

SOLICITATION, OFFER, AND AWARD <i>(Construction, Alteration, or Repair)</i>	1. SOLICITATION NO. W5J9LE-11-R-0083	2. TYPE OF SOLICITATION <input type="checkbox"/> SEALED BID (IFB) <input checked="" type="checkbox"/> NEGOTIATED (RFP)	3. DATE ISSUED 18-Aug-2011	PAGE OF PAGES 1 OF 78
	IMPORTANT - The "offer" section on the reverse must be fully completed by offeror.			

4. CONTRACT NO.	5. REQUISITION/PURCHASE REQUEST NO.	6. PROJECT NO. W&I 11-008
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7. ISSUED BY AFGHANISTAN DISTRICT SOUTH (AES) US ARMY CORPS OF ENGINEERS APO AE 09355	CODE W5J9LE	8. ADDRESS OFFER TO <i>(If Other Than Item 7)</i> CODE
TEL: FAX:		See Item 7 TEL: FAX:

9. FOR INFORMATION CALL:	A. NAME MARK T JONES	B. TELEPHONE NO. <i>(Include area code) (NO COLLECT CALLS)</i>
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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):*
 Kajaki Intake Structure and Piezometers Repair
 Kajaki Irrigation Intake Structure and Piezometer Repairs, Kajaki Dam, Helmand Province, Afghanistan
 The Government intends to award one Firm Fixed price contract.
 The magnitude of this construction project is between \$1,000,000.00 and \$5,000,000.00 for the base and all options.
 This acquisition is unrestricted/full and open. There is no scheduled site visit. Offerors may conduct their own independent site visit on their own schedule and at their own risk.
 The point of contact for this solicitation is Mr. Mark Jones, USACE-AED-S, US phone #540-667-6867, email: mark.t.jones@usace.army.mil

11. The Contractor shall begin performance within 10 calendar days and complete it within 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 checked="" type="checkbox"/> YES <input type="checkbox"/> NO	12B. CALENDAR DAYS 15
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13. ADDITIONAL SOLICITATION REQUIREMENTS:

A. Sealed offers in original and 1 copies to perform the work required are due at the place specified in Item 8 by 04:00 PM (hour) local time 17 Sep 2011 (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) work requirements, and (2) other provisions and clauses incorporated in the solicitation in full text or by reference.

D. Offers providing less than 120 calendar days for Government acceptance after the date offers are due will not be considered and will be rejected.

SOLICITATION, OFFER, AND AWARD (Continued)*(Construction, Alteration, or Repair)***OFFER (Must be fully completed by offeror)**14. NAME AND ADDRESS OF OFFEROR *(Include ZIP Code)*15. TELEPHONE NO. *(Include area code)*16. REMITTANCE ADDRESS *(Include only if different than Item 14)***See Item 14**

CODE

FACILITY CODE

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

AMOUNTS

SEE SCHEDULE OF PRICES

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

19. ACKNOWLEDGMENT OF AMENDMENTS*(The offeror acknowledges receipt of amendments to the solicitation -- give number and date of each)*

AMENDMENT NO.

DATE

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

20B. SIGNATURE

20C. OFFER DATE

AWARD (To be completed by Government)

21. ITEMS ACCEPTED:

22. AMOUNT

23. ACCOUNTING AND APPROPRIATION DATA

24. SUBMIT INVOICES TO ADDRESS SHOWN IN
*(4 copies unless otherwise specified)***ITEM**

25. OTHER THAN FULL AND OPEN COMPETITION PURSUANT TO

 10 U.S.C. 2304(c) 41 U.S.C. 253(c)

26. ADMINISTERED BY

CODE

27. PAYMENT WILL BE MADE BY:

CODE

CONTRACTING OFFICER WILL COMPLETE ITEM 28 OR 29 AS APPLICABLE 28. NEGOTIATED AGREEMENT *(Contractor is required to sign this document and return _____ copies to issuing office.)* Contractor agrees to furnish and deliver all items or perform all work, requisitions identified on this form and any continuation sheets for the consideration stated in this contract. The rights and obligations of the parties to this contract shall be governed by (a) this contract award, (b) the solicitation, and (c) the clauses, representations, certifications, and specifications or incorporated by reference in or attached to this contract. 29. AWARD *(Contractor is not required to sign this document.)*

Your offer on this solicitation, is hereby accepted as to the items listed. This award 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

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PROPOSAL SCHEDULE 1

BIDDING SCHEDULE

The Contractor shall provide a price for all items.

<u>ITEM</u>	<u>DESCRIPTION</u>	<u>QTY</u>	<u>UNIT</u>	<u>Unit Price</u>	<u>AMOUNT</u>
0001	GENERAL				
0001	Mobilization & Demobilization	1	LS	XXX	\$ _____
0002	Irrigation Intake Structure- Design	1	LS	XXX	\$ _____
0003	Irrigation Intake Structure - Construction	1	LS	XXX	\$ _____
0004	Instrumentation - Design	1	LS	XXX	\$ _____
0005	Instrumentation – Installation, Piezometer, Survey, Monuments & Staff Gauges	1	LS	XXX	\$ _____
0006	Security	1	LS	XXX	\$ _____
0007	DBA Insurance (CLIN's 0001 – 0005)	1	LS	XXX	\$ _____
<p>The amount listed by the offeror on this CLIN is the estimated DBA insurance premium (estimated payroll of the offeror and its subcontractors times the applicable rate(s)). The DBA insurance premium amount varies with payroll and the nature of services and will, therefore, be taken into account during price evaluation of offers. The actual amount paid by the government under this CLIN will be based on the amount of the Rutherford invoice, stamp “paid” and submitted by the offeror after contract award. In the event of recalculation of the premium by CNA based on actual payroll amounts, the contracting officer will adjust this CLIN by contract modification to reflect the actual premium amounts paid.</p>					
0008	REIMBURSEMENT FOR ACTUAL PERFORMANCE AND PAYMENT BONDS PREMIUMS	1	LS	XXX	\$ _____ Not to Exceed
	(see schedule note 9 of additional information)				
	TOTAL BASE BID ITEMS:				\$ _____

