	Interest	OCT 2008
52.232-27	Prompt Payment for Construction Contracts	OCT 2008
52.232-33	Payment by Electronic Funds Transfer--Central Contractor Registration	OCT 2003
52.232-38	Submission of Electronic Funds Transfer Information with Offer	MAY 1999
52.233-1	Disputes	JUL 2002
52.233-3	Protest After Award	AUG 1996
52.233-4	Applicable Law for Breach of Contract Claim	OCT 2004
52.236-2	Differing Site Conditions	APR 1984
52.236-3	Site Investigation and Conditions Affecting the Work	APR 1984
52.236-5	Material and Workmanship	APR 1984
52.236-6	Superintendence by the Contractor	APR 1984
52.236-7	Permits and Responsibilities	NOV 1991
52.236-8	Other Contracts	APR 1984
52.236-9	Protection of Existing Vegetation, Structures, Equipment, Utilities, and Improvements	APR 1984
52.236-10	Operations and Storage Areas	APR 1984
52.236-11	Use and Possession Prior to Completion	APR 1984
52.236-12	Cleaning Up	APR 1984
52.236-13 Alt I	Accident Prevention (Nov 1991) - Alternate I	NOV 1991
52.236-15	Schedules for Construction Contracts	APR 1984
52.236-17	Layout of Work	APR 1984
52.236-21 Alt I	Specifications and Drawings for Construction (Feb 1997) - Alternate I	APR 1984
52.236-25	Requirements for Registration of Designers	JUN 2003
52.236-26	Preconstruction Conference	FEB 1995
52.242-13	Bankruptcy	JUL 1995
52.242-14	Suspension of Work	APR 1984
52.243-4	Changes	JUN 2007
52.243-6	Change Order Accounting	APR 1984
52.244-5	Competition In Subcontracting	DEC 1996
52.246-21	Warranty of Construction	MAR 1994
52.247-34	F.O.B. Destination	NOV 1991
52.247-63	Preference For U.S. Flag Air Carriers	JUN 2003
52.248-3	Value Engineering-Construction	SEP 2006
52.249-2 Alt I	Termination for Convenience of the Government (Fixed-Price) (May 2004) - Alternate I	SEP 1996
52.249-10	Default (Fixed-Price Construction)	APR 1984
52.253-1	Computer Generated Forms	JAN 1991
252.201-7000	Contracting Officer's Representative	DEC 1991

252.203-7001	Prohibition On Persons Convicted of Fraud or Other Defense-DEC 2008 Contract-Related Felonies	
252.204-7000	Disclosure Of Information	DEC 1991
252.204-7003	Control Of Government Personnel Work Product	APR 1992
252.204-7004 Alt A	Central Contractor Registration (52.204-7) Alternate A	SEP 2007
252.209-7004	Subcontracting With Firms That Are Owned or Controlled By The Government of a Terrorist Country	DEC 2006
252.215-7000	Pricing Adjustments	DEC 1991
252.215-7002	Cost Estimating System Requirements	DEC 2006
252.222-7002	Compliance With Local Labor Laws (Overseas)	JUN 1997
252.223-7002	Safety Precautions For Ammunition And Explosives	MAY 1994
252.223-7003	Changes In Place Of Performance--Ammunition And Explosives	DEC 1991
252.223-7004	Drug Free Work Force	SEP 1988
252.225-7005	Identification Of Expenditures In The United States	JUN 2005
252.225-7028	Exclusionary Policies And Practices Of Foreign Government	APR 2003
252.225-7041	Correspondence in English	JUN 1997
252.227-7013	Rights in Technical Data--Noncommercial Items	NOV 1995
252.227-7022	Government Rights (Unlimited)	MAR 1979
252.227-7023	Drawings and Other Data to become Property of Government	MAR 1979
252.227-7030	Technical Data--Withholding Of Payment	MAR 2000
252.227-7033	Rights in Shop Drawings	APR 1966
252.231-7000	Supplemental Cost Principles	DEC 1991
252.232-7003	Electronic Submission of Payment Requests and Receiving Reports	MAR 2008
252.232-7008	Assignment of Claims (Overseas)	JUN 1997
252.232-7010	Levies on Contract Payments	DEC 2006
252.233-7001	Choice of Law (Overseas)	JUN 1997
252.236-7000	Modification Proposals-Price Breakdown	DEC 1991
252.236-7008	Contract Prices-Bidding Schedules	DEC 1991
252.243-7001	Pricing Of Contract Modifications	DEC 1991
252.243-7002	Requests for Equitable Adjustment	MAR 1998
252.247-7023	Transportation of Supplies by Sea	MAY 2002
252.247-7024	Notification Of Transportation Of Supplies By Sea	MAR 2000

CLAUSES INCORPORATED BY FULL TEXT

52.232-34 PAYMENT BY ELECTRONIC FUNDS TRANSFER—OTHER THAN CENTRAL CONTRACTOR REGISTRATION (MAY 1999)

(a) Method of payment. (1) All payments by the Government under this contract shall be made by electronic funds transfer (EFT) except as provided in paragraph (a)(2) of this clause. As used in this clause, the term “EFT” refers to the funds transfer and may also include the payment information transfer.

(2) In the event the Government is unable to release one or more payments by EFT, the Contractor agrees to either--

(i) Accept payment by check or some other mutually agreeable method of payment; or

(ii) Request the Government to extend payment due dates until such time as the Government makes payment by EFT (but see paragraph (d) of this clause).

(b) Mandatory submission of Contractor's EFT information. (1) The Contractor is required to provide the Government with the information required to make payment by EFT (see paragraph (j) of this clause). The

Contractor shall provide this information directly to the office designated in this contract to receive that information (hereafter: "designated office") by 15 days. If not otherwise specified in this contract, the payment office is the designated office for receipt of the Contractor's EFT information. If more than one designated office is named for the contract, the Contractor shall provide a separate notice to each office. In the event that the EFT information changes, the Contractor shall be responsible for providing the updated information to the designated office(s).

(2) If the Contractor provides EFT information applicable to multiple contracts, the Contractor shall specifically state the applicability of this EFT information in terms acceptable to the designated office. However, EFT information supplied to a designated office shall be applicable only to contracts that identify that designated office as the office to receive EFT information for that contract.

(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. (1) The Government is not required to make any payment under this contract until after receipt, by the designated office, of the correct EFT payment information from the Contractor. Until receipt of the correct EFT information, 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.

(2) If the EFT information changes after submission of correct EFT information, the Government shall begin using the changed EFT information no later than 30 days after its receipt by the designated office to the extent payment is made by EFT. However, the Contractor may request that no further payments be made until the updated EFT information is implemented by the payment office. If such suspension would result in a late payment under the prompt payment terms of this contract, the Contractor's request for suspension shall extend the due date for payment by the number of days of the suspension.

(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) 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 provide the EFT information required by paragraph (j) of this clause to the designated office, and shall be paid by EFT in accordance with the terms of this clause. In all respects, the requirements of this clause shall apply to the assignee as if it were the Contractor. EFT information that shows the ultimate recipient of the transfer to be other than the Contractor, in the absence of a proper assignment of claims acceptable to the Government, is incorrect EFT information within the meaning of paragraph (d) of this clause.

(h) Liability for change of EFT information by financial agent. The Government is not liable for errors resulting from changes to EFT information provided 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 in the contract.

(j) EFT information. The Contractor shall provide the following information to the designated office. The Contractor may supply this data for this or multiple contracts (see paragraph (b) of this clause). The Contractor shall designate a single financial agent per contract capable of receiving and processing the EFT information using the EFT methods described in paragraph (c) of this clause.

(1) The contract number (or other procurement identification number).

(2) The Contractor's name and remittance address, as stated in the contract(s).

(3) The signature (manual or electronic, as appropriate), title, and telephone number of the Contractor official authorized to provide this information.

(4) The name, address, and 9-digit Routing Transit Number of the Contractor's financial agent.

(5) The Contractor's account number and the type of account (checking, saving, or lockbox).

(6) If applicable, the Fedwire Transfer System telegraphic abbreviation of the Contractor's financial agent.

(7) If applicable, the Contractor shall also provide the name, address, telegraphic abbreviation, and 9-digit Routing Transit Number of the correspondent financial institution receiving the wire transfer payment if the Contractor's financial agent is not directly on-line to the Fedwire Transfer System; and, therefore, not the receiver of the wire transfer payment.

(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 **TWELVE (12)** 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)

52.249-5000 BASIS FOR SETTLEMENT OF PROPOSALS

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)

52.252-2 CLAUSES INCORPORATED BY REFERENCE (FEB 1998)

This contract incorporates one or more clauses by reference, with the same force and effect as if they were given in full text. Upon request, the Contracting Officer will make their full text available. Also, the full text of a clause may be accessed electronically at this/these address(es):

<http://www.arnet.gov/far/>

<http://farsite.hill.af.mil/VFDFARA.HTM>

(End of clause)

252.225-7043 ANTITERRORISM/FORCE PROTECTION POLICY FOR DEFENSE CONTRACTORS OUTSIDE THE UNITED STATES (MAR 2006)

- (a) Definition. United States, as used in this clause, means, the 50 States, the District of Columbia, and outlying areas.
- (b) Except as provided in paragraph (c) of this clause, the Contractor and its subcontractors, if performing or traveling outside the United States under this contract, shall--
 - (1) Affiliate with the Overseas Security Advisory Council, if the Contractor or subcontractor is a U.S. entity;

(2) Ensure that Contractor and subcontractor personnel who are U.S. nationals and are in-country on a non-transitory basis, register with the U.S. Embassy, and that Contractor and subcontractor personnel who are third country nationals comply with any security related requirements of the Embassy of their nationality;

(3) Provide, to Contractor and subcontractor personnel, antiterrorism/force protection awareness information commensurate with that which the Department of Defense (DoD) provides to its military and civilian personnel and their families, to the extent such information can be made available prior to travel outside the United States; and

(4) Obtain and comply with the most current antiterrorism/force protection guidance for Contractor and subcontractor personnel.

(c) The requirements of this clause do not apply to any subcontractor that is--

(1) A foreign government;

(2) A representative of a foreign government; or

(3) A foreign corporation wholly owned by a foreign government.

(d) Information and guidance pertaining to DoD antiterrorism/force protection can be obtained from [Combined Security Transition Command – Afghanistan \(CSTC-A\), Camp Eggers](#).

(End of clause)

252.229-7000 INVOICES EXCLUSIVE OF TAXES OR DUTIES (JUNE 1997)

Invoices submitted in accordance with the terms and conditions of this contract shall be exclusive of all taxes or duties for which relief is available.

(End of clause)

252.229-7001 TAX RELIEF (JUN 1997)

(a) Prices set forth in this contract are exclusive of all taxes and duties from which the United States Government is exempt by virtue of tax agreements between the United States Government and the Contractor's government. The following taxes or duties have been excluded from the contract price:

“Reference the exchange of diplomatic notes between the USA and Afghanistan dated September 26, 2002, December 12, 2002, and May 28, 2003; and/or successor notes or agreements as applicable.”

(b) The Contractor's invoice shall list separately the gross price, amount of tax deducted, and net price charged.

(c) When items manufactured to United States Government specifications are being acquired, the Contractor shall identify the materials or components intended to be imported in order to ensure that relief from import duties is obtained. If the Contractor intends to use imported products from inventories on hand, the price of which includes a factor for import duties, the Contractor shall ensure the United States Government's exemption from these taxes. The Contractor may obtain a refund of the import duties from its government or request the duty-free import of an amount of supplies or components corresponding to that used from inventory for this contract.

(End of clause)

252.236-7001 CONTRACT DRAWINGS AND SPECIFICATIONS (AUG 2000)

(a) The Government will provide to the Contractor, without charge, one set of contract drawings and specifications, except publications incorporated into the technical provisions by reference, in electronic or paper media as chosen by the Contracting Officer.

(b) The Contractor shall--

- (1) Check all drawings furnished immediately upon receipt;
- (2) Compare all drawings and verify the figures before laying out the work;
- (3) Promptly notify the Contracting Officer of any discrepancies;
- (4) Be responsible for any errors that might have been avoided by complying with this paragraph (b); and
- (5) Reproduce and print contract drawings and specifications as needed.

(c) In general--

- (1) Large-scale drawings shall govern small-scale drawings; and
- (2) The Contractor shall follow figures marked on drawings in preference to scale measurements.

(d) Omissions from the drawings or specifications or the misdescription of details of work that are manifestly necessary to carry out the intent of the drawings and specifications, or that are customarily performed, shall not relieve the Contractor from performing such omitted or misdescribed details of the work. The Contractor shall perform such details as if fully and correctly set forth and described in the drawings and specifications.

(e) The work shall conform to the specifications and the contract drawings identified on the following index of drawings:

Title	File	Drawing No.
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SEE SECTION 00800

(End of clause)

Section 00800 - Special Contract Requirements

SECTION 00800

DEFENSE BASE ACT INSURANCE RATES – LIMITATION – FIXED-PRICE (OCT 2008)

(a) The U. S. Army Corps of Engineers (USACE) has entered into a contract with **CNA Insurance** to provide all Defense Base Act (DBA) insurance to USACE and JCC-I/A contractors and subcontractors at a contracted fixed rate. The fixed rates for this insurance are as follows:

Service	\$4.00	per \$100 of employee remuneration
Construction	\$7.50	per \$100 of employee remuneration
Aviation	\$20.00	per \$100 of employee remuneration
Security	\$12.50	per \$100 of employee remuneration

(b) Bidders/Offerors should compute the total compensation or total payroll, (salary, plus overseas recruitment incentive and post differential, but excludes per diem, housing allowance, travel expenses, temporary quarters allowance, education allowance and other miscellaneous post allowances) to be paid to employees who will be covered by DBA insurance. Compute the cost of DBA Insurance by utilizing the spaces provided below for the base period and whatever extension there may be thereafter, if applicable.

(1) Compensation of Covered Employees: _____
(Total Payroll Not Total Contract Value) Ex.: If total Payroll is \$100,000.00

(2) Applicable DBA Rate: _____
(Use appropriate Rate) Ex: If a Service, the rate is \$4.00/\$100 or 4%

(3) Total DBA Cost: _____
(Amount of DBA Premium) Ex.: \$100 K multiplied by 4% is \$4,000.00

(c) Bidders/Offerors shall include a statement as to whether or not local nationals or third country nationals will be employed on the resultant contract.

(d) CNA Insurance is utilizing Rutherford International as their managing Broker. The primary POC is the USACE DBA Program Administrator is Ramoan Jones, (703) 813-6571 ramoan.jones@rutherford.com. The alternate POC is Sara Payne, Senior Vice President, (703) 813-6503 sara.payne@rutherford.com.

WORKERS COMPENSATION INSURANCE (DEFENSE BASE ACT) – SERVICES (OCT 2008)

(a) This Special Contract Requirement supplements FAR Clause 52.228-3 Workers' Compensation Insurance (Defense Base Act).

(b) The contractor agrees to procure Defense Base Act (DBA) insurance pursuant to the terms of the contract between the U.S. Army Corps of Engineers (USACE) and **CNA Insurance** unless the contractor has a DBA self-insurance program approved by the Department of Labor. Proof of this self-insurance shall be provided to the Contracting Officer. The contractor shall submit proof of a valid DBA Insurance policy with CNA Insurance for the Prime and their Subcontractor's at every tier prior to performance of the contract. The current rate under the USACE and JCC-I/A contract is **\$4.00 per \$100 of compensation for services.**

(c) The contractor agrees to insert a Special Contract Requirement substantially the same as this one in all subcontracts (at every tier) to which DBA is applicable.

(d) Should the rates for DBA insurance coverage increase or decrease during the performance of this contract, USACE shall modify the contract accordingly. However, the revised rates will not be applicable until the Contractor's or Subcontractor's DBA Insurance policy is due to be renewed.

(e) Premiums will be reimbursed only if coverage is purchased through the USACE mandatory requirements DBA contract administered by CNA Insurance and their Managing Broker, Rutherford International.

(f) Failure to comply and purchase Defense Base Act (DBA) Insurance in accordance with FAR Clauses 52.228-3 Workers' Compensation Insurance (Defense Base Act), from the U.S. Army Corps of Engineers mandatory Insurance Carrier/Broker (CNA Insurance/Rutherford International) for the Prime and all of the Subcontractors at every tier, shall be considered a material breach and could cause your contract to be terminated for default/cause.

APPLICATION OF US CRIMINAL JURISDICTION

Reference DODI 5525.11. The contractor is directed to provide all of its personnel working under this contract, and to require all of its subcontractors to provide their personnel, with written notification that - with the exception of nationals of Afghanistan and those ordinarily resident in Afghanistan - contractor and subcontractor personnel, and the dependents of contractor and subcontractor personnel who are residing with such personnel, may be subject to US criminal jurisdiction as provided for in the Military Extraterritorial Jurisdiction Act, 18 USC 3261-3267; see Section 3267(1)(A)(iii)(I) and (2)(A)(iii). A copy of the notice ***shall be furnished to the contracting officer upon award of the contract***, along with a certification by an authorized company representative attesting to the provision of the notification to contractor personnel.

TRAVEL WARNINGS

The contractor shall provide all personnel working under this contract, and shall require subcontractors to provide their personnel, with a written notification advising such personnel to be aware of US State Department Travel Warnings with respect to Afghanistan, available at <http://travel.state.gov>, in the event they wish to consider bringing their dependants into Afghanistan. A copy of the notice ***shall be furnished to the contracting officer upon award of the contract***, along with a certification by an authorized company representative attesting to the provision of the notification to contractor personnel. At no time, subject to the written approval of the contracting officer, may the contractor allow such dependants, or any other unauthorized individuals, to be present on the project site grounds, whether in transit or otherwise.

CLASS DEVIATION 2007-O0010, IMPLEMENTATION OF THE SYNCHRONIZED PREDEPLOYMENT AND OPERATIONAL TRACKER (SPOT) TO ACCOUNT FOR CONTRACTOR PERSONNEL PERFORMING IN THE UNITED STATES CENTRAL COMMAND AREA OF RESPONSIBILITY.

(i) "Performance in the United States Central Command Area of Responsibility (USCENTCOM AOR)" means performance of a service or construction, as required by the contract. For supply contracts, production of the supplies or associated overhead functions are not covered, but

services associated with the acquisition of the supplies are covered (e.g., installation or maintenance).

(ii) If a contract requires performance in the USCENTCOM AOR, but some personnel performing the contract are authorized to accompany the U.S. Armed Forces, and other personnel performing the contract are not authorized to accompany the U.S. Armed Forces, include in the solicitation and contract both the clause at DFARS 252.225-7040 and the clause provided by Class Deviation 2007-O0010. Paragraph (b)(1) of each clause limits the applicability of the clause to the appropriate personnel. There are differences between the two clauses, primarily in Government support to contractor personnel (e.g., security protection and limited medical treatment) and potential applicability of the Uniform Code of Military Justice to contractor employees that are authorized to accompany the U.S. Armed Forces.

(iii) The requirements of paragraph (g) of the clause in Class Deviation 2007-O0010 are not applicable to subcontracts for which the period of performance of the subcontract is less than 30 days.

(iv) In exceptional circumstances, the head of the agency may authorize deviations from the requirements of Class Deviation 2007-O0010, in accordance with FAR Subpart 1.4 and DFARS Subpart 201.4.

(end clause)

AI 25.1103-109
MEDICAL SCREENING AND VACCINATION REQUIREMENTS
FOR LOCALLY HIRED EMPLOYEES
(MAR 2009)

(a) Contractors, and subcontractors at any tier shall ensure and provide satisfactory evidence that all locally hired employees, including Local National (LN), Third Country National, and U.S. employees, working on military have been screened for and do not currently have active tuberculosis (TB).

(1) Contractors may utilize a testing method of either a chest x-ray or TB skin test (TST).

(i) Chest x-rays shall be taken and TBTs administered within 90 days prior to the start of employment.

(ii) Screening may be performed either by a licensed medical provider from the local economy or by contractors' licensed medical staffs. Contractors shall maintain medical screening documentation and make it available to the Contracting Officer upon request.

(2) TB screening documentation will be required by the responsible Base Defense Operations Center (BDOC) prior to issuance of base access badges.

(b) Contractor employees, including subcontractors at any tier, who work in positions where they are working with food or water production and distribution shall have current Typhoid and Hepatitis "A" (full series) vaccinations, in addition to the TB tests required above.

(a) At least the first inoculation in the Hepatitis "A" series must be given prior to the start of employment, with continuation and completion of the inoculation series. The Typhoid inoculation must be completed within two years prior to the date of employment in the food and water service capacity.

(i) Once the complete Hepatitis "A" vaccination series is completed, it does not have to be repeated. The Typhoid vaccination requires a booster immunization every three years.

(ii) Proof of individual employee vaccinations shall be provided to the Contracting Officer and

maintained by the Contractor for examination by the Contracting Officer.

(End of Requirement)

AI 25.1103-104

**COMPLIANCE WITH LAWS AND REGULATIONS
(MAR 2009)**

(a) The Contractor shall comply with, and shall ensure that its employees and its subcontractors and their employees, at all tiers, are aware of and obey all U.S. and Host Nation laws, Federal or DoD regulations, and Central Command orders and directives applicable to personnel in Iraq and Afghanistan, including but not limited to USCENTCOM, Multi-National Force and Multi-National Corps operations and fragmentary orders, instructions, policies and directives.

(b) Contractor employees shall particularly note all laws, regulations, policies, and orders restricting authority to carry firearms, rules for the use of force, and prohibiting sexual or aggravated assault. Contractor employees are subject to General Orders Number 1, as modified from time to time, including without limitation, their prohibition on privately owned firearms, alcohol, drugs, war souvenirs, pornography and photographing detainees, human casualties or military security measures.

(c) Contractor employees may be ordered removed from secure military installations or the theater of operations by order of the senior military commander of the battle space for acts that disrupt good order and discipline or violate applicable laws, regulations, orders, instructions, policies, or directives. Contractors shall immediately comply with any such order to remove its contractor employee.

(d) Contractor employees performing in the USCENTCOM Area of Operations (AOR) may be subject to the jurisdiction of overlapping criminal codes, including, but not limited to, the Military Extraterritorial Jurisdiction Act (18 U.S.C. Sec. 3261, et al) (MEJA), the Uniform Code of Military Justice (10 U.S.C. Sec. 801, et al)(UCMJ), and the laws of the Host Nation. Non-US citizens may also be subject to the laws of their home country while performing in the USCENTCOM AOR. Contractor employee status in these overlapping criminal jurisdictions may be modified from time to time by the United States, the Host Nation, or by applicable status of forces agreements.

(e) Under MEJA, a person who engages in felony misconduct outside the United States while employed by or accompanying the Armed Forces is subject to arrest, removal and prosecution in United States federal courts. Under the UCMJ, a person serving with or accompanying the Armed Forces in the field during a declared war or contingency operation may be disciplined for a criminal offense, including by referral of charges to a General Court Martial. Contractor employees may be ordered into confinement or placed under conditions that restrict movement within the AOR or administratively attached to a military command pending resolution of a criminal investigation.

(f) Contractors shall immediately notify military law enforcement and the Contracting Officer if they suspect an employee has committed an offense. Contractors shall take any and all reasonable and necessary measures to secure the presence of an employee suspected of a serious felony offense. Contractors shall not knowingly facilitate the departure of an employee suspected of a serious felony offense or violating the Rules for the Use of Force to depart Iraq or Afghanistan without approval from the senior U.S. commander in the country.

(End of Requirement)

AI 22.1705-100

**PROHIBITION AGAINST HUMAN TRAFFICKING, INHUMANE LIVING
CONDITIONS, AND WITHHOLDING OF EMPLOYEE PASSPORTS
(MAR 2009)**

(a) All contractors (“contractors” refers to both prime contractors and all subcontractors at all tiers) are reminded of the prohibition contained in Title 18, United States Code, Section 1592, against knowingly destroying, concealing, removing, confiscating, or possessing any actual or purported passport or other immigration document, or any other actual or purported government identification document, of another person, to prevent or restrict or to attempt to prevent or restrict, without lawful authority, the person’s liberty to move or travel, in order to maintain the labor or services of that person, when the person is or has been a victim of a severe form of trafficking in persons.

W912ER-09-R-0027

Page 191 of 199

(b) Contractors are also required to comply with the following provisions:

(1) Contractors shall only hold employee passports and other identification documents discussed above for the shortest period of time reasonable for administrative processing purposes.

(2) Contractors shall provide all employees with a signed copy of their employment contract, in English as well as the employee’s native language that defines the terms of their employment/compensation.

(3) Contractors shall not utilize unlicensed recruiting firms, or firms that charge illegal recruiting fees.

(4) Contractors shall be required to provide adequate living conditions (sanitation, health, safety, living space) for their employees. Fifty square feet is the minimum acceptable square footage of personal living space per employee. Upon contractor’s written request, contracting officers may grant a waiver in writing in cases where the existing square footage is within 20% of the minimum, and the overall conditions are determined by the contracting officer to be acceptable. A copy of the waiver approval shall be maintained at the respective life support area.

(5) Contractors shall incorporate checks of life support areas to ensure compliance with the requirements of this Trafficking in Persons Prohibition into their Quality Control program, which will be reviewed within the Government’s Quality Assurance process.

(6) Contractors shall comply with international laws regarding transit/exit/entry procedures, and the requirements for work visas. Contractors shall follow all Host Country entry and exit requirements.

(c) Contractors have an affirmative duty to advise the Contracting Officer if they learn of their employees violating the human trafficking and inhumane living conditions provisions contained herein. Contractors are advised that contracting officers and/or their representatives will conduct random checks to ensure contractors and subcontractors at all tiers are adhering to the law on human trafficking, humane living conditions and withholding of passports.

(d) The contractor agrees to incorporate the substance of this clause, including this paragraph, in all subcontracts under his contract.

(End of Requirement)

AI 23.1000-100

**REPORTING KIDNAPPINGS, SERIOUS INJURIES AND DEATHS
(MAR 2009)**

Contractors shall notify the Contracting Officer, as soon as practicable, whenever employee kidnappings, serious injuries or deaths occur.

Report the following information:

Contract Number:

Contract Description & Location:

Company Name:

Reporting party:

Name:

Phone number:
e-mail address:
Victim:
Name:
Gender (Male/Female):
Age:
Nationality:
Country of permanent residence:
Incident:
Description:
Location:
Date and time:
Other Pertinent Information:

(End of Requirement)

AI 25.1103-2

**ARMED PERSONNEL INCIDENT REPORTS
(MAR 2009)**

(a) All contractors and subcontractors in the Multi-National Forces-Iraq (MNF-I) or Combined Joint Task Force (Afghanistan) theater of operations shall comply with and shall ensure that their personnel supporting MNF-I or CJTF forces are familiar with and comply with all applicable orders, directives, and instructions issued by the respective MNF-I or CJTF Commanders relating to force protection and safety.

(b) **IRAQ:** Contractors shall provide all incidents and use of weapons firing incidents to the MNC-I Contractor Operations Cell (CONOC) as soon as practical, based upon the situation, and submit a written report to CONOC within 4 hours. The initial report shall include the name of the company, location of the incident, time when the incident occurred, a brief description of the events leading up to the incident, and a company point of contact. A follow-up, comprehensive written report shall be provided to the CONOC within 96 hours of the incident. Reports shall be submitted to CONOC at: mncic3conoc@iraq.centcom.mil; DSN 318-435-2369; Iraqna 0044 203 286 9851 or 0044 203 239 5894; or Skype: MNCICONOC.

(c) **AFGHANISTAN:** Contractors shall report all incidents and use of weapons through their Contracting Officers who will notify the JOC Watch at Bagram AB. (JOC SHIFT DIRECTOR, DSN: 318-431-4116; SVOIP: 431-7108) Information should include: the name of the company, where the incident occurred, time when the incident occurred, a brief description of the events leading up to the incident, and a point of contact for the company. The JOC Watch duty officer will issue guidance for further reporting requirements.

(d) Contractors shall provide first aid and request MEDEVAC of injured persons, and remain available for U.S. or Coalition response forces, based upon the situation. In the event contractor personnel are detained by U.S. or Coalition Forces, prolonged detention due to lack of proper identification can be alleviated by contractor personnel possessing on their person information that includes the contractor's name, the contract number, a contractor management POC, and the phone number of the CONOC/JOC Watch.

(End of Requirement)

AI 25.1103-103

**FITNESS FOR DUTY AND MEDICAL/DENTAL CARE LIMITATIONS
(MAR 2009)**

(1) The contractor shall perform the requirements of this contract notwithstanding the

fitness for duty of deployed employees, the provisions for care offered under this section, and redeployment of individuals determined to be unfit. The contractor bears the responsibility for ensuring all employees are aware of the conditions and medical treatment available at the performance. The contractor shall include this information and requirement in all subcontracts with performance in the theater of operations.

(2) The contractor shall not deploy an individual with any of the following conditions unless approved by the appropriate CENTCOM Service Component (ie. ARCENT, AFCENT, etc.) Surgeon: Conditions which prevent the wear of personal protective equipment, including protective mask, ballistic helmet, body armor, and chemical/biological protective garments; conditions which prohibit required theater immunizations or medications; conditions or current medical treatment or medications that contraindicate or preclude the use of chemical and biological protectives and antidotes; diabetes mellitus, Type I or II, on pharmacological therapy; symptomatic coronary artery disease, or with myocardial infarction within one year prior to deployment, or within six months of coronary artery bypass graft, coronary artery angioplasty, or stenting; morbid obesity (BMI \geq 40); dysrhythmias or arrhythmias, either symptomatic or requiring medical or electrophysiologic control; uncontrolled hypertension, current heart failure, or automatic implantable defibrillator; therapeutic anticoagulation; malignancy, newly diagnosed or under current treatment, or recently diagnosed/treated and requiring frequent subspecialist surveillance, examination, and/or laboratory testing; dental or oral conditions requiring or likely to require urgent dental care within six months' time, active orthodontic care, conditions requiring prosthodontic care, conditions with immediate restorative dentistry needs, conditions with a current requirement for oral-maxillofacial surgery; new onset (< 1 year) seizure disorder, or seizure within one year prior to deployment; history of heat stroke; Meniere's Disease or other vertiginous/motion sickness disorder, unless well controlled on medications available in theater; recurrent syncope, ataxias, new diagnosis (< 1 year) of mood disorder, thought disorder, anxiety, somatoform, or dissociative disorder, or personality disorder with mood or thought manifestations; unrepaired hernia; tracheostomy or aphonia; renalithiasis, current; active tuberculosis; pregnancy; unclosed surgical defect, such as external fixator placement; requirement for medical devices using AC power; HIV antibody positivity; psychotic and bipolar disorders. (Reference: Mod 8 to USCENTCOM Individual Protection and Individual/Unit Deployment Policy, PPG-Tab A: Amplification of the Minimal Standards of Fitness for Deployment to the CENTCOM AOR).

(3) In accordance with military directives (DoDI 3020.41, DoDI 6000.11, CFC FRAGO 09-1038, DoD PGI 225.74), resuscitative care, stabilization, hospitalization at Level III (emergency) military treatment facilities and assistance with patient movement in emergencies where loss of life, limb or eyesight could occur will be provided. Hospitalization will be limited to emergency stabilization and short-term medical treatment with an emphasis on return to duty or placement in the patient movement system. Subject to availability at the time of need, a medical treatment facility may provide reimbursable treatment for emergency medical or dental care such as broken bones, lacerations, broken teeth or lost fillings.

(4) Routine and primary medical care is not authorized. Pharmaceutical services are not authorized for routine or known, routine prescription drug needs of the individual. Routine dental care, examinations and cleanings are not authorized.

(5) Notwithstanding any other provision of the contract, the contractor shall be liable for any and all medically-related services or transportation rendered. In accordance with OUSD(C) Memorandum dated 4 June 2008, the following reimbursement rates will be charged for services at all DoD deployed medical facilities. These rates are in effect until changed by DoD direction.

(a) Inpatient daily rate: \$2,041.00. Date of discharge is not billed unless the patient is admitted to the hospital and discharged the same day.

(b) Outpatient visit rate: \$195.00. This includes diagnostic imaging, laboratory,

pathology, and pharmacy provided at the medical facility.

(End of Requirement)

AI 25.1103-105
MONTHLY CONTRACTOR CENSUS REPORTING
(MAR 2009)

Contractor shall provide monthly employee census information to the Contracting Officer, by province, for this contract. Information shall be submitted either electronically or by hard-copy. Information shall be current as of the 25th day of each month and received by the Contracting Officer no later than the first day of the following month. The following information shall be provided for each province in which work was performed:

- (1) The total number (prime and subcontractors at all tiers) employees.
- (2) The total number (prime and subcontractors at all tiers) of U.S. citizens.
- (3) The total number (prime and subcontractors at all tiers) of local nationals (LN).
- (4) The total number (prime and subcontractors at all tiers) of third-country nationals (TCN).
- (5) Name of province in which the work was performed.
- (6) The names of all company employees who enter and update employee data in the Synchronized Predeployment & Operational Tracker (SPOT) IAW DFARS 252.225-7040 or DFARS DOD class deviation 2007-O0010.

(End of Requirement)

AI 25.1103-101
ARMING REQUIREMENTS AND PROCEDURES FOR
PERSONAL SECURITY SERVICES CONTRACTORS AND FOR REQUESTS
FOR PERSONAL PROTECTION
(MAR 2009)

General. Contractor and its subcontractors at all tiers that require arming under this contract agree to obey all laws, regulations, orders, and directives applicable to the use of private security personnel in Iraq and Afghanistan, including U.S. CENTCOM, Multi-National Force Commander and Multi-National Corps Commander orders, instructions and directives. Contractors will ensure that all employees, including employees at any tier of subcontracting relationships, armed under the provisions of this contract, comply with the contents of this clause and with the requirements set forth in the following:

DODI 3020.41, *Program Management for Acquisition and Operational Contract Support in Contingency Operations*;

DFARS 252.225-7040, *Contractor Personnel Supporting a Force Deployed Outside the United States*;

Class Deviation 2007-O0010, Contractor Personnel in the United States Central Command Area of Responsibility

CPA Order #17, *Registration Requirements for Private Security Companies*, dated 27 Jun 04;

U.S. CENTCOM Policy Letter, Mod 1, *Personal Protection and Contract Security Service Arming*, dated 7 Nov 2006

Required Government Documentation. The unit requesting the contractor security shall provide a description of the following to the arming approval authority and to the contracting officer:

The specific location where the PSC will operate;

The persons and/or property that require protection;

The anticipated threat;
The required weapon types; and
The reason current security/police forces are inadequate.

Required Contractor Documentation. Contractors and their subcontractors at all tiers that require arming approval shall provide the following to the contracting officer representative (COR):

Documentation that each employee who will be armed under the contract received the following training—

Weapons Qualification/Familiarization. All employees must meet the qualification requirements established by any DoD or other U.S. government agency

Law of Armed Conflict (LOAC);

Rules for the Use of Force (RUF), as defined in the U.S. CENTCOM Policy, dated 23 December 2005; and

Distinction between the above-prescribed RUF and the Rules of Engagement (ROE), which are applicable only to military forces.

Completed DD Form 2760 (or equivalent documentation) for each armed employee, indicating that the employee is not otherwise prohibited under U.S. law from possessing the required weapon or ammunition.

One (1) copy of a business license from the Iraqi or Afghani Ministry of Trade or Interior;

One (1) copy of an operating license (or a temporary operating license) from the Ministry of Interior;

A communications plan that, at a minimum, sets forth the following:

The contractor's method of notifying military forces and requesting assistance where hostilities arise or combat action is needed;

How relevant threat information will be shared between contractor security personnel and U.S. military forces; and

How the contractor will coordinate transportation with appropriate military authorities.

An acceptable plan for accomplishing background checks on all contractor and subcontractor employees who will be armed under the contract. The contractor shall, at a minimum, perform the following (which will be specifically addressed in its plan and which will be documented and furnished to the COR upon completion):

Use one or more of the following sources when conducting the background checks:

Interpol, FBI, Country of Origin Criminal Records, Country of Origin U.S. Embassy Information Request, CIA records, and/or any other records available;

Verify with MNC-I or Afghanistan RCE – CG Provost Marshal that no employee has been barred by any commander within Iraq or Afghanistan; and

Certify, after completing all checks, that all persons armed under this contract are not prohibited under U.S. law from possessing a weapon or ammunition.

Required Contractor Acknowledgements. Contractors and their subcontractors at all tiers that require arming approval will provide written acknowledgement of the following to the COR:

Penalties for Non-Compliance. Failure of contractor or subcontractor employee(s) to comply with the laws, regulations, orders, and rules (including those specified herein) governing the use of force may result in the revocation of weapons authorization for such employee(s). Where appropriate, such failure may also result in the total revocation of weapons authorization for the contractor (or subcontractor) and sanctions under the contract, including termination.

Criminal and Civil Liability. Arming of contractor or subcontractor employees under this contract may subject the contractor, its subcontractors, and persons employed by the same, to U.S. and Host Nation prosecution and civil liability. "Host Nation" refers to the nation or nations where services under this contract are performed.

Lapses in Training. Failure to successfully retrain an employee who is armed under this contract within twelve (12) months of the last training date will constitute a lapse in the employee's authorization to possess and carry the weapon. All unauthorized employees

will immediately surrender their weapon to the contractor and will remain unarmed until such time as they are retrained and the COR determines that the retraining is sufficient.

Authorized Weapon & Ammunition Types. Unless DCDRUSCENTCOM (or a designee) provides otherwise, all arming requests and authorizations for contractor or subcontractor employees under this contract shall be limited to U.S. Government approved weapons and ammunition. This restriction applies to all weapons in the possession of contractor employees, even if such weapons are required for personal protection. The following weapons and ammunition are currently authorized by the U.S. Government for use in Iraq and Afghanistan:

The M9, M4, M16, or equivalent (e.g. .45 CAL, AK-47).

The M9 or equivalent sidearm will be the standard personal protection weapon unless other weapons are specifically requested and approved.

U.S. government Ball ammunition is the standard approved ammunition.

Requirements for Individual Weapons Possession. All employees of the contractor and its subcontractors at all tiers who are armed under this contract must:

Possess only those U.S. Government-approved weapons and ammunition for which they are qualified under the training requirements of section (c);

Carry weapons only when on duty or at a specific post;

Not conceal any weapons, unless specifically authorized;

Carry proof of authorization to be armed. Employees not possessing such proof will be deemed unauthorized and must surrender their weapon to their employer; and IAW USCENTCOM G.O. #1, consumption of alcohol in Iraq or Afghanistan is prohibited. In the event of a suspension or an exception to G.O. #1, employees shall not consume any alcoholic beverage while armed or within eight (8) hours of the next work period where they will be armed.

Weapons/Equipment Restrictions and Responsibilities. Unless otherwise provided, the U.S. Government will not provide any weapons or ammunition to contractors, their subcontractors, or any employees of the same. The Contractor will provide all weapons and ammunition to those employees that will be armed under the contract. The contractor and its subcontractors at all tiers will also provide interceptor body armor, ballistic helmets, and the Nuclear, Biological, and Chemical (NBC) protective masks to those employees that require such equipment in the performance of their duties.

Rules for the Use of Force (RUF). In addition to the RUF and ROE training referenced in paragraph (c), the contractor and its subcontractors at all tiers will monitor and report all activities of its armed employees that may violate the RUF. Prompt reporting demonstrates a desire by the contractor and its subcontractors to minimize the impact of any violations and, therefore, will be given favorable consideration. Violations of the RUF include, though are not limited to:

Taking a direct part in hostilities or combat actions, other than to exercise self-defense;

Failing to cooperate with Coalition and Host Nation forces;

Using deadly force, other than in self-defense where there is a reasonable belief of imminent risk of death or serious bodily harm;

Failing to use a graduated force approach;

Failing to treat the local civilians with humanity or respect; and

Detaining local civilians, other than in self-defense or as reflected in the contract terms.

Retention and Review of Records. The Contractor and all subcontractors at all tiers shall maintain records on weapons training, LOAC, RUF and the screening of employees for at least six (6) months following the expiration (or termination) of the contract. The Contractor and its subcontractors at all tiers shall make these records available to the Contracting Officer or designated representative, at no additional cost to the government, within 72 hours of a request.

Contractor Vehicles. Vehicles used by contractor and subcontractor personnel in the course of their security duties shall not be painted or marked to resemble U.S./Coalition or host nation military and police force vehicles.

Quarterly Reporting. The prime contractor will report quarterly (i.e. NLT 1 January, 1

April, 1 July and 1 October for each quarter of the calendar year) to the Contracting Officer responsible for this contract, and any other organization designated by the Contracting Officer, the following information under this contract:

The total number of armed civilians and contractors;

The names and contact information of its subcontractors at all tiers; and

A general assessment of the threat conditions, adequacy of force numbers, and any problems that might require a change to force levels. Note: this information is in addition to the information the contractor promises to immediately provide under the communications plan referenced at paragraph (c)(5).

(End of Requirement)

AI 36.521-100
ELECTRICAL AND STRUCTURAL BUILDING STANDARDS FOR
CONSTRUCTION PROJECTS
(MAR 2009)

(a) The standards set forth herein are the minimum requirements for the contract. These standards must be followed unless a more stringent standard is specifically included. In such case the most stringent standard shall be required for contract acceptance.

(b) The contractor, in coordination with the Contracting Officer, Base Camp Mayor, Base/Unit Engineers, and requiring activity shall evaluate, upgrade, build, and/or refurbish buildings to a safe and livable condition. This work may include refurbishment, construction, alterations, and upgrades. All work shall be in accordance with accepted standards of quality.

(c) As dictated by the Unified Facilities Criteria (UFC) the contract shall meet:

(1) "the minimum requirements of United States' National Fire Protection Association (NFPA) 70,

(2) National Electrical Code (NEC),

(3) the American National Standards Institute (ANSI) C2, and

(4) the United States' National Electrical Safety Code (NESC).

(d) These standards must be met when it is reasonable to do so with available materials. When conditions dictate deviation, then provisions within the International Electrical Code (IEC) or British Standard (BS 7671) shall be followed. Any deviations from the above necessary to reflect market conditions, shall receive prior written approval from a qualified engineer and the Contracting Officer.

(e) The following internet links provide access to some of these standards:

UFC: http://65.204.17.188/report/doc_ufc.html

NFPA 70: <http://www.nfpa.org>

NESC: <http://www.standards.ieee.org/nesc>

(End of Requirement)

SECTION 01010

SECTION 01010
SCOPE OF WORK

1. GENERAL

The project consists of the design and construction of a new vehicle refueling point and removal of the existing refueling point at the ANA National Military Hospital at Kabul, Afghanistan. The proposed site is located next to the existing vehicle refueling point. Refer to appendices for photos of the proposed site

location. The project is defined as the adaptation of existing design, material, labor, and equipment to construct a vehicle refueling point consisting of a covered fueling island, a small control/observation building, a hazardous material storage enclosure, bulk diesel and MOGAS fuel tanks with reinforced concrete containment and associated concrete pad, access roads, site preparation and storm water drainage system with oil/water separator. Provide signage IAW EM 385-1-1, Section 8 and Section 9. Signs shall be posted as directed by the COR. Signs shall read "No Smoking Within 50 Feet", "Portable Fire Extinguisher" and "Spill Response Kit". Other warning signs shall be posted as directed by the COR. Demolition of the existing vehicle refueling point and subsequent removal of contaminated soil is also required after completion of the new vehicle refueling station. The work within this contract shall meet and be constructed in accordance with current U.S. design and International Building Codes (IBC), Life Safety Codes (NFPA-101), Force Protection and security standards. A partial listing of references is included herein:

IBC, International Building Codes 2003
NFPA 101, Life Safety Codes
UFC 4-010-01, DoD Minimum Anti-Terrorism Standards for Buildings.
UFC 3-460-01, Petroleum Fuel Facilities
EM 385-1-1, Safety and Health Requirements Manual

1.1 ENGLISH LANGUAGE REQUIREMENT

All information shall be presented in English. The Contractor shall have a minimum of one English-speaking representative to communicate with the COR at all times when work is in progress.

1.2 SUBMITTALS

Submittals and a Submittal Register are required as specified in Section 01335 of the Basic Contract.

1.3 COST ESTIMATE

The contractor shall prepare a parametric construction cost estimate for AED Engineering data collection purposes. The contractor shall prepare a thorough, well-supported, estimate reflecting the final design features, construction schedule and conditions, and any construction phasing requirements. The cost estimate shall be submitted as part of the 65%, 99% and Final design submittals.

1.4 CQM TRAINING REQUIREMENT

Before project design and construction begin, the Contractor's Quality Control Manager is required to have completed the U.S. Army Corps of Engineers (USACE) Construction Quality Management (CQM) course, or equivalent. The CQM course will be offered periodically by the Afghanistan Engineer District (AED), USACE. For enrollment and course information, contact the AED Quality Assurance Branch through the COR. CQM training is also offered at university, commercial and technical training centers, contact the AED Quality Assurance Branch through the COR for names and locations. Alternative CQM courses, other than those mentioned above, must be approved by the Quality Assurance Branch. The Quality Assurance Branch of the AED can provide information related to AED offerings of the CQM course, as well as contact information for training centers. Alternative CQM courses, other than those mentioned above, must be approved by the Quality Assurance Branch.

The contractor's quality control plan, as defined in USACE Guide Specification 01451 (or 01 45 04.00 10), entitled "Contractor Quality Control", must include "The name, qualifications (in resume format), duties, responsibilities, and authorities of each person assigned a CQC function." For the QC Manager, qualifications must include a certificate demonstrating completion of an approved CQM course.

1.5 ELECTRICAL WORKERS QUALIFICATIONS

Electrical work shall be performed by Qualified Personnel with verifiable credentials who are thoroughly knowledgeable with applicable code requirements. Verifiable credentials consist of a certificate of graduations from an approved trade school and required amount of experience, depending on work being performed, and should be identified in the proposal that is submitted. Qualified personnel are one who has received training in and has demonstrated skills and knowledge in the construction and operation of electrical equipment and installations and the hazards involved. This includes the skills and techniques necessary to distinguish exposed live parts from other parts of electric equipment, to determine the nominal voltage of exposed live parts, the clearance distances and corresponding voltages to which the qualified person will be exposed.

1.5.1 Supervisory Electrician

Supervisory electricians must be graduates of an approved trade school, and must have two years of relevant electrician experience. Approved programs include but are not limited to the Afghanistan Technical and Vocational Institute (in Kabul), the Kunar Trades Training Center, and the Commercial Technical Training Center (in Jalalabad). Work experience resumes and graduation certificates shall be submitted and approved prior to commencement of any design or construction involving electrical work. Approval is granted by the Contracting Officer's Representative with guidance by the Quality Assurance Branch and/or the Safety Office of the US Army Corps of Engineers, Afghanistan Engineer District,

1.5.2 Electricians

Electricians must be graduates of an approved trade school and must be able to provide upon request a certification of successful course work completion and graduation in addition to a resume of work experience.

2. LOCATION

The site is located in the ANA National Military Hospital compound.

3. UNEXPLODED ORDNANCE (UXO)

3.1 UXO REMOVAL AND CLEARANCE

The contractor is not responsible for the clearance or removal of mines and unexploded ordnance (UXO) from the site prior to the commencement of construction.

It is the responsibility of the Contractor to be aware of the risk of encountering UXO/mines and to take all actions necessary to assure a safe work area to perform the requirements of this contract. The Contractor assumes the risk of any and all personal injury, property damage or other liability arising out of or resulting from any Contractor action taken hereunder. The Contractor and its subcontractors may not handle, work with, move, transport, render safe, or disarm any UXO/mine, unless they have appropriate accreditations from the MAC.

If a UXO/mine is encountered during project construction, UXO/mine disposal shall be handled in accordance with Section 01015, Technical Requirements.

4. SUMMARY OF WORK

4.1 CONTRACTOR REQUIREMENTS

The contractor shall design and construct the facilities as a design-build contract and shall be in accordance with the requirements stated in Section 01015: TECHNICAL REQUIREMENTS. Refer to attachment following this section for more specifics for required spaces. The design and construction work shall include but not be limited to that shown within attached table and described herein.

4.1.1 GENERAL REQUIREMENTS FOR FACILITIES

All requirements set forth in the Scope of Work, but not included in the Technical Requirements, shall be considered as set forth in both, and vice versa.

All standard construction amenities and details such as heating, lighting, site drainage, utility connections, etc. shall be implied as a design and construction requirement. Drawings referenced are contained in Appendix A.

The design and construction work shall include but not be limited to the following sub-paragraphs. In general, this project consists of designing and constructing of the following:

4.1.2 Base Bid

1. Design Activities
2. Mobilization/Demobilization
3. As-Built Drawings
4. Construct new vehicle refueling point
5. Demolish existing vehicle refueling point
6. Remove contaminated soil and fill with satisfactory material
7. DBA Insurance

4.2 STORM WATER SYSTEM

The Contractor shall design and construct a storm water drainage system around the new vehicle refueling point. Provide a drain trench at both ends of the vehicle refueling pad. Provide steel grating which can support the load of the vehicles. The drainage from the trenches shall flow into an oil water separator and then flow out to the storm drainage system. Connect the new storm water drainage to existing.

4.3 DEMOLITION AND GRADING

The contractor shall demolish the existing vehicle refueling point after the new vehicle refueling station is completed and operational. The Contractor shall remove and dispose of all debris, equipment, concrete, and foundations. The contractor shall remove contaminated soil from around and under the existing fueling island and within the existing tank buildings.

The Contractor shall verify the location of debris disposal with the Contracting Officer. The Contractor shall perform complete final site grading after the demolition and soil removal is completed. Native crushed stone 100 mm thick shall be placed over the graded area.

4.4 FOUNDATION DESIGN

Foundations, including subgrade, shall be designed and constructed based on recommendations from geotechnical investigation required herein.

4.5 ROADS AND CURBS

The Contractor shall design and construct the entire road and parking network. The roads shall be designed to carry traffic of a 40 metric-ton five-axle vehicle. A storm drainage system shall also be included. The road layout shall provide access to the new vehicle refueling station and the bulk fuel tanks. Road design shall be designed per Section 01015, Technical Requirements. Roadways and curbs are required as shown on attached drawings and shall be designed and constructed based upon recommendations from geotechnical analysis as required herein.

4.6 VEHICLE RE-FUELING POINT

The Contractor shall design and construct a low profile vehicle re-fueling point, as specified in Section 01015, capable of storing 19,375 liters (5000 gallons) of diesel and 19,375 liters (5000 gallons) of MOGAS. Provide a converted 2440 x 6060 conex shipping container as the control/observation building. Provide a weather canopy 2800 mm x 11000 mm x a minimum 5000 mm high over the vehicle re-fueling island. Provide a separate covered, chain link enclosure for storing waste fuel containers. Appendix A provides the general layout for the vehicle re-fueling point. The Contractor is responsible for the coordination and placement of the respective facilities based on the actual site. The Contractor shall provide the required fuel to flush and test the system. The Contractor shall provide a full supply of fuel to the tanks at the time of turnover to the Government. The Contractor shall provide capability for fuel delivery from outside of the containment dike.

4.7 HEATING

Environmental control of the facilities shall be achieved as specified in Section 01015.

4.8 LIGHTING

General lighting shall be provided as indicated and shall meet recommendations from IESNA for each building type and function within each building. Design and installation shall meet NEC 70 requirements.

Exterior lighting shall be high intensity discharge luminaries on 10 meter high minimum spun aluminum or galvanized steel poles. If to be installed on an existing installation, type of luminaries shall match existing predominant type within installation.

4.9 SITE ELECTRICAL AND COMMUNICATION SYSTEM

POWER SYSTEM: The contractor shall provide power to the vehicle fueling facility from an existing source on the installation. All electrical design and installation shall meet NEC (NFPA 70) requirements. Electrical receptacles shall be provided every three meters along the wall in the control building. The control building shall have lighting as shown that will light the interior of the building to 50 foot candles. An exterior light over the door shall also be installed. Conductors and circuits shall be sized for the specific loads. All wiring shall be run and pulled through conduits. The power supplied to the vehicle fueling station shall 380/220V 50Hz.

5.0 COMPLETION OF WORK

All work required under this contract shall be completed within 270 calendar days [including government review time] from Notice to Proceed for site work.

6.0 REFERENCES

Refer to Section 01015 for required references.

-- End of Section --
01010

SECTION 01015

SECTION 01015 TECHNICAL REQUIREMENTS – DESIGN/BUILD

1.0 GENERAL

1.1 COMPLIANCE

The Contractor's design and construction must comply with technical requirements contained herein. The Contractor shall provide design and construction using the best blend of cost, construction efficiency, system durability, ease of maintenance and environmental compatibility.

1.2 MINIMUM & ALTERNATE REQUIREMENTS

These design and product requirements are minimum requirements. The Contractor is encouraged to propose alternate design or products (equipment and material) that are more commonly used in the region; will be equally or more cost effective or allow for more timely completion, but furnish the same system safety, durability, ease of maintenance and environmental compatibility. The Contractor will be required to submit information as requested by the Contracting Officer to make a comparison of the proposed alternate. All variations of approved designs must be approved by the Contracting Officer.

1.3 ASBESTOS CONTAINING MATERIALS

Asbestos containing material (ACM) shall not be used in the design and construction of this project. If no other material is available which will perform the required function or where the use of other material would be cost prohibitive, a waiver for the use of asbestos containing materials must be obtained from the Contracting Officer.

1.4 SAFETY

1.4.1 Unexploded Ordnance (UXO)

1.4.1.1 UXO/Mine Discovery during Project Construction

It is the responsibility of the Contractor to be aware of the risk of encountering UXO and to take all actions necessary to assure a safe work area to perform the requirements of this contract. If during construction, the contractor becomes aware of or encounters UXO or potential UXO, the contractor shall immediately stop work at the site of encounter, move to a safe location, notify the COR, and mitigate any delays to scheduled or unscheduled contract work. Once the contractor has informed the COR, the contractor will await further direction. The Contractor assumes the risk of any and all personal injury, property damage or other liability arising out of or resulting from any Contractor action taken hereunder.

NOTE: For previous UXO/mine information, the following points of contact from the UN Mine Action Center of Afghanistan are provided:

Mohammad Sediq, Chief of Operations,
Email: sediq@unmaca.org
Cell: +93 070 295207

Hansie Heymans, Chief Information Officer,
Email: hansie@unmaca.org
Cell: +93 070 294286

1.5 LIMITATION OF WORKING SPACE

The Contractor shall, except where required for service connections or other special reason(s), confine his operations strictly within the boundaries of the site. Workmen will not be permitted to trespass on adjoining property. Any operations or use of space outside the boundaries of the site shall be by arrangement with all interested parties. It must be emphasized that the Contractor must take all practical steps to prevent his workmen from entering adjoining property and in the event of trespass occurring the Contractor will be held entirely responsible.

Areas located immediately outside the construction area are known to contain mines and unexploded ordnance (UXO). Contractors assume all risks when venturing in or out of the designated work area.

1.6 TEMPORARY STRUCTURES

The Contractor shall erect suitable temporary fences, lighting, and necessary structures to safeguard the site, materials and plant against damage or theft and for the protection of the general public and shall adequately maintain the same throughout the course of the contract.

1.7 SUBCONTRACTORS

Compliance with the provisions of this section by subcontractors will be the responsibility of the contractor.

1.8 LIST OF CODES AND TECHNICAL CRITERIA:

The following codes and technical criteria and those referenced therein shall be required for this project. References within each reference below shall be required and adhered to. This list is not exhaustive and is not necessarily complete.

ACI 301M Specifications for Structural Concrete

ACI 318 Building Code Requirements for Structural Concrete (latest edition), American Concrete Institute

ACI 530/ASCE 5/TMS 402, Building Code Requirements for Masonry Structures, latest edition.

IBC - International Building Codes, 2006 or latest edition (and its referenced codes including those inset below)

IEEE C2, National Electrical Safety Code (NESC), latest edition

IMC – International Mechanical Code

IPC – International Plumbing Code

Lighting Handbook, IESNA, latest edition

National Electrical Safety Code (NESC), Institute of Electrical and Electronic Engineers (IEEE C2), 2002 edition

NFPA 10, Portable Fire Extinguishers, 2002 edition

NFPA 30, Flammable and Combustible Liquids Code, 2003 edition

NFPA 30A, Code for Motor Fuel Dispensing Facilities and Repair Garages, 2003 edition

NFPA 70, National Electrical Code, 2005 edition

NFPA 72, National Fire Alarm Code, 2002 edition

NFPA 101, Life Safety Code, 2006 edition

TM 5-811-1 Electrical Power Supply and Distribution

UFC 3-460-01, Petroleum Fuel Facilities

UFC 3-230-17FA, Drainage in Areas Other than Airfields, 16 Jan 2004

UFC 3-520-01, Interior Electrical Systems, 10 June 2002

UFC 3-530-01AN, Design: Interior and Exterior Lighting and Controls, 19 Aug 2005

The publications to be taken into consideration shall be those of the most recent editions.

Unified Facility Criteria (UFC) is available online at http://www.wbdg.org/ccb/browse_cat.php?o=29&c=4

Standards other than those mentioned above may be accepted if the standards chosen are internationally recognized and meet the minimum requirements of the specified standards. The Contractor shall be prepared to submit proof of this if requested by the Contracting Officer.

2.0 SITE DEVELOPMENT

2.1 GENERAL

The project includes furnishing all materials, equipment and labor for constructing storm sewer service lines, as applicable, and connecting to the existing or new sewer networks.

2.2 ENVIRONMENTAL PROTECTION

2.2.1 Applicable regulations

The Contractor shall comply with all Host Nation laws, rules, regulations or standards concerning environmental pollution control and abatement with regard to discharge of liquid waste into natural streams or manmade channels. The contractor shall review host nation and U.S. Government environmental regulations with the contracting officer prior to design and discharge of any liquid wastes into natural streams or manmade channels.

2.2.2 Notification

The Contracting Officer will notify the Contractor in writing of any observed non-compliance with the foregoing provisions. 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. No extension of time or damages will be awarded to the Contractor unless it was later determined that the Contractor was in compliance.

2.2.3 Spillages

Measures shall be taken to prevent chemicals, fuels, oils, greases, bituminous materials, waste washings, herbicides and insecticides, and construction materials from polluting the construction site and surrounding area.

2.2.4 Disposal

Disposal of any materials, wastes, effluents, trash, garbage, oil, grease, chemicals, etc., shall be taken to a dumpsite off site and subject to the approval of the Contracting Officer. Burning at the project site for the disposal of refuse and debris will not be permitted.

2.2.5 Spill Response Kits

Provide for minimum of two spill response kits; at a minimum each kit container will have 1 broom, 1 non-sparking shovel, 50 spill absorbent pads, 10 - 3" dia. x 10' long socks, 5 bags of absorbent material /media and 50 6mm- ply bags; pre-package commercial kits are available (\geq 95 gal kits). Place the spill containment kit at locations directed by the COR after the facility has been constructed and prior to operation.

2.3 CIVIL SITE DEVELOPMENT

2.3.1 Site Plan

The contractor shall locate the facilities in general agreement with the drawings included and any requirements in the Scope of Work, section 01010. All site features shall be clearly defined and dimensioned on the site plan. Buildings shall be located to provide access for emergency vehicles and fire fighting. Roads and parking areas shall be designed for turning radius of the largest vehicle entering the compound. The site plan shall show geometric design of the site, including applicable dimensions of all exterior facilities, mechanical equipment, pavements, utilities, etc. Required facilities are described in the following sections of this specification.

2.3.1.1 Demolition

Demolition shall include removal of all structures, foundations, pavements, and utilities, and clear and grubbing. All refuse and debris shall be disposed of off site. Scrap metal shall be the property of the Host Government. The scrap metal on site shall be moved to an area away from the site perimeter as directed by the Contracting Officer's Representative and left for the Host Government to remove and/or salvage.

Demolished fencing and concertina wire shall be neatly rolled up for reuse by the host government. Likewise, used fence posts and outriggers shall be neatly stockpiled for reuse by the host government.

2.3.2 Site Grading & Drainage

The contractor will provide all necessary grading to insure adequate drainage so that no areas will be flooded due to a rainfall of a 10-year frequency. Drainage of the area should be compatible with the existing terrain. Building slab finished floor elevation shall be a minimum 150mm above grade and outside grade shall slope away from the building on all sides at a minimum slope of 5% for a distance of 3 meters. Holes and depressions shall be backfilled. Fill materials shall be composed of satisfactory soils or aggregates defined in ASTM D 2487 as GW, GP, GM, SP, SM, SW. Minimum soil compaction shall be 95 percent of maximum density as defined in ASTM D 1557. Lifts of fill shall not exceed 254 mm (10"). Each lift shall be compacted and checked for density utilizing ASTM D 1556.

2.3.2.1 Roads and Parking Areas

Contractor shall construct roads, parking, and storage areas using aggregate surface. Subgrade shall be scarified and compacted to 95% maximum density as defined in ASTM D 1557. Aggregate base shall be 150mm (6 inches) for parking areas. Aggregate Base Course (ABC) material must be well graded, durable aggregate uniformly moistened and mechanically stabilized by compaction. Degree of compaction shall be expressed as a percentage of the maximum density obtained by the test procedure presented in ASTM D 1557.

2.3.2.2 Concrete Slab at refueling area

Contractor shall construct a 300 mm (12 inches) thick reinforced concrete slab at the vehicle fueling point. The slab shall be placed on 203 mm (8 inches) Aggregate Base Course compacted to 98% of maximum density as defined by ASTM D 1557. The concrete slab shall be sloped to drain into a trench drain provided at both ends of the vehicle fueling point. The trench drain shall be collected in an oil-water separator.

2.3.2.3 Chain-Link Fence and Gates

Provide chain-link fence and gates around waste fuel storage facility and concrete pad. Fence and gate fabric shall be No. 9 gage wires woven into a 50 mm diamond mesh. Fabric shall be coated with 366 grams per square meter zinc galvanizing. Posts shall be ASTM F 1083 Pipe, Steel, Hot Dipped Zinc Coated (Galvanized) Welded or equal. Top of fence and gates shall be provided with outriggers and reinforced barbed tape as indicated above. Post sizes shall be as shown on drawings.

The gates shall be swing type. Hinged gates shall be a pair of 3.65 m wide x 2.4 m high leaves, constructed of a steel tube frame and steel tube intermediate posts and rails. The design of the gates shall insure that it is dimensionally stable, square, true and planar. Gate leaves shall not rack or deflect when install on its hinges. Gates shall have a sufficient number of hinges, anchor mounted to the exterior masonry walls, to support each gate leaf. Provide a locking mechanism that holds the gates together when in the closed position as well as a drop bolt that engages a steel sleeve embedded in the pavement.

Submittal Requirements:

- a. The manufacturer of this product must have been in this business for at least 5 years.
- b. Installers must be certified by the manufacturer.
- c. Welded mesh and wire must be ASTM A641 Class 3
- d. Geo-textile shall be ASTM D4632, D6241, D4355, D4751 & D4491.

- e. Structural calculations must be prepared by a licensed engineer and must be submitted and approved by the Government prior to installation

2.4 CIVIL UTILITIES

2.4.1 General

The design of the storm sewer system shall be sized to provide flow and discharge based on a 10-yr flooding event. The design drawings shall show all utility lines, line sizes, valves, manholes, cleanouts, and applicable details associated with storm sewer system designs. Specifications covering pipes, valves, pumps, controls, and storm sewers shall be submitted as part of the design and shall require standard materials that are available in-country. Contractor shall install and connect exterior storm sewer system collection to service connection points of each facility requiring such.

2.4.2 Storm Sewer System

2.4.2.1 General

There are no functional or salvageable sanitary sewer collection, treatment or disposal facilities at this site. The Contractor shall obtain topographic information or other maps that show vegetation, drainage channels and other land surface features such as underground utilities and related structures that may influence the design and layout of the collection system. If maps are not available, or do not provide satisfactory information or sufficient detail of the site, field surveys shall be performed. Storm sewer systems less than 1.25 meters (4 feet) under road crossings shall have reinforced concrete cover at least 150 mm (6 inch) thick around the pipe. Concrete cover will extend out to at least 1 m from each road edge.

Exterior storm sewer system line construction shall include service to the oil/water separator as described in the Scope of Work Section 01010. Contractor shall design storm sewer system collection system using approved field survey data and finished concrete slab elevations. Depending upon the topography and building location, the most practical location of storm sewer system lines is along one side of the street. In other cases they may be located behind buildings midway between streets. All storm sewer system shall be located outside of the roadways as much as practical, and minimize the number of roadway crossings.

2.4.2.2 Pipe

Pipe shall conform to the respective specifications and other requirements as follows: Provide Polyvinyl Vinyl Chloride (PVC) conforming to ASTM D 3034, Type PSM with a maximum SDR of 35, size 380 mm (15inch) or less in diameter. PVC shall be certified as meeting the requirements of ASTM D 1784, cell Class 12454 B.

2.4.2.2.1 Fittings

Fittings shall be compatible with pipe supplied and shall have a strength not less than that of the pipe. Fittings shall conform to the respective specifications and requirements as follows: provide PVC fittings conforming to ASTM D 3034 for type PSM pipe.

2.4.2.2.2 Joints

Joints installation requirements shall comply with the manufacturers installation instructions. Flexible plastic pipe (PVC or high density polyethylene pipe) gasketed joints shall conform to ASTM D3212.

2.4.2.2.3 Branch Connections

Branch connections shall be made by use of regular fittings or solvent-cemented saddles as approved. Saddles for PVC pipe shall conform to Table 4 of ASTM D 3034.

2.4.3 Oil/Water Separators

Oil/water separators shall be utilized for all drains from industrial sites. Separators shall be installed as close as possible from the drain location. Storm sewer system shall not be mixed with sanitary sewer system and shall be in accordance with UFC 3-240-07FA, latest edition.

3.0 STRUCTURAL

3.1 GENERAL

The project consists of various concrete structures for a sanitary sewer system and a new vehicle refueling point.

3.2 DESIGN

Design shall be performed and design documents signed by a registered professional architect and/or engineer. Calculations shall be in SI (metric) units of measurements. All components of the structures shall be designed and constructed to support safely all loads without exceeding the allowable stress for the materials of construction in the structural members and connections

3.3 STANDARDS

The Contractor should use the following American standards to provide sound structural design if local standards are not available, relevant, or applicable. The Contractor shall follow American Concrete Institute Standards for design and installation of all concrete structures.

Concrete	See STRUCTURAL CONCRETE below.
Plaster strength	140.0 kg./sq.cm (f'c) (2,000psi) conforming to ASTM C 926.
Steel Reinforcement	4,218.0 kg./sq.cm(Fy= 60.0 ksi),yield strength.
Welded Wire Fabric	ASTM A185
Anchor Bolts	ASTM A307 using A36 steel.
Concrete Masonry Units	ASTM C90, Type I (normal wt, moisture Cntrl).
Mortar	ASTM C270, Type S (Ultimate compressive strength of 130.0 kg/sq. cm.)
Proportion	1 part cement, 0-1/2 part lime and 4-1/2 parts aggregate
Grout	ASTM C476 (Slump between 200 mm to 250mm and Compressive Strength 14 MPa (2,000 psi) at 28 days.
Joint Reinforcement	Standard 9 gauge minimum, Ladder Type
Structural Steel	ASTM A36: 2,530.0 kg./sq.cm (Fy = 36,000psi)
Welding	AWS (American Welding Society) D1.1-2002.

3.4 DEAD AND LIVE LOADS

Dead loads consist of the weight of all materials of construction incorporated in the buildings. Live loads used for design shall be in accordance with the Structural Load Data, UFC-3-310-01, and edition as referenced herein.

3.5 WIND LOADS

Wind loads shall be calculated using a "3-second gust" wind speed of 125 km/hr.

3.6 SEISMIC

The building and all parts thereof shall be designed for the seismic requirements as defined by the International Building Code referenced herein.

Spectral ordinates shall be $S_s = 1.28g$ and $S_1 = 0.51g$.

3.7 STRUCTURAL CONCRETE

Concrete structural elements shall be designed and constructed in accordance with the provisions of the American Concrete Institute, Building Code Requirements for Structural Concrete, ACI 318, latest edition. For the design and construction of all structural concrete, use a minimum 28 day compressive strength of 28 MPa (4,000 psi) or as shown on the drawings, whichever is greater. Reinforcing steel shall be deformed bars conforming to American Society for Testing and Materials (ASTM) publication ASTM A 615, Deformed and Plain Billet-Steel Bars for Concrete Reinforcement. Concrete shall have maximum water-cement ratio of 0.45. No concrete shall be placed when the ambient air temperature exceeds 32 degrees C (90 degrees F) unless an appropriate chemical retardant is used. In all cases when concrete is placed at 32 degrees C (90 degrees F) or hotter it shall be covered and kept continuously wet for a minimum of 48 hours. Concrete members at or below grade shall have a minimum concrete cover over reinforcement of 75 mm (3 inch).

3.8 MASONRY

Masonry shall be designed and constructed in accordance with the provisions of Building Code Requirements for Masonry Structures, ACI 530/ASCE 5/TMS 402, latest editions. Mortar shall be Type S and conform to ASTM C 270, latest edition. Masonry shall not be used below grade. **All cells of exterior reinforced CMU walls shall be fully grouted. For interior CMU walls, only the reinforced cells need to be grouted. All CMU walls shall have reinforced horizontal bond beams at a maximum spacing of 1,200mm on center.**

3.9 STRUCTURAL STEEL

Structural steel shall be designed and constructed in accordance with the provisions of American Institute of Steel Construction (AISC), Specifications for Structural Steel Buildings, 9th Edition. Design of cold-formed steel structural members shall be in accordance with the provisions of American Iron and Steel Institute (AISI), Specifications for Design of Cold-Formed Steel Structural Members.

3.10 METAL DECK

Deck units shall conform to SDI Publication Number 29. Panels of maximum possible lengths shall be used to minimize end laps. Deck units shall be fabricated in lengths to span three or more supports with flush, telescoped or nested 50 mm (2 inch) laps at ends, and interlocking, or nested side laps. Metal deck units shall be fabricated of steel thickness required by the design and shall be galvanized.

4. FOUNDATIONS

Foundations shall be in accordance with the Geotechnical requirements of this RFP.

4.1 EARTHWORK AND FOUNDATION PREPARATION

4.1.1 Capillary Water barrier

ASTM C 33 fine aggregate grading with a maximum of 3 percent by weight passing ASTM D 1140, 75 micrometers, No. 200 sieve, or 37.5mm and no more than 2 percent by weight passing the 4.75mm No. 4 size sieve and conforming to the soil quality requirements specified in the paragraph entitled "Satisfactory Materials."

4.1.2 Satisfactory Materials

Any materials classified by ASTM D 2487 as GW, GW-GM, GW-GC, SW, SW-SM, or SW-SC and free of debris, roots, wood, scrap material, vegetation, refuse, soft unsound particles, or objectionable materials. Unless specified otherwise, the maximum particle diameter shall be one-half the lift thickness at the intended location.

4.1.3 Unsatisfactory Materials

Any materials which do not comply with the requirements set forth in the Satisfactory Materials paragraph. Unsatisfactory materials also include man-made fills, trash, refuse, or backfills from previous construction. Unsatisfactory material also includes material classified as satisfactory which contains root and other organic matter, frozen material, and stones larger than 75mm. The Contracting Officer shall be notified of any unsatisfactory materials.

4.1.4 Clearing and Grubbing

No clearing and grubbing is expected.

4.1.5 Stripping and Excavation and Compaction of Fill

Strip suitable soil from the site where excavation or grading is indicated and stockpile separately from other excavated material. Material unsuitable for use as topsoil shall be stockpiled and used for backfilling. Locate topsoil so that the material can be used readily for the finished grading. Where sufficient existing topsoil conforming to the material requirements is not available on site, provide borrow materials suitable for use as topsoil. Protect topsoil and keep in segregated piles until needed.

Excavate to contours, elevation, and dimensions indicated. Reuse excavated materials that meet the specified requirements for the material type required at the intended location. Keep excavations free from water. Excavate soil disturbed or weakened by Contractor's operations, soils softened or made unsuitable for subsequent construction due to exposure to weather. Excavations below indicated depths will not be permitted except to remove unsatisfactory material. Unsatisfactory material encountered below the grades shown shall be removed as directed. Refill with satisfactory material and compact to at least 95 percent of the maximum dry density, as determined by the Modified Proctor laboratory procedure. ASTM D 1557 shall be used for producing the Modified Proctor moisture-density curve, unless the soil to be compacted includes more than 30% retained on the 19 mm (3/4") sieve. In this case, the Contractor must replace the ASTM D 1557 laboratory compaction procedure with AASHTO T 180, Method D, corrected with AASHTO T 224.

During compaction, the moisture content of the soil shall be within 1.5 percent of the optimum moisture content, as determined by the Modified Proctor laboratory procedure. The thickness of compacted lifts shall not exceed 15 cm and the dry density of each compacted lift shall be tested by either sand cone (ASTM D 1556) or nuclear gage (ASTM D 2292). If the nuclear gage is used, it must first be compared to sand cone tests for each soil type to verify the accuracy of the nuclear gage measurements for moisture content, wet density, and dry density. Furthermore, every tenth nuclear gage test must be accompanied by a sand cone test and these verification data must be summarized and submitted to the Contracting Officer. Density tests shall be performed at a frequency of not less than one test for each 200 square meters and not less than two tests per compacted lift.

4.1.6 Structures with Spread Footings

Ensure that footing subgrades have been inspected and approved by the Contracting Officer prior to concrete placement. Fill over excavations with concrete during foundation placement.

5. ARCHITECTURAL REQUIREMENTS

5.1 GENERAL

All material approved shall become standardized material to be used throughout the facilities under contract. Different sub-contractors shall not use different material or standards under the contract. Intent of the project is to use locally procured materials (unless specified otherwise) and labor to the maximum extent possible while satisfying seismic building code. Conflicts between criteria shall be brought to the attention of the Contracting Officer for resolution. In such instances, the Contractor shall furnish all available information with justification to the Contracting Officer.

5.2 DESIGN CRITERIA

The Codes, Standards, and Regulations listed herein shall be used in the construction of this project. The publications shall be the most recent editions. Standards other than those mentioned may be accepted provided they meet the minimum requirements and the contractor shall submit proof of equivalency to the Contracting Officer for approval.

IBC - International Building Code, latest edition
NFPA 101 - Life Safety Code, latest edition

5.3 LIFE SAFETY/ FIRE PROTECTION/ HANDICAPPED ACCESSIBILITY

To the extent possible, all facilities will be designed in accordance with recognized industry standards for life safety and building egress. An adequate fire alarm system, fire extinguishers, and smoke alarms shall all be included as required. Due to the lack of adequate water volume and pressure, sprinkler systems are not feasible. The facility shall comply with all other safety requirements of NFPA 101. In keeping with the intended function of these facilities, handicapped accessibility will not be incorporated into this project. Due to the war contingency requirement, it is assumed that only able-bodied military and civilian personnel will use the facilities listed herein.

5.4 ANTITERRORISM/ FORCE PROTECTION

Force protection/anti-terrorism measures for this location shall be followed and incorporated into this project as indicated, in accordance with the referenced DoD Regulations. Information regarding force protection may be found herein and at the following link: www.tisp.org/files/pdf/dodstandards.pdf .

5.5 EXCAVATION

Trench excavation shall be made for concrete footings. Trenches shall be a minimum of .8 meter deep. Trenches deeper than 1.5 meters shall have protective shoring to protect workers or have the sides of the trench sloped back at a slope of 1.5:1. Care shall be taken when backfilling of foundation trenches to avoid damage to walls. Any excess dirt shall become the property of the Contractor and shall be removed from the site to a location approved by the Contracting Officer.

5.6 CONCRETE

Place 100 mm (4") of capillary water barrier below areas to receive a concrete slab on properly compacted soil free of organic material. Concrete flooring in wet areas shall slope to the floor drain and not allow for water to puddle. Concrete slabs in all areas shall not be placed prior to inspection and approval of piping and sub-surface by the Contracting Officer. Foundation trenches shall be level and free of loose material. Trenches shall be inspected and approved by the Contracting Officer prior to placing of any concrete foundations. See paragraph 5 for structural characteristics of concrete and reinforcing steel for foundations and slabs.

5.7 METAL

5.7.1 Metal Window Sills

Galvanized metal window sills, 1 mm (20 gage), shall be installed on the exterior of all windows. The metal window sills shall have a turn down of 50 mm over the exterior. Metal sills shall extend from side to side of the window opening in a single piece. Extend the metal window sill a minimum of 20 mm under the bottom of the aluminum windows. Sills shall slope a minimum of 6mm to the exterior and not allow water to puddle.

5.8 CARPENTRY

5.8.1 Metal Fascia & Soffit

No wood fascias and/or soffits are allowed. Use metal fascias and soffits throughout with plywood underneath for support. Extend roof decking out over fascia a minimum of 20 mm. Provide a 40 mm drip flashing over edge of roof decking so that it extends past bottom of decking on all sides of the building. Provide continuous soffit venting of all overhangs at both bottom and top of roof slope.

5.9 ROOFING AND WEATHERPROOFING

5.9.1 Sloped Roofs

On sloping roofs provide and install (22 gauge) galvanized steel in either corrugated or standing seam design. Metal roofing shall be anchored to the steel purlins or wood deck sub-surface using exposed fasteners at 300 mm on center at all seams and at 600 mm on center in the panel field. Fasteners shall be placed at the top of the corrugation taking care not to dent panel. Roof sealant or adhesive shall be placed over each anchor head. Roofing system shall include all edge, ridge and penetration flashings necessary for a watertight installation and as described in this section. Roofing shall be galvanized mill finish. Panels shall be overlapped two corrugations side to side and be continuous sheets from ridge to eave. Provide continuous ridge vents on all gable roofs.

5.9.2 Flashing and Sheet Metal

5.9.2.1 Materials

Any metal listed by ASTM, DIN, BS or EN standards. Manual for a particular item may be used, unless otherwise specified or indicated. Materials shall conform to the requirements specified below and to the thicknesses and configurations established in ASTM, DIN, BS or EN standards. Different items need not be of the same metal, except that if copper is selected for any exposed item, all exposed items shall be copper.

5.9.2.2 Steel Sheet, Zinc-Coated (Galvanized)

Zinc coated steel conforming to ASTM A 525, DIN BS or EN Standards.

5.9.2.3 Downspouts and Gutters

Downspouts shall be designed and fabricated on site. Unless otherwise specified or indicated, exposed edges shall be folded back to form a 13 mm (1/2 inch) hem on the concealed side, and bottom edges of exposed vertical surfaces shall be angled to form drips. Bituminous cement shall not be placed in contact with roofing membranes other than built-up roofing.

Downspouts shall be installed as indicated. Downspouts shall be rigidly attached to the building. Supports for downspouts shall be spaced according to manufacturer's recommendations.

5.9.2.3 Connections and Jointing

5.9.2.3.1 Soldering

Soldering shall apply to copper and stainless steel items. Edges of sheet metal shall be pre-tinned before soldering is begun. Soldering shall be done slowly with well heated soldering irons so as to thoroughly heat the seams and completely sweat the solder through the full width of the seam. Edges of stainless steel to be pre-tinned shall be treated with soldering acid flux. Soldering shall follow immediately after application of the flux. Upon completion of soldering, the acid flux residue shall be thoroughly cleaned from the sheet metal with a water solution of washing soda and rinsed with clean water.

5.9.2.3.2 Seaming

Flat-lock and soldered-lap seams shall finish not less than 25 mm. wide. Unsoldered plain-lap seams shall lap not less than 75 mm. unless otherwise specified. Flat seams shall be made in the direction of the flow.

5.9.2.3.3 Cleats

A continuous cleat shall be provided where indicated or specified to secure loose edges of the sheet metalwork. Butt joints of cleats shall be spaced approximately 3 mm. apart. The cleat shall be fastened to supporting wood construction with nails evenly spaced not over 300 mm. on centers. Where the fastening is to be made to concrete or masonry, screws shall be used and shall be driven in expansion shields set in concrete or masonry.

5.9.2.3.4 Flashing

Flashings shall be installed at intersections of roof with vertical surfaces and at projections through roof, except that flashing for heating and plumbing, including piping, roof and floor drains, and for electrical conduit projections through roof or walls are specified in other sections. Except as otherwise indicated, counter flashings shall be provided over base flashings. Perforations in flashings made by masonry anchors shall be installed on top of joint reinforcement. Flashing shall be formed to direct water to the outside of the system.

5.9.3 Sealants

5.9.3.1 Interior Sealant

ASTM C 834 or ASTM C 920, Type S or M, Grade NS, Class 12.5, Use NT, DIN, BS, or EN equal standards

5.9.3.2 Exterior Sealant

For joints in vertical and horizontal surfaces, provide ASTM C 920, Type S or M, Grade NS, DIN, BS, or EN equal standards.

5.9.3.3 Floor Joint Sealant

(ASTM C 920) Type S or M, Grade P, class 25, use T

5.9.3.4 Primers

Provide a non-staining, quick-drying type and consistency recommended by the sealant manufacturer for the particular application.

5.9.3.5 Bond Breakers

Provide the type and consistency recommended by the sealant manufacturer to prevent adhesion of the sealant to backing or to bottom of the joint.

5.9.3.6 Backstops

Backing shall be 25 to 33 percent oversize for closed cell and 40 to 50 percent oversize for open cell material, unless otherwise indicated.

5.9.3.7 Cleaning Solvents

Provide type(s) recommended by the sealant manufacturer except for aluminum and bronze surfaces that will be in contact with sealant.

5.9.3.8 Surface Preparation

Surfaces shall be clean, dry to the touch, and free from dirt, frost, moisture, grease, oil, wax, lacquer, paint, or other foreign matter that would tend to destroy or impair adhesion. Oil and grease shall be removed with solvent and surfaces shall be wiped dry with clean cloths. When resealing an existing joint, remove existing caulk or sealant prior to applying new sealant. For surface types not listed below, the sealant manufacturer shall be contacted for specific recommendations.

5.9.3.9 Masking Tape

Masking tape shall be placed on the finish surface on one or both sides of a joint cavity to protect adjacent finish surfaces from primer or sealant smears. Masking tape shall be removed within 10 minutes after joint has been filled and tooled.

5.9.3.10 Backstops

Install backstops dry and free of tears or holes. Tightly pack the back or bottom of joint cavities with backstop material to provide a joint of the depth specified.

5.9.3.11 Primer

Immediately prior to application of the sealant, clean out loose particles from joints. Where recommended by sealant manufacturer, apply primer to joints in concrete masonry units, wood, and other porous surfaces in accordance with sealant manufacturer's instructions. Do not apply primer to exposed finish surfaces.

5.9.3.12 Bond Breaker

Provide bond breakers to the back or bottom of joint cavities, as recommended by the sealant manufacturer for each type of joint and sealant used, to prevent sealant from adhering to these surfaces. Carefully apply the bond breaker to avoid contamination of adjoining surfaces or breaking bond with surfaces other than those covered by the bond breaker.

5.9.3.13 Sealants

Provide a sealant compatible with the material(s) to which it is applied. Do not use a sealant that has exceeded shelf life or has gelled and can not be discharged in a continuous flow from the gun. Apply the sealant in accordance with the manufacturer's instructions with a gun having a nozzle that fits the joint width. Force sealant into joints to fill the joints solidly without air pockets. Tool the sealant after application to ensure adhesion. Sealant shall be uniformly smooth and free of wrinkles. Upon completion of sealant application, roughen partially filled or unfilled joints, apply sealant, and tool smooth as specified. Sealer shall be applied over the sealant when and as specified by the sealant manufacturer.

5.9.3.14 Protection

Protect areas adjacent to joints from sealant smears. Masking tape may be used for this purpose if

removed 5 to 10 minutes after the joint is filled.

5.9.3.15 Final Cleaning

Upon completion of sealant application, remove remaining smears and stains and leave the work in a clean and neat condition.

- a. Masonry and Other Porous Surfaces: Immediately scrape off fresh sealant that has been smeared on masonry and rub clean with a solvent as recommended by the sealant manufacturer. Allow excess sealant to cure for 24 hour then remove by wire brushing or sanding.
- b. Metal and Other Non-Porous Surfaces: Remove excess sealant with a solvent-moistened cloth.

5.10 WINDOWS, DOORS & GLAZING

5.10.1 Windows

5.10.1.1 Materials

- a. Aluminum Extrusions: Provide alloy and temper recommended by the window manufacturer for the strength, corrosion resistance, and application of required finish, meeting the DIN 1725 raw material requirements, but not less than 215 N/mm² ultimate tensile strength and not less than 1.5 mm thick at any location for main frame and sash members. Note: At the contractor's option extruded PVC windows may be provided in lieu of aluminum windows.
- b. Fasteners: Provide aluminum, nonmagnetic stainless steel, epoxy adhesive, or other materials warranted by the manufacturer to be non-corrosive and compatible with aluminum window members, trim, hardware, anchors, and other components of window units.
 1. Reinforcement: Where fasteners screw-anchor into aluminum less than 0.125 inch thick, reinforce the interior with aluminum or nonmagnetic stainless steel to receive screw threads or provide standard non-corrosive pressed-in splined grommet nuts.
 2. Exposed Fasteners: Except where unavoidable for application of hardware, do not use exposed fasteners. For application of hardware, use fasteners that match the finish of the member or hardware being fastened, as appropriate.
- c. Anchors, Clips, and Window Accessories: Fabricate anchors, clips, and window accessories of aluminum, nonmagnetic stainless steel, or hot-dip zinc-coated steel or iron complying with the requirements of DIN 1748; provide sufficient strength to withstand design pressure indicated. As a minimum provide 3 anchors on each side of the frame.
- d. Compression-Type Glazing Strips and Weatherstripping: Unless otherwise indicated, and at the manufacturer's option, provide compressible stripping for glazing and weatherstripping such as molded EPDM or neoprene gaskets.
- e. Sealant: For sealants required within fabricated window units, provide type recommended by the manufacturer for joint size and movement. Sealant shall remain permanently elastic non-shrinking, and non-migrating. Comply with Sealants of these specifications for selection and installation of sealants.
- f. Wire Fabric Insect Screen shall be permanently fixed to the exterior.

5.10.1.2 Hardware

Provide the manufacturer's standard hardware fabricated from aluminum, stainless steel, or other

corrosion-resistant material compatible with aluminum and of sufficient strength to perform the function for which it is intended.

5.10.1.3 Fabrication

Provide aluminum windows with factory finish in all buildings as indicated in the design drawings. Window openings shall be provided with insect screening permanently fixed to the exterior. Provide a locking device on the interior of each window. Provide anchors on each side of the frame into the adjoining structure, 3 on each side. Provide weather stripping system for all exterior windows and doors.

5.10.1.4 Finishes

Apply baked enamel in compliance with paint manufacturer's specifications for cleaning, conversion coating, and painting. Color shall be white meeting the requirements of DIN 50018

5.10.1.5 Inspection

Inspect openings before beginning installation. Verify that rough or masonry opening is correct and the sill plate is level. Masonry surfaces shall be visibly dry and free of excess mortar, sand, and other construction debris.

5.10.1.6 Installation

Comply with manufacturer's specifications and recommendations for installation of window units, hardware, operators, and other components of the work. Set window units plumb, level, and true to line, without warp or rack of frames or sash. Provide proper support and anchor securely in place. Set sill members and other members in a bed of compound or with joint fillers or gaskets, as shown, to provide weather tight construction. Refer to the Sealant sections for compounds, fillers, and gaskets to be installed concurrently with window units. Coordinate installation with wall flashings and other components of the work.

5.10.1.7 Adjusting

Adjust operating sash and hardware to provide a tight fit at contact points and at weather stripping for smooth operation and a weather tight closure.

5.10.1.8 Cleaning

Clean aluminum surfaces promptly after installation of windows. Exercise care to avoid damage to protective coatings and finishes. Remove excess glazing and sealant compounds, dirt, and other substances. Lubricate hardware and other moving parts.

5.10.2 Doors

All exterior doors shall be heavy duty metal doors with metal frames. Interior door shall be hollow metal doors with hollow metal frames. Commercial duty lock sets and hardware shall be used on all doors. Hinges shall be the 5 knuckle type or equivalent. Provide door handles and locksets that can be locked with a key on all doors. Door locks shall have a thumb latch on inside of door such that no key is necessary to exit the room or building. Coordinate the final keying schedule with Contracting Officer prior to ordering lock sets. Generally the building should have 8 master keys fitting all locks, 8 sub-master keys fitting all exterior doors and 3 keys each for each interior door. Include 25% spare key blanks for the amount of keys provided per building. Provide numbering system identifying key to associated room door. Provide weather stripping system for all exterior doors.

5.10.2.1 Steel Doors

SDI A250.8, except as specified otherwise. Prepare doors to receive specified hardware. Undercut where indicated. Exterior doors shall have top edge closed flush and sealed to prevent water intrusion. Doors shall be 44.5 mm thick, unless otherwise indicated. Doors shall be constructed using heavy gauge steel with minimum thickness of 1.2 mm.

5.10.2.2 Standard Steel Frames

SDI A250.8, except as otherwise specified. Form frames to sizes and shapes indicated, with welded corners or knock-down field-assembled corners. Provide steel frames for doors, transoms, sidelights, mullions, cased openings, and interior glazed panels, unless otherwise indicated.

5.10.2.3 Welded Frames

Continuously weld frame faces at corner joints. Mechanically interlock or continuously weld stops and rabbets. Grind welds smooth.

5.10.2.4 Stops and Beads

Form stops and beads from 0.9 mm thick steel. Provide for glazed and other openings in standard steel frames. Secure beads to frames with oval-head, countersunk Phillips self-tapping sheet metal screws or concealed clips and fasteners. Space the fasteners approximately 300 to 400 mm on centers. Miter molded shapes at corners. Use butt or miter square or rectangular beads at corners.

5.10.2.5 Anchors

Provide anchors to secure the frame to adjoining construction. Provide steel anchors, zinc-coated or painted with rust-inhibitive paint, anchors not lighter than 1.2 mm thick.

5.10.2.5.1 Wall Anchors

Provide at least three anchors for each jamb. For frames which are more than 2285 mm in height, provide one additional anchor for each jamb for each additional 760 mm or fraction thereof.

5.10.2.5.2 Floor Anchors

Provide floor anchors drilled for 10 mm anchor bolts at bottom of each jamb member. Where floor fill occurs, terminate bottom of frames at the indicated finished floor levels and support by adjustable extension clips resting on and anchored to the structural slabs.

5.10.2.5.3 Fire and Smoke Doors and Frames

The requirements of NFPA 80 and NFPA 105 respectfully shall take precedence over details indicated or specified.

5.10.2.5.4 Weather-stripping, Integral Gasket

Black synthetic rubber gasket with tabs for factory fitting into factory slotted frames, or extruded neoprene foam gasket made to fit into a continuous groove formed in the frame, may be provided in lieu of head and jamb seals. Insert gasket in groove after frame is finish painted.

5.10.2.5.5 Hardware Preparation

Provide minimum hardware reinforcing gages as specified in ANSI A250.6. Drill and tap doors and frames to receive finish hardware. Prepare doors and frames for hardware in accordance with the applicable requirements of SDI A250.8 and ANSI A250.6. For additional requirements refer to BHMA A115. Drill and tap for surface-applied hardware at the project site. Build additional reinforcing for

surface-applied hardware into the door at the factory. Locate hardware in accordance with the requirements of SDI A250.8, as applicable. Punch door frames, with the exception of frames that will have weather-stripping or lightproof or soundproof gasketing, to receive a minimum of two rubber or vinyl door silencers on lock side of single doors and one silencer for each leaf at heads of double doors. Set lock strikes out to provide clearance for silencers.

5.10.2.5.6 Finishes

All surfaces of doors and frames shall be thoroughly cleaned, chemically treated and factory primed with a rust inhibiting coating as specified in SDI A250.8, or paintable A25 galvanized steel without primer. Where coating is removed by welding, apply touchup of factory primer.

5.10.2.5.7 Fabrication and Workmanship

Finished doors and frames shall be strong and rigid, neat in appearance, and free from defects, waves, scratches, cuts, dents, ridges, holes, warp, and buckle. Molded members shall be clean cut, straight, and true, with joints coped or mitered, well formed, and in true alignment. Dress exposed welded and soldered joints smooth. Design door frame sections for use with the wall construction indicated. Corner joints shall be well formed and in true alignment. Conceal fastenings where practicable. On wraparound frames for masonry partitions, provide a throat opening 3 mm larger than the actual masonry thickness. Design other frames in exposed masonry walls or partitions to allow sufficient space between the inside back of trim and masonry to receive calking compound.

5.10.2.5.8 Installation

a. Frames

Set frames in accordance with SDI 105. Plumb, align, and brace securely until permanent anchors are set. Anchor bottoms of frames with expansion bolts or powder-actuated fasteners. Build in or secure wall anchors to adjoining construction. Backfill frames with mortar. When an additive is provided in the mortar, coat inside of frames with corrosion-inhibiting bituminous material. For frames in exterior walls, ensure that stops are filled with rigid insulation before grout is placed.

b. Grouted Frames

For frames to be installed in exterior walls and to be filled with mortar or grout, fill the stops with strips of rigid insulation to keep the grout out of the stops and to facilitate installation of stop-applied head and jamb seals.

c. Doors

Hang doors in accordance with clearances specified in SDI A250.8. After erection and glazing, clean and adjust hardware.

5.10.2.5.9 Protection and Cleaning

Protect doors and frames from damage. Repair damaged doors and frames prior to completion and acceptance of the project or replace with new, as directed. Wire brush rusted frames until rust is removed. Clean thoroughly. Apply an all-over coat of rust-inhibitive paint of the same type used for shop coat. Upon completion, clean exposed surfaces of doors and frames thoroughly. Remove mastic smears and other unsightly marks.

5.10.2.5.10 Accessories

a. Weather Stripping

Provide weather-stripping that is a standard cataloged product of a manufacturer regularly engaged in the manufacture of this specialized item. Weather stripping shall be looped neoprene or vinyl held in an extruded non-ferrous metal housing. Air leakage of weather stripped doors shall not exceed 0.003125 cubic meters per second of air per square meter of door area when tested in accordance with ASTM E 283

Install doors in strict accordance with the manufacturer's printed instructions and details. Weather strip the exterior swing-type doors at sills, heads and jambs to provide weather tight installation. Apply weather stripping at sills to bottom rails of doors and hold in place with a brass or bronze plate. Apply weather stripping to door frames at jambs and head. Shape weather stripping at sills to suit the threshold.

b. Pre-fitting

At the Contractor's option, doors may be provided factory pre-fit. Doors shall be sized and machined at the factory by the door manufacturer in accordance with the standards under which they are produced. The work shall include sizing, beveled edges, mortising, and drilling for hardware and providing necessary beaded openings for glass and louvers. Provide the door manufacturer with the necessary hardware samples, and frame and hardware schedules as required to coordinate the work.

c. Finishes

Provide door finish colors as selected by the Contracting Officer from the color selection samples.

d. Water-Resistant Sealer

Provide a water-resistant sealer compatible with the specified finish as approved and as recommended by the door manufacturer.

e. Installation

Before installation, seal top and bottom edges of doors with the approved water-resistant sealer. Seal cuts made on the job immediately after cutting using approved water-resistant sealer. Fit, trim, and hang doors with a 2 mm minimum, 3 mm maximum clearance at sides and top, and a 5 mm minimum, 6 mm maximum clearance over thresholds. Provide 10 mm minimum, 11 mm maximum clearance at bottom where no threshold occurs. Bevel edges of doors at the rate of 3 mm in 50 mm. Door warp shall not exceed 6 mm when measured in accordance with WDMA I.S. 1-A.

5.10.3 Glazing

All glazing shall be double laminated and insulating. Laminated glazing shall be constructed of two panes of minimum 3mm annealed glass laminated to a minimum 0.75mm polyvinyl-butylal (PVB) interlayer, in accordance with UFC 4-010-01. Two panes of laminated glazing shall be installed in each window with hermetically sealed 13mm airspace between them. After installation of windows, the contractor shall install a minimum 3mil tinted film (Scotch shield Ultra Safety and Security Window Film or approved equal) to the inside face of the glazing in accordance with manufacturer's instructions.

5.10.3.1 Glazing Accessories

5.10.3.2 Sealant

Sealant shall be elastomeric conforming to ASTM, DIN, BS, or EN standards. Type S or M, Grade NS, Class 12.5, Use G, of type chemically compatible with setting blocks, preformed sealing tape and sealants used in manufacturing insulation glass. Color of sealant shall be as selected from manufacturer's full range of standard colors by Contracting Officer.

5.10.3.3 Glazing Gaskets

Glazing gaskets shall be extruded with continuous integral locking projection designed to engage into metal glass holding members to provide a watertight seal during dynamic loading, building movements and thermal movements. Glazing gaskets for a single glazed opening shall be continuous one-piece units with factory-fabricated injection-molded corners free of flashing and burrs. Glazing gaskets shall be in lengths or units recommended by manufacturer to ensure against pull-back at corners.

5.10.3.4 Fixed Glazing Gaskets

Fixed glazing gaskets shall be closed-cell (sponge) smooth extruded compression gaskets of cured elastomeric virgin neoprene compounds conforming to ASTM, DIN, BS or EN standards.

5.10.3.5 Wedge Glazing Gaskets

Wedge glazing gaskets shall be high-quality extrusions of cured elastomeric virgin neoprene compounds, ozone resistant, conforming to ASTM, DIN, BS, or EN standards.

5.10.3.6 Putty and glazing Compound

Glazing compound shall conform to ASTM, DIN, BS, or EN standards for face-glazing metal sash. Putty shall be linseed oil type conforming to DIN, BS, or EN standards for face-glazing primed wood sash. Putty and glazing compounds shall not be used with insulating glass or laminated glass.

5.10.3.7 Setting and Edge Blocking

Neoprene setting blocks shall be dense extruded type conforming to ASTM, DIN, BS, or EN standards. Silicone setting blocks shall be required when blocks are in contact with silicone sealant. Profiles, lengths and locations shall be as required and recommended in writing by glass manufacturer.

5.10.3.8 Preparation

Openings and framing systems scheduled to receive glass shall be examined for compliance with glass manufacturer's recommendations including size, squareness, offsets at corners, presence and function of weep system, face and edge clearance requirements and effective sealing between joints of glass-framing members. Detrimental materials shall be removed from glazing rabbet and glass surfaced and wiped dry with solvent. Glazing surfaces shall be dry and free of frost.

5.10.3.9 Installation

Glass and glazing work shall be performed in accordance with, glass manufacturer's instructions and warranty requirements. Glass shall be installed with factory labels intact and removed only when instructed. Edges and corners shall not be ground, nipped or cut after leaving factory. Springing, forcing or twisting of units during installation will not be permitted.

5.10.3.10 Cleaning

Upon completion of project, outside surfaces of glass shall be washed clean and the inside surfaces of glass shall be washed and polished in accordance with glass manufacturer's recommendations.

5.10.3.11 Protection

Glass work shall be protected immediately after installation. Glazed openings shall be identified with suitable warning tapes, cloth, or paper flags, attached with non-staining adhesives. Reflective glass shall be protected with a protective material to eliminate any contamination of the reflective coating. Protective

material shall be placed far enough away from the coated glass to allow air to circulate to reduce heat buildup and moisture accumulation on the glass. Glass units which are broken chipped, cracked, abraded, or otherwise damaged during construction activities shall be removed and replaced with new units.

5.11 FINISHES

All exterior metal surfaces, including container exterior shall be painted to match existing adjacent buildings Interior shall be painted gypsum board ceilings and walls. Flooring shall be broom finished concrete

5.11.1 Exposed exterior steel trim, frames, door and pipe rails

Paint with one coat oil-based primer, with 2 coats of oil-based alkyd gloss enamel, color to be selected by the Contracting Officer from the color board provided by the Contractor.

5.12 MODULAR CONEX UNIT

Modular Container shall have a concrete foundation and shall be securely bolted to the foundation. Contracting Officer Representative (COR) reserves the right to inspect and reject any Modular Conex Containers not in good condition. All Modular Containers shall be inspected and accepted by Architect prior to leaving factory. See plans and these technical requirements for extent of work. Exterior walls, roof, and ceilings shall have minimum 50mm thick insulation. All insulation in exterior walls containing water pipes shall be rigid foam board insulation, insulation in areas next to concrete or earth shall be rigid foam board insulation. Provide split pack heat pump unit. Exterior metal Color: as directed by the Contracting Officer. Doors, windows, and glazing shall be as indicated in Section 5, ARCHITECTURAL.

For force protection reasons, roof structure shall be 24 gauge metal corrugated roofing over asphalt membrane layer over 25 mm plywood layer. CONEX box roof shall contain a 70 cm layer of sandbags. The contractor is to determine the structural load capability of the CONEX roof as part of the design effort.

5.13 STRUCTURAL STEEL

Structural steel shall be designed and constructed in accordance with the provisions of American Institute of Steel Construction (AISC), Specifications for Structural Steel Buildings, 9th Edition. Design of cold-formed steel structural members shall be in accordance with the provisions of American Iron and Steel Institute (AISI), Specifications for Design of Cold-Formed Steel Structural Members.

5.14 Steel Roof Joists

Steel roof joists shall be placed according to the roof design and roof manufacturer specifications. Steel purlins shall be installed perpendicular to the steel beams. Use continuous metal roof sheets from ridge to eave to avoid constructing roof seams. In lieu of the continuous metal roof sheets, the Contractor can submit a plan for roofing seams; however, the plan must show a detail of how leaks will be avoided, and the Contracting Officer before application must approve the plan. Steel "hat channels" can be installed for the connection to the CONEX box module. Provide all necessary metal framing for roof fascia and soffits. See structural paragraph for structural characteristics of steel joists.

5.14.1 Open Web Steel Joists

Open web steel joists shall conform to SJI Specifications and Tables. Joists shall be designed to support the loads given in the standard load tables of SJI Specifications and Tables.

5.15 EARTHWORK AND FOUNDATION PREPARATION

5.15.1 Capillary Water barrier

ASTM C 33 fine aggregate grading with a maximum of 3 percent by weight passing ASTM D 1140, 75 micrometers, No. 200 sieve, or 37.5mm and no more than 2 percent by weight passing the 4.75mm No. 4 size sieve and conforming to the soil quality requirements specified in the paragraph entitled "Satisfactory Materials."

5.15.2 Satisfactory Materials

Any materials classified by ASTM D 2487 as GW, GW-GM, GW-GC, SW, SW-SM, SM, SC, SW-SC, or CL-ML and free of debris, roots, wood, scrap material, vegetation, refuse, soft unsound particles, or objectionable materials. Unless specified otherwise, the maximum particle diameter shall be one-half the lift thickness at the intended location.

5.15.3 Unsatisfactory Materials

Materials which do not comply with the requirements for satisfactory materials. Unsatisfactory materials also include man-made fills, trash, refuse, or backfills from previous construction. Unsatisfactory material also includes material classified as satisfactory which contains root and other organic matter, frozen material, and stones larger than 75mm. The Contracting Officer shall be notified of any unsatisfactory materials.

5.15.4 Stripping

Strip suitable soil from the site where excavation or grading is indicated and stockpile separately from other excavated material. Material unsuitable for use as topsoil shall be stockpiled and used for backfilling. Locate topsoil so that the material can be used readily for the finished grading. Where sufficient existing topsoil conforming to the material requirements is not available on site, provide borrow materials suitable for use as topsoil. Protect topsoil and keep in segregated piles until needed.

5.15.5 Excavation and Compaction of Fill

Excavate to contours, elevation, and dimensions indicated. Reuse excavated materials that meet the specified requirements for the material type required at the intended location. Keep excavations free from water. Excavate soil disturbed or weakened by Contractor's operations, soils softened or made unsuitable for subsequent construction due to exposure to weather. Excavations below indicated depths will not be permitted except to remove unsatisfactory material. Unsatisfactory material encountered below the grades shown shall be removed as directed. Refill with satisfactory material and compact to at least 95 percent of the maximum dry density, as determined by the Modified Proctor laboratory procedure. ASTM D 1557 shall be used for producing the Modified Proctor moisture-density curve, unless the soil to be compacted includes more than 30% retained on the 19 mm (3/4") sieve. In this case, the Contractor must replace the ASTM D 1557 laboratory compaction procedure with AASHTO T 180, Method D, corrected with AASHTO T 224.

During compaction, the moisture content of the soil shall be within 1.5 percent of the optimum moisture content, as determined by the Modified Proctor laboratory procedure. The thickness of compacted lifts shall not exceed 15 cm and the dry density of each compacted lift shall be tested by either sand cone (ASTM D 1556) or nuclear gage (ASTM D 2292). If the nuclear gage is used, it must first be compared to sand cone tests for each soil type to verify the accuracy of the nuclear gage measurements for moisture content, wet density, and dry density. Furthermore, every tenth nuclear gage test must be accompanied by a sand cone test and these verification data must be summarized and submitted to the Contracting Officer. Density tests shall be performed at a frequency of not less than one test for each 200 square meters and not less than two tests per compacted lift.

5.15.6 Structures with Spread Footings

Ensure that footing subgrades have been inspected and approved by the Contracting Officer prior to concrete placement. Fill over excavations with concrete during foundation placement.

6.0 MECHANICAL

6.1 GENERAL

6.2 ELECTRIC HEATER

6.2.1 Unit Heater

A 2 kW, fan powered, electric resistance unit heater shall be installed in the control/observation building. Generally, unit heaters shall be mounted as high as possible. Unit heaters shall be of the industrial grade, very durable and securely fastened to the ceiling, wall or structure. Provide a self-contained electric heating unit, suspended from ceiling or structure, with fan and heating elements. Provide control-circuit terminals and single source of power supply with disconnect. Heating wire element shall be nickel chromium. Include limit controls for overheat protection of heaters. Provide tamper resistant integral thermostat.

6.2.2 Submittals

The Contractor shall submit the following for the equipment to be provided under this section of the specification: manufacturer's data including performance characteristics at design conditions; manufacturer's certificate stating that each unit will perform to the conditions stated, catalog cuts showing dimensions, performance data, electrical requirements, compliance with standards as stated in paragraph CODES, STANDARDS AND REGULATIONS; complete shop drawings indicating location and installation details.

The manufacturer shall also submit a 2 year warranty for each of the units.

6.3 TEST ON COMPLETION

6.3.1 Test Coordination

After completion of the work, the Contractor shall demonstrate to the Contracting Officer that the heater installation is adjusted and regulated correctly to fulfill the function for which it has been designed. Coordinate with the Contracting Officer on when the test shall be scheduled. Include tests for all interlocks, safety cutouts and other protective device to ensure correct functioning. All such tests shall be carried out and full records of the values obtained shall be prepared along with the final settings and submitted to the Contracting Officer in writing.

6.4 CEILING FANS

6.4.1 Ceiling Fan

Provide a 1320mm blade ceiling fan in the control/observation building. Fans shall have reversible motors. Center in the room. Coordinate placement with the lighting plan to prevent conflict or casting shadows. Fan mount shall be flush, standard, or angle mount depending on ceiling height. Fan shall be mounted such that the fan blade is approximately 2.44 meters above the finished floor. The fan shall be provided with out light kit. The finish shall be factory painted white. The controls shall be from either a single pole switch or from two 3 way switches to provide on/off operation. The electrical supply shall be 230volts, single phase, and 50 hertz. Install per manufacturers' instructions.

6.4.2 Submittals.

The Contractor shall submit the following for the equipment to be provided under this section of the

specification: manufacturer's data including performance characteristics at design conditions; catalog cuts showing dimensions, performance data, electrical requirements, and installation details.

6.5 Motor Pool Fuel Point (Storage/Dispensing)

Provide a 19,375 liter (5000 gallon) diesel and a 19,375 liter (5000 gallon) MOGAS fuel tanks.

These tanks shall be single wall construction complete with fill tube and cap, suction tube, tank gauge, vent, and other fittings and appurtenances required for full and safe operation. Tanks shall be provided with support saddles, platform/stair, concrete pad and leak spillage containment provisions. Fuels shall be transferred from the storage tanks by transfer pumps located within the fuel dispensing units. Fuel piping shall be fiberglass for underground and steel for piping located above grade. Provide separate dispensing units for diesel and MOGAS. Each dispensing unit shall be equipped with dual nozzles and key control. Coordinate site design and route all contaminated drainage water from the fuel dispensing pad through an oil/water separator.

The Contractor shall provide capability for fuel delivery from outside of the containment dike. Provide for a truck hook up nozzle, fuel meter, isolation valve and associated piping and fittings.

The Contractor shall provide the required fuel to flush and test the system. The Contractor shall provide a full supply of fuel to the tanks at the time of turnover to the Government.

6.5.1 TESTING AND COMMISSIONING

The Contractor shall flush and test all the fuel piping systems. After completing the work, the Contractor shall demonstrate that all fuel systems operate to fully satisfy the function for which these systems have been designed. The Contractor shall test, adjust, balance and regulate the system and its controls as necessary until the required designed conditions are met. The Contractor shall include tests for interlocks, safety cutouts and other protective devices to demonstrate safe operation. All such tests shall be carried out in the presence of the Contracting Officer and full written records of the test data and final settings shall be submitted to the Contracting Officer.

7.0 FIRE PROTECTION

7.1 PORTABLE FIRE EXTINGUISHERS

Portable fire extinguishers shall be provided at the vehicle fueling station, at the bulk fuel tank refueling point, and the waste fuel storage facility. Generally, extinguishers will be of the multi-purpose dry chemical type, class A, B and C. Portable fire extinguishers shall be provided IAW NFPA 10, Portable Fire Extinguishers, 2002 edition.

8.0 ELECTRICAL

8.1 GENERAL

Contractor shall design and construct all electrical systems for the facilities to be provided. This includes design, construction, all necessary labor, equipment, and material for a fully functional system.

8.2 DESIGN CRITERIA

8.2.1 Applicable Standards

- a. Design shall be in the required units as stipulated herein.
- b. Conflicts between criteria and/or local standards shall be brought to the attention of the Contracting Officer for resolution. In such instances, all available information shall be furnished to the Contracting Officer for approval.
- c. All electrical systems and equipment shall be installed in accordance with the requirements set forth in the documents referenced herein.

- d. Acceptance Testing: Contractor shall develop and submit for approval complete acceptance test procedures on all systems provided. As a minimum the testing procedures shall comply with the requirements of the National Fire Protection Association (NFPA) and the International Electrical Testing Association Inc. (NETA).

8.3 MATERIAL

8.3.1 General

Unless noted otherwise, all material used shall be in compliance with the requirements of UL standards. In the event that UL compliant materials are not available, Contractor may then select applicable British Standards (BS), IEC, CE, CSA, GS, DIN listed material (or equivalent), but the contractor must prove equivalence and must provide the government with a full copy of the relevant specification(s)/standard(s). Material and equipment installed under this contract shall be for the appropriate application and installed in accordance with manufacturers recommendations.

Equipment enclosure types shall be in compliance with the National Electrical Manufacturer's Association (NEMA) or the International Electro-Technical Committee (IEC) standards.

Major components of equipment shall have the manufacturer's name, address, type or style, voltage and current rating, and catalog number on a non-corrosive and non-heat sensitive plate, securely attached to the equipment. All equipment delivered and placed in storage, prior to installation, shall be protected from the weather, humidity and temperature variation, dirt and dust, and any other contaminants. All equipment shall be in new condition, undamaged and unused.

8.3.2 Standard Product

All material and equipment shall be a standard product of a manufacturer regularly engaged in the manufacture of the product and shall essentially duplicate items that have been in satisfactory use for at least two (2) years prior to bid opening.

8.3.3 Design Conditions

All equipment shall be rated and designed for the maximum ambient temperature and altitude of the construction site. Equipment that is altitude and temperature sensitive, such as generators, shall be derated according to the manufacturer's recommendations. Generic derating criteria for altitude and for ambient temperature may be used to approximate the required size of such equipment during the design phase, but a stipulation shall be placed on the construction plans to adjust the size according to the derating criteria specific to the manufacturer's equipment chosen before the equipment is ordered.

8.3.4 Restrictions

Aluminum conductors shall not be specified or used except as bare steel reinforced (ACSR) overhead conductors in an aerial primary distribution system. Aluminum windings shall not be used in transformers.

8.4 DESIGN REQUIREMENTS

8.4.1 Electrical Distribution System

The contractor shall provide power to the vehicle fueling facility from an existing source on the installation. All electrical design and installation shall meet NEC (NFPA 70) requirements. Electrical receptacles shall be provided every three meters along the wall in the control building. The control building shall have lighting as shown that will light the interior of the building to 50 foot candles. An exterior light over the door shall also be installed. Conductors and circuits shall be sized for the specific loads. All wiring shall be run and pulled through conduits. The power supplied to the vehicle fueling station shall 380/220V 50Hz.

The contractor shall provide service entrance feeders from the distribution system to the service entrance equipment located inside of each facility and sized to the rating of the service entrance equipment. Service entrance equipment shall include a distribution panel board sized to supply the total load of each facility. Service entrance feeder lengths shall be kept as short as possible to minimize voltage drop. They shall be underground not less than 1220mm below grade in direct buried 100mm minimum thick-wall PVC (Schedule 80).

All panel boards shall be circuit breaker 'bolt-on' type panels. Minimum size circuit breaker shall be rated at no less than 20-amperes. Circuit breakers shall be connected to bus bar(s) within the panel boards. Daisy chain (breaker-to-breaker) connection(s) are not acceptable. Indoor distribution panels shall be flush mounted in finished areas and surface mounted in unfinished areas. All circuit breakers shall be labeled with an identification number corresponding to the panel schedule. A 3-pole circuit breaker shall be a single unit and not made up of 3 single pole circuit breakers connected with a wire or bridge to make a 3-pole breaker. All branch circuit wiring shall be copper, minimum #4 mm² (#12 AWG) installed in metal conduit. Wiring shall be concealed in finished areas and surface mounted in unfinished areas. Flush mounted panels shall be provided with spare empty conduits from panel to unfinished area for future use. All panels shall be provided with a minimum of 25% spare capacity for future load growth. Power receptacles (outlets) shall be duplex type 220 V, 50 hertz, type CEE 7/7 with Earth Ground rated for 20A or better and shall be compatible with the required secondary power. All splicing and terminations of wires shall be performed in junction or device boxes. Proper wire nuts/connectors shall be used for splicing wire. No twist-wire connections with electrical tape wrapped around it shall be acceptable. All electrical installation shall be in accordance with NFPA 70 (National Electric Code). Contractor shall design and provide circuits for all mechanical equipment and any other equipment that requires power and make the final connections.

All loads shall be coordinated to provide balanced loading. Phase imbalance at each panel shall not exceed 5%.

Voltage Drop for branch circuits shall be limited to no more than 3%; voltage drop for branch and feeder circuits combined shall be limited to no more than 5%.

All circuit breakers shall use down-stream coordination to ensure the breaker nearest a fault or overload is the first to trip.

8.4.2 Lighting

Indoor lighting for all areas shall consist of fluorescent surface mounted light fixtures. All light fixtures shall be factory finished, complete and operational, to include but not be limited to, lens, globe, lamp, ballast etc. Industrial type fluorescent light fixtures shall not be used. Every room shall be provided with a minimum of one light switch. Light fixtures shall be mounted approximately 2.5-meters (8 feet) above finished floor (AFF) minimum. Fixtures may be pendant or ceiling mounted, depending on the ceiling type and height.

8.4.3 Light Fixtures

Lighting fixtures shall be a standard manufacturer's product. Fluorescent surface mounted light fixtures shall be power factor corrected and equipped with standard electronic ballast. All light fixtures shall properly operate using standard lamps available locally. Fixtures shall be fully factory wired and designed for appropriate application i.e. appropriate for that location where installed.

8.4.4 Light Switches

Light switch shall be single pole. Minimum of one light switch shall be provided in every room.

8.4.5 Receptacles

General-purpose receptacles shall be as required herein. All receptacles shall be duplex, unless otherwise specified in this section, the NEC, or other referenced standard.

Receptacles shall be placed at a maximum of 3-meter (10 feet) intervals. Total number of duplex receptacles shall be limited to six (6) per 20-ampere circuit breaker.

8.4.6 Conductors

All cable and wire conductors shall be copper. Conductor jacket or insulation shall be color coded to satisfy NEC requirements. The use of 75 or 90 degree C (minimum) terminals and insulated conductors is required. Use of higher degree C rated conductors on circuits with protective device terminals rated at a lower degree C is allowed but must be derated to the rating of the device terminals.

8.4.7 Grounding and Bonding

Grounding and bonding shall comply with the requirements of NFPA 70. Underground connections shall be exothermally welded. All exposed non-current carrying metallic parts of electrical equipment in the electrical system shall be grounded. Insulated grounding conductor (separate from the electrical system neutral conductor) shall be installed in all feeder and branch circuit raceways. Grounding conductor shall be green-colored, unless the local authority requires a different color-coded conductor. Ground rods shall be 20 millimeters (0.75 inches) in diameter and 3 meters (~10 feet) long made of copper-clad steel. Final measurement of the ground resistance shall be in compliance with the requirements of the local authority but shall not exceed 25 ohms when measured more than 48 hours after rainfall.

8.4.8 Enclosures

Enclosures for exterior and interior applications shall be NEMA Type 3S (IEC Classification IP54) and NEMA Type 1 (IEC Classification IP10) respectively.

8.4.9 Transient Voltage Surge Suppression (TVSS)

Transient Voltage Surge Suppression shall be provided utilizing surge arresters to protect sensitive and critical equipment. As a minimum TVSS protection shall be provided at each panel serving electronic loads and shall be shown on the panel schedule. It is recommended that Metal Oxide Varistors (MOV) technology be used for such applications.

8.4.10 Conduit Raceway System

Metal conduit system shall be complete, to include but not limited to, necessary junction and pull boxes. Smallest conduit size shall be no less than 20mm (0.75 inch) in diameter. All empty conduits shall be furnished with pull wire or cord or rope (depending on the size of conduit and length of run). System design and installation shall be per NFPA 70 requirements. Exterior conductors below grade shall be installed in concrete encased PVC conduit at a depth of 1220 millimeters.

8.4.11 Identification Nameplates

Major electrical equipment, such as transformers, panel boards, and load centers, etc. shall be provided with permanently installed engraved identification nameplates.

8.4.12 Schedules

All panel boards and load centers shall be provided with a directory. Directory shall be typed written in English, Dari and Pashto.

8.4.13 Vehicle Fueling Station Operation

When a dispenser is activated, the pump will start and dispense the fuel. In the event of an emergency, the emergency shutdown switches will be capable of shutting down the entire system.

8.4.14 Single Line Diagram

Complete single line diagrams shall be provided for all systems installed. All major items in each system shall be identified and labeled for respective ratings. Single line diagrams for each system, installed in a clear plastic frame, shall be provided.

8.5 OPERATIONS AND MAINTENANCE (O&M) FOR ELECTRICAL

- (a) Contractor is required to provide a 12 month supply of parts for operation and maintenance of equipment according to the manufacturer's recommendations. In addition to this, the contractors shall provide an inventory of all items, location/address stored and secured, and commissioning plans.
- (b) The O&M manuals must be provided prior to any training activities. Manuals shall be "tri-lingual" in English, Dari and Pashto.
- (c) All control panels shall have tri-lingual name plates in Dari, Pashto and English.
- (d) The contractor shall provide an outline of the training lesson plan (to be approved by the Government) prior to conducting training. CD recordings of training on video shall also be provided, after training is conducted.

--END OF SECTION--
01015

SECTION 01060

SECTION 01060 SPECIAL CLAUSES

PART 1 GENERAL

1.1 PRECONSTRUCTION CONFERENCE

1.1.1 Schedule of Meeting

At the earliest practicable time, prior to commencement of the work, the Contractor and any Subcontractors whose presence is necessary or requested, shall meet in conference with representatives of the Contracting Officer to discuss and develop a mutual understanding relative to the details of the administration and execution of this contract. This will include but not necessarily be limited to the Contractor's Quality Control (CQC) Program, the Contractors Accident Prevention Program, submittals, correspondence, schedule, access to the work site, security requirements, interface requirements, temporary facilities and services, hazards and risks, working after normal hours or on weekends or holidays, assignment of inspectors, representations, special requirements, phasing, and other aspects of this project that warrant clarification and understanding.

1.1.2 Meeting Minutes

It shall be the responsibility of the Contractors CQC System Manager to prepare detailed minutes of this meeting and submit those minutes to the Contracting Officer for approval within three (3) workdays. Any corrections deemed necessary by the Contracting Officer shall be incorporated and resubmitted within

two (2) calendar days after receipt. Upon approval of the minutes by the Contracting Officer, the Contractor shall distribute the minutes to all parties present or concerned.

1.2 AREA USE PLAN

The Contractor shall submit to the Contracting Officer, within ten (10) calendar days after award of this contract, an Area Use Plan designating intended use of all areas within the project boundaries. This plan shall include, but not necessarily be limited to the following: the proposed location and dimensions of any area to be fenced and used by the Contractor; construction plant and building installations/the number of trailers and facilities to be used; avenues of ingress/egress to the fenced areas and details of the fence installation; drawings showing temporary electrical installations; temporary water and sewage disposal installations; material storage areas; hazardous storage areas. Any areas that may have to be graveled shall also be identified. The plan shall also include a narrative description of the building structural system, the site utility system and the office or administration facilities. The Contractor shall also indicate if the use of a supplemental or other staging area is desired. The Contractor shall not begin construction of the mobilization facilities prior to approval by the Contracting Officer of the Area Use Plan described herein.

1.3 CONTRACTOR'S MOBILIZATION AREA

The Contractor will be permitted to use an area approved by the Contracting Officer within the contract limits for operation of his construction equipment and plants, shops, warehouses, and offices. Utilities will be provided for the Contractor as described below. The Contractor is responsible for obtaining any required additional mobilization area above that designated. The construction site shall be cleared of construction debris and other materials and the area restored to its final grade.

1.3.1 Contractor's Temporary Facilities

1.3.1.1 General

All facilities within the Contractor's mobilization area shall be of substantial construction suitable for the local weather conditions. Sanitary facilities shall meet the requirements of Corps of Engineers, Safety and Health Requirements Manual EM 385-1-1. Local nationals will not be granted any privileges under this contract. Government provided services are for American and Foreign national contractors only.

1.3.1.2 Administrative Field Offices

The Contractor may provide and maintain administrative field office facilities within the mobilization area at the designated site. Government office and warehouse facilities will not be available to the Contractor's personnel.

1.3.1.3 Storage Area

The Contractor shall construct a temporary 1.8 meter (6 foot) high chain link fence around trailers and materials. The fence shall include plastic strip inserts, colored green or 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 approved in writing by the Contracting Officer.

1.3.1.4 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. If radio communication is approved by Contracting Officer / installation security office, frequency selection shall be approved by Contracting Officer to prevent interference with installation operations. Such devices shall be made available for use

by Government personnel.

1.3.1.5 Appearance of Mobilization Site Facilities and/or Trailers

Mobilization Site Facilities and/or 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 or other transportable structures which, in the opinion of the Contracting Officer, require exterior painting or maintenance will not be allowed on the construction site until such work or maintenance has been performed to the satisfaction of the Contracting Officer.

1.3.1.6 Maintenance of Storage Area

Fencing shall be kept in a state of good repair and proper alignment. Should the Contractor elect to traverse unpaved areas which are not established roadways with construction equipment or other vehicles, such areas shall be covered with a layer of gravel as necessary to prevent rutting and the tracking of soil onto paved or established roadways; gravel gradation shall be at the Contractor's discretion.

1.3.1.7 Security Provisions

Adequate outside security lighting shall be provided at the Contractor's temporary facilities. The Contractor shall be responsible for the security of its own facilities and equipment.

1.3.1.8 Sanitation

a. Sanitary Facilities: The Contractor shall be responsible for maintaining such facilities at no expense to the Government.

b. Trash Disposal: The Contractor shall be responsible for collection and disposal of trash from the work areas and from the mobilization area. General construction debris and demolition debris shall be collected and transported by the Contractor to a location designated by the Government. Construction debris, waste materials, packaging material and the like shall be removed from the work site daily. Loose debris capable of being windblown, shall be immediately placed in sealed or covered containers to prevent it from being blown onto taxiways or runways. Any dirt or soil that is tracked onto paved or surfaced roadways shall be cleaned daily. Materials resulting from demolition activities that are salvageable shall be stored within the fenced area described above. Stored material not indoors, whether new or salvaged, shall be neatly stacked when stored.

1.3.1.9 Telephone

The Contractor shall make arrangements to install and pay all costs for telephone facilities desired.

1.3.1.10 Restoration of Storage Area

Upon completion of the project and after removal of mobilization facilities, 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 unpaved areas shall be removed and all such areas restored to their original conditions.

1.3.2 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 Host Nation and base 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 base 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.

1.3.2.1 Use of Existing Roads as Haul Routes

The Contractor shall be responsible for coordinating with the base authorities for use of any existing roads as haul routes. Construction, and routing of new haul roads, and/or upgrading of existing roads to carry anticipated construction traffic shall be coordinated with the Base authorities and is the sole responsibility of the Contractor.

1.3.2.2 Employee Parking

The Contractor's employees may be allowed parking on the military installation. The Contractor is responsible for transporting workers (local nationals) from off post to the worksite, coordinating security identification screening, and cooperating in gate searches with the base authorities. The government reserves the right to terminate any and all contractor parking at any time.

1.3.3 Temporary Project Safety Fencing and Barricades

The Contractor shall impose all measures necessary to limit public access to hazardous areas and to ensure the restriction of workers to the immediate area of the construction and mobilization site. The Contracting Officer may require in writing that the Contractor remove from the work any employee found to be in violation of this requirement.

1.3.3.1 Barricades

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. Travel to and from the project site shall be restricted to a route approved by the Contracting Officer.

1.3.4 Host Nation Authorizations, Permits and Licenses

It shall be the Contractor's responsibility to obtain such local authorizations, permits and licenses necessary to establish his quarry operations, batching operations and haul routes (See Special Clause entitled: COMPLIANCE WITH HOST COUNTRY RULES AND CUSTOMS).

1.4 RESPONSIBILITY FOR PHYSICAL SECURITY

Prior to mobilization, the Contractor shall submit his proposed means of providing project security to prevent unauthorized access to equipment, facilities, materials and documents, and to safeguard them against sabotage, damage, and theft. The Contractor shall be responsible for physical security of all materials, supplies, and equipment of every description, including property which may be Government-furnished or owned, for all areas occupied jointly by the Contractor and the Government, as well as for all work performed.

1.5 DUST CONTROL

The Contractor shall be required to control objectionable dust in the work areas, access roadways, and haul roads by means of controlled vehicle speeds or dust palliatives. Vehicles transporting sand, cement,

gravel or other materials creating a dust problem shall be covered, as directed by the Contracting Officer, or in accordance with local Laws, codes, and regulations.

1.6 DIGGING PERMITS

1.6.1 Requirements for Digging Permits

Prior to the start of any work activity that requires excavation within the current base, the Contractor shall obtain a digging permit.

1.6.2 Requests for Digging Permits

Requests for Digging Permits shall be submitted to Contracting Officer a minimum of seven (7) days prior to the start of the work activity covered by the permit. The request for a Digging Permit shall include a narrative description of the work to be performed and a detailed map of the area of the excavation clearly marking the location of all known utilities or other obstructions. If the work activity covered by the Digging Permit request also requires a utility outage, a separate request for the outage shall be submitted in accordance with the paragraph entitled CONNECTIONS TO EXISTING UTILITIES.

1.6.3 Preparation of Requests for Digging Permits

Prior to submitting a request for a Digging Permit, the Contractor shall carefully review the area to be excavated to determine the location of existing utilities and other obstructions. The Contractor will review available drawings and will conduct a visual inspection of the site. The Contractor will utilize underground utility detecting devices such as metal and cable detectors to determine the location of existing utilities. All utility lines found shall be clearly flagged or marked and the location of the utility shall be shown on the drawing to be submitted with the request for Digging Permit.

1.6.4 Existing Underground Utilities

The Contractor shall exercise utmost care in researching locations of existing utilities and reducing damage to existing utilities. Any utilities damaged by the Contractor shall be promptly repaired by the Contractor. The Contracting Officer will review and approve any proposed repairs. Any damage to existing utilities will be immediately reported to the Contracting Officer and the Base Commander.

1.7 CONNECTIONS TO EXISTING UTILITIES

1.7.1 General

Any outage involving disruption of electrical service beyond the site area shall be requested in writing at least ten (10) days in advance of the date requested for the commencement of the outage. The Contractor shall provide a request, detailing the type of outage needed (water, sewer, electrical, steam, etc.), the time needed to perform the work, the reason for the outage, and the known affected facilities. The Contracting Officer shall be contacted prior to the outage to confirm the time and date. If the Contractor fails to initiate work at the approved time, the Contracting Officer may cancel the approved outage and may direct the Contractor to resubmit a new request. No part of the time lost due to the Contractor's failure to properly schedule an outage shall be made the subject of claim for extension of time or for excess costs or damages by the Contractor.

1.7.1.1 Performance of Work During Non-Standard Hours

To minimize outage impact to the mission of the installation, all outages shall be scheduled on weekends or from 2100 – 0530 hours on duty days and/or as directed by Contracting Officer Representative (COR). The period proposed for performance of the outage shall include sufficient contingencies to preclude impact to the peak working hours 0530 – 1800 hours during the workweek.

1.7.1.2 Exterior Night Lighting

Exterior night lighting shall be provided in conformance with EM-385-1-1 entitled Safety and Health Requirements Manual.

1.7.2 Existing Underground Utilities

The Contractor is provided notice that existing utilities may be present in the construction area. The Contractor shall exercise the utmost care in researching locations of existing utility lines by implementing control measures to eliminate, or reduce to a level acceptable to the Contracting Officer, the chance of damaging or destroying existing utilities.

1.7.2.1 Use of Underground Utility Detecting Device

Prior to any excavation, a metal and/or cable-detecting device shall be used along the route of the excavation. All underground utilities discovered by this method will be flagged a minimum distance of one-half (1/2) meter on each side of the location.

1.7.2.2 Hand Excavation

Hand excavation methods and special supervisory care shall be used between any flagged markers, in areas of known or suspected hazards, and in areas known or suspected to have multiple and/or concentrated utility lines or connections.

1.7.3 Repair of Damaged Utilities

The Contractor shall be responsible to repair any utilities damaged by him. The method of repair and schedule for performance of the repair shall be coordinated with, and subject to the approval of, the Contracting Officer. The repair work and any temporary work required to keep the system operational while repairs are being completed, shall be performed at no cost to the Government.

1.8 WATER

The Contractor shall install and maintain necessary supply connections and piping for same, but only at such locations and in such manner as may be approved by the Contracting Officer. Water required for final testing, adjusting and balancing of HVAC systems will be furnished by the Government. Before final acceptance of systems, or facilities, all temporary connections and piping installed by the Contractor shall be removed at his expense in a manner satisfactory to the Contracting Officer.

1.9 NOT USED

1.10 ELECTRICITY (GOVERNMENT PROVIDED)

Electrical service is to be provided by the Government within this contract since electrical power connection shall be to existing nearby Government owned electrical power system. However, the Contractor may be required to provide temporary construction power until permanent power system is connected. The means of doing so, such as by temporary distribution systems, shall be the responsibility of the Contractor. All temporary connections for electricity shall be subject to the approval of the Contracting Officer and shall comply with Corps of Engineers manual EM 385-1-1 entitled Safety and Health Requirements Manual. All temporary lines shall be furnished, installed, connected and maintained by the Contractor in a workmanlike manner satisfactory to the Contracting Officer. Before final acceptance of systems, or facilities, all temporary connections installed by the Contractor shall be removed at his expense in a manner satisfactory to the Contracting Officer.

1.11 WORK OUTSIDE REGULAR HOURS

If the Contractor desires to carry on work outside regular base duty hours, or on holidays, including the following U.S. holidays: New Year's Day, Martin Luther King Jr Birthday, President's Day, Memorial Day, Independence Day, Labor Day, Columbus Day, Veteran's Day, Thanksgiving and Christmas. the Contractor shall submit an application to the Contracting Officer. Due to reliance upon local national laborers and time off due to local observances, there may be disruptions. Potentials dates are the following local observances: National Islamic Holiday of Ashura, Ramadan (actual date varies – check with local authorities). The Contractor shall allow ample time to enable satisfactory arrangements to be made by the Government for inspecting the work in progress. At night, exterior lighting shall be provided in conformance with EM-385-1-1 entitled "Safety and Health Requirements Manual".

1.12 SCHEDULING OF WORK IN EXISTING FACILITIES

As soon as practicable, but in any event not later than thirty (30) calendar days after award of this contract, the Contractor shall meet in conference with the Contracting Officer, or his duly authorized representatives, to discuss and develop mutual understanding relative to the scheduling of work in and access to the existing facilities where work has to be performed under this contract, so that the Contractor's proposed construction schedule is coordinated with the operating and security requirements of the installation.

1.13 SPECIAL FACILITIES AND SERVICES TO BE FURNISHED BY THE CONTRACTOR

The Contractor shall furnish the facilities and services listed in this clause for Corps of Engineers personnel and other persons as designated by the Contracting Officer. All facilities, furnishings, materials, and equipment shall be new when furnished at the site. The Contractor shall fully maintain and repair all facilities, furnishings and equipment listed below. All facilities, furnishings, materials, and equipment furnished and/or installed by the Contractor under this clause shall remain the property of the Contractor at the completion of the contract. Facility structures shall be modular or containerized, suitable for easy movement at a later date.

1.14 PREPARATION OF AS-BUILT DRAWINGS (CONTRACTOR)

1.14.1 As-Built Drawing Submittals

a. Government approval is required for As-Built drawings as below in accordance with Section 01335, SUBMITTAL PROCEDURES.

b. Drawings showing final as-built conditions of the project. The local language of Afghanistan shall be added to project As-Built drawings. The final CADD as-built drawings shall consist of one **set** of electronic CADD drawing files in the specified format, and **one half-size and two full-size paper copies** of the approved as-built drawings.

1.14.2 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.

1.14.2.1 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 preconstruction conference for projects requiring CADD file as-built drawings.

1.14.2.2 Working As-Built and Final As-Built Drawings

a. The Contractor shall revise 2 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:

b. 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.

c. The location and dimensions of any changes within the building structure.

d. Correct grade, elevations, cross section, or alignment of roads, earthwork, structures or utilities if any changes were made from contract plans.

e. 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.

f. The topography, invert elevations and grades of drainage installed or affected as part of the project construction.

g. Changes or modifications which result from the final inspection.

h. Where contract drawings or specifications present options, only the option selected for construction shall be shown on the final as-built prints.

i. 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.

j. Systems designed or enhanced by the Contractor, such as HVAC controls, fire alarm, fire sprinkler, and irrigation systems.

k. 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.

1.14.3 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.

1.14.4 Computer Aided Design and Drafting (CADD) Drawings

a. 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. The Contractor will be furnished "as-designed" drawings in AutoCAD Release 2007 or Microstation V8 format compatible with a Windows XP operating system. The 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.

b. Prior to submittal of the first design submittal involving CADD drawings, the Contractor shall prepare one typical CADD drawing for the project and furnish, via ENG Form 4025, the electronic CADD drawing file for review and approval by the Contracting Officer. All Government comments involving changes to this single drawing shall be accomplished and resubmittal(s) made until the Government is satisfied that all CADD Standards are being followed and all subsequent drawings will also be in compliance with these Standards.

c. 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.

d. 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.

e. 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.

f. 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 full size paper copy prints of these drawings for Government review, comparison with approved red-line marked up drawings, and approval. The Government will promptly return one set of prints annotated with any necessary corrections to the CADD file(s) if corrections are required prior to approval. Within 20 days 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 full size paper 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 is the responsibility of the Contractor. The Government reserves the right to reject any drawing files it deems incompatible with the CADD system. Upon approval by the Government of the final as-built drawing package for the entire project, the Contractor shall provide the number of as-built copies noted in Paragraph 1.1 of this Section.

g. 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.

1.14.5 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.

1.15 CERTIFICATES OF COMPLIANCE

Any certificates required for demonstrating proof of compliance of materials with specification requirements shall be executed in accordance with Section 01335 SUBMITTAL PROCEDURES FOR DESIGN/BUILD. Each certificate shall be signed by an official authorized to certify in behalf of the manufacturing company involved and shall contain the name and address of the Contractor, the project name and location, description and the quantity of the items involved, and date or dates of shipment or delivery to which the certificates apply. Copies of laboratory test reports submitted with certificates shall contain the name and address of the testing laboratory and the date or dates of the tests to which the report applies. Certification shall not be construed as relieving the Contractor from furnishing satisfactory material.

1.16 ACCIDENT PREVENTION

The Contractor shall comply with all applicable Host Country laws and with such additional measures as the Contracting Officer may find necessary in accordance with CONTRACT CLAUSE 52.236-13 entitled ACCIDENT PREVENTION (NOV1991)-ALTERNATE 1 (APR 1984). Applicable provisions of the Corps of Engineers manual entitled Safety and Health Requirements Manual EM 385-1-1 will be applied to all work under this contract. The referenced manual may be obtained from the Contracting Officer at the jobsite or from the Afghanistan Engineer District at Kabul, Afghanistan.

1.16.1 Accident Prevention Program

Within fifteen (15) days after award of this contract, and at least ten (10) days prior to the accident prevention pre-work conference, four (4) copies of the Accident Prevention Plan required by the CONTRACT CLAUSE 52.236-13 entitled ACCIDENT PREVENTION (NOV 1991)- ALTERNATE I shall be submitted for review by the Contracting Officer. The Contractor shall not commence physical work at the site until the Accident Prevention Plan (APP) has been reviewed and accepted by the Contracting Officer. The APP shall meet the requirements listed in Appendix "A" of EM385-1-1. The program shall include the following: TAC Form 61 " Accident Prevention Program Hazard Analysis (Activity Hazard Analysis)" fully completed and signed by an executive officer of the company in block No. 13. The Activity Hazard Analysis is a method in which those hazards likely to cause a serious injury or fatality are analyzed for each phase of operations. Corrective action is planned in advance, which will eliminate the hazards. An analysis is required for each new phase of work. On large or complex jobs the first phase may be presented in detail with the submittal of the Accident Prevention Plan rather than presenting the complete analysis. If the plan is to be presented in phases, a proposed outline for future phases must be submitted as a part of the initial Accident Prevention Plan submittal. Accident Prevention Plans will be reviewed for timeliness and adequacy at least monthly with a signature sheet signed and dated documenting that these reviews took place. Copy of company policy statement of Accident Prevention and any other guidance as required by EM 385-1-1, Appendix A.

1.16.2 Ground Fault Circuit Interrupter (GFCI) Requirement – Overseas Construction

The Corps of Engineers Health and Safety Manual, EM 385-1-1, section 11.C.05.a. states: "The GFCI device shall be calibrated to trip within the threshold values of 5 ma +/- 1 ma as specified in Underwriters Laboratory (UL) Standard 943." A variance from USACE has been granted allowing 10 ma, in lieu of 5 ma, for overseas activities that use 220 Volts (V)/50 hertz (Hz) electrical power.

1.16.3 Temporary Power - Electrical Distribution Boxes

EM 385-1-1 section 11.A.01.a. states, "All electrical wiring and equipment shall be a type listed by a nationally recognized testing laboratory for the specific application for which it is to be used." This includes temporary electrical distribution boxes. Locally manufactured electrical boxes will not be allowed. Only manufactured electrical distribution boxes that meet the European CE requirements, with 10 ma CE type GFCIs installed shall be allowed.

Contractors shall:

- a. Make no modifications that might void any CE or manufacturer certification.
- b. Test the installed systems to demonstrate that they operate properly and provide the 10 ma earth leakage protection.
- c. Ensure GFCIs will have an integral push-to-test function. The testing shall be performed on a regular basis.
- d. Check that proper grounding is checked regularly and flexible cords, connectors, and sockets inspected before each use.

1.17 HAZARDOUS MATERIALS

Should the Contractor encounter asbestos or other hazardous materials, during the construction period of this contract, he shall immediately stop all work activities in the area where the hazardous material is discovered. The Contractor shall then notify the Contracting Officer; identify the area of danger; and not proceed with work in that area until given approval from the Contracting Officer to continue work activities. Hazardous material is considered to be asbestos, explosive devices, toxic waste, or material

hazardous to health and safety. The Contractor shall secure the area from daily traffic until it is safe to resume normal activities.

1.18 SPARE PARTS

1.18.1 General

The requirements of this clause are in addition to any requirements for the provision of specific spare parts to be provided by the Contractor included in Technical Provisions. The Contractor shall furnish spare parts as directed by the Contracting Officer under the provisions of this clause for all equipment for which O&M data is to be provided under Clause OPERATION AND MAINTENANCE (O&M) DATA of this contract. The term "spare parts" as used herein shall include spare parts, special tools and test equipment.

1.18.2 Selection of Spare Parts to be Furnished

The Contractor shall provide master parts lists, recommended spare parts lists and lists of special tools and test equipment as a part of the equipment O&M data required by Clause OPERATION AND MAINTENANCE (O&M) DATA. The master parts list shall include the supplier's price for each part. After review of the lists, the Contracting Officer will select spare parts and furnish written direction to the Contractor indicating quantities and types of spare parts to be furnished by the Contractor. Written directions for spare parts orders may be provided on an incremental basis as reviews of O&M data submitted by the Contractor are completed but will not necessarily be issued in the sequence in which the Contractor submitted the equipment O&M data.

1.18.3 Procurement and Delivery of Spare Parts

The Contractor shall procure and be responsible for delivery, receipt, handling, placing in storage, inventory, and turnover to the Contracting Officer all spare parts selected by the Contracting Officer. In addition to the recommended spare parts list required in paragraph SELECTION OF SPARE PARTS TO BE FURNISHED above, the Contractor is responsible to have one (1) year supply of manufacturer's recommended spare parts on site ready to turn over to the Contracting Officer at the time of acceptance of the facility.

1.18.3.1 Shipment and Delivery

The Contractor shall be responsible for the shipment and delivery of spare parts to the location on or near the site in Afghanistan as selected by the Contracting Officer. The Contractor shall provide all manpower and equipment required to receive and place into designated storage areas all spare parts purchased under this clause. The Contractor shall give the Contracting Officer thirty (30) calendar days notice of arrival at the site of the first shipment.

1.18.3.2 Turnover of Spare Parts

The Contractor shall notify the Contracting Officer seventy-two (72) hours prior to delivery of spare parts to the designated storage area. The Contractor and the Contracting Officer will perform a joint inventory of the spare parts and the spare parts will be turned over to the Contracting Officer. Spare parts purchased under this clause shall not be used by the Contractor.

1.18.3.3 Parts and Package Identification

Prior to shipment from point of purchase, each spare part shall be tagged or otherwise marked or labeled. Such labeling may be placed or affixed to the container, box or packaging in which spare parts are located when it is not feasible to place or affix such labeling directly on each spare part. Tags or labels shall include, but not necessarily be limited to; part number, description, parent equipment name and number location, project and/or other data as directed by the Contracting Officer.

1.18.3.4 Preservation and Packaging Instruction

- a. Items ordered under this contract shall be preserved and packed for a minimum of three (3) years shelf life storage. All items shall be individually packaged except when the manufacturer specifies that the items are to be used in sets. Appropriate identification labels must be affixed to the items protective box or package. After the spare parts are packaged, the manufacturer shall weigh the spare parts and packaging and place the weight and size of the packaged container on the label with other information as outlined herein. Each item, not normally identified with manufacturer's name and part number, shall have an appropriate label affixed to it with manufacturer's name and part number.
- b. Machined spare parts shall be lubricated or coated in order to withstand extensive periods of storage in a highly corrosive atmosphere.
- c. Large items (greater than 22.7 kg (50 lbs.), or larger than 0.03 CM (one cubic foot) shall be packaged in waterproof wooden boxes and properly braced. Cushioning shall be used to prevent damage to the item and to the packaging material.
- d. Solid state components, such as diodes, transistors, integrated circuits or equipment consisting of such parts that can be damaged as a result of static electricity and other stray electro-magnetic fields shall be packaged in heat-sealed, aluminum foil, laminated, flexible packages.
- e. All other spare parts shall be packaged in heat sealed plastic bags or wrap. Delicate and more fragile items such as test equipment shall be cushioned or wrapped with transparent bubble wrap material prior to being inserted into the plastic package.

1.18.4 Warranty

All spare parts provided by the Contractor under this clause are subject to the general warranty clauses of this contract.

1.18.5 Payments for Spare Parts

Payments for spare parts ordered under the paragraph entitled "Selection of Spare Parts To Be Furnished" will be made under the work item of the Work Breakdown Sheet entitled "Spare Parts". Payments for spare parts specifically required elsewhere in this contract shall be considered as part of those equipment costs and shall be included in other payment items as appropriate. Payments for spare parts ordered under this clause shall be based on the invoice price (FOB supplier) plus certified invoice price of surface shipment to the site in Afghanistan. The invoice price (FOB supplier) shall include the separately listed cost for preservation and packaging by the manufacturer as specified herein. The Contractor shall provide invoices and any additional backup, which may be required to demonstrate that the invoices presented represent the cost of spare parts, preservation and packaging, and cost of surface shipment to the site. Payment for handling, delivery, inventory, turnover, customs, overhead or profit shall not be paid or allowed under this Contract Provision, and shall be included in the cost for installation of this equipment under the other appropriate payment items of this contract. Price increases over prices furnished under paragraph SELECTION OF SPARE PARTS TO BE FURNISHED shall be fully substantiated. Payment for spare parts will be made after the spare parts have been accepted at the site by the Contracting Officer. If the total payments under the work item entitled "Spare Parts" does not reduce the balance of this work item to zero, the remaining balance will be deducted from the final contract amount. If orders exceed the work item entitled "Spare Parts", a modification for equitable adjustment will be issued in accordance with Contract Clause 52.243-4 entitled CHANGES. Payments for spare parts ordered under this clause shall constitute full payment for all cost of the spare parts and associated cost of preservation and packaging, and cost of surface shipment to the site. Other ancillary costs shall be included by the Contractor under the other appropriate work items of this contract and no additional cost except as provided herein will be allowed.

1.19 OPERATION AND MAINTENANCE (O&M) DATA

1.19.1 General

The requirements contained herein are in addition to all shop drawings submission requirements stated in other sections of the specifications. The Contractor shall include the provisions for all items required under this clause in all purchase orders and sub-contract agreements. Submittals required hereinafter will not relieve the Contractor of any responsibilities under the Warranty of Construction Provisions of this contract or under the various Guarantee Clauses of the Technical Provisions.

1.19.2 Submittals

The Contractor shall submit all items requiring submission of O&M data under this and other sections of these specifications in accordance with Section 01335 SUBMITTAL PROCEDURES FOR DESIGN/BUILD of the specifications.

1.19.3 Operation and Maintenance (O&M) Data

The Contractor shall furnish operation and maintenance manuals for all facilities constructed under this contract. The manuals shall be loose leaf, indexed and shall consist of manufacturer's brochures, manufacturer's operation and maintenance manuals, service and repair manuals, catalogs, service bulletins, instruction charts, diagrams, other information as necessary to support the operation and maintenance of the end items of equipment, assemblies and systems. Each type of facility (housing, barracks, mosque, etc.) shall be covered by a separate manual (or manuals) consisting of all data pertaining to the equipment and/or systems within that facility. Identical equipment within a single major system shall require only one submittal of data. The Contractor shall furnish all O&M manuals to the Contracting Officer not less than thirty (30) calendar days prior to contract completion. Required number of submittals (number of sets) shall be as specified in Section 01335 SUBMITTAL PROCEDURES FOR DESIGN/BUILD.

1.19.4 Recommended Spare Parts List

The Contractor shall furnish a recommended spare parts list containing equipment manufacturers' recommendations for five (5) years; two (2) years and one (1) year spare parts stock levels in Afghanistan. Current unit price and effective date, lead time, shelf life for each individual part, and total cost of all recommended parts shall be furnished.

1.19.5 Supplemental Submittals of Data

After initial submittal of O&M manuals and until final acceptance of all equipment, the Contractor shall prepare and deliver to the Contracting Officer supplemental technical data as previously described for all changes, modifications, revisions and substitutions to equipment and components. For equipment or systems introduced into the contract under change order, or modified by change order, supplemental data shall be furnished within forty-five (45) calendar days after issuance of the change order. The supplemental data furnished shall be properly prepared and identified for insertion into the O&M manuals.

1.19.6 Framed Instructions for Systems

Approved wiring and control diagrams showing the complete layout of the entire system, including equipment, piping, valves and control sequence, framed under glass or in approved laminated plastic, shall be posted, where applicable, in all mechanical equipment rooms. In addition, detailed operating instructions explaining safe starting and stopping procedures for all systems shall be prepared in typed form along with the inspections required to insure normal safe operations. The instructions shall be framed as specified above for the wiring and control diagrams and posted beside the diagram. Proposed diagrams, instructions, and other sheets shall be submitted for approval prior to posting. Operating instructions shall be posted before acceptance testing of the systems and verified during acceptance testing.

1.19.7 Additional Submittals/Re-submittals

The Contracting Officer reserves the right 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 necessary to insure that adequate information has been furnished to provide the satisfactory operation and maintenance of the various items of equipment and to fulfill the intent of the specifications. Additional submittals or resubmittals supplementing incorrect or incomplete data shall be made within thirty (30) calendar days after receiving notice by the Contracting Officer. All costs arising from these resubmissions shall be borne by the Contractor.

1.20 INSTRUCTIONS AND TRAINING FOR OPERATION AND MAINTENANCE

1.20.1 General

The Contractor shall be responsible for the instruction and training of operating and maintenance personnel as specified below and in the Technical Provisions of the specifications. Unless otherwise indicated in the Technical Provisions, operating and maintenance instructions shall be given for a minimum period as follows:

Title	Duration of Training
Mechanical Systems	10 Days
Electrical Systems	10 Days

1.20.2 Operation and Maintenance Training

The Contractor shall provide competent instructors for training of personnel designated by the Contracting Officer to operate mechanical and electrical building systems and equipment, perform the required preventive maintenance to minimize breakdown, and to perform necessary repairs when malfunction or breakdown of equipment occurs. Such training shall consist of classroom and on-the-equipment training for the period specified, which shall be completed prior to acceptance of a system or equipment, as applicable. The instructor(s) shall have no other duties during the period of training. Classroom instruction shall not exceed fifty percent (50%) of the total training time, with the balance devoted to on-the-equipment demonstration and familiarization. Emphasis will be given to both electrical and mechanical features, in accordance with approved training plans.

1.20.3 Arrangements

The training shall be for not less than the periods of time specified, five (5) days per week, and eight (8) hours per day, subject to review and approval by the Contracting Officer. Each individual training session shall be presented one time only, shall be video taped in a television system compatible with the local area, and be scheduled in a manner acceptable to the Contracting Officer. At the completion of training, the videotapes shall become the property of the Government. In addition to the Contractor's requirements to video tape each training section, the Government reserves the right to record, in any manner, the subject training material, or training sessions given by the Contractor, without additional cost to the Government.

Recordings obtained will be used in future training by the Government. The operating and maintenance manual data, as specified to be furnished in these Special Clauses, shall be used as the base material for training.

1.20.4 Scheduling

The Contractor shall contact the Contracting Officer for the purpose of preliminary planning, scheduling, and coordination of training, to maximize effectiveness of the training program for available operating and maintenance personnel. The Contractor shall initiate and make arrangements for such contact within thirty (30) calendar days after receipt of notification of award of contract; and shall include all significant times in scheduling and completing training in his PROJECT SCHEDULE. The Contractor shall provide a draft outline of training outline in sufficient detail to provide a broad indication of the type of scope of training to be given. It shall include but not be limited to; (a) a list of subjects to be presented; (b) estimated amounts of classroom and on-the-equipment instruction for each subject; (c) a list of minimum qualifications for instructors; and (d) discussions concerning the types and amounts of visual aids, reference materials, tools and test equipment, mock-up and other training materials that will be employed during training.

1.20.5 Preliminary Plan

The Contractor shall submit seven (7) copies of an outline of his proposed training plan to the Contracting Officer for review and approval not later than 60 calendar days after award of this contract. The plan will be reviewed and coordinated with the content of the O&M manuals.

1.20.6 Plan

The Contractor shall submit seven (7) copies of his proposed training plan to the Contracting Officer for approval not later than ninety (90) calendar days prior to start of any training. The plan shall include the following; (a) a weekly outline showing overall form and design of training presentation; (b) a day-by-day schedule showing time intervals, the major and subordinate subjects to be covered in each, the name of

the instructor(s) and qualification summary of each, and identification of related handouts; (c) summary of the number of hours of classroom and on-the-equipment training; (d) a list of reference materials to be provided by the Contractor to the trainees; and (e) a list and description of the training materials to be used, such as text, visual aids, mock-up, tools, etc. The Contractor shall be responsible for furnishing all training materials except the following: The Government will provide space, chairs, and tables for classroom training, and three (3) sets of the five (5) sets of O&M Manuals required by the Contractor per Section 01335 SUBMITTAL PROCEDURES FOR DESIGN/BUILD of the specifications. Provision of these manuals is solely for reference purposes, and in no way relieves the Contractor from providing all instruction and materials necessary for training personnel designated by the Government. All costs for resubmission of training plans, training materials, etc., as requested by the Contracting Officer shall be borne by the Contractor. Resubmittals shall be made within twenty (20) days of notice from the Contracting Officer.

1.20.7 Attendance Roster/TAC Form 356

The Contractor shall develop an attendance roster or a similar document indicating each student's attendance, prior to the start of each class, subject and/or topic. This includes both "Hands-On" and classroom training. It is strongly recommended that each student trained be required to sign this document at the beginning of each class day for each and every class, subject and/or topic taught on that day. The Contractor's failure to have student attendance verified in writing may be cause for the Government to order the Contractor to repeat schooling where evidence of attendance cannot be verified. No part of the time lost due to such repeat instruction shall be made the subject of claim for extension of time or for excess costs or damage by the Contractor. Within ten (10) working days after completion of Operation and Maintenance Training conducted in accordance with this clause and/or applicable Technical Provision section, the Contractor shall complete and submit TAC Form 356 "Operation and Maintenance Training Validation Certificate". The attendance roster shall be included as an attachment to TAC Form 356.

1.21 CONTRACTOR FURNISHED EQUIPMENT LISTS

The Contractor shall furnish a list of all items, other than integral construction type items, furnished under the contract. Items such as furniture, drapes, rugs, vehicles, office machines, appliances, etc., shall fall under this category. The Contractor's list shall describe the item; give the unit price and total quantities of each. Model and serial numbers for equipment shall be provided when applicable. The Contractor shall keep an up-to-date register of all covered items and make this information available to the Contracting Officer at all times. Prior to acceptance, the Contractor shall submit the complete register to the Contracting Officer.

1.22 TIME EXTENSIONS

1.22.1 General

This provision specifies the procedure for determination of time extensions for unusually severe weather in accordance with the Contract Clause 52.249-10 entitled DEFAULT (FIXED-PRICE CONSTRUCTION) APR 1984. The listing below defines the anticipated monthly unusually severe weather for the contract period and is based on National Oceanic and Atmospheric Administration (NOAA) or similar data for the geographic location of the project. The schedule of anticipated unusually severe weather will constitute the baseline for determining monthly weather time evaluations. Upon award of this contract and continuing throughout the contract each month, actual unusually severe weather days will be recorded on a calendar day basis (including weekends and holidays) and compared to the monthly anticipated unusually severe weather in the schedule below. The term "actual unusually severe weather days" shall include days actually impacted by unusually severe weather. The Contractor's schedule must reflect the anticipated unusually severe weather days on all weather dependent activities.

MONTHLY ANTICIPATED UNUSUALLY SEVERE WEATHER CALENDAR DAYS

January	4 Days
February	2 Days
March	2 Days
April thru December	0 Days

1.22.2 Time Extensions

The number of actual unusually severe weather days shall be calculated chronologically from the first to the last day in each month. Unusually severe weather days must prevent work for fifty percent (50%) or more of the Contractor's workday and delay work critical to the timely completion of the project. If the number of actual unusually severe weather days exceeds the number of days anticipated in the paragraph above, the Contracting Officer will determine whether the Contractor is entitled to a time extension. The Contracting Officer will convert any qualifying delays to calendar days and issue a modification in accordance with the Contract Clause 52.249-10 entitled DEFAULT (FIXED-PRICE CONSTRUCTION) APR 1984.

1.22.3 Other Delays

Construction delays due to full or partial base closures due to incidents such as demonstrations, civil unrest and outright attacks will be examined on an individual basis for consideration of time extensions.

1.23 STANDARDIZATION

Where two or more items of the same type or class of product, system or equipment furnished in this project are required, the units shall be products of the same manufacturer and shall be interchangeable when of the same size, capacity, performance characteristics, and rating. The only exception to this requirement is where the items are interchangeable due to conformance with industry standards (valves, fittings, etc.); they need not be by the same manufacturer. This requirement applies to all manufactured items in the project that normally require repair or replacement during the life of the equipment.

1.24 COMPLIANCE WITH HOST COUNTRY RULES AND CUSTOMS

The laws of Host Country may prohibit access to certain areas of the country that are under military control. The Contractor shall furnish the Contracting Officer the names of personnel, type, and amounts of equipment, dates and length of time required at the site, and the purpose of entering the host country. It is understood that areas to which rights of entry are provided by the Host Government are to be used only for work carried out under the contract and no destruction or damages shall be caused, except through normal usage, without concurrence of the Host Government.

1.24.1 Contractor's Responsibilities

The following items are the sole responsibility of the Contractor to investigate, estimate as to cost, and assume the risk, as normally encountered by Contractors. The Contractor shall be responsible for determining the effect of the following on his own cost of performance of the contract and for including sufficient amount in the contract price:

- a. Official language and type of accounts required to satisfy the officials of the Local Government.
- b. Entry and exit visas, residence permits, and residence laws applicable to aliens. This includes any special requirements of the Host Government, including those required by local Labor Offices, which the Contractor may have to fulfill before an application for a regular block of visas will be accepted.
- c. Passports, health and immunization certificates, and quarantine clearance.

- d. Compliance with local labor and insurance laws, including payment of employer's share of contribution, collecting balance from employee and paying into insurance funds.
- e. Strikes, demonstrations and work stoppage.
- f. Collection through withholding and payment to local Government, of any Host Country income tax on employees subject to tax.
- g. Arranging to perform work in the Host Country, to import personnel, to employ non-indigenous labor, to receive payments and to remove such funds from the country.
- h. Operating under local laws, practices, customs and controls, and with local unions, in connection with hiring and firing, mandatory wage scales, vacation pay, severance pay, overtime, holiday pay, 7th day of rest, legal notice or pay in lieu thereof for dismissal of employees, slowdown and curtailed schedules during religious holidays and ratio of local labor employed in comparison to others.
- i. Possibility of claims in local bureaus, litigation in local courts, or attachment of local bank accounts.
- j. Compliance with workmen's compensation laws and contributions into funds. Provisions of necessary medical service for Contractor employees.
- k. Special license required by the local Government for setting up and operating any manufacturing plant in the Host Country, e.g. concrete batching, precast concrete, concrete blocks, etc.
- l. Sales within the host country of Contractor-owned materials, and equipment.
- m. Special licenses for physicians, mechanics, tradesmen, drivers, etc.
- n. Identification and/or registration with local police of imported personnel.
- o. Stamp tax on documents, payments and payrolls.
- p. Base passes for permanent staff, day laborers, motor vehicles, etc.
- q. Compliance with all customs and import rules, regulations and restrictions, including, but not limited to, local purchase requirements.

1.25.1 Employee Identification

The Contractor shall be responsible for furnishing to each employee and for requiring each employee engaged on the work, to display identification as approved and directed by the Contracting Officer. Prescribed identification shall immediately be delivered to the Contracting Officer for cancellation upon release of any employee. When required, the Contractor shall obtain and provide fingerprints of persons employed on the project. Contractor and subcontractor personnel shall wear identifying markings on hard hats clearly identifying the company for whom the employee works.

1.25.1.1 Preparation of Identification Badges

The Contractor shall be required to prepare a written application inclusive color photographs and provide all materials and labor necessary to prepare an identification badge, laminated in plastic, containing the employee's name, badge number, color photo, height and weight, the name of the Contractor's organization and for requiring each employee engaged on the work to display this identification as directed by the Contracting Officer. The Contractor shall submit each application and draft badge through the Contracting Officer to the Base Security Office. A minimum of thirty-five workdays shall be allowed for Government review and certification of badges. The Base Security Office will certify each draft badge by signature, stamp, seal or any combination thereof. Upon certification by the Base Security Office, the

badges will be returned to the Contractor for final preparation, lamination, and issuance. Badges shall not be taken out of country during periods of travel or absence. During such periods, the Contractor may be permitted to issue temporary identification badges.

1.25 EMPLOYEE INFORMATION

1.25.1.2 Employee Background and Historical Information

The Contractor shall be required to prepare and maintain personal background and historical information forms on each employee. These forms may be reviewed by the Base Security Office. The required information shall include but not necessarily be limited to the following:

- a. Full name.
- b. Place and date of birth.
- c. Three (3) current color photographs.
- d. Copy of Citizenship/Nationality identification.
- e. Copy of Passport.
- f. Copy of drivers license.
- g. Police Background Check.
- h. Work History.
- i. Personal background information.
- j. Copy of Work Permit and/or Visa.
- k. Permanent home of record and in-country address.
- l. Other information mandated by local law, the Base Security Regulations or that may be required to coordinate and process the necessary documentation with the government offices responsible for the approval.
- n. Registration, insurance company, policy number and expiration date for each vehicle.

1.25.2 Identification of Contractor Vehicles

The Contractor shall be responsible for requiring each vehicle engaged in the work to display permanent vehicular identification as approved and directed by the Contracting Officer. If acceptable to the Base Security Office and approved by the Contracting Officer, the Contractor may institute a system of non-permanent temporary identification for one-time delivery and transit vehicles. Each Contractor vehicle, machine, piece of equipment, or towed trailers, shall show the Contractor's name such that it is clearly visible on both front doors of the vehicle and both sides of a towed trailer. A valid license plate shall be displayed at all times. Contractor vehicles operated on Government property shall be maintained in a good state of repair, shall be insured, and shall be registered in accordance with Afghanistan Law.

1.25.3 Security Plan

The Contractor shall submit to the Contracting Officer, within ten (10) calendar days after award of this contract, his proposed personnel and vehicular access plan. This plan shall cover all elements for issuance of the access passes, safeguarding of passes not issued, construction security operations, lost passes, temporary vehicle passes, and collection of passes for employee's and vehicles on 1)- temporary absence; 2)- termination or release; and 3)- termination or completion of contract. The plan shall address in detail the contractors proposed procedures, and organization necessary to produce and maintain effective security within the contract limits twenty-four (24) hours a day seven (7) days a week.

1.26 RADIO TRANSMITTER RESTRICTIONS

To preclude accidental actuation of sensitive electronic equipment, the Contractor shall not use radio-transmitting equipment without prior approval of the Contracting Officer.

1.28 PUBLIC RELEASE OF INFORMATION

1.28.1 Prohibition

There shall be no public release of information or photographs concerning any aspect of the materials or services relating to this bid, contract, purchase order, or other documents resulting there from without the prior written approval of the Contracting Officer.

1.28.2 Subcontract and Purchase Orders

The Contractor agrees to insert the substance of this clause in all purchase orders and subcontract agreements issued under this contract.

1.29 ATTACHMENTS

TAC FORM 61 - Accident Prevention Program Hazard Analysis

TAC FORM 356 - Operation and Maintenance Training Validation Certificate

PART 2 LOCAL CLAUSES

2.1 APPLICATION OF US CRIMINAL JURISDICTION

Reference DODI 5525.11. The contractor is directed to provide all of its personnel working under this contract, and to require all of its subcontractors to provide their personnel, with written notification that - with the exception of nationals of Afghanistan and those ordinarily resident in Afghanistan - contractor and subcontractor personnel, and the dependents of contractor and subcontractor personnel who are residing with such personnel, may be subject to US criminal jurisdiction as provided for in the Military Extraterritorial Jurisdiction Act, 18 USC 3261-3267; see Section 3267(1)(A)(iii)(I) and (2)(A)(iii). A copy of the notice ***shall be furnished to the contracting officer upon award of the contract***, along with a certification by an authorized company representative attesting to the provision of the notification to contractor personnel.

2.2 ATTACKS FROM HOSTILE ENTITIES

This contract is firm fixed-price. Costs incurred in the performance of project execution that arise from the attacks of hostile entities, such as costs arising from damage to or destruction of contractor equipment and facilities, and damage to or destruction of the project prior to Government acceptance, are the sole responsibility of the contractor. The Government makes no guarantee to provide the contractor with security, and bears no obligation to reimburse the contractor for costs arising from the attacks of hostile entities. When appropriate, the Contracting Officer may provide the contractor with an equitable adjustment with respect to time – but not cost – in accordance with clause 52.249-10; see 52.249-10(b)(1)(i) and (2).

2.3 INSTALLATION ACCESS AND BADGING

This contract is firm fixed-price. It is the responsibility of the contractor to be knowledgeable of and to abide by any and all applicable installation access procedures and requirements, to include any and all badging procedures and requirements, that may be necessary for contractor access to the project site. Such procedures and requirements may change over the course of contract performance; it is the responsibility of the contractor to plan accordingly in order to meet its existing obligations under this contract. The US Army Corps of Engineers, Afghanistan Engineer District, neither controls nor is responsible for any such installation access procedures, requirements or changes thereto.

2.4 CUSTOMS CLEARANCE

Reference clauses 52.229-6 and 52.225-13. This contract is firm fixed-price. It is the responsibility of the contractor to be knowledgeable of and to abide by any and all applicable customs clearance procedures and requirements that may be necessary for the transportation of supplies and equipment into Afghanistan. Such procedures and requirements may change over the course of contract performance; it is the responsibility of the contractor to plan accordingly in order to meet its existing obligations under this contract. The US Army Corps of Engineers, Afghanistan Engineer District, neither controls nor is responsible for any such customs clearance procedures, requirements or changes thereto.

2.5 TRAVEL WARNINGS

The contractor shall provide all personnel working under this contract, and shall require subcontractors to provide their personnel, with a written notification advising such personnel to be aware of US State Department Travel Warnings with respect to Afghanistan, available at <http://travel.state.gov>, in the event they wish to consider bringing their dependants into Afghanistan. A copy of the notice **shall be furnished to the contracting officer upon award of the contract**, along with a certification by an authorized company representative attesting to the provision of the notification to contractor personnel. At no time, subject to the written approval of the contracting officer, may the contractor allow such dependants, or any other unauthorized individuals, to be present on the project site grounds, whether in transit or otherwise.

2.6 DRUG-FREE WORKFORCE

Documentation of the contractor's drug-free workforce program as required by clause 252.223-7004(b) **shall be furnished to the contracting officer upon award of the contract.**

2.7 COMBATING TRAFFICKING IN PERSONS, COMMERCIAL SEX ACTS, FORCED LABOR

A copy of the employee notification statement as required by clause 252.222-7006(d) **shall be furnished to the contracting officer upon award of the contract**, along with a certification by an authorized company representative attesting to the provision of the notification to contractor personnel.

-- End of Section --
01060

SECTION 01312

SECTION 01312 QUALITY CONTROL SYSTEM (QCS)

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: the Contractor can obtain the current address from the Government. 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 specifications "SUBMITTAL PROCEDURES", "CONTRACTOR QUALITY CONTROL", "PROJECT SCHEDULE", and Contract Clause, "Payments", 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. 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. Any program updates of QCS will be made available to the Contractor via the Government RMS Website as they become available. It shall be the responsibility of the contractor to maintain the QCS software and install updates 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. No separate payment shall be made for updating or maintaining the necessary hardware configurations necessary to run QCS:

Hardware

IBM-compatible PC with 1000 MHz Pentium or higher processor
256+ MB RAM for workstation / 512+ MB RAM for server
1 GB hard drive disk space for sole use by the QCS system
Digital Video Disk (DVD)-Compact Disk (CD) Reader-Writer (RW/ROM)
Monitor with a resolution of AT LEAST 1024x768, 16bit colors
Mouse or other pointing device
Windows compatible printer. (Laser printer must have 4 MB+ of RAM)
Connection to the Internet, minimum 56k BPS

Software

MS Windows 2000 or higher
QAS-Word Processing software: MS Word 2000 or newer
Internet browser supporting HTML 4.0 or higher
Electronic mail (E-mail) MAPI compatible
Virus protection software 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. The government will provide QCS training if requested by the contractor.

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 or via CD-ROM. 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. Data updates to the Government shall be submitted via either E-mail or electronic media with printed/file attachments, e.g., daily reports, schedule updates, payment requests. If permitted by the Contracting Officer. 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. 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.

1.6.3.1 Daily Contractor Quality Control (CQC) Reports.

QCS includes the means to produce the Daily CQC Report. 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 specification 01451 "CONTRACTOR QUALITY CONTROL".

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.

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 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 Specification Section Project Schedule. This schedule shall be input and maintained in the QCS database either manually or by using the Standard Data Exchange Format (SDEF). The updated schedule data shall be included with each pay request submitted by the Contractor.

1.6.6 Requests for Information (RFI)

The Contractor shall use the two-way RFI system contained in QCS for tracking all RFI's generated during the contract. Hard copies of all RFI's shall be provided to the government, and will govern in the event of a discrepancy between electronic and printed mediums.

1.6.7 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.

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 --
01312

SECTION 01321

SECTION 01321 PROJECT SCHEDULE

PART 1 GENERAL

1.1 SUBMITTALS

The following shall be submitted for Government approval in accordance with Section 01335
SUBMITTAL PROCEDURES: SD-07 Schedules Project Schedule; Horizontal Bar Chart and Periodic Payment Request Updates; and Projected Earnings Curve and Periodic Payment Request Updates. Revisions to the Project Schedule and Projected Earnings Curve for Modifications Issued to this Contract shall be coordinated with the Contracting Officer.

PART 2 PRODUCTS (Not Applicable)

PART 3 EXECUTION

3.1 GENERAL

The Contractor shall furnish a Project Schedule as described below. The scheduling of construction shall be the responsibility of the Contractor. Contractor management personnel shall actively participate in its development. Subcontractors and suppliers working on the project should also contribute in developing and maintaining an accurate Project Schedule. The approved Project Schedule shall be used to measure the progress of the work, to aid in evaluating time extensions, and to provide the basis of all progress payments.

3.2 BASIS FOR PAYMENT

The schedule shall be the basis for measuring Contractor progress. Lack of an approved schedule or scheduling personnel shall result in an inability of the Contracting Officer to evaluate Contractor progress for the purposes of payment. Failure of the Contractor to provide all information, as specified below, shall result in the disapproval of the entire Project Schedule submission and the inability of the Contracting Officer to evaluate Contractor progress for payment purposes. In the case where Project Schedule revisions have been directed by the Contracting Officer and those revisions have not been included in the Project Schedule, then 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

3.3.1 Schedule of Construction

Within seven (7) calendar days after notice to proceed, the Contractor shall prepare and submit a Construction Schedule to the Contracting Officer for approval. This schedule shall address each payment line item and/or sub-line item listed in the Proposal Schedule separately.

3.3.2 Non-Compliance

Failure of the Contractor to comply with the requirements of the Contracting Officer shall be grounds for 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.

3.3.3 Horizontal Bar Chart

The required schedule shall utilize an automated scheduling program and shall be in the form of a horizontal bar chart. The line or sub-line item schedule of activities shall be listed down the left side of the page. A time scale shall run across the bottom of the page. Each work item shall be represented by a bar starting with the schedule start date and running continuously to the completion date.

3.3.4 Cost

Listed with each work item shall be a corresponding cost representing the total cost, such as material, labor, equipment, and overhead associated with that item. The total cost of the work items shall be equal to the Bid Price for that sub-line item of the Proposal Schedule.

3.3.5 Scheduled Project Completion

The schedule interval shall extend from Notice-To-Proceed to the contract completion date.

3.3.6 Projected Earning Curve

Submitted with the Construction Schedule shall be a Projected Earning Curve. The Projected Earning Curve is a plot of the Contractor's earnings on the vertical axis and the contract duration on the horizontal axis. The earnings figure shall relate to the complete value of the contract and need not reflect each facility separately.

3.3.7 Construction Schedule

The Construction Schedule shall be on one page with a maximum dimension of 90 cm by 120 cm. The Contractor shall submit the Projected Earnings Curve on the same page. The initial submittal shall include one (1) reproducible and four (4) copies, one (1) copy of which will be returned to the Contractor when approved.

3.3.8 Submission With Partial Payment Estimate

Each time the Contractor submits a payment request under this contract he shall also submit three (3) copies of the Bar Chart. The Bar Chart shall be annotated by indicating the percent complete for each activity directly on the bar. The Projected Earnings Curve shall be annotated by plotting actual earnings versus time on the same graph. Those work items reflecting performance which is behind schedule by fifteen (15) calendar days or more shall be fully explained in detail giving the reason for delay and the Contractor's plan for timely completion within the schedule.

3.3.9 Modifications

The Construction Schedule and Projected Earning Curve shall be revised to reflect any and all modifications issued to this contract as they are issued. Format and numbers of copies as defined in paragraph CONSTRUCTION SCHEDULE shall be submitted for approval by the Contracting Officer.

3.4 PERIODIC PROGRESS MEETINGS

Progress meetings to discuss payment shall include a monthly on-site meeting or shall be conducted at other regular intervals mutually agreed to at the preconstruction conference. During this meeting the Contractor shall describe, on an activity-by-activity basis, all proposed revisions and adjustments to the project schedule required to reflect the current status of the project. The Contracting Officer will approve activity progress, proposed revisions, and adjustments as appropriate.

3.4.1 Update Submission Following Progress Meeting

A complete update of the project schedule containing all approved progress, revisions, and adjustments, based on the regular progress meeting, shall be submitted not later than four (4) working days after the monthly progress meeting.

3.4.2 Progress Meeting Contents

Update information, including Actual Start Dates, Actual Finish Dates, Remaining Durations, and Cost to Date, shall be subject to the approval of the Contracting Officer.

3.4.3 Earnings Report

A compilation of the Contractor's Total Earnings on the project from the Notice-to-Proceed until the most recent Monthly Progress Meeting shall be recorded. This report shall reflect the Earnings of specific activities based on the agreements made in the field and approved between the Contractor and the 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. This report shall: sum all activities and provide a percent complete by individual activity and total project percent complete. The report shall contain, for each activity: activity identification, activity description, original budgeted amount, total quantity, quantity to date, percent complete (based on cost), and earnings to date.

3.4.4 Cost Completion

The earnings for each activity started shall be reviewed. Payment shall be based on earnings for each in-progress or completed activity. Payment for individual activities shall not be made for work that contains quality defects. A portion of the overall project amount may be retained based on delays of activities.

3.4.5 Network Analysis System

The Contractor may, as an option, submit to the Contracting Officer for approval, a time related network analysis in lieu of the previously specified bar chart.

-- End of Section --
01321

SECTION 01335

SECTION 01335
SUBMITTAL PROCEDURES FOR DESIGN-BUILD PROJECTS

PART 1 GENERAL

1.1 REFERENCE

The publication listed below forms a part of this specification to the extent referenced. The publication is referenced to in the text by basic designation only.

CONSTRUCTION SPECIFICATIONS INSTITUTE

Manual of Practice
Construction Specifications Institute
http://www.csinet.org/s_csi/index.asp
601 Madison Street
Alexandria, Virginia
22314-1791

NATIONAL INSTITUTE OF BUILDING SCIENCES (NIBS)

Unified Master Reference List (UMRL)
National Institute of Building Sciences
1090 Vermont Avenue, NW, Suite 700
Washington, DC 20005-4905
Email: nibs@nibs.org
FAX: (202) 289-1092
Tele: (202) 289-7800

AFGHANISTAN ENGINEER DISTRICT

AFGHANISTAN ENGINEER DISTRICT
<http://www.aed.usace.army.mil>
U.S. Army Corps of Engineers
Attention: Qalaa House
APO AE 09356

1.2 SUBMITTAL CLASSIFICATION

Submittals are classified as follows.

1.2.1 DESIGN SUBMITTALS

Contractor furnished design submittals are the various design documents which primarily consist of field investigations, calculations, design analysis, drawings and specifications.

In addition, for every Design Submittal, the Contractor shall submit all non-administrative modifications issued for the Contract as part of the Design Submittal package to enable AED to validate that these modifications have been incorporated into this design submittal.

The Contractor shall clearly label and date all Design Submittals to reflect the current design stage and date of submission to the Government to avoid confusion between current and previous submittals. The Design-Build Contractor shall not begin construction work until the Government has reviewed the Design-Build Contractor's concept, intermediate and final designs and has cleared them for construction. Clearance for construction shall not be construed as meaning Government approval. Unless otherwise indicated, the risk for the design is the sole responsibility of the Design-Build Contractor.

As a minimum, design submittals shall be submitted at the following intervals:

General design - 65%

Final design review - 99%

Cleared For Construction review - 100%

1.2.1.1 GENERAL DESIGN REVIEW (65%):

The review of this submittal is primarily to insure that the contract documents and design analysis are proceeding in a timely manner and that the Contract requirements and design criteria are being correctly understood and adhered to. The submittal shall consist of the following:

- a. Complete design analysis, plans and specifications for any contract feature(s) that the Contractor would like Partial Clearance for Construction on once the 65% Design Submittal has been approved, including list of those Construction Submittal items requiring Government Approval (GA).
- b. For all other work, provide a Draft Construction Specifications complete - all anticipated sections, edited to include only applicable requirements.
- c. Construction Drawings complete for all work to be completed until the 99% Final Design Review Submittal is provided, with all past Design Review comments incorporated. The Contractor is expected to have completed all of his coordination checks and have the drawings in a design complete condition. The drawings shall contain all the details necessary to assure a clear understanding of the work throughout construction.

For work shown but incomplete and still under design, the Contractor should clearly indicate on the ENG Form 4025 what is being submitted for review and approval.

1.2.1.2 FINAL DESIGN REVIEW (99%):

The review of this submittal is primarily to insure that the contract documents and design analysis are nearing completion and that the Contract requirements and design criteria are being correctly understood and adhered to. The submittal shall consist of the following:

- a. Design Analysis complete with all prior comments incorporated.
- b. Draft Construction Specifications complete - all anticipated sections, edited to include only applicable requirements.
- c. Construction Drawings complete with all 65% comments incorporated. 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 finalized at this time including the incorporation of any design review comments generated by all past design reviews. The drawings shall contain all the details necessary to assure a clear understanding of the work throughout construction.

1.2.1.4 "CLEARED FOR CONSTRUCTION" SUBMITTAL (100%):

The review of this submittal is to insure that the design is in accordance with all Contract requirements and any directions provided the Contractor during the design process. The only effort remaining between the Final Design Review Submittal and the "Cleared For Construction" Design Review Submittal is the incorporation of all Government review comments. The Contractor shall submit the following documents for this review:

- a. Design Analysis, only if changes have occurred since 99% Design Submittal. 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 Drawings and Specifications.
- b. Construction Specifications, complete.
- c. Construction Drawings, complete.

Once the design documents have been "Cleared for Construction" by the Contracting Officer, the Contractor shall clearly identify each document by annotating it as "Cleared for Construction."

1.2.2 PARTIAL DESIGN SUBMITTALS

In the interest of expediting construction, the Contracting Officer may approve partial design submittals, procurement of materials and equipment, as well as issue the Notice To Proceed (NTP) for construction of those elements of the design which have been cleared for construction. Such partial notices to proceed shall be solely at the discretion of the Contracting Officer. The Contractor must obtain the approval of the Designer of Record (DOR) and the Government's concurrence for any Contractor proposed revision to the professionally stamped and sealed design reviewed and Cleared for Construction by the Government, before proceeding with the revision. The Government reserves the right to non-concur with any revision to the design, which may impact furniture, furnishings, equipment selections or operations decisions that were made, based on the reviewed and cleared for construction design. Any revision to the design, which deviates from the contract requirements (i.e., the RFP and the accepted proposal), will require a modification, pursuant to the Changes clause, in addition to Government concurrence. The Government reserves the right to disapprove such a revision. Unless the Government initiates a change to the contract requirements, or the Government determines that the Government furnished design criteria are incorrect and must be revised, any Contractor initiated proposed change to the contract requirements, which results in additional cost, shall strictly be at the Contractor's expense. The Contractor shall track all approved revisions to the reviewed and cleared for construction design and shall incorporate them into the As-Built design documentation, in accordance with Section 01780A, CLOSEOUT SUBMITTALS, Paragraphs 1.1 and 1.2, which lists all requirements associated with submission of editable CADD format As-Builts required as part of this contract. The Designer of Record shall document its professional concurrence on the As-Builts for any revisions by affixing its stamp and seal on the drawings and specifications.

1.2.3 USE OF DrChecks_{SM} FOR DESIGN SUBMITTAL COMMENT AND RESPONSE

1.2.3.1 DrChecks_{SM} WEB LINK

All AED Design Submittal review comments will be documented using the standard design review tool for the U.S. Army Corps of Engineers, a web-based application called "DrChecks_{SM}". The web link to DrChecks_{SM} is:

<https://www.projnet.org/projnet/binKornHome/index.cfm>

1.2.3.2 DrChecks_{SM} VENDOR IDENTIFICATION AND TUTORIAL

Upon notification of award, the contractor shall immediately coordinate with the Chief, Engineering Branch, AED to acquire a vendor identification and a brief tutorial on the use of DrChecks_{SM}. The contractor is responsible for providing their own DrChecks_{SM} Administrator within their own design staff personnel to access and accomplish actions within DrChecks_{SM}.

1.2.3.3 NOTIFICATION OF DrChecks_{SM} FILE ACCESS

The Afghanistan Engineer District will complete a review at every Design Submittal stage for conformance with the technical requirements of the Contract and document all comments in DrChecks_{SM}. At completion of the review, a notification will be issued to the Contractor by the Contracting Officer's representative that the particular DrChecks_{SM} file will be opened to the Contractor. Until this time, the Contractor is not able to view any AED comments for that particular Design Submittal.

1.2.3.4 FURTHER CONTRACTOR INFORMATION AFTER DrChecks_{SM} REVIEWS

See Paragraph 3.7.4, Government Review, for further procedures and requirements associated with Design Submittal reviews.

1.2.4 CONSTRUCTION SUBMITTALS

1.2.4.1 Contractor Furnished Government Approved Construction Submittals (GA)

Government approved construction submittals are primarily related to plans (Contractor Quality Control, Accident Prevention, Resident Management System, Area Use, etc.), schedules (Project Schedule/Network Analysis), and certificates of compliance, reports and records/statements. They may also include proposed variations to approved design documents in accordance with the paragraph entitled "VARIATIONS".

In addition, GA construction submittals are required for the following:

a. CIVIL FEATURES

TESTING RESULTS: Data will include information on the locations and depths of all viable water supply sources at the site(s) involved and a water quantity and water quality analysis for each source from the Ministry of Public Health or other certified testing firm.

b. MECHANICAL FEATURES

EQUIPMENT SUBMITTALS: Manufacturer's standard catalog data, installation, Operation and Maintenance (O&M) manuals and construction details for water wells, water tanks, control valves, pipe insulation, water pumps, air handling units, condensers, variable air volume (VAV) boxes.

TESTING RESULTS: For water tanks, water pumps (including instrumentation), water piping, sprinkler systems, and oxygen systems, submit six (6) copies of each test containing the following information in bound letter-size booklets:

- 1) The date the tests were performed.
- 2) A list of equipment used, with calibration certifications.
- 3) A copy of measurements taken.
- 4) The parameters to be verified.
- 5) The condition specified for the parameter.
- 6) The inspection results, signed, dated, and certified by the installer. The certification shall state that required procedures were accomplished, that the procedures were conducted in compliance the plans and specifications.
- 7) A description of adjustments performed.

Individual reports shall be provided for storage tank tests, piping tests, system performance tests, high level alarm test, and the system leak tests. Drawings shall be folded blue lines, with the title block visible.

c. ELECTRICAL FEATURES

PRODUCT DATA and SHOP DRAWINGS: generators (and its auxiliaries), load bank, transformers, substations, panels/switchboards/motor control centers, lightning protection, receptacles, circuit breakers.

DESIGN DATA: lightning protection and grounding.

TEST DATA: Lightning protection and grounding.

d. ARCHITECTURAL FEATURES

PRODUCT DATA/CATALOGUE CUTS/SHOP DRAWINGS/SCHEDULES: Specialty doors and frames (fire rated, sound rated, bullet resistant, security, overhead rolling); door hardware; windows; metal roofing (including fasteners, flashing, and accessories); building insulation; fire-rated and water-resistant gypsum board; and other specialty products (bullet resistant glazing/panels).

COLOR BOARD: Architectural finishes

PRODUCT DATA/CATALOGUE CUTS/INSTALLATION INSTRUCTIONS: Exterior Insulation and Finish System (EIFS)

SHOP DRAWINGS: Casework/Cabinetry

1.2.4.2 For Information Only Construction Submittals (FIO)

All submittals not requiring Designer of Record or Government approval will be for information only. These construction submittals shall be checked, stamped, signed and dated by the Contractor's Quality Control Engineer, certifying that such submittal complies with the contract requirements. All Contractor submittals shall be subject to review by the Government at any time during the course of the contract. Any Contractor submittal found to contain errors or omissions shall be resubmitted as one requiring "approval". No adjustment for time or money will be allowed for corrections required as a result of noncompliance with plans or specifications. Normally submittals For Information Only will not be returned. Approval of the Contracting Officer is not required on FIO submittals. These submittals will be used for information purposes. 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 and will not prevent the Contracting Officer from requiring removal and replacement if nonconforming material is incorporated in the work.

1.2.4.3 Variations

After design submittals have been reviewed and cleared for construction by the Contracting Officer, no submittal for the purpose of substituting materials, equipment, systems, and patented processes will be considered by the Government unless submitted in accordance with the paragraph entitled VARIATIONS.

1.2.4.4 Additional Shop Drawings and Submittals

In accordance with the paragraph entitled DESIGN DISCREPANCIES, the Government may request the Design-Build Contractor to provide additional shop drawing and submittal type data subsequent to completion of the design.

1.2.4.5 Incomplete Design

The Design-Build Contractor shall not use construction submittals as a means to supplant and/or supplement an incomplete design effort.

1.3 SUBMITTAL CERTIFICATION

The CQC organization shall be responsible for certifying that all submittals and deliverables have been reviewed in detail for completeness, are correct, and are in strict conformance with the contract drawings, specifications, and reference documents.

1.3.1 Effective Quality Control System

The Contractor is responsible for quality control and shall establish and maintain an effective quality control system in compliance with Contract Clause 52.236-21 SPECIFICATIONS AND DRAWINGS FOR CONSTRUCTION - ALTERNATE I, and SECTION 01451 CONTRACTOR QUALITY CONTROL.

1.3.1.1 Organizational Responsibility

The quality control system shall cover all design, construction, subcontractor, manufacturer, vendor, and supplier operations at any tier, both onsite and offsite.

1.3.1.2 CQC System Manager Review and Approval

Prior to submittal, all items shall be checked and approved by the Contractor's Quality Control (CQC) System Manager. If found to be in strict conformance with the contract requirement, each item shall be stamped, signed, and dated by the CQC System Manager. Copies of the CQC organizations review comments indicating action taken shall be included within each submittal.

1.3.1.3 Determination of Compliance

Each submittal shall be complete and in sufficient detail to allow ready determination of compliance with contract requirements by the Contracting Officer. The contractor shall submit all required documentation with submittals. The U.S. Army Corps of Engineer (USACE) will not accept partial submittals.

1.3.2 Responsibility for Errors or Omissions

It is the sole responsibility of the Contractor to ensure that submittals do or do not comply with the contract documents. Government review, clearance for construction, or 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.

1.3.2.1 Government Review

Government review, clearance for construction, or approval of Design and construction 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 it is the sole responsibility of the Contractor to certify that each Submittal has been reviewed in detail and is in strict conformance with all the contract documents and design criteria referenced therein.

1.3.3 Substitutions

After design submittals have been reviewed and cleared for construction by the Contracting Officer, no re-submittal for the purpose of substituting materials or equipment will be considered unless justified as indicated in the paragraph entitled VARIATIONS.

1.3.4 Additional Submittals

In conjunction with Contract Clause 52.236-5 MATERIAL AND WORKMANSHIP, the Contracting Officer may request submittals in addition to those specified when deemed necessary to adequately describe the work.

1.3.5 Untimely and Unacceptable Submittals

If the Contractor fails to submit submittals in a timely fashion, or repetitively submits submittals that are incomplete or not in strict conformance with the contract documents, no part of the time lost due to such actions shall be made the subject of claim for extension of time or for excess costs or damages by the Contractor.

1.3.6 Stamps

Stamps shall be used by the Contractor on all design and post design construction submittals to certify that the submittal meets contract requirements and shall be similar to the following:

Contractor (Firm Name)
Contract Number
Contract Name

I certify that this submittal accurate, is in strict conformance with all contract requirements, has been thoroughly coordinated and cross checked against all other applicable disciplines to prevent the omission of vital information, that all conflicts have been resolved, and that repetition has been avoided and, it is complete and in sufficient detail to allow ready determination of compliance with contract requirements by the Contracting Officer.

Name of CQC System Manager: _____

Signature of CQC System Manager: _____

Date: _____

1.4 ENGLISH LANGUAGE

All specifications, drawings, design analysis, design calculations, shop drawings, catalog data, materials lists, and equipment schedules submitted shall be in the English language. However, the local language of host country shall be added to project As-Built drawings.

1.5 UNITS OF MEASUREMENT

Design documents shall be prepared in accordance with the guidance offered in SECTION 01415 METRIC 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.

1.5.1 Drawings

1.5.1.1 Site Layout

All site layout data shall be dimensioned in meters or coordinates, as appropriate. All details and pipe sizes shall be dimensioned in millimeters.

EXAMPLE: Masonry openings shall be a U.S. module to suit a standard U.S. door. The dimensions of the opening shall be given in SI units. Metric dimensions for site plans shall be in meters and fraction thereof. Dimensions for all other drawings shall be in millimeters using hard metric designations (example: 12 meters = 12 000). Hard metric is defined as utilizing standard metric products and the use of measurements in increments of fifty (50) and one hundred (100) millimeters.

1.5.1.2 Geo-reference

All site plans shall be geo-referenced using the WGS 1984 coordinate system, specifically the following: WGS 1984 UTM one 42 N. If the designer is not able to use the stated coordinate system the coordinate system used shall be correlated to the stated coordinate system. A table shall be provided within the site drawing set cross referencing the WGS84 system to that utilized. This is required to allow AED to incorporate the plans into GIS for storage, map production, and possible geospatial analysis of the different work sites.

1.5.2 Design Calculations

Calculations shall be in SI units to meet the requirements of the design. Quantities on the contract drawings stated in SI units, shall also be stated in SI units in the design analysis to match the drawings.

1.5.3 Specifications

All equipment and products shall be specified according to U.S. standards and described by appropriate units as required herein.

1.6 WITHHOLDING OF PAYMENT FOR SUBMITTALS

1.6.1 Design Submittals

Payment for Design work will not be made in whole or in part until the Government has reviewed and cleared the design for construction.

1.6.2 Construction Submittals

Payment for materials incorporated in the work will not be made if required approvals have not been obtained. In event under separate clause of the contract, the Contractor is allowed partial or total invoice payment for materials shipped from the Continental United States (CONUS), and/or stored at the site, the Contractor shall with his request for such payment, submit copies of approvals (ENG Form 4025) certifying that the materials that are being shipped and/or stored have been approved and are in full compliance with the contract technical specifications.

PART 2 PRODUCTS

2.1 GENERAL

The following are contract deliverables which expound upon and finalize the design parameters/requirements outlined within the contract documents. They shall be prepared in such a

fashion that the Prime Contractor is responsible to the Government and not as an internal document between the Prime Contractor and its Subcontractors, Vendors, Suppliers, etc.

2.2 PROJECT NARRATIVE

The Project Narrative shall be a bound set and shall contain the contract Request For Proposal (RFP) Sections 01010 and 01015 (and any additional RFP sections that are appropriate). The RFP Section 01010 and 01015 shall be the latest version. Any subsequent changes to the RFP shall be clearly marked and highlighted with explanation for the changes. The Project Narrative shall also contain the general description of the project and a discussion of the design approach and design features for the project.

2.3 DESIGN ANALYSIS

2.3.1 Submittal

A design analysis, written in the English language with SI units of measure, shall be submitted for review by the Government. The design analysis is a written explanation of the project design which is expanded and revised (updated) as the design progresses. 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 drawings and specifications. The design analysis contains the criteria for and the history of the project design, including criteria furnished by the Government, letters, codes, references, conference minutes, and pertinent research. Design calculations, computerized and manual, are included in the design analysis. Narrative descriptions of design solutions are also included. Written material may be illustrated by diagrams and sketches to convey design concepts. Catalog cuts and manufacturer's data for all equipment items, shall be submitted. Specific requirements for the design analysis, listed by submittal phase, are noted in Paragraph 1.2.1.

2.3.2 Format

Format of design analysis shall closely match the standard format referenced within the RFP.

2.4 DESIGN CALCULATIONS

All design calculations shall be presented such that they are easily understood, correlated with RFP requirements (Section 1010 and 1015 criteria; codes; all other applicable or pertinent criteria) and all final conclusions clearly documented and summarized. The Design Submittal must include complete information (Soil Report, percolation test results, concrete design strengths, steel material properties, electrical loads, heat gain/loss assumptions, etc.) necessary to support all design calculations in order to easily and efficiently verify the accuracy of this information and the resulting project components shown in plans and specifications.

2.4.1 Submittal

When design calculations are voluminous, they shall be bound separately from the narrative part of the design analysis. Design calculations will include a title page, table of contents, and be indexed (tabbed) to separate distinct parts of the various analysis and design actions being accomplished to support plan drawings submitted. They shall be presented in a clear, consistent and legible format in order to quickly understand the analysis and design accomplished. Presentation shall be such that a person unfamiliar with the project features and associated analysis and design can quickly understand the overall design process and procedures, review the information in conjunction with the given set of plans and specifications, and verify the suitability of all information submitted.

All design calculations shall explain the source of loading conditions with assumptions and conclusions explained. The analysis and design methods shall also be explained, including assumptions, theories and formulae. Include applicable diagrams that are clearly explained and

correlated with related computations, whether computer or hand generated. The design calculations shall include a complete and comprehensive list of the criteria (and date or version of the criteria) that the design/analysis will be compared to (codes, Corps of Engineers Engineering Regulations, Engineering Manuals, etc.). Within the separable elements of design calculations, the engineer shall cite the specific code or reference paragraph or section as appropriate to indicate conformance to requirements.

At the beginning of each project component design section, present a summary of all load conditions and combinations required per applicable code or Corps of Engineers manual or regulation. Then clearly identify the particular load case governing the design and clearly show how the particular analysis, construction materials to be used, and the specific design meet the governing load combination.

Calculation sheets shall carry the names or initials of the engineer and the checker and the dates of calculations and checking. No portion of the calculations shall be computed and checked by the same person.

2.4.2 Computer Analysis

Provide a clear summary of all computer outputs and highlight in the outputs information used in the analysis and design accomplished elsewhere in the calculations.

If a computerized analysis or design program is used (either commercial software packages or unique, designer-written computer analysis/design tools), the computations shall provide clear reference to the software program and version being used and an explanation of the validity of the particular program to the given application (where has the program been used before, what input and output does the program provide, is the program a recognized Corps of Engineers or industry standard). If the program is proprietary to the Contractor (not recognized by the Corps of Engineers or industry), the Contractor shall provide a sample hand calculation to verify the results of one set of data generated by the computer program.

State exactly the computation performed by the computer. Include applicable diagrams, adequately identified. Provide all necessary explanations of the computer printout format, symbols, and abbreviations. Use adequate and consistent notation. Provide sufficient information to permit manual checks of the results.

Each set of computer printouts shall be preceded by an index and by a description of the computation performed. If several sets of computations are submitted, they shall be accompanied by a general table of contents in addition to the individual indices.

When the computer output is large, it shall be divided into volumes at logical division points. All final computer results used in design shall be separated from the total pages of computer output that might be included in the design calculations for ease of review.

2.5 SPECIFICATIONS

Specifications shall be prepared in accordance with the Construction Specifications Institute (CSI) format. The Contractor-prepared specifications shall include as a minimum, all applicable specification sections referenced by the CSI. Where the CSI does not reference a specification section for specific work to be performed by this contract, the Design-Build Contractor shall be responsible for creating the required specification.

2.5.1 Use of Unified Facilities Guide Specifications (UFGS)

UFGS (Uniform Federal Guide Specifications) are required for this project. Current UFGS information may be obtained at the following location: http://www.wbdg.org/ccb/browse_org.php?o=70.

Specifications for UFGS are in SpecsIntact format. SpecsIntact is government sponsored software used to edit specifications for government contracts. The software is available at the following link: <http://specsintact.ksc.nasa.gov/index.asp>.

2.5.2 Quality Control and Testing

Specifications shall include required quality control and further indicate all testing to be conducted by the Contractor, its subcontractors, vendors and/or suppliers.

2.5.3 Ambiguities and indefinite specifications

Ambiguities, indefinite specification requirements (e.g., highest quality, workmanlike manner, as necessary, where appropriate, as directed etc) and language open to interpretation is unacceptable.

2.5.4 Industry Standards

2.5.4.1 U.S. Industry Standards

The Specifications shall be based on internationally accepted U.S. industry Standards. Customarily accepted publications may be found in the UNIFIED MASTER REFERENCE LIST (UMRL) which may be located at the following URL: <http://www.hnd.usace.army.mil/techinfo/UFGS/UFGSref.htm>.

To access the UMRL select the "Unified Facilities Guide Specifications" tab and scroll down to Unified Master Reference List (UMRL) (PDF version).

Examples of U.S. standards are: National Fire Protection Association (NFPA), International Building Code (IBC), American Concrete Institute (ACI), American Water Works Association (AWWA), ADAAG (ADA Accessibility Guidelines) for Buildings and Facilities, etc. Standards referenced shall be by specific issue; the revision letter, date or other specific identification shall be included.

This document lists publications referenced in the Unified Facilities Guide Specifications (UFGS) of the Corps of Engineers (USACE), the Naval Facilities Engineering Command (NAVFAC), the Air Force Civil Engineer Support Agency (AFCEA), and the guide specifications of the National Aeronautics and Space Administration (NASA). This document is maintained by the National Institute of Building Sciences (NIBS) based on information provided by the agencies involved and the standards producing organizations. The listing is current with information available to NIBS on the date of this publication.

Standards referenced in specifications and drawings prepared by the Contractor shall be by specific issue; the revision letter, date or other specific identification shall be included.

2.5.4.2 Non U.S. Industry Standards

If non-U.S. industry standards (e.g., codes, regulations, or technical references and norms) are authorized for use under this contract and are incorporated in the Contractor's design, one (1) copy of each standard referenced shall be provided to the Government.

Where a U.S. design and/or construction standard cannot be referenced due to non-availability of products and/or systems, another specification format using the CSI guidelines may be utilized for that particular product and/or system. If a majority of the specifications within this project reference non-U.S. products due to availability and/or other factors, the entire set of specifications are not required to be in UFGS and SpecsIntact format.

2.6 DRAWINGS

2.6.1 Computer Assisted Design and Drafting (CADD)

Computer Assisted Design and Drafting (CADD) is required for all work related to this contract. Only personnel proficient in the preparation of CADD drawings shall be employed to modify the contract drawings or prepare new drawings. The CADD deliverables shall meet the requirements of the A/E/C CADD Standard (Release 3.0). Emphasis is on drawings meeting sheet layout standards, level/layer naming standards and sheet naming conventions. The CADD standards may be downloaded at the CAD/BIM Technology Center at the following link:

<https://cadbim.usace.army.mil/default.aspx?p=s&t=13&i=4>.

The Contractor shall furnish all softcopy design submittals (and As-Builts) using software applications in either .dwg (AutoCAD, AutoDesk release 2005 or later) or in .dgn (MicroStation, Bentley Systems version 8.0 or later) format. In addition, the Contractor is required to submit the softcopy design submittals in .pdf (Adobe Acrobat) format. Drawings prepared in any convention other than CADD, must have the written approval of the Contracting Officer.

2.6.2 Drawings

Drawings shall be prepared in the English language with metric (SI) units of measure. All the drawings and details of the working drawings shall be adequately labeled and cross-referenced. Complete, thoroughly checked, and coordination with other engineering disciplines design drawings shall be submitted. At the final design submittal (100%) the Contractor shall have incorporated all design review comments generated by previous design review(s), have completed all of the constructability and coordination comments, and have the drawings in a Ready-to-Build condition. The drawings shall be complete at this time and contain all the details necessary to ensure a clear understanding of the work throughout construction.

2.6.3 Drawing Size Border Sheets

All drawings shall be prepared in size "A1" border sheets (594mm by 841mm). Hardcopy design submissions may be printed on half size drawing sheets ("A3", 279 mm by 420 mm) for purposes of saving paper and for ease of review. If drawings are not readable in the half size reduction, the Contractor shall submit all drawings in A1 border sheets. All final contract drawing sets (As-Builts) shall be submitted on A1 border sheets. Drawing sheets shall be trimmed to specified size if necessary.

2.6.4 Sequence of Design Drawings

Referencing the A/E/C CADD Standard (pg. 13, Table 2-1 of the A/E/C CADD standards) the sequence of drawings shall follow the sequence as shown below:

Discipline

1. General
2. Hazardous Materials
3. Survey/Mapping
4. Geotechnical
5. Civil
6. Landscape
7. Structural
8. Architectural
9. Interiors
10. Equipment
11. Fire Protection
12. Plumbing
13. Process
14. Mechanical
15. Electrical

- 16. Telecommunications
- 17. Resource
- 18. Other Disciplines
- 19. Sub-Contractor/Shop Drawings
- 20. Operations

2.6.5 Drawing Folder Structure

CADD files shall be organized in a folder structure to what is described in Paragraph 2.6.4. For multi-building projects a folder of each building type shall be created and the applicable folders shown in each building type folder.

2.6.6 Drawing Sheet Assembly

CADD files shall be organized to what is described in “Option 2 – Use of Design Model Only” (page 10, Figure 2-3 of the A/E/C CADD Standard). This method will utilize one view and the use of “paper space” is not used. The border sheet shall be X-REF into each model file and scaled up to the applicable scale.

2.6.7 Model Files

Model files represent the building’s physical layout and components such as floor plans and elevations. Model files shall be drawn to full size (1:1) in the default view. Floor Plan Model files represent one floor. Model files shall have coordinates (x,y,z) of 0,0,0 in paper space on layout. The exception for model files with coordinates 0,0,0 shall be the civil site plan (see section 1.5.1.2 Georeferencing).

2.6.8 Border Sheet Files

Border sheet files are used to assemble model files for plotting and viewing purposes. Every border sheet file has a drawing area, title block, border and represents one plotted drawing.

2.6.9 Layer/Level names

Layer or level files names shall follow the guidelines of appendix A and B of the A/E/C CADD standards. For AutoCAD, .dwt (drawing template files) shall be used to import the proper layers that will be inclusive of the correct line type, color, and line thickness of the respective layer.

2.6.10 Drawing File Naming Convention

CADD files shall follow the naming convention as described in the A/E/C CADD Standards. For model files reference pg 12 - 16, figure 2-4, tables 2-1 and 2-2. for sheet files reference pg 18 – 22, figure 2-5, table 2-3.

2.6.11 Sheet Identification Block

The sheet identifier will follow the name of the border sheet file. This will consist of the discipline designator, the sheet type designator and the sheet sequence number as referenced in pg 23, figure 2-6 of the A/E/C CADD Standards.

2.6.12 Drawing Scales

The scales indicated on the following list shall, in general, be used for all drawings. The Contractor may, at its option, make exceptions to scales indicated, if approved in writing by the Contracting Officer.

TYPICAL DRAWING SCALES	
DRAWING TYPE	METRIC
SITE PLAN	1:200
	1:400
	1:500
	1:600
	1:700
	1:1000
	1:2000
	1:5000
	1:6000
	1:10000
	1:20000
FLOOR PLAN	1:50
	1:100
	1:200
ROOF PLAN	1:200
EXTERIOR ELEVATIONS	1:100
	1:200
INTERIOR ELEVATIONS	1:50
	1:100
CROSS SECTIONS	1:50
	1:100
	1:200
WALL SECTIONS	1:20
STAIR DETAILS	1:10
DETAILS	1:5

2.6.13 Symbols, Line styles, & Patterns

Approved symbols, line styles, and patterns shall be in accordance with AEC CAD Standard Release 3.0 or current version (see Appendix D of the A/E/C CADD Standards). The approved symbols, line styles, and patterns associated with AutoCAD software maybe downloaded in the following link: <https://tsc.wes.army.mil/products/standards/aec/aecstdsym.asp>

2.6.14 Plotter Prepared Original Drawings

Plotter prepared original drawings shall be prepared on 20 pound bond paper, unless otherwise approved and shall be plotted on the matte side. Raster plotters must provide a minimum resolution of 400 dpi while vector plotters shall provide a minimum resolution of 0.0010 inch with an accuracy of +0.1% of the move and a repeatability error of not more than 0.005 inch. Drawings produced from dot matrix plotters are not acceptable. Plots accompanied by the digital design file may be prepared on vellum: translucent bond is not acceptable. Line density shall be equivalent to that produced by black India ink: half tone plots are only acceptable where the half-tone color setting of RGB (red, green blue) settings equal a value of 153 (see pg. 27, Table 3-4 of the A/E/C CADD Standards). Drawings plotted in color is not acceptable. Manual changes to plotted originals are not acceptable.

2.6.15 Title and Revision Block

Title and revision block shall match examples shown in 1335a-Attachments-AED.pdf, Figures 1 through 4, furnished as an attachment to this RFP.

2.6.16 Legends

For each submittal, legends of symbols and lists of abbreviations shall be placed on the drawings. They shall include all of the symbols and abbreviations used in the drawing set, but shall exclude any symbols and abbreviations not used. Since many symbols are limited to certain design disciplines, there is a definite advantage to the use of separate legends on the initial sheet of each design discipline or in the Standard Details package for each discipline. If legends have not been shown by discipline, a legend shall be placed on the first drawing.

2.6.17 Location Grid

To facilitate the location of project elements and the coordination of the various disciplines' drawings, all plans shall indicate a column line or planning grid, and all floor plans (except structural plans) shall show room numbers.

2.6.18 Composite and Key Plans

If the plan of a large building or structure must be placed on two or more sheets in order to maintain proper scale, the total plan shall be placed on one sheet at a smaller scale. Appropriate key plans and match lines shall appear on segmented drawings. Key plans shall be used not only to relate large scale plans to total floor plans but also to relate individual buildings to complexes of buildings. Key plans shall be drawn in a convenient location and shall indicate the relative location of the represented plan area by crosshatching.

2.6.19 Specifications Placed on the Drawings

Details of standard products or items which are adequately covered by specifications shall not be included on the drawings.

2.6.20 Revisions

Drawing revisions shall be prepared only on the original CADD files. A revision area is required on all sheets.

2.6.21 Binding

All volumes of drawing prints shall be firmly bound and shall have covers of heavier bond than the drawing sheets. If posts are used to fasten sheets together, the drilled holes on the bond edges of the sheets shall be on 8-1/2-inch centers.

2.6.22 Government Provided files

At the Preconstruction meeting, the Contractor shall be provided a CD that shall contain the AED border sheet, the A/E/C CADD standards, and various other files related to the compliancy of CADD files to the A/E/C CADD standards.

PART 3 EXECUTION

3.1 GENERAL

3.1.1 Design Concept Coordination Meeting

Shortly after Notice To Proceed (NTP) the Government or contractor may suggest meeting(s) to review the Design Submittal process or discuss various aspects of the contract to enable prompt and efficient initiation of contract actions. Meeting(s) will be held to assure attention is focused on key project requirements (necessary contractor design and Government review that is required to provide Construction Clearance), to discuss features and items of work that need to be submitted early due to long lead time items, or discuss other concepts/ideas that will help accelerate the contract work. Other Design Coordination meetings may be requested throughout the contract period if Government review of various contractor Design Submittals indicate poor design and plan or specification quality in order to clearly explain the changes and improvements required of the contractor, assure understanding of Government comments, code references and required investigations and calculations, to move forward with acceptable design and satisfactory plans and specifications.

3.1.2 Government Design Changes

Government design changes which do not increase construction costs shall be made at no charge to the Government. The Contracting Officer may request design submittals in addition to those listed when deemed necessary to adequately describe the work covered in the contract documents. Submittals shall be made in the respective number of copies and to the respective addresses set forth in the paragraph entitled SUBMITTAL PROCEDURE. Each submittal shall be complete and in sufficient detail to allow ready determination of compliance with contract requirements.

3.2 SUBMITTAL REGISTER

3.2.1 Design Submittals

The Contractor shall submit as part of his Project Schedule Design Submittal milestone dates. The Contractor shall post all actual dates of submittal actions (including clearance for construction) as they occur.

3.2.2 Construction Submittal Register (ENG Form 4288)

Attached to this section is ENG Form 4288 which the Contractor is responsible for developing for this contract. All Design and construction submittals shall be shown on this register. The submittal register shall be the controlling document and will be used to control all submittals throughout the life of the contract. The Contractor shall maintain and update the register on a monthly basis for the Contracting Officer's approval.

3.3 TRANSMITTAL FORM (ENG Form 4025)

The sample transmittal form (ENG Form 4025) attached to this section shall be used for submitting both design and construction 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 will be exercised to ensure proper listing of the specification paragraph and/or sheet number of the contract drawings pertinent to the data submitted for each item.

3.4 PROGRESS SCHEDULE

The Contractor shall prepare and submit a design progress schedule to the Contracting Officer. The Critical Path Method (CPM) of network calculation shall be used to generate the Project Schedule. The progress schedule shall show, as a percentage of the total design price, the various items included in the contract and the order in which the Contractor proposes to carry on the work, with dates on which he will start the features of the work and the contemplated dates for completing same. Significant milestones such as review submittals shall be annotated. The Contractor shall assign sufficient technical, supervisory and administrative personnel to insure the prosecution of the work in accordance with the progress schedule. The Contractor shall correct the progress schedule at the

end of each month and submit as required to the Contracting Officer. The approved Project Schedule shall be used to measure the progress of the work, to aid in evaluating time extensions, and to provide the basis of all progress payments.

3.5 SCHEDULING

3.5.1 Design Submittals

Adequate time (a minimum of fourteen (14) full calendar days exclusive of mailing time) shall be allowed for Government review and comment in DrChecks_{SM}. If the Contractor fails to submit design submittals in a timely fashion, or repetitively submits design submittals that are not in strict conformance with the Contract documents, no part of the time lost due to such actions shall be made the subject of claim for extension of time or for excess costs or damages by the Contractor.

3.5.2 Construction Submittals

Contractor furnished Government Approved Construction Submittals (GA) for items noted in Paragraph 1.2.4 of this Section, or others as required by the COR, shall be submitted to the Area or Resident Office, per directions given at the Pre-Construction meeting. Adequate time (a minimum of fourteen (14) full calendar days exclusive of mailing time) shall be allowed for AED review and comment.

3.5.3 Post Design Construction Submittals

Submittals covering component items forming a system or items that are interrelated shall be scheduled to be coordinated and submitted concurrently. Certifications to be submitted with the pertinent drawings shall be so scheduled. Adequate time (a minimum of fourteen (14) full calendar days exclusive of mailing time) shall be allowed for review and approval. If the Contractor fails to submit post design construction submittals in a timely fashion, or repetitively submits submittals that are not in strict conformance with the Contract documents, no part of the time lost due to actions shall be made the subject of claim for extension of time or for excess costs or damages by the Contractor.

3.6 SUBMITTAL PROCEDURE

3.6.1 Design Submittals

3.6.1.1 Afghanistan Engineer District (AED)

One (1) half-size hard copy and two (2) soft copies on CD-ROM (electronic version) of all design submittals (calculations, reports of field tests, design analysis, plans, specifications, etc) shall be transmitted to the Government at the following address, by means of ENG Form 4025:

AFGHANISTAN ENGINEER DISTRICT

(1) DHL, FEDEX, UPS or any other courier service:
U.S. Army Corps of Engineers
Afghanistan Engineer District
House # 1, St. #1 West
West Wazir Akbar High School
Behind Amani High School
Kabul, Afghanistan
Attention: Chief, Engineering Branch

The Contractor shall scan the soft copy (electronic version) of each Design Submittal using most up-to-date version of recognized Industry-standard anti-virus software (Symantec, Norton, etc.) to insure

that no viruses are contained in it prior to acceptance by AED. The label shall indicate it has been scanned for viruses and the anti-virus software and version clearly indicated.

3.6.1.2 Resident/Area Engineer Office

Complete design submittals shall be provided to the Area and/or Resident Engineer Office such that these are received **at the same time** as the Contractor provides them to the address noted in Paragraph 3.6.1.1. At the Pre-Construction meeting, the Contractor will be furnished the Area and/or Resident Office addresses to which these submittals shall be provided and the specific number of hard copies (full and half sizes) and soft copies (CD-ROM) required by the Area and/or Resident Office as per Paragraph 3.6.1.1, soft copies are to be properly labeled and checked for viruses by the Contractor prior to delivery.

3.6.1.3 Editable CADD Format As-Builts

This is a Design-Build project and in accordance with Contract Clause 52.227-7022 GOVERNMENT RIGHTS (UNLIMITED), the Government has non-exclusive rights to use the design on other projects. Therefore, the As-Builts furnished to the Government must be in an editable format. See Section 01780A CLOSEOUT SUBMITTALS, Paragraphs 1.1 and 1.2, for all requirements associated with submission of editable CADD format As-Builts required as part of this contract.

3.6.2 Post Design Construction Submittals

One (1) copy of all post design construction submittals shall be transmitted to:

AFGHANISTAN ENGINEER DISTRICT

(1) DHL, FEDEX, UPS or any other courier service:

U.S. Army Corps of Engineers
Afghanistan Engineer District
House # 1, St. #1 West
West Wazir Akbar High School
Behind Amani High School
Kabul, Afghanistan
Attention: Chief, Engineering Branch

3.6.3 Submittal Numbering System

Instructions on the numbering system to be used for construction submittals follows.

3.6.3.1 Submittals

Shop drawings and materials are listed on the Submittal Register (ENG Form 4288) as follows:

a. List is prepared according to contract specifications and drawings, picking up all items involved in the project.

b. This list is divided into sections as indicated in the specifications. For example:

Section 01015 "Technical Requirements"
Section 01335 "Design Submittals"
Section 02831 "Chain-Link Fence"
Section 02710 "Subdrainage System"
Section 03300 "Concrete For Building Construction"
Section 04200 "Masonry"

3.6.3.2 Numbering procedures for transmittal on ENG FORM 4025

Each Specification Section will have various requirements for submittals (design information, product data, test reports, procedures, etc.) to the Government for Approval (GA) or For Information Only (FIO). Items from different Sections cannot be submitted on the same ENG Form 4025. When furnishing one or more items from the same Section at a given time, a single ENG Form 4025 can be used to identify and submit these items. Block 'b' of the 4025 entitled "DESCRIPTION OF ITEM SUBMITTED" should provide an accurate and unique description of each item being proposed by the Contractor. Item numbers (block "a" of the 4025 entitled "ITEM NO.") will be automatically generated in QCS for each ENG Form 4025. QCS will track and automatically generate the "ITEM NO." for all following ENG Form 4025s for the same Section number. To illustrate, a transmittal for the 35% Design Submittal required by Section 01335 might have the following Items:

ITEM NO. 1	Topographic Information
ITEM NO. 2	Geotechnical Report
ITEM NO. 3	Foundation Design
ITEM NO. 4	35% Plans
ITEM NO. 5	Outline of Construction Specifications to be used

If this was the first submittal furnished by the Contractor for Section 01335, then a Transmittal Number of 01335-1 would be generated using QCS. As new transmittals are generated in QCS, the last digit of the transmittal is increased incrementally, as follows:

Transmittal No. 01335-2
Transmittal No. 01335-3
Transmittal No. 01335-4

and so forth. The first transmittal submitted from each Specification Section will be "-1", in other words, there will never be a "Transmittal No. 01335-0".

The above illustration is true for all other Specification Sections included in the Request for Proposal or in the Construction Specifications compiled by the Contractor in the prosecution of work under the RFP.

3.6.3.3 Resubmittals

Should the Contractor be required to resubmit any transmittal due to one or more items on that transmittal being Coded "C" (Cleared for Construction, except as noted in attached comments, Resubmission Required) or "E" (NOT Cleared for Construction, see attached comments, Resubmission Required) by the Government, QCS will be used to generate the same transmittal number followed by the number "-1" for the first resubmittal, "-2" for the second resubmittal, "-3" for the third resubmittal, etc.

As an example, assume the 65% Design Submittal is provided to the Government as Transmittal 01335-9. Due to omissions or errors in that Submittal which result in a Code "E" being given, then the subsequent 65% Design Resubmittal #1 would be "Transmittal 01335-9.1". Should a resubmittal again be necessary, it would be Design Resubmittal #2 and would be submitted as "Transmittal 01335-9.2".

The purpose of this system is to avoid deviations from the Submittal Register and to track submittals in both RMS and DrChecks_{SM}. It should be noted that a new transmittal number following the above system CANNOT be generated in QCS unless the prior transmittal has been given a Code If the Contractor is having difficulty generating the correct transmittal number, contact the COR to resolve the matter.

The Contractor use the above nomenclature and date of submission to the Government for Plan Cover Sheets; title blocks for all drawings; all Specification Cover Sheets; all specification pages; all Design Analysis Cover Sheets and associated pages; and similar labeling for all other documents included in the submittal.

See the attachment titled "1335a-Attachments-AED.pdf" (Figures 1-4) for required Title Block Required Annotations drawing guidance.

3.6.4 Variations

If Design or construction submittals show variations from the contract parameters and/or requirements, the Contractor shall justify such variations in writing, at the time of submission. Additionally, the Contractor shall also annotate block "h" entitled "variation" of ENG FORM 4025. After design submittals have been reviewed and cleared for construction by the Contracting Officer, no resubmittal for the purpose of substituting materials, equipment, systems, and patented processes will be considered unless accompanied by the following:

- a. Reason or purpose for proposed variation, substitution, or revision.
- b. How does quality of variation compare with quality of the specified item? This shall be in the form of a technical evaluation tabulating differences between the item(s) originally specified and what is proposed.
- c. Provide a cost comparison. This shall include an acquisition and life cycle cost comparison.
- d. For proprietary materials, products, systems, and patented processes a certification signed by an official authorized to certify in behalf of the manufacturing company that the proposed substitution meets or exceeds what was originally specified.
- e. For all other actions, a certification signed by a licensed professional engineer or architect certifying that the proposed variation or revision meets or exceeds what was originally specified.
- f. Advantage to the Government, if variation is approved, i.e. Operation and Maintenance considerations, better product, etc.
- g. Ramifications and impact, if not approved.

If the Government review detects any items not in compliance with contract requirements or items requiring further clarification, the Contractor will be so advised. Lack of notification by the Contracting Officer of any non-complying item does not relieve the Contractor of any contractual obligation.

3.6.5 Non-Compliance

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 worksite, 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.

3.7 REVIEW OF CONTRACTOR PREPARED DESIGN DOCUMENTS

3.7.1 General

The work under contract will be subject to continuous review by representatives of the Contracting Officer. Additionally, joint design review conferences with representation by all organizations having a direct interest in the items under review may be held. The Contractor shall furnish copies of all drawings and related documents to be reviewed at the review conference on or before the date indicated by the Government. Additional conferences pertaining to specific problems may be requested by the Contractor or may be directed by the Contracting Officer as necessary to progress the work. The Contractor shall prepare minutes of all conferences and shall furnish two copies to the Contracting Officer within seven (7) days after the conference.

3.7.2 Independent Design Review

The Contractor shall have someone other than the Designer or Design Team perform an Independent Technical Review of all specifications, drawings, design analysis, calculations, and other required data prior to submission to the Government. This review shall insure the professional quality, technical accuracy, and the coordination of all design analysis, drawings and specifications, and other services furnished under this contract have been accomplished. Work must be organized in a manner that will assure thorough coordination between various details on drawings, between the various sections of the specifications, and between the drawings and specifications. The Contractor shall thoroughly cross-check and coordinate all work until he is professionally satisfied that no conflicts exist, vital information has not been omitted, and that indefinite language open to interpretation has been resolved. Upon completion of this review, the Contractor shall certify that each design submittal is complete, accurate, is in strict conformance with all contract requirements, that repetition has been avoided, that all conflicts have been resolved, and that the documents have thoroughly coordinated and cross checked against all the applicable disciplines to prevent the omission of vital information.

3.7.3 Contractor's Quality Control Organization Review

The Contractor shall thoroughly review each submittal prior to submission to the Contracting Officer to assure it is complete, correct and unified. This review shall be for the purposes of eliminating errors, interferences, and inconsistencies, and of incorporating design criteria, review comments, specifications, and any additional information required. The Contractor will give evidence of such review of all items in each submittal ENG Form 4025, by annotating Column "g" (titled "For Contractor Use Code") of this Form with the letter "A," meaning the Contractor has reviewed it and is indicating it is "Approved as Submitted". Design submittals submitted to the Contracting Officer without evidence of the above requirements or the Contractor's certified approval will be returned for resubmission. No part of the time lost due to such resubmissions shall be made the subject of claim for extension of time or for excess costs or damages by the Contractor.

3.7.4 Government Review

- a. Within 14 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. After receipt, the Government will be allowed fourteen (14) full days to review and comment on all Design Submittals, except as noted below. This time period starts on the next full day after delivery of the Design Submittal to the Government.
- b. If a design submittal is deficient (errors on ENG Form 4025, incorrect drawing title block information, missing or incomplete features required in the Submittal, etc.), it will be returned immediately without further review for correction and resubmission. The review time will begin when the corrected submittal is received. The Contractor may be liable for liquidated damages owed to the Government for returned design submittals due to deficiencies.
- c. The contractor shall not begin construction work until the Government has reviewed the Contractor's Design Submittal and cleared it for construction. Clearance for construction does not mean Government approval. Government review shall not be construed as a complete check but

will evaluate the general design approach and adherence to contract parameters. The Government Review is often limited in time and scope. Therefore, the Contractor shall not consider any review performed by the Government as an excuse for incomplete work.

- d. Upon completion of the review the Contractor will be notified by the Contracting Officer Representative that the DrChecks_{SM} file is open for viewing and response to AED comments. The Contracting Officer will indicate whether the Design Submittal, or portions thereof, has or has not been cleared for construction using the following action codes:

A – Cleared for Construction

B – Cleared for Construction, except as noted in attached comments

C – Cleared for Construction, except as noted in attached comments,
Re-submission required

E - NOT Cleared for Construction, see attached comments,
Re-submission required

FX – Receipt acknowledged, does not comply as noted with contract requirements.

These codes shall NOT be used by the Contractor.

Design submittals Cleared for Construction by the Contracting Officer shall not relieve the Contractor from responsibility for any design errors or omissions and any liability associated with such errors, nor from responsibility for complying with the requirements of this contract.

3.7.4.1 Incorporation of Government Review Comments

- a. The Contractor shall review each comment, furnish a complete response in DrChecks_{SM} as to how the comment will be addressed in the Design Analysis, Plans and Specifications, or other Design Submittal stipulations required in this Contract. The Contractor will then incorporate each comment into the design submittal along with other work required at the next Design Submittal stage. The Contractor shall furnish disposition of all comments in DrChecks_{SM}, with the next scheduled submittal. The disposition shall identify action taken with citation of location within the relevant design document. Generalized statements of intention such as "will comply" or "will revise the specification" are not acceptable. During the design review process, comments will be made on the design submittals that will change the drawings and specifications. The Government will make no additional payments to the Contractor for the incorporation of comments. Review comments are considered part of the contract administration process.
- b. 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 close of review period in order that the comment can be resolved.
- c. The Contractor is cautioned that if he believes the action required by any comment exceeds the requirements of this contract, he should flag the comment in DrChecks_{SM} as a scope change, and notify the COR in writing immediately.
- d. If a design submittal is over one (1) day late in accordance with the latest design schedule, the Government review period may be extended 7 days. Submittal date revisions must be made in writing at least five (5) days prior to the submittal.

3.7.4.2 Conferences

As necessary, conferences will be conducted between the Contractor and the Government to resolve review comments.

A review conference may be held at the completion of AED review and subsequent Contractor response for each design submittal. The review conference will be held at the Corps District Office in Kabul, Afghanistan. The Contractor shall bring the personnel that developed the Design submittal to the review conference.

3.7.4.3 Design Deficiencies

Design deficiencies noted by the Government shall be corrected prior to the start of design for subsequent features of work which may be affected by, or need to be built upon, the deficient design work.

3.7.5 Design Discrepancies

The Contractor shall be responsible for the correction of incomplete design data, omissions, and design discrepancies which become apparent during construction. The Contractor shall provide the Contracting Officer with a proposed recommendation for correcting a design error, within three (3) calendar days after notification by the Contracting Officer. 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 worksite, 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. Should extensions of design, fabrication plans and/or specific manufacturer's details be required as a result of a Government issued Change Order, the Government will make an equitable adjustment in accordance with Contract Clause 52.243-4 entitled CHANGES.

3.8 Phased or "Fast-Track" Design

3.8.1 General

If approved by the Government, design and construction sequencing may be effected on an incremental basis as each approved phase or portion (e.g., demolition, geotechnical, site work, exterior utilities, foundations, substructure, superstructure, exterior closure, roofing, interior construction, mechanical, electrical, etc.) of the design is completed.

3.8.2 Design Phases

Complete or partial design phasing may or may not have been specified by the Government elsewhere in this contract. For construction sequencing or phasing that the Government has not specifically mandated, the Design-Build Contractor may submit a proposed phasing plan. Design phasing proposed by the Design-Build Contractor shall be submitted to the Government for approval.

3.8.3 Sequence of Design-Construction (Fast-Track)

After receipt of the Contract Notice to Proceed (NTP) the Contractor shall initiate design, comply with all design submission 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 Government, the initial submission failed to meet the minimum quality requirements as set forth in the contract.

3.8.4 Notice-to-Proceed for Limited Construction

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.

3.8.5 In-Place Construction Payment

No payment will be made for any in-place construction until all required submittals have been made, reviewed and are satisfactory to the Government.

3.8.6 Commencement of Construction

Construction of work may begin after receipt of the clearance for construction (Notice to Proceed) for each design phase. Any work performed by the Contractor prior to receipt of the clearance for construction, shall be at the Contractor's own risk and expense. Work cleared for construction that does not conform to the design parameters and/or requirements of this contract shall be corrected by the Contractor at no additional cost or time to the Government.

3.9 Conduct of Work

3.9.1 Performance

Perform the work diligently and aggressively, and promptly advise the Contracting Officer of all significant developments.

3.9.2 Telephone Conversations

Prepare a summary, and promptly furnish a copy thereof to the Contracting Officer, of all telephone conversations relating to the design work under this contract.

3.9.3 Cooperation with Others

Cooperate fully with other firms, consultants and contractors performing work under the program to which this contract pertains, upon being advised by the Contracting Officer that such firms or individuals have a legitimate interest in the program, have need-to-know status, and proper security clearance where required.

3.9.4 Technical Criteria

All designs, drawings, and specifications shall be prepared in accordance with the contract documents and with the applicable publications referenced therein. As soon as possible, the Contractor shall obtain copies of all publications applicable to this contract. Availability of publications (where to purchase) is contained in Specification Section 01420 entitled: SOURCES FOR REFERENCE PUBLICATIONS. Any deviations from the technical criteria contained in the contract documents or in the applicable publications, including the use of criteria obtained from the user or other sources, must receive prior approval of the Contracting Officer. Where the technical criteria contained or referred to herein are not met, the Contractor will be required to conform his design to the same at his own time and expense.

3.9.5 Conflicts

Any conflicts, ambiguities, questions or problems encountered by the Contractor in following the criteria shall be immediately submitted in writing to the Contracting Officer with the Contractor's recommendations. Prior to submission to the Government the Contractor shall take appropriate measures to obtain clarification of design criteria requirements, to acquire all pertinent design information, and to incorporate such information in the work being performed.

3.9.6 Design Priorities

The design of this project shall consider the remote location and harsh environment of this project and the impact this will have on sources of technical supply, the cost of construction, the low level of maintenance, and the difficulty of obtaining replacement parts. Unless stated otherwise in this contract, the following design priorities shall be followed.

3.9.6.1 Construction Life Span Levels

Permanent Construction. Buildings and facilities shall be designed and constructed to serve a life expectancy of more than 25 years, to be energy efficient, and to have finishes, materials, and systems that are low maintenance and low life-cycle cost.

3.9.6.2 Operability

Systems including but not necessarily limited to mechanical, electrical, communications, etc., must be simple to operate and easy to maintain.

3.9.6.3 Standardization

Use of standardized materials, products, equipment, and systems is necessary to minimize the requirements for replacement parts, storage facilities, and service requirements.

3.9.6.4 Topographic Surveys, Easements, and Utilities

Unless otherwise stated in the contract, the Contractor will be responsible for detailed topographic mapping, available easements, and utility information for the project.

3.9.6.5 Horizontal and Vertical Control

The mapping shall be based on the base coordinate system. If the base system cannot be found, the surveyor shall use any established monuments. If monuments have been destroyed or do not exist, an assumed horizontal and vertical datum shall be established, using arbitrary coordinates of 10,000n and 10,000e and an elevation of 1,000 meters. The horizontal and vertical control established on site shall be a closed loop with third order accuracy and procedures. Provide three (3) concrete survey monuments at the survey site. All of the control points established at the site shall be plotted at the appropriate coordinate point and shall be identified by name or number, and adjusted elevations. The location of the project site, as determined by the surveyor shall be submitted in writing to the Contracting Officer. The site location shall be identified by temporary markers, approved by the Contracting Officer before proceeding with the surveying work.

3.9.6.6 Topography Requirements

A sufficient quantity of horizontal and vertical control shall be established to provide a detailed topographic survey at 1:500 scale with one quarter meter contour intervals minimum. Intermediate elevations shall be provided as necessary to show breaks in grade and changes in terrain.

The contours shall accurately express the relief detail and topographic shapes. In addition, 90 percent of the elevations or profiles interpolated from the contours shall be correct to within one-half of the contour interval and spot elevations shall be correct within plus or minus 20 millimeters.

Spot elevations affecting design of facilities shall be provided. Specifically, break points or control points in grades of terrain such as tops of hills, bottoms of ditches and gullies, high bank elevations, etc.

All surface and sub-surface structures features within the area to be surveyed shall be shown and identified on the topographic maps. In addition, these features shall be located by sufficient distance ties and labeled on the topographic sheets to permit accurate scaling and identification.

The location and sizes of potable, sanitary, electrical and mechanical utilities within the survey site shall be shown on the survey map. Sanitary manholes and appurtenances shall show top elevations and invert elevations.

3.9.6.7 Geotechnical Investigation

Unless otherwise stated in the contract, the Contractor will be responsible for Geotechnical investigation, including subsurface explorations, sampling, field and laboratory testing, and water studies where applicable.

3.9.6.8 Cathodic Protection and Earth Resistance

Unless otherwise stated in the contract, the Contractor will be responsible for determining whether cathodic protection on buried structures and underground utility systems are needed for special electrical grounding and counterpoise systems, and for gathering the field data necessary for design.

3.9.6.9 Water Supply and Quality Data

Unless otherwise stated in the contract, the Contractor will be responsible for obtaining all water supply and water quality data. This data will include information on the locations and depths of all viable water supply sources at the site(s) involved and a water quantity and water quality analysis for each source.

3.9.6.10 Occupational Safety and Health Act

The facilities, systems, and equipment designed under this contract shall comply with the Occupational Safety and Health Act (OSHA), Code of Federal Regulations, Title 29, Chapter XVII, Parts 1910 and 1926. Any problems in incorporating these standards due to conflicts with other technical criteria shall be submitted to the Contracting Officer for resolution.

3.9.6.11 Asbestos Containing Materials

Asbestos containing material (ACM) will not be used in the design of new structures or systems. In the event no other material is available which will perform the required function or where the use of other material would be cost prohibitive, a waiver for the use of asbestos containing materials must be obtained from AED.

3.9.6.12 Existing Construction

Asbestos containing materials (ACM) presently included in existing construction to be rehabilitated or otherwise modified as a result of this project shall be removed and a non-asbestos containing material substituted in lieu thereof.

3.9.6.13 Suspected Asbestos Containing Materials

All such structures and systems shall be inspected to determine the presence or probable presence of ACM. When ACM is suspected, a documented survey will be performed. The survey will be

developed into an abatement design and will be made a part of the design documents. In the event no other material is available which will perform the required function or the use of a substitute material would be cost prohibitive due to initial cost and tear-out of existing construction, a waiver for the retention of the asbestos containing material must be obtained from the Contracting Officer.

3.10 VALUE METHODOLOGY/VALUE ENGINEERING

The Contractor during the course of his design shall be alert for and shall identify those high-cost low-value items or areas which he considers may be accomplished in different ways that will increase the value of the project at the same or less cost. Potential value engineering study items shall be reported to the Value Engineer through the Contracting Officer.

3.10.1 Performance Oriented Value Engineering Change Proposal (VECP)

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 Contract Documents which were addressed in the Contractor's accepted contract proposal and which were evaluated in competition with other Proposers for award of this contract. For purposes of this clause, the term "performance oriented" refers to those aspects of the design criteria or other contract requirements which allow the Proposer or the 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 fulfill 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.

3.10.2 Prescriptive Oriented Value Engineering Change Proposal (VECP)

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. 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 Proposers little or no freedom in the choice of design approach, materials, fabrication techniques, methods of installation or other approach to fulfill the contract requirements.

3.11 ATTACHMENTS

The following attachments form an integral part of this specification:

ENG FORM 4025R, Mar 95 - Transmittal of Shop Drawings, Equipment Data, Material Samples, or Manufacturer's Certificate of Compliance (2 pages)

ENG FORM 4288-R, Mar 95 - Submittal Register

Figure 1 – AED Title Block

Figure 2 - AED Management Block

Figure 3 - AED Issue Block & Required Notations

Figure 4 - Border Sheet Size

SECTION 01415

SECTION 01415

METRIC MEASUREMENTS

1.1 REFERENCES

The publications listed below form a part of this specification to the extent referenced. The publications are referred to within the text by the basic designation only.

ASTM INTERNATIONAL (ASTM)

ASTM E 621 (1994; R 1999e1) Use of Metric (SI) Units in Building Design and Construction (Committee E-6 Supplement to E380)

ASTM SI 10 (2002) American National Standard for Use of the International System of Units (SI): The Modern Metric System

1.2 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.

1.3 USE OF MEASUREMENTS IN SPECIFICATIONS

Measurements in specifications 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.

1.3.1 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.

1.3.2 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 15-5/8inches)).

1.3.3 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).

1.4 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.

1.5 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 SI 10 and ASTM E 621 as the basis for establishing metric measurements required to be used in submittals.

-- End of Section --
01415

SECTION 01451

SPECIFICATION SECTION 01451 CONTRACTOR QUALITY CONTROL

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 within the text by the basic designation only.

U.S. ARMY CORPS OF ENGINEERS (USACE)

ER 1110-1-12 (1993) Quality Management

EM 385-1-1 Safety and Health Requirements Manual

1.2 PAYMENT

Separate payment will not be made for providing and maintaining an effective Quality Control program, and all costs associated therewith shall be included in the applicable unit prices or lump-sum prices contained in the Bidding Schedule.

PART 2 PRODUCTS (Not Applicable)

PART 3 EXECUTION

3.1 GENERAL REQUIREMENTS

The Contractor is responsible for quality control and shall establish and maintain an effective quality control system in compliance with the Contract Clauses and this specification section. 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 site 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 the quality requirements specified in the contract. The site project superintendent in this context shall be the highest level manager responsible for the overall construction activities at the site, including quality and production. The site project superintendent shall maintain a physical presence at the site at all times, except as otherwise acceptable to the Contracting Officer, and shall be responsible for all construction and construction related activities at the site.

3.2 CQM TRAINING REQUIREMENT

Before project design and construction begin, the Contractor's Quality Control Manager is required to have completed the U.S. Army Corps of Engineers CQM course, or equivalent. The Construction Trades Training Center (CTTC) in Jalalabad, Afghanistan provides a course that satisfies the requirement. Courses are offered at regular intervals. For enrollment and course information contact CTTC at the following:

Mhd. Haris
e-mail: mharis@afghanreconstruction.org
Telephone: 0700 08 0602

Pervaiz
e-mail: adpzmuj@yahoo.com
Telephone: 0700 61 3133

3.3 QUALITY CONTROL PLAN

The Contractor shall furnish for review by the Government, not later than five (5) days after receipt of Notice-to-Proceed (NTP) the proposed Contractor Quality Control (CQC) Plan. The plan shall identify personnel, procedures, control, instructions, records, and forms to be used.

3.2.1 Content of the CQC Plan

The CQC Plan shall include, as a minimum, the following to cover all construction operations, both on site and off-site, 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, consultants, and purchasing agents. These procedures shall be in accordance with Specification 01335 SUBMITTAL PROCEDURES.
- e. Control, verification, and acceptance testing procedures for each specific test to include the test name, specification paragraph requiring test, feature of work to be tested, test frequency, and person responsible for each test.

- f. Procedures for tracking preparatory, initial, and follow-up control phases and control, verification, and acceptance tests including documentation.
- g. Procedures for tracking construction deficiencies from identification through acceptable corrective action. These procedures shall establish verification that identified deficiencies have been corrected.
- h. Reporting procedures, including proposed reporting formats.
- i. A list of the definable features of work. A definable feature of work is a task which is separate and distinct from other tasks, has separate control requirements, and may be identified by different trades or disciplines, or it may be work by the same trade in a different environment. Although each section of the specifications may generally be considered as a definable feature of work, there are frequently more than one definable features under a particular section. This list will be agreed upon during the coordination meeting.

3.2.2 Additional Requirements for Design Quality Control (DQC) Plan

The following additional requirements apply to the Design Quality Control

(DQC) plan:

(1) The Contractor shall provide and maintain a Design Quality Control (DQC) Plan as an effective quality control program which will assure that all services required by this design contract are performed and provided in a manner that meets professional architectural and engineering quality standards. As a minimum, all documents shall be technically reviewed by competent, independent reviewers identified in the DQC Plan. The same element that produced the product shall not perform the independent technical review (ITR). The Contractor shall correct errors and deficiencies in the design documents prior to submitting them to the Government.

(2) The Contractor shall include the design schedule in the master project schedule, showing the sequence of events involved in carrying out the project design tasks within the specific contract period. This should be at a detailed level of scheduling sufficient to identify all major design tasks, including those that control the flow of work. The schedule shall include review and correction periods associated with each item. This should be a forward planning as well as a project monitoring tool. The schedule reflects calendar days and not dates for each activity. If the schedule is changed, the Contractor shall submit a revised schedule reflecting the change within 7 calendar days. The Contractor shall include in the DQC Plan the discipline-specific checklists to be used during the design and quality control of each submittal. These completed checklists shall be submitted at each design phase as part of the project documentation. Example checklists can be found in ER 1110-1-12.

(3) The DQC Plan shall be implemented by an Design Quality Control Manager who has the responsibility of being cognizant of and assuring that all documents on the project have been coordinated. This individual shall be a person who has verifiable engineering or architectural design experience and is a registered professional engineer or architect. The Contractor shall notify the Contracting Officer, in writing, of the name of the individual, and the name of an alternate person assigned to the position.

The Contracting Officer will notify the Contractor in writing of the acceptance of the DQC Plan. After acceptance, any changes proposed by the Contractor are subject to the acceptance of the Contracting Officer.

3.2.3 Acceptance of Plan

Acceptance of the Contractor's plan is required prior to the start of construction. Acceptance is conditional and will be predicated on satisfactory performance during the construction. The Government reserves the right to require the Contractor to make changes in the CQC plan and operations including removal of personnel, as necessary, to obtain the quality specified.

3.2.4 Notification of Changes

Notification of Changes. After acceptance of the QC plan, the Contractor shall notify the Contracting Officer in writing a minimum of seven calendar days prior to any proposed change. Proposed changes are subject to acceptance by the Contracting Officer.

3.3 COORDINATION MEETING

After the Pre-construction Conference, before start of construction, and prior to acceptance by the Government of the Quality Control 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 5 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 on-site and off-site work, and the interrelationship of Contractor's Management and control with the Government's Quality Assurance. Minutes of the meeting shall be prepared by the Government and signed by both the Contractor and the Contracting Officer. The minutes shall become a part of the contract file. There may be occasions when subsequent conferences will be called by either party to reconfirm mutual understandings and/or address deficiencies in the CQC system or procedures, which may require corrective action by the Contractor.

3.4 QUALITY CONTROL ORGANIZATION

3.4.1 Personnel Requirements

The requirements for the CQC organization are a CQC System Manager, and sufficient number of additional qualified personnel to ensure safety and contract compliance. Personnel identified in the technical provisions as requiring specialized skills to assure the required work is being performed properly will also be included as part of the CQC organization. The Contractor's CQC staff shall maintain a presence at the site at all times during progress of the work and have complete authority and responsibility to take any action necessary to ensure contract compliance. The CQC staff shall be subject to acceptance by the Contracting Officer. The Contractor shall provide adequate office space, filing systems and other resources as necessary to maintain an effective and fully functional CQC organization. Complete records of all letters, material submittals, shop drawing submittals, schedules and all other project documentation shall be promptly furnished to the CQC organization by the Contractor. The CQC organization shall be responsible to maintain these documents and records at the site at all times, except as otherwise acceptable to the Contracting Officer.

3.4.2 CQC System Manager

The Contractor shall identify an individual within his organization at the site of the work who shall be responsible for overall management of the CQC and have the authority to act in all CQC matters for the Contractor. The CQC system manager shall be a graduate engineer, graduate architect, or a graduate construction manager, with experience on construction projects similar in type to this contract OR a construction person with a minimum of ten (10) years in related work. The CQC System Manager shall be on the site at all times during construction and shall be employed by the Contractor. The CQC System Manager shall be assigned no other duties. An alternate for the CQC System Manager will be identified in the plan to serve in the event of the CQC system manager's absence. The requirements for the alternate will be the same as for the designated CQC manager.

3.4.3 Not Used.

3.4.4 Additional Requirement

In addition to the above experience and/or education requirements, the CQC System Manager shall have completed the course entitled "Construction Quality Management For Contractors". This course is periodically offered by the government, and inquiries as to the next course offering may be directed to the local construction field office.

3.4.5 Organizational Changes

The Contractor shall maintain the CQC staff at full strength at all times. When it is necessary to make changes to the CQC staff, the Contractor shall revise the CQC Plan to reflect the changes and submit the changes to the Contracting Officer for acceptance.

3.5 SUBMITTALS AND DELIVERABLES

Submittals, if needed, shall be made as specified in the STR titled SUBMITTAL PROCEDURES. The CQC organization shall be responsible for certifying that all submittals and deliverables are in compliance with the contract requirements.

3.6 CONTROL

Contractor Quality Control is the means by which the Contractor ensures that the construction, to include that of subcontractors and suppliers, complies with the requirements of the contract. At least three phases of control shall be conducted by the CQC System Manager for each definable feature of the construction work as follows:

3.6.1 Preparatory Phase.

This phase shall be performed prior to beginning work on each definable feature of work, after all required documents and 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, reference codes, and standards. A copy of those sections of referenced codes and standards, in the English language unless specifically approved otherwise by the Contracting Officer, applicable to that portion of the work to be accomplished in the field shall be made available by the Contractor at the preparatory inspection. These copies shall be maintained in the field and available for use by Government personnel until final acceptance of the work.
- b. A review of the contract drawings.
- c. A check to assure that all materials and/or equipment have been tested, submitted, and approved.
- d. A check to assure that provisions 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 verify that they are on hand, conform to approved shop drawings or submitted data, and are properly stored.
- g. Reviews of the appropriate activity hazard analysis to ensure safety requirements are met.
- h. Discussion of procedures for constructing the work including repetitive deficiencies, construction tolerances and workmanship standards for that feature of work.
- i. A check to ensure that the Contracting Officer has accepted the portion of the plan for the work to be performed.
- j. Discussion of the initial control phase.
- k. The Government shall be notified at least 24 hours in advance of beginning any of the required action of the preparatory phase. This phase shall include a meeting conducted by the CQC system manager and attended by the superintendent, other CQC personnel (as applicable), and the foreman responsible for the definable feature. The results of the

preparatory phase actions shall be documented by separate minutes prepared by the CQC system manager and attached to the daily QC report. The Contractor shall instruct applicable workers as to the acceptable level of workmanship required in order to meet contract specifications.

3.6.2 Initial Phase.

This phase shall be accomplished at the beginning of a definable feature of work. The following shall be accomplished:

- a. A check of preliminary work to ensure that it is in compliance with contract requirements. Review minutes of the preparatory meeting.
- b. Verification of full contract compliance. Verify required control inspection and testing.
- c. Establish level of workmanship and verify that it meets minimum acceptable workmanship standards. Compare with sample panels as appropriate.
- d. Resolve all differences.
- e. Check safety to include compliance with and upgrading of the safety plan and activity hazard analysis. Review the activity analysis with each worker.
- f. The Government shall be notified at least 24 hours in advance of beginning the initial phase. Separate minutes of this phase shall be prepared by the CQC system manager and attached to the daily QC report. Exact location of initial phase shall be indicated for future reference and comparison with follow-up phases.
- g. The initial phase should be repeated for each new crew to work on-site, or any time acceptable specified quality standards are not being met.

3.6.3 Follow-up Phase.

Daily checks shall be performed to assure continuing compliance with contract requirements, including control testing, until completion of the particular feature of work. The checks shall be made a matter of record in the CQC documentation. Final follow-up checks shall be conducted, and all noted deficiencies corrected, prior to the start of additional features of work that may be affected by the deficient work. The Contractor shall not build upon nor conceal non-conforming work.

3.6.4 Additional Preparatory and Initial Phases

Additional preparatory and initial phases may be required by the Contracting Officer on the same definable features of work if the quality of on-going work is unacceptable; if there are changes in the applicable QC staff or in the on-site production supervision or work crew; if work on a definable feature is resumed after a substantial period of inactivity; or if other problems develop.

3.7 TESTS

3.7.1 Testing Procedure

The Contractor shall perform tests specified or required to verify that control measures are adequate to provide a product that conforms to contract requirements. Upon request, the Contractor shall furnish to the Government duplicate samples of test specimens for possible testing by the Government. Costs incidental to the transportation of samples or materials shall be borne by the Contractor.

Testing includes operation and/or acceptance tests when specified. A list of tests to be performed shall be furnished as a part of the CQC plan. The list shall give the test name, frequency, specification paragraph containing the test requirements, the personnel and laboratory responsible for each type of test, and an estimate of the number of tests required. 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 Quality Control report for the date taken. Specification paragraph/item reference, location where tests were taken, and the sequential control number identifying the test will be given. Actual test reports may be submitted later, if approved by the Contracting Officer, with a reference to the test number and date taken. An information copy of tests performed by an off-site or commercial test facility will be provided directly to the Contracting Officer. Failure to submit timely test reports, as stated, may result in nonpayment for related work performed and disapproval of the test facility for this contract.

3.8 COMPLETION INSPECTION

3.8.1 Punch-Out Inspection

Near the end of the work, or any increment of the work established by a time stated in the SPECIAL CONTRACT REQUIREMENTS Clause, "Commencement, Prosecution, and Completion of Work", or by the specifications, the CQC Manager shall conduct an inspection of the work. A punch list of items which do not conform to the approved drawings and specifications shall be prepared and included in the CQC documentation, as required by paragraph DOCUMENTATION. The list of deficiencies shall include the estimated date by which the deficiencies will be corrected. The CQC System Manager or staff shall make a second inspection to ascertain that all deficiencies have been corrected. Once this is accomplished, the Contractor shall notify the Government that the facility is ready for the Government Pre-Final inspection.

3.8.2 Pre-Final Inspection

The Government will perform the pre-final inspection to verify that the facility is complete and ready to be occupied. A Government Pre-Final Punch List may be developed as a result of this inspection. The Contractor's CQC System Manager shall ensure that all items on this list have been corrected before notifying the Government, so that a Final inspection with the customer can be scheduled. Any items noted on the Pre-Final inspection shall be corrected in a timely manner. These inspections and any deficiency corrections required by this paragraph shall be accomplished within the time slated for completion of the entire work or any particular increment of the work if the project is divided into increments by separate completion dates.

3.8.3 Final Acceptance Inspection

The Contractor's Quality Control Inspection personnel, plus the superintendent or other primary management person, and the Contracting Officer's Representative shall be in attendance at the final acceptance inspection. Additional Government personnel including, but not limited to, those from Base/Post Civil Facility Engineer user groups, and major commands may also be in attendance. The final acceptance inspection will be formally scheduled by the Contracting Officer based upon results of the Pre-Final inspection. Notice shall be given to the Contracting Officer at least 14 days prior to the final acceptance inspection and shall include the Contractor's assurance that all specific items previously identified to the Contractor as being unacceptable, along with all remaining work performed under the contract, will be complete and acceptable by the date scheduled for the final acceptance inspection. Failure of the Contractor to have all contract work acceptably complete for this inspection will be cause for the Contracting Officer to bill the Contractor for the Government's additional inspection cost in accordance with the contract clause titled "Inspection of Construction".

3.9 DOCUMENTATION

The Contractor shall maintain current records providing factual evidence that required quality control activities and/or tests have been performed. These records shall include the work of subcontractors and suppliers and shall be on an acceptable form that includes, as a minimum, the following information:

- a. Contractor/subcontractor and their area of responsibility.
- b. Operating plant/equipment with hours worked, idle, or down for repair.
- c. Work performed each day, giving location, description, and by whom. When Network Analysis (NAS) is used, identify each phase of work performed each day by NAS activity number.
- d. Test and/or control activities performed with results and references to specifications/drawings requirements. The control phase shall be identified (Preparatory, Initial, Follow-up). List of deficiencies noted, along with corrective action.
- e. Quantity of materials received at the site with statement as to acceptability, storage, and reference to specifications/drawings requirements.
- f. Submittals and deliverables reviewed, with contract reference, by whom, and action taken.
- g. Offsite surveillance activities, including actions taken.
- h. Job safety evaluations stating what was checked, results, and instructions or corrective actions.
- i. Instructions given/received and conflicts in plans and/or specifications.
- j. Contractor's verification statement.

These records shall indicate a description of trades working on the project; the number of personnel working; weather conditions encountered; and any delays encountered. These records shall cover both conforming and deficient features and shall include a statement that equipment and materials incorporated in the work and workmanship comply with the contract. The original and one copy of these records in report form shall be furnished to the Government daily within forty-eight (48) hours after the date covered by the report, except that reports need not be submitted for days on which no work is performed. As a minimum, one report shall be prepared and submitted for every 7 days of no work and on the last day of a no work period. All calendar days shall be accounted for throughout the life of the contract. The first report following a day of no work shall be for that day only. Reports shall be signed and dated by the CQC System Manager. The report from the CQC System Manager shall include copies of test reports and copies of reports prepared by all subordinate quality control personnel.

3.10 SAMPLE FORMS

In accordance with Specification 01312 QUALITY CONTROL SYSTEM, the contractor shall use the forms produced by and printed from QCS. Samples of any forms required to meet the requirements of this section which are not produced by that system shall be included in the contractor's Quality Control Plan.

3.11 NOTIFICATION OF NONCOMPLIANCE

The Contracting Officer will notify the Contractor of any detected noncompliance with the foregoing requirements. The Contractor shall take immediate corrective action after receipt of such notice. Such notice, when delivered to the Contractor at the work site, shall be deemed sufficient for the purpose of notification. If the Contractor fails or refuses to comply promptly, the Contracting Officer may issue an order stopping all or part of the work until satisfactory corrective action has been taken. No part of the time lost due to such stop orders shall be made the subject of claim for extension of time or for excess costs or damages by the Contractor.

SECTION 01525

**SECTION 01525
SAFETY AND OCCUPATIONAL HEALTH REQUIREMENTS**

PART 1 GENERAL

For contractor safety on projects associated with this program, compliance with EM 385-1-1 safety requirements will be the long-term goal reached by growing a safety culture. This compliance will, by necessity, be achieved through a phased-in process. In the Commander's letter at the preface of the EM 385-1-1, he acknowledges that in OCONUS locations, strict compliance with the manual may not be possible – and through the hazard analysis process, safety measures can be developed to attain the same degree of safety.

This specification consists of two parts:

- 1) Sections 1.1 through 3.12.1, which are the standard safety specifications for work in Europe District and;
- 2) Appendix A, Phasing approach for safety in emerging countries where there is little or no national safety standards.

1.1 REFERENCES

The publications listed below form a part of this specification to the extent referenced. The publications are referred to within the text by the basic designation only.

AMERICAN NATIONAL STANDARDS INSTITUTE (ANSI)

ANSI A10.32	Personal Fall Protection - Safety Requirements for Construction and Demolition Operations
ANSI Z359.1(1992; R 1999)	Safety Requirements for Personal Fall Arrest Systems, Subsystems and Components
ASME B30.3(1996)	Construction Tower Cranes

ASME INTERNATIONAL (ASME)

ASME B30.22(2000)	Articulating Boom Cranes
ASME B30.5(2004)	Mobile and Locomotive Cranes

NATIONAL FIRE PROTECTION ASSOCIATION (NFPA)

NFPA 10(2002)	Portable Fire Extinguishers
NFPA 241(2000)	Safeguarding Construction, Alteration, and Demolition Operations
NFPA 51B(2003)	Fire Prevention During Welding, Cutting, and Other Hot Work

NFPA 70(2005) National Electrical Code
NFPA 70E(2004) Electrical Safety in the Workplace

U.S. ARMY CORPS OF ENGINEERS (USACE)

EM 385-1-1(2008) Safety Safety and Health Requirements

U.S. NATIONAL ARCHIVES AND RECORDS ADMINISTRATION (NARA)

29 CFR 1910 Occupational Safety and Health Standards (OSHA)
29 CFR 1910.146 Permit-required Confined Spaces
29 CFR 1915 Confined and Enclosed Spaces and Other Dangerous Atmospheres in Shipyard Employment
29 CFR 1919 Gear Certification
29 CFR 1926 Safety and Health Regulations for Construction
29 CFR 1926.500 Fall Protection

1.2 SUBMITTALS

Government approval is required for submittals with a "G" designation; submittals not having a "G" designation are for information only. When used, a designation following the "G" designation identifies the office that will review the submittal for the Government. The following shall be submitted in accordance with SR SUBMITTAL PROCEDURES:

SD-01 Preconstruction Submittals

Accident Prevention Plan (APP); G, ACC
Activity Hazard Analysis (AHA); G, ACC
Crane Critical Lift Plan; G, ACC
Proof of qualification for Crane Operators; G, ACC

SD-06 Test Reports

Reports: Submit reports as their incidence occurs, in accordance with the requirements of the paragraph entitled, "Reports."

Accident Reports
Monthly Exposure Reports
Crane Reports
Regulatory Citations and Violations

SD-07 Certificates

Confined Space Entry Permit

Contractor Safety Self-Evaluation Checklist; G, ACC

Submit one copy of each permit/certificate attached to each Daily Quality Control Report.

1.3 DEFINITIONS

a. **Competent Person for Fall Protection.** A person who is capable of identifying hazardous or dangerous conditions in the personal fall arrest system or any component thereof, as well as their application and use with related equipment, and has the authority to take prompt corrective measures to eliminate the hazards of falling.

b. **High Visibility Accident.** Any mishap which may generate publicity and/or high visibility.

c. **Medical Treatment.** 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.

d. **Qualified Person for Fall Protection.** A person with a recognized degree or professional certificate, extensive knowledge, training and experience in the field of fall protection who is capable of performing design, analysis, and evaluation of fall protection systems and equipment.

e. **Recordable Injuries or Illnesses.** Any work-related injury or illness that results in:

(1) Death, regardless of the time between the injury and death, or the length of the illness;

(2) Days away from work (any time lost after day of injury/illness onset);

(3) Restricted work;

(4) Transfer to another job;

(5) Medical treatment beyond first aid;

(6) Loss of consciousness; or

(7) A significant injury or illness diagnosed by a physician or other licensed health care professional, even if it did not result in (1) through (6) above.

f. "USACE" property and equipment specified in USACE EM 385-1-1 should be interpreted as Government property and equipment.

1.4 DRUG PREVENTION PROGRAM

Conduct a proactive drug and alcohol use prevention program for all workers, prime and subcontractor, on the site. Ensure that no employee uses illegal drugs or consumes 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 and involved employees for the influence of drugs and alcohol. A copy of the test shall be made available to the Contracting Officer upon request.

1.5 REGULATORY REQUIREMENTS

In addition to the detailed requirements included in the provisions of this contract, work performed shall comply with USACE EM 385-1-1.

1.6 SITE QUALIFICATIONS, DUTIES AND MEETINGS

1.6.1 Personnel Qualifications

1.6.1.1 Site Safety and Health Officer (SSHO)

Site Safety and Health Officer (SSHO) shall be provided at the work site at all times to perform safety and occupational health management, surveillance, inspections, and safety enforcement for the Contractor. The Contractor Quality Control (QC) person can only be the SSHO on this project if approved by the Contracting Officer. Any project exceeding 1 Million US dollars in value shall have a full time SSHO. The SSHO shall meet the following requirements: A minimum of 1 year safety work on similar projects; 30-hour OSHA construction safety class or equivalent within the last 3 years. Competent person training as needed.

1.6.1.2 Competent Person for Confined Space Entry

Provide a competent person meeting the requirements of EM 385-1-1 who is assigned in writing by the Government Designated Authority (GDA) to assess confined spaces and who possesses demonstrated knowledge, skill and ability to:

- a. Identify the structure, location, and designation of confined and permit-required confined spaces where work is done;
- b. Calibrate and use testing equipment including but not limited to, oxygen indicators, combustible gas indicators, carbon monoxide indicators, and carbon dioxide indicators, and to interpret accurately the test results of that equipment;
- c. Perform all required tests and inspections specified in Section 06.I of EM 385-1-1;
- d. Assess hazardous conditions including atmospheric hazards in confined space and adjacent spaces and specify the necessary protection and precautions to be taken;
- e. Determine ventilation requirements for confined space entries and operations;
- f. Assess hazards associated with hot work in confined and adjacent space and determine fire watch requirements; and,
- g. Maintain records required.

1.6.1.3 Crane Operators

Crane operators shall meet the requirements in USACE EM 385-1-1, Section 16 and Appendix G.

1.6.2 Personnel Duties

1.6.2.1 Site Safety and Health Officer (SSHO)/Superintendent

a. Conduct daily safety and health inspections and maintain a written log which includes area/operation inspected, date of inspection, identified hazards, recommended corrective actions, estimated and actual dates of corrections. Safety inspection logs shall be attached to the Contractors' daily quality control report.

- b. Conduct mishap investigations and complete required reports. Maintain an accident/injury log such as the OSHA Form 300 or host nation equivalent, and Daily Production reports for prime and sub-contractors.
- c. Maintain applicable safety reference material on the job site.
- d. Attend the pre-construction conference, pre-work meetings including preparatory inspection meeting, and periodic in-progress meetings.
- e. Implement and enforce accepted APPS and AHAs.
- f. Maintain a safety and health deficiency tracking system that monitors outstanding deficiencies until resolution. A list of unresolved safety and health deficiencies shall be posted on the safety bulletin board.
- g. Ensure sub-contractor compliance with safety and health requirements.

Failure to perform the above duties will result in dismissal of the superintendent and/or SSHO, and a project work stoppage. The project work stoppage will remain in effect pending approval of a suitable replacement.

1.6.3 Meetings

1.6.3.1 Preconstruction Conference

- a. Contractor representatives who have a responsibility or significant role in accident prevention on the project shall attend the preconstruction conference. This includes the project superintendent, site safety and health officer, quality control supervisor, or any other assigned safety and health professionals who participated in the development of the APP (including the Activity Hazard Analyses (AHAs) and special plans, program and procedures associated with it).
- b. The Contractor shall discuss the details of the submitted APP to include incorporated plans, programs, procedures and a listing of anticipated AHAs that will be developed and implemented during the performance of the contract. This list of proposed AHAs will be reviewed at the conference and an agreement will be reached between the Contractor and the Contracting Officer's representative as to which phases will require an analysis. In addition, a schedule for the preparation, submittal, review, and acceptance of AHAs shall be established to preclude project delays.
- c. Deficiencies in the submitted APP will be brought to the attention of the Contractor at the preconstruction conference, and the Contractor shall revise the plan to correct deficiencies and re-submit it for acceptance. Work shall not begin until there is an accepted APP.
- d. The functions of a Preconstruction conference may take place at the Post-Award Kickoff meeting for Design Build Contracts.

1.6.3.2 Safety Meetings

Shall be conducted and documented as required by EM 385-1-1. Minutes showing contract title, signatures of attendees and a list of topics discussed shall be attached to the Contractors' daily quality control report.

1.7 TRAINING

1.7.1 New Employee Indoctrination

New employees (prime and sub-contractor) will be informed of specific site hazards before they begin work. Documentation of this orientation shall be kept on file at the project site.

1.7.2 Periodic Training

Provide Safety and Health Training in accordance with USACE EM 385-1-1 and the accepted APP. Ensure all required training has been accomplished for all onsite employees.

1.7.3 Training on Activity Hazard Analysis (AHA)

Prior to beginning a new phase, training will be provided to all affected

1.8 ACCIDENT PREVENTION PLAN (APP)

The Contractor shall use a qualified person to prepare the written site-specific APP in both English and in the host nation language. Prepare the APP in accordance with the format and requirements of USACE EM 385-1-1 and as supplemented herein. Cover all paragraph and subparagraph elements in USACE EM 385-1-1, Appendix A, "Minimum Basic Outline for Accident Prevention Plan". Specific requirements for some of the APP elements are described below. The APP shall be job-specific and shall address any unusual or unique aspects of the project or activity for which it is written. The APP shall interface with the Contractor's overall safety and health program. Any portions of the Contractor's overall safety and health program referenced in the APP shall be included in the applicable APP element and made site-specific. The Government considers the Prime Contractor to be the "controlling authority" for all work site safety and health of the subcontractors. Contractors are responsible for informing their subcontractors of the safety provisions under the terms of the contract and the penalties for noncompliance, coordinating the work to prevent one craft from interfering with or creating hazardous working conditions for other crafts, and inspecting subcontractor operations to ensure that accident prevention responsibilities are being carried out. The APP shall be signed by the person and firm (senior person) preparing the APP, the Contractor, the on-site superintendent, the designated site safety and health officer.

Submit the APP to the Contracting Officer 15 calendar days prior to the date of the preconstruction conference for acceptance. Work cannot proceed without an accepted APP.

Once accepted by the Contracting Officer, the APP and attachments will be enforced as part of the contract. Disregarding the provisions of this contract or the accepted APP will be cause for stopping of work, at the discretion of the Contracting Officer, until the matter has been rectified.

Once work begins, changes to the accepted APP shall be made with the knowledge and concurrence of the Contracting Officer, project superintendent, SSHO and quality control manager. Should any hazard become evident, stop work in the area, secure the area, and develop a plan to remove the hazard. Notify the Contracting Officer within 24 hours of discovery. In the interim, all necessary action shall be taken to restore and maintain safe working conditions in order to safeguard onsite personnel, visitors, the public, and the environment.

Copies of the accepted plan will be maintained at the Contracting Officer's office and at the job site.

The APP shall be continuously reviewed and amended, as necessary, throughout the life of the contract. Unusual or high-hazard activities not identified in the original APP shall be incorporated in the plan as they are discovered.

1.8.1 EM 385-1-1 Contents

In addition to the requirements outlines in Appendix A of USACE EM 385-1-1, the following is required:

- a. Names and qualifications (resumes including education, training, experience and certifications) of all site safety and health personnel designated to perform work on this project to include the designated site safety and health officer and other competent and qualified personnel to be. The duties of each position shall be specified.
- b. Qualifications of competent and of qualified persons. As a minimum, competent persons shall be designated and qualifications submitted for each of the following major areas: excavation; scaffolding; fall protection; hazardous energy; confined space; health hazard recognition, evaluation and control of chemical, physical and biological agents; personal protective equipment and clothing to include selection, use and maintenance.
- c. Confined Space Entry Plan. Develop a confined space entry plan in accordance with USACE EM 385-1-1, Section 06.I, and any other federal, state and local regulatory requirements identified in this contract. 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.)
- d. Crane Critical Lift Plan. Prepare and sign weight handling critical lift plans for lifts over 75 percent of the capacity of the crane or hoist (or lifts over 50 percent of the capacity of a barge mounted mobile crane's hoists) at any radius of lift; lifts involving more than one crane or hoist; lifts of personnel; and lifts involving non-routine rigging or operation, sensitive equipment, or unusual safety risks. The plan shall be submitted 15 calendar days prior to on-site work and include the requirements of USACE EM 385-1-1, paragraph 16.C.18. and the following:
 - (1) For lifts of personnel, the plan shall demonstrate compliance with the requirements of EM 385-1-1, Section 22.F.
 - (2) For barge mounted mobile cranes, barge stability calculations identifying barge list and trim based on anticipated loading; and load charts based on calculated list and trim. The amount of list and trim shall be within the crane manufacturer's requirements.
- e. Fall Protection and Prevention (FP&P) Plan. The plan shall be site specific and address all fall hazards in the work place and during different phases of construction. It shall address how to protect and prevent workers from falling to lower levels when they are exposed to fall hazards above 1.8 m (6 feet). A qualified person for fall protection shall prepare and sign the plan. The plan shall include fall protection and prevention systems, equipment and methods employed for every phase of work, responsibilities, assisted rescue, self-rescue and evacuation procedures, training requirements, and monitoring methods. Fall Protection and Prevention Plan shall be revised every six months for lengthy projects, reflecting any changes during the course of construction due to changes in personnel, equipment, systems or work habits. The accepted Fall Protection and Prevention Plan shall be kept and maintained at the job site for the duration of the project. The Fall Protection and Prevention Plan shall be included in the Accident Prevention Plan (APP).

1.9 ACTIVITY HAZARD ANALYSIS (AHA)

The Activity Hazard Analysis (AHA) format shall be in accordance with USACE EM 385-1-1, and shall be written in both English and the host nation language. Submit the AHA for review at least 15 calendar days prior to the start of each phase. Format subsequent AHAs as amendments to the APP. The analysis should be used during daily inspections to ensure the implementation and effectiveness of the activity's safety and health controls.

The AHA list will be reviewed periodically (at least monthly) at the Contractor supervisory safety meeting and updated as necessary when procedures, scheduling, or hazards change.

The activity hazard analyses shall be developed using the project schedule as the basis for the activities performed. Any activities listed on the project schedule will require an AHA. The AHAs will be developed by the contractor, supplier or subcontractor and provided to the prime contractor for submittal to the Contracting Officer.

1.10 DISPLAY OF SAFETY INFORMATION

Within 1 calendar day after commencement of work, erect a safety bulletin board at the job site. The safety bulletin board shall include information and be maintained as required by EM 385-1-1, section 01.A.06.

1.11 SITE SAFETY REFERENCE MATERIALS

Maintain safety-related references applicable to the project. Maintain applicable equipment manufacturer's manuals.

1.12 EMERGENCY MEDICAL TREATMENT

Contractors will arrange for their own emergency medical treatment. The Government has no responsibility to provide emergency medical treatment. Military medical clinics may provide emergency treatment for serious injuries; the contractor is responsible for coordination with the local military medical clinic prior to mobilization.

1.13 REPORTS

1.13.1 Accident Reports

For recordable injuries and illnesses, and property damage accidents resulting in at least \$2,000 in damages, the Prime Contractor shall conduct an accident investigation to establish the root cause(s) of the accident, complete the USACE Accident Report Form 3394 and provide the report to the Contracting Officer within 5 calendar day(s) of the accident. The Contracting Officer will provide copies of any required or special forms.

1.13.2 Accident Notification

Notify the Contracting Officer as soon as practical, but not later than four hours, after any accident meeting the definition of Recordable Injuries or Illnesses or High Visibility Accidents, property damage equal to or greater than \$2,000. 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; extent of injury, if known, and brief description of accident (to include type of construction equipment used, PPE used, etc.). Preserve the conditions and evidence on the accident site until the Government investigation team arrives on-site and Government investigation is conducted.

1.13.3 Monthly Exposure Reports

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. The Contracting Officer will provide copies of any special forms.

1.13.4 Crane Reports

Submit crane inspection reports required in accordance with USACE EM 385-1-1, Appendix H and as specified herein with Daily Reports of Inspections.

1.14 HOT WORK

Prior to performing "Hot Work" (welding, cutting, etc.) or operating other flame-producing/spark producing devices, a written permit shall be requested from the Installation. CONTRACTORS ARE REQUIRED TO MEET ALL CRITERIA BEFORE A PERMIT IS ISSUED. The Contractor will provide at least two (2) six kilogram ABC rated 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. The Fire Watch shall be trained in fire fighting techniques and remain on-site for a minimum of 120 minutes after completion of the task or as specified on the hot work permit.

When starting work in the facility, Contractors shall require their personnel to familiarize themselves with the location of the nearest fire alarm boxes and place in memory the emergency phone numbers. ANY FIRE, NO MATTER HOW SMALL, SHALL BE REPORTED TO THE RESPONSIBLE FIRE DIVISION/DEPARTMENT IMMEDIATELY.

PART 2 PRODUCTS

Not used.

PART 3 EXECUTION

3.1 CONSTRUCTION AND/OR OTHER WORK

Before initiation of work at the job site, an accident prevention plan, written by the Contractor for the specific work and hazards of the contract and implementing in detail the pertinent requirements of EM 385-1-1, will be reviewed and found acceptable by designated Government personnel. Specific requirements for development of the accident prevention plan are found in sections 01.A and Appendix A of EM 385-1-1.

Before beginning each activity involving a type of work presenting hazards not experienced in previous project operations or where a new work crew or subcontractor is to perform the work, activity hazard analysis (AHA) shall be prepared by the Contractor performing the work activity. See paragraph 01.A.09 of EM 385-1-1.

The Contractor shall require subcontractors to submit their plan of operations showing methods they propose to use in accomplishing major phases of work.

The Contractor shall be prepared to discuss the plans in conferences convened by the Contracting Officer prior to starting work on each major phase of operation. Plans shall include all pertinent information such as layout of haul roads, access roads, storage areas, electrical distribution lines, methods of providing minimum exposure to overhead loads, and methods of access to work areas. The plan for accomplishing the initial work phase shall be submitted within 15 calendar days after award of the contract. Plans for subsequent major phases of work shall be submitted not later than 15 calendar days prior to initiation of work on each major phase.

All areas where construction, demolition, alteration, building, or similarly related activities take place, all workers shall have the following minimum personal protective clothing and equipment:

1. Short sleeve shirt.
2. Long trousers.
3. Steel-toed safety boots.
4. Hard hat.

3.1.1 Falling Object Protection

All areas must be barricaded to safeguard employees. When working overhead, barricade the area below to prevent entry by unauthorized employees. Construction warning tape and signs shall be posted so they are clearly visible from all possible access points. When employees are working overhead all tools and equipment shall be secured so that they will not fall. When using guardrail as falling object protection, all openings shall be small enough to prevent passage of potential falling objects.

3.1.2 Hazardous Material Use

Each hazardous material must receive approval prior to being brought 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 or Contractor employees to any unsafe or unhealthful conditions. Adequate protective measures must be taken to prevent Government or Contractor employees from being exposed to any hazardous condition that could result from the work or storage. The Prime Contractor shall keep a complete inventory of hazardous materials brought onto the work-site. Approval by the Contracting Officer of protective measures and storage area is required prior to the start of the work.

3.1.3 Hazardous Material Exclusions

Notwithstanding any other hazardous material used in this contract, radioactive materials or instruments capable of producing ionizing/non-ionizing radiation (with the exception of radioactive material and devices used in accordance with USACE EM 385-1-1 such as nuclear density meters for compaction testing and laboratory equipment with radioactive sources) as well as materials which contain asbestos, mercury or polychlorinated biphenyls, di-isocyanates, lead-based paint are prohibited. The Contracting Officer, upon written request by the Contractor, may consider exceptions to the use of any of the above excluded materials.

3.1.4 Unforeseen Hazardous Material

The design should have identified materials such as PCB, lead paint, and friable and non-friable 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. Within 14 calendar days the Government will determine if the material is hazardous. 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 FALL HAZARD PROTECTION AND PREVENTION PROGRAM

The Contractor shall establish a fall protection and prevention program, for the protection of all employees exposed to fall hazards. The program shall include company policy, identify responsibilities, education and training requirements, fall hazard identification, prevention and control measures, inspection, storage, care and maintenance of fall protection equipment and rescue and evacuation procedures.

3.2.1 Training

The Contractor shall institute a fall protection training program. As part of the Fall Hazard Protection and Prevention Program, the Contractor shall provide training for each employee who might be

exposed to fall hazards. A competent person for fall protection shall provide the training. Training requirements shall be in accordance with USACE EM 385-1-1, section 21.A.16.

3.2.2 Fall Protection Equipment and Systems

The Contractor shall enforce use of the fall protection equipment and systems designated for each specific work activity in the Fall Protection and Prevention Plan and/or AHA at all times when an employee is exposed to a fall hazard. Employees shall be protected from fall hazards as specified in EM 385-1-1, section 21. In addition to the required fall protection systems, safety skiff, personal floatation devices, life rings etc., are required when working above or next to water in accordance with USACE EM 385-1-1, paragraphs 05.H. and 05.I. Personal fall arrest systems are required when working from an articulating or extendible boom, swing stages, or suspended platform. In addition, personal fall arrest systems are required when operating other equipment such as scissor lifts if the work platform is capable of being positioned outside the wheelbase. The need for tying-off in such equipment is to prevent ejection of the employee from the equipment during raising, lowering, or travel. Fall protection must comply with USACE EM 385-1-1 and host nation requirements, whichever is more stringent.

3.2.2.1 Personal Fall Arrest Equipment

Personal fall arrest equipment, systems, subsystems, and components shall meet ANSI Z359.1 or European Union equivalent. Only a full-body harness with a shock-absorbing lanyard or self-retracting lanyard is an acceptable personal fall arrest body support device. Body belts may only be used as a positioning device system (for uses such as steel reinforcing assembly and in addition to an approved fall arrest system). Harnesses shall have a fall arrest attachment affixed to the body support (usually a Dorsal D-ring) and specifically designated for attachment to the rest of the system. Only locking snap hooks and carabiners shall be used. Webbing, straps, and ropes shall be made of synthetic fiber. The maximum free fall distance when using fall arrest equipment shall not exceed 1.8 m (6 feet). The total fall distance and any swinging of the worker (pendulum-like motion) that can occur during a fall shall always be taken into consideration when attaching a person to a fall arrest system.

3.2.3 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 1.8 m (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. A safety monitoring system is not adequate fall protection and is not authorized.
- (2) For work greater than 1.8 m (6 feet) from an edge, warning lines shall be erected and installed in accordance with USACE EM 385-1-1.

b. Steep-Sloped Roofs: Work on steep-sloped roofs requires a personal fall arrest system, guardrails with toe-boards, or safety nets. This requirement also includes residential or housing type construction.

3.2.4 Existing Anchorage

Existing anchorages, to be used for attachment of personal fall arrest equipment, shall be certified (or re-certified) by a qualified person for fall protection in accordance with ANSI Z359.1 or European

Union equivalent. Exiting horizontal lifeline anchorages shall be certified (or re-certified) by a registered professional engineer with experience in designing horizontal lifeline systems.

3.2.5 Horizontal Lifelines

Horizontal lifelines shall be designed, installed, certified and used under the supervision of a qualified person for fall protection as part of a complete fall arrest system which maintains a safety factor of 2.

3.2.6 Guardrails and Safety Nets

Guardrails and safety nets shall be designed, installed and used in accordance with EM 385-1-1 or Host Nation requirements, whichever is more stringent.

3.2.7 Rescue and Evacuation Procedures

When personal fall arrest systems are used, the contractor must ensure that the mishap victim can self-rescue or can be rescued promptly should a fall occur. A Rescue and Evacuation Plan shall be prepared by the contractor and include a detailed discussion of the following: methods of rescue; methods of self-rescue; equipment used; training requirement; specialized training for the rescuers; procedures for requesting rescue and medical assistance; and transportation routes to a medical facility. The Rescue and Evacuation Plan shall be included in the Activity Hazard Analysis (AHA) for the phase of work, in the Fall Protection and Prevention (FP&P) Plan, and the Accident Prevention Plan (APP).

3.3 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. Access to scaffold platforms greater than 6 m in height shall be accessed by use of a scaffold stair system. Vertical ladders commonly provided by scaffold system manufacturers shall not be used for accessing scaffold platforms greater than 6 m in height. The use of an adequate gate is required. Contractor shall ensure that employees are qualified to perform scaffold erection and dismantling. 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 and prevention plan. 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. Side 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. Work platforms shall be placed on mud sills. Scaffold or work platform erectors shall have fall protection during the erection and dismantling of scaffolding or work platforms that are more than six feet. Delineate fall protection requirements when working above six feet or above dangerous operations in the Fall Protection and Prevention (FP&P) Plan and Activity Hazard Analysis (AHA) for the phase of work.

3.4 EQUIPMENT

3.4.1 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 manufacturer's printed instructions.

- c. Operators of forklifts or power industrial trucks shall be trained/licensed in accordance with Host Nation requirements.

3.4.2 Weight Handling Equipment

- a. Cranes and derricks shall be equipped as specified in EM-385-1-1 section 16.
- b. The Contractor shall notify the Contracting Officer 15 days in advance of any cranes entering the activity so that necessary quality assurance spot checks can be coordinated. Contractor's operator shall remain with the crane during the spot check.
- 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. All testing shall be performed in accordance with the manufacturer's recommended procedures.
- d. Under no circumstance shall a Contractor make a lift at or above 90% of the cranes rated capacity in any configuration.
- e. 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 USACE EM 385-1-1 section 11.
- f. Crane suspended personnel work platforms (baskets) shall not be used unless the Contractor proves to the satisfaction of the Contracting Officer that using any other access to the work location would provide a greater hazard to the workers or is impossible. Personnel shall not be lifted with a line hoist or friction crane.
- g. Portable fire extinguishers shall be inspected, maintained, and recharged.
- h. All employees shall be kept clear of loads about to be lifted and of suspended loads.
- i. The Contractor shall use cribbing when performing lifts on outriggers.
- j. The crane hook/block must be positioned directly over the load. Side loading of the crane is prohibited.
- k. A physical barricade must be positioned to prevent personnel from entering the counterweight swing (tail swing) area of the crane.
- l. Certification records which include the date of inspection, signature of the person performing the inspection, and the serial number or other identifier of the crane that was inspected shall always be available for review by Contracting Officer personnel.
- m. Written reports listing the load test procedures used along with any repairs or alterations performed on the crane shall be available for review by Contracting Officer personnel.
- n. Certify that all crane operators have been trained in proper use of all safety devices (e.g. anti-two block devices).
- o. Take steps to ensure that wind speed does not contribute to loss of control of the load during lifting operations. Prior to conducting lifting operations the contractor shall set a maximum wind speed at which a crane can be safely operated based on the equipment being used, the load being lifted, experience of operators and riggers, and hazards on the work site. This maximum wind speed determination shall be included as part of the activity hazard analysis plan for that operation.

3.5 EXCAVATIONS

The competent person for excavations performed as a result of contract work shall be on-site when excavation work is being performed, and shall inspect, and document the excavations daily prior to entry by workers. The competent person must evaluate all hazards, including atmospheric, that may be associated with the work, and shall have the resources necessary to correct hazards promptly.

3.5.1 Utility Locations

Prior to any excavation, all underground utilities in the work area must be positively identified by the contractor utilizing a) a private utility locating service in addition to any station locating service, and/or b) a metal and/or cable-detecting device along the route of the excavation. All underground utilities discovered will be flagged a distance of one-half (1/2) meter on each side of the location, and any markings made during the utility investigation must be maintained throughout the contract.

Damage occurring to existing utilities, when the above procedures are not followed, will be repaired at the Contractor's expense.

3.5.2 Utility Location Verification

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. Digging within 0.61 m (2 feet) of a known utility must not be performed by means of mechanical equipment; hand digging shall be used. If construction is parallel to an existing utility the utility shall be exposed by hand digging every 30.5 m (100 feet) if parallel within 1.5 m (5 feet) of the excavation.

3.5.3 Shoring Systems

Trench and shoring systems must be identified in the accepted safety plan and AHA. Manufacture tabulated data and specifications or registered engineer tabulated data for shoring or benching systems shall be readily available on-site for review. Job-made shoring or shielding shall have the registered professional engineer stamp, specifications, and tabulated data. Extreme care must be used when excavating near direct burial electric underground cables.

3.5.4 Trenching Machinery

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 at the project site.

3.6 UTILITIES WITHIN CONCRETE SLABS

Utilities located within concrete slabs or pier structures, bridges, and the like, are extremely difficult to identify due to the reinforcing steel used in the construction of these structures. Whenever contract work involves concrete chipping, saw cutting, or core drilling, the existing utility location must be coordinated with station utility departments in addition to a private locating service. Outages to isolate utility systems shall be used in circumstances where utilities are unable to be positively identified. The use of historical drawings does not alleviate the contractor from meeting this requirement.

3.7 ELECTRICAL

3.7.1 Conduct of Electrical Work

Underground electrical spaces must be certified safe for entry before entering to conduct work. Cables that will 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 Station Utilities 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 cable cutting remotely using hydraulic cutting tool. 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. In addition, provide electrical arc flash protection for personnel as required by NFPA 70E. Insulating blankets, hearing protection, and switching suits may also be required, depending on the specific job and as delineated in the Contractor's AHA.

3.7.2 Portable Extension Cords

Portable extension cords shall be sized in accordance with manufacturer ratings for the tool to be powered and protected from damage. All damaged extension cords shall be immediately removed from service. Portable extension cords shall meet the requirements of NFPA 70 or European Union equivalent.

3.8 WORK IN CONFINED SPACES

The Contractor shall comply with the requirements in Section 06.I of USACE 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.06 of USACE 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 to ensure exposure to any hazardous atmosphere is kept below its' action level.
- c. Ensure the use of rescue and retrieval devices in confined spaces greater than 1.5 m (5 feet) in depth. Conform to Sections 06.I.08, 06.I.09 and 06.I.10 of USACE 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 entrants and attendants for the work. Conform to Section 06.I.07 of USACE EM 385-1-1.
- f. Daily Entry Permit. 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 USACE 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 DEMOLITION

3.101.1 Demolition Plan

The Contractor shall submit a written demolition plan for all demolition work to be carried on the site. In addition, the demolition plan shall be signed by a Professional Registered Engineer and meet the requirements of the Corps of Engineers Safety and Health Manual, EM 385-1-1, section 23. The demolition plan shall be submitted to the COR at least 1 week before the beginning of the work, including structural calculations for the demolition, if necessary. The demolition work shall not begin before the Contractor has received a written approval from the COR.

3.12.1 Protection of Personnel

During the demolition work the Contractor shall continuously evaluate the condition of the structure being demolished and take immediate action to protect all personnel working in and around the demolition site. No area, section, or component of floors, roofs, walls, columns, pilasters, or other structural element will be allowed to be left standing without sufficient bracing, shoring, or lateral support to prevent collapse or failure while workers remove debris or perform other work in the immediate area.

3.10.1 Protection of Structures

Floors, roofs, walls, columns, pilasters, and other structural components that are designed and constructed to stand without lateral support or shoring, and are determined to be in stable condition, shall remain standing without additional bracing, shoring, or lateral support until demolished, unless directed otherwise by the COR. The Contractor shall ensure that no elements determined to be unstable are left unsupported and shall be responsible for placing and securing bracing, shoring, or lateral supports as may be required as a result of any cutting, removal, or demolition work performed under this contract.

Interior concrete or masonry walls shall be demolished from the top down unless a Registered Engineer can demonstrate that an alternate method poses no additional safety hazards

3.11 HOUSEKEEPING

3.11.1 Clean-Up

The Contractor shall be responsible for cleaning up. The Contractor shall require his personnel to keep the immediate work site clean of all dirt and debris resulting from work under this contract. Accumulated dirt and debris shall be hauled off and disposed of in accordance with local law and at least once a week by the Contractor. Additionally, all debris in work areas shall be cleaned up daily or more frequently if necessary. Construction debris may be temporarily located in an approved location, however garbage accumulation must be removed each day.

Stairwells used by the Contractor during execution of work shall be cleaned daily. Cloths, mops, and brushes containing combustible materials shall be disposed of or stored outside of the buildings in tight covered metal containers. Paints and thinners shall not be poured into inlets of the interior or exterior sewage system. Paint, stains, and other residues on adjacent surfaces or fixtures caused by the Contractor shall be carefully removed and cleaned to original finish. Upon completion of the work, the Contractor shall remove all construction equipment, materials and debris resulting from the work. The entire work site and the area used by Contractor personnel shall be left clean.

SECTION 01770

**SPECIFICATION SECTION 01770
CLOSEOUT PROCEDURES**

PART 1: GENERAL

1.1 SUBMITTALS

Government approval is required for submittals with a "G" designation; submittals not having a "G" designation are for information only. When used, a designation following the "G" designation identifies the office that will review the submittal for the Government. The following shall be submitted in accordance with Section 01335 SUBMITTAL PROCEDURES:

SD-10 Operation and Maintenance Data
Equipment/Product Warranty List; G
Submit Data Package 1 in accordance with Section 01781 OPERATION AND MAINTENANCE DATA.

SD-11 Closeout Submittals
As-Built Drawings; G
Record of Materials; G
Equipment/Product Warranty Tag; G

1.2 PROJECT RECORD DOCUMENTS

1.2.1 As-Built Drawings

As built drawings shall be submitted in accordance with Section 01780A CLOSEOUT SUBMITTALS

1.2.2 As-Built Record of Materials

Furnish a record of materials.

Where several manufacturers' brands, types, or classes of the item listed have been used in the project, designate specific areas where each item was used. Designations shall be keyed to the areas and spaces depicted on the contract drawing. Furnish the record of materials used in the following format:

MATERIALS DESIGNATION	SPECIFICATION	MANUFACTURER	MATERIALS USED (MANUFACTURER'S DESIGNATION)	WHERE USED

1.3 EQUIPMENT/PRODUCT WARRANTIES

1.3.1 Equipment/Product Warranty List

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, feature of construction or system indicating:

1. Name of item.
2. Model and serial numbers.
3. Location where installed.
4. Name and phone numbers of manufacturers or suppliers.
5. Names, addresses and telephone numbers of sources of spare parts.
6. Warranties and terms of warranty. This shall include one-year overall warranty of construction. Items which have extended warranties shall be indicated with separate warranty expiration dates.
7. Cross-reference to warranty certificates as applicable.
8. Starting point and duration of warranty period.
9. Summary of maintenance procedures required to continue the warranty in force.
10. Cross-reference to specific pertinent Operation and Maintenance manuals.
11. Organization, names and phone numbers of persons to call for warranty service.
12. Typical response time and repair time expected for various warranted equipment.

d. The Contractor's plans for attendance at the 4 and 9 month post-construction warranty inspections conducted by the Government.

e. Procedure and status of tagging of all equipment covered by extended warranties.

f. Copies of instructions to be posted near selected pieces of equipment where operation is critical for warranty and/or safety reasons.

1.3.2 Performance of Warranty Work

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.

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 Warranty Tags

At the time of installation, each warranted item shall be tagged with a durable, oil and water resistant tag approved by the Contracting Officer. Each tag shall be attached with a copper wire and shall be sprayed with a silicone waterproof coating. The date of acceptance and the QC signature shall remain blank until project is accepted for beneficial occupancy. The tag shall show the following information.

- a. Type of product/material _____
- b. Model number _____
- c. Serial number _____
- d. Contract number _____
- e. Warranty period _____ from _____ to _____
- f. Inspector's signature _____
- g. Construction Contractor _____
Address _____
Telephone number _____
- h. Warranty contact _____
Address _____
Telephone number _____
- i. Warranty response time priority code _____
- j. WARNING - PROJECT PERSONNEL TO PERFORM ONLY OPERATIONAL
MAINTENANCE DURING THE WARRANTY PERIOD.

1.4 MECHANICAL TESTING AND BALANCING

All contract requirements for testing/adjusting/balancing shall be fully completed, including all testing, prior to contract completion date. The time required to complete all testing/adjusting/balancing is included in the allotted calendar days for completion.

1.5 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 --
01770

SECTION 01780A

SECTION 01780A

CLOSEOUT SUBMITTALS

PART 1 GENERAL

1.1 SUBMITTALS

Government approval is required for submittals with a "G" designation; submittals not having a "G" designation are for Contractor Quality Control approval. 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 01335 SUBMITTAL PROCEDURES:

SD-02 Shop Drawings

As-Built Drawings

Drawings showing final as-built conditions of the project. The local language of Afghanistan shall be added to project As-Built drawings. The final CADD as-built drawings shall consist of **one set** of electronic CADD drawing files in the specified format, and **one half-size and two full-size paper copies** of the approved as-built drawings.

SD-03 Product Data

As-Built Record of Equipment and Materials

Two copies of the record listing the as-built materials and equipment incorporated into the construction of the project.

Warranty Management Plan

One set 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

Two record copies of the warranty tags showing the layout and design.

Final Cleaning

Two 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 preconstruction conference for projects requiring CADD file as-built drawings.

1.2.1.2 Working As-Built and Final As-Built Drawings

a. The Contractor shall revise 2 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:

b. 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.

c. The location and dimensions of any changes within the building structure.

d. Correct grade, elevations, cross section, or alignment of roads, earthwork, structures or utilities if any changes were made from contract plans.

e. 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.

f. The topography, invert elevations and grades of drainage installed or affected as part of the project construction.

- g. Changes or modifications which result from the final inspection.
- h. Where contract drawings or specifications present options, only the option selected for construction shall be shown on the final as-built prints.
- i. 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.
- j. Systems designed or enhanced by the Contractor, such as HVAC controls, fire alarm, fire sprinkler, and irrigation systems.
- k. 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

a. 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. The Contractor will be furnished "as-designed" drawings in AutoCAD Release 2007 or Microstation V8 format compatible with a Windows XP operating system. The 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.

b. Prior to submittal of the first design submittal involving CADD drawings, the Contractor shall prepare one typical CADD drawing for the project and furnish, via ENG Form 4025, the electronic CADD drawing file for review and approval by the Contracting Officer. All Government comments involving changes to this single drawing shall be accomplished and resubmittal(s) made until the Government is satisfied that all CADD Standards are being followed and all subsequent drawings will also be in compliance with these Standards.

c. 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.

d. 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.

e. 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.

f. 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 full size paper copy prints of these drawings for Government review, comparison with approved red-line marked up drawings, and approval. The Government will promptly return one set of prints annotated with any necessary corrections to the CADD file(s) if corrections are required prior to approval. Within 20 days 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 full size paper 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 is the responsibility of the Contractor. The Government reserves the right to reject any drawing files it deems incompatible with the CADD system. Upon approval by the Government of the final as-built drawing package for the entire project, the Contractor shall provide the number of as-built copies noted in Paragraph 1.1 of this Section.

g. 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 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 one copy 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, Model, and Serial Number	Composition and Size	Used	Where
-------------	--------------------------	---	-------------------------	------	-------

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 name plate. 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, feature of construction or system indicating:

1. Name of item.
2. Model and serial numbers.
3. Location where installed.
4. Name and phone numbers of manufacturers or suppliers.
5. Names, addresses and telephone numbers of sources of spare parts.
6. Warranties and terms of warranty. This shall include one-year overall warranty of construction. Items which have extended warranties shall be indicated with separate warranty expiration dates.
7. Cross-reference to warranty certificates as applicable.
8. Starting point and duration of warranty period.
9. Summary of maintenance procedures required to continue the warranty in force.
10. Cross-reference to specific pertinent Operation and Maintenance manuals.
11. Organization, names and phone numbers of persons to call for warranty service.
12. Typical response time and repair time expected for various warranted equipment.

d. The Contractor's plans for attendance at the 4 and 9 month post-construction warranty inspections conducted by the Government.

e. Procedure and status of tagging of all equipment covered by extended warranties.

f. Copies of instructions to be posted near selected pieces of equipment where operation is critical for warranty and/or safety reasons.

1.3.2 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.

1.3.3 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 backcharge 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 other work to be initiated within 3 work days and work continuously 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

- 1) 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

Street lights.

Code 1-Gas

- 1) Leaks and breaks.
- 2) No gas to family housing unit or cantonment area.

Code 1-Heat

- 1) Area power failure affecting heat.
- 2) Heater in unit not working.

Code 2-Kitchen Equipment

- 1) Dishwasher not operating properly.
- 2) All other equipment hampering preparation of a meal.

Code 1-Plumbing

- 1) Hot water heater failure.
- 2) Leaking water supply pipes.

Code 2-Plumbing

- 1) Flush valves not operating properly.
- 2) Fixture drain, supply line to commode, or any water pipe leaking.
- 3) Commode leaking at base.

Code 3 –Plumbing

Leaky faucets.

Code 3-Interior

- 1) Floors damaged.
- 2) Paint chipping or peeling.
- 3) Casework.

Code 1-Roof Leaks

Temporary repairs will be made where major damage to property is occurring.

Code 2-Roof Leaks

Where major damage to property is not occurring, check for location of leak during rain and complete repairs on a Code 2 basis.

Code 2-Water (Exterior)

No water to facility.

Code 2-Water (Hot)

No hot water in portion of building listed.

Code 3-All other work not listed above.

1.3.5 Warranty Tags

At the time of installation, each warranted item shall be tagged with a durable, oil and water resistant tag approved by the Contracting Officer. Each tag shall be attached with a copper wire and shall be sprayed with a silicone waterproof coating. The date of acceptance and the QC signature shall remain blank until project is accepted for beneficial occupancy. The tag shall show the following information.

- a. Type of product/material _____.
- b. Model number _____.
- c. Serial number _____.
- d. Contract number _____.
- e. Warranty period _____ from _____ to _____.
- f. Inspector's signature _____.
- g. Construction Contractor _____.
Address _____ . Telephone
number _____.
- h. Warranty contact _____.
Address _____ . Telephone
number _____.

i. Warranty response time priority code_____.

j. WARNING - PROJECT PERSONNEL TO PERFORM ONLY OPERATIONAL MAINTENANCE DURING THE WARRANTY PERIOD.

1.4 MECHANICAL TESTING, ADJUSTING, BALANCING, AND COMMISSIONING

Prior to final inspection and transfer of the completed facility; all reports, statements, certificates, and completed checklists for testing, adjusting, balancing, and commissioning of mechanical systems shall be submitted to and approved by the Contracting Officer as specified in applicable technical specification sections.

1.5 OPERATION AND MAINTENANCE MANUALS

Three (3) copies of all Operation and Maintenance (O&M) manuals shall be submitted as follows:

AFGHANISTAN ENGINEER DISTRICT

(1) DHL, FEDEX, UPS or any other courier service:

U.S. Army Corps of Engineers
Afghanistan Engineer District
House # 1, St. #1 West
West Wazir Akbar High School
Behind Amani High School
Kabul, Afghanistan
Attn: Chief, Engineering Branch

Operation manuals and maintenance manuals shall be provided in a common volume, complete, clearly differentiated and 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 --
01780A

SECTION 01781

**SECTION 01781
OPERATION AND MAINTENANCE DATA**

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 01335 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 a list 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.

PART 2 PRODUCTS

Not used.

PART 3 EXECUTION

3.1 TRAINING

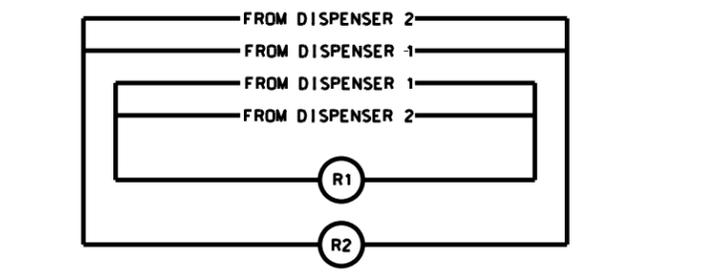
Unless provided for elsewhere, the Contractor shall provide operational and maintenance training for all systems furnished under this contract in accordance with this section. The training shall not take place until the operation and maintenance manuals are submitted and approved.

Training will be given to personnel responsible for the operation and maintenance of the system at the installation. Orient training to the specific system being installed under this contract. Use operation and maintenance manual as the primary instructional aid in contractor provided activity personnel training. Manuals shall be delivered for each trainee with two additional sets delivered for archiving at the project site. Submit a training course schedule, syllabus, and training materials 14 days prior to the start of training. Obtain approval of the training course before beginning that phase of training. Furnish a qualified instructor approved by the system manufacturer to conduct training for the specific system.

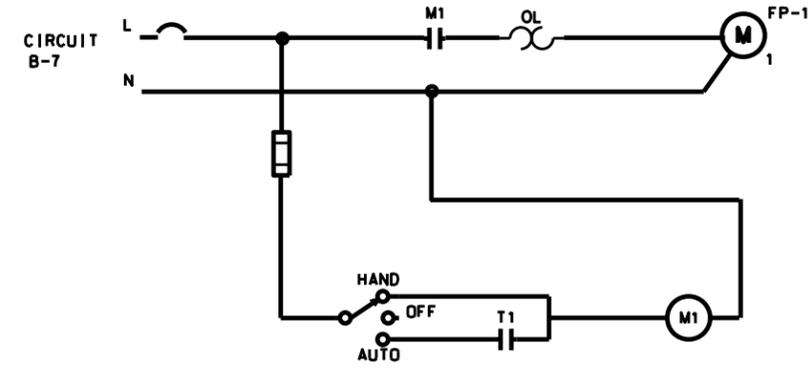
Training manuals shall include an agenda, defined objectives and a detailed description of the subject matter for each lesson. Furnish audio-visual equipment and all other training materials and supplies. A training day is defined as 8 hours of classroom or lab instruction, including two 15 minute breaks and excluding lunch time, Monday through Friday, during the daytime shift in effect at the training facility. For guidance, the Contractor should assume the attendees will have a high school education.

The Contractor shall videotape the training session on VHS tapes and provide the tapes to the Government.

-- End of Section --
01781

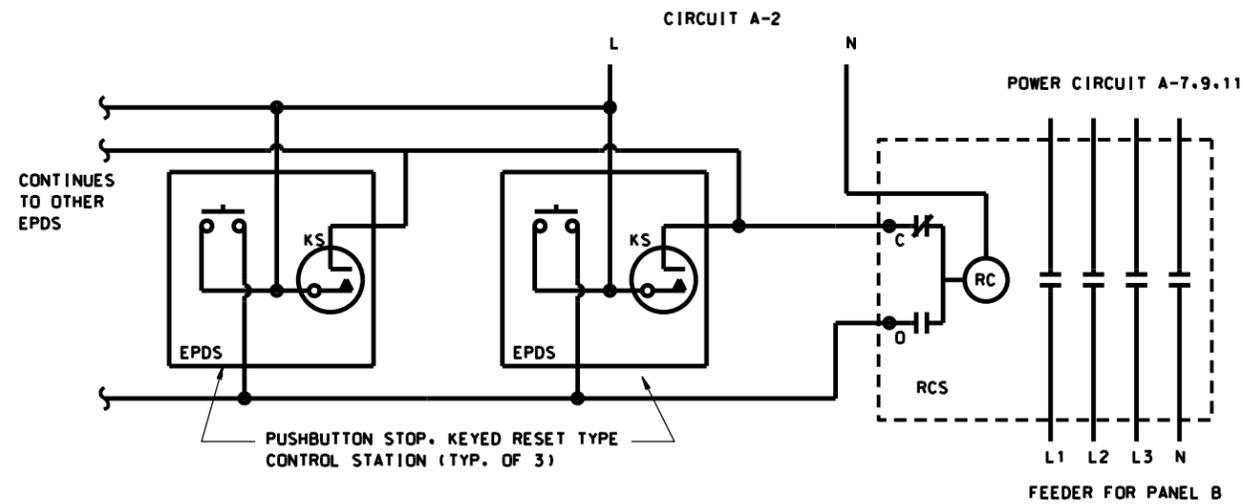


MO-GAS AND DIESEL TANKS CONTROL SCHEMATIC
(FP-1 THROUGH FP-4)
RELAYS ARE LOCATED IN THE RELAY CABINET



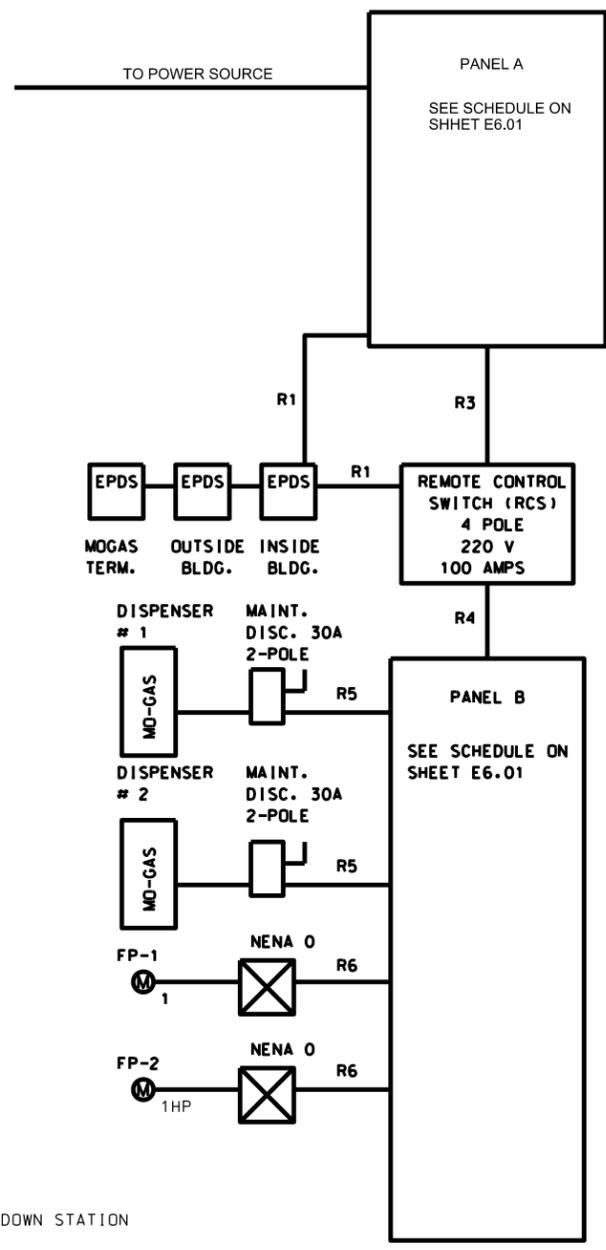
TYPICAL FUEL PUMP SCHEMATIC
(FP-1 THROUGH FP-4)

FUEL PUMP NOTES:
1. TYPICAL FOR FP-1. FP-2 IS SIMILAR.



EMERGENCY STOP CONTROL SCHEMATIC
TWO EPDS SHOWN (TYP. OF FOUR)

SUPPLEMENTAL LEGEND:
RC RCS CONTROL RELAY
RCS REMOTE CONTROL SWITCH
KS KEYED SWITCH
OL OVERLOADS
MC MOTOR CONTROLLER
EPDS EMERGENCY POWER DOWN STATION
CPT CONTROL POWER TRANSFORMER



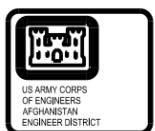
POWER ONE-LINE SCHEMATIC
NO SCALE

SUPPLEMENTAL LEGEND:

FP FUELING PUMP
EPDS EMERGENCY POWER DOWN STATION

NOTES:

- SEE SHEET E5.02 FOR EPDS DETAILS
- THE HORSEPOWERS INDICATED ARE APPROXIMATE. MOTORS ARE TO BE SIZED IN ACCORDANCE WITH PERFORMANCE INFORMATION GIVEN IN OTHER PORTIONS OF THE PLANS AND SPECIFICATIONS. IF MOTORS, OR OTHER COMPONENTS OR EQUIPMENT ARE FURNISHED IN SIZES OTHER THAN INDICATED, IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO ADJUST THE INDICATED SIZES OF WIRING, CIRCUIT BREAKER, ETC. AND TO RE-CIRCUIT IF NECESSARY AT NO ADDITIONAL COST TO THE GOVERNMENT.
- THE FEED FOR PANEL A WILL CONNECT TO THE SITE POWER SOURCE POWER.



US ARMY CORPS OF ENGINEERS
AFGHANISTAN ENGINEER DISTRICT

NO.	DATE	APPROV.	DESCRIPTION

DESIGNED BY:	DATE:	REV:
DRAWN BY:	DESIGN FILE NO.:	
REVIEWED BY:	DRAWING CODE:	
SUBMITTED BY:	FILE NAME:	
	PLOT SCALE:	
	PLOT DATE:	

U.S. ARMY ENGINEER DISTRICT AFGHANISTAN
CORPS OF ENGINEERS
APO AE 96338

ENGINEERING AND CONSTRUCTION DIVISION

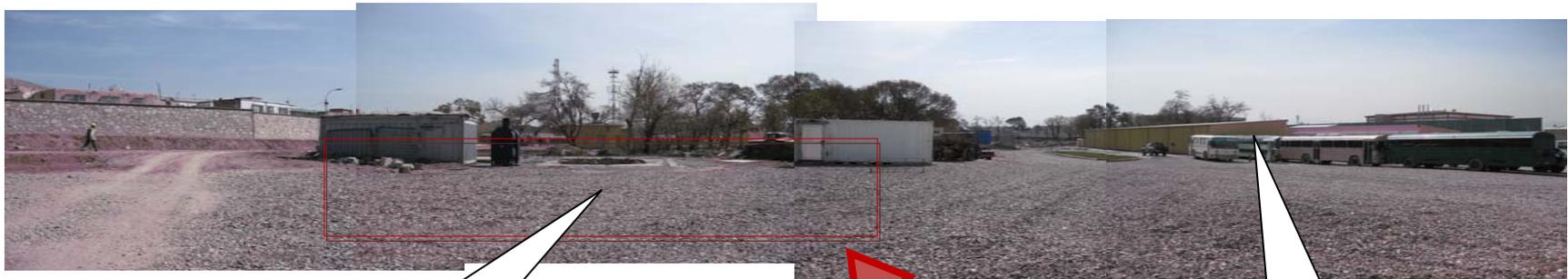
NATIONAL MILITARY HOSPITAL (NHM)
National Military Hospital, Kabul, Afghanistan
VEHICLE REFUELING POINT
ELECTRICAL SCHEMATIC AND POWER SCHEMATIC

SHEET REFERENCE NUMBER:
E-003
SHEET -- OF --

Existing Site – To be demolished after the new facility is on-line.



Proposed location of new facility – immediately adjacent to old facility.



Proposed location of
new vehicle refueling
point.

Direction of
vehicle traffic

Nearest electrical
connection