0009	OPTIONAL BID ITEM				
0009AA	Inspection of Trash Racks & Guides	1	LS	XXX	\$ _____
0009AB	DBA Insurance for SUBCLIN 0009AA	1	LS	XXX	\$ _____
<p>The amount listed by the offeror on this CLIN is the estimated DBA insurance premium (estimated payroll of the offeror and its subcontractors, multiplied by the applicable rate(s)). The actual amount paid by the government under this CLIN will be based on the amount of the Rutherford invoice submitted by the offeror after contract award. In the event of recalculation of the premium by CNA based on actual payroll amounts, the Contracting Officer will adjust this CLIN by contract modification to reflect actual premium amounts paid.</p>					
0010	OPTIONAL BID ITEM				
0010AA	Replacement of Trash Racks	1	LS	XXX	\$ _____
0010AB	DBA Insurance for SUBCLIN 0010AA	1	LS	XXX	\$ _____
<p>The amount listed by the offeror on this CLIN is the estimated DBA insurance premium (estimated payroll of the offeror and its subcontractors, multiplied by the applicable rate(s)). The actual amount paid by the government under this CLIN will be based on the amount of the Rutherford invoice submitted by the offeror after contract award. In the event of recalculation of the premium by CNA based on actual payroll amounts, the Contracting Officer will adjust this CLIN by contract modification to reflect actual premium amounts paid.</p>					
0011	OPTIONAL BID ITEM				
0011AA	Repair of Trash Rack Guides	1	LS	XXX	\$ _____
0011AB	DBA Insurance for SUBCLIN 0011AA	1	LS	XXX	\$ _____
<p>The amount listed by the offeror on this CLIN is the estimated DBA insurance premium (estimated payroll of the offeror and its subcontractors, multiplied by the applicable rate(s)). The actual amount paid by the government under this CLIN will be based on the amount of the Rutherford invoice submitted by the offeror after contract award. In the event of recalculation of the premium by CNA based on actual payroll amounts, the Contracting Officer will adjust this CLIN by contract modification to reflect actual premium amounts paid.</p>					

	TOTAL OPTIONAL BID ITEMS				\$ _____
	SCHEDULE TOTAL:				\$ _____

SCHEDULE NOTES

1. Offeror shall submit prices on all items. Scope of work on each item is described in Section 010140 Summary of Work.
2. Only one contract for the entire schedule will be awarded under this solicitation. This project will be awarded as a single contract.
3. Costs associated with this project shall include design and construction costs, site development, and utility installation.
4. EVALUATION OF OPTIONS: The award will be made to the lowest, responsive and responsible bidder. For pricing purposes the Government will evaluate both the Base Proposals and Option Proposals. The Government is not obligated to exercise the options.
5. EXERCISE OF OPTIONAL BID ITEMS: Optional bid items (if any) may, at the option of the Government, be exercised by the Government at any time within 180 calendar days after receipt of the notice to proceed. The period of performance will not be extended if optional bid items are exercised.
6. Design costs shall consist of design analysis, drawings, and specifications for all facilities where a standard design has not been provided by the Government. The cost of all design shall be paid for under the bid item in which the design work is associated.
7. ORDER of WORK: See Section 00150.
8. PERIOD OF PERFORMANCE AND LIQUIDATED DAMAGES: See Section 00150 for performance schedule. Period of performance is defined as the number of calendar days from receipt of notice to proceed. Liquidated Damages are included in this contract. See FAR Clause 52.211-12.
9. Notwithstanding the Contract Clause entitled "Payments Under Fixed-Price Construction Contracts," the Contractor shall not be reimbursed an amount which exceeds the dollar amount set forth in **bid item 0008**.
10. Abbreviations:
 - LM = Linear meters
 - SM = Square meters
 - EA = Each

LS = Lump Sum
m² = square meters
kPa = kilopascals
m = meters
cm = centimeters
l = liters
kVA = kilo volt amps

-END OF SECTION

BONDING REQUIREMENTS

BID GUARANTEE:

Offerors are required to furnish a bid guarantee in the proper form and amount, by the time set for delivery of proposals. The amount of the bid guarantee shall be 20% of the bid price or \$3,000,000, whichever is less. See FAR Clause 52.228-1 BID GUARANTEE (SEP 1996) for specific requirements.

PERFORMANCE AND PAYMENT BOND REQUIREMENTS:

The contractor awarded this contract is required to provide performance and payment bonds. See FAR Clause 52.228-15 PERFORMANCE AND PAYMENT BONDS – CONSTRUCTION 9OCT 2010. Please note that the penal amount of performance and payment bonds at the time of contract award shall be 30 percent of the original price.

SECTION 00113**SECTION 00113
PROCEDURES FOR SUBMITTAL OF OFFERS AND PROPOSAL EVALUATION CRITERIA****GENERAL****basis and intent**

The intent of this Request for Proposal (SOLICITATION W5J9LE-11-R-0083) is to select one contractor for the design and construction of the intake structure and piezometers at the Kajaki Dam, Helmand Province, Afghanistan.

The basis of award is lowest Price Technically Acceptable (LPTA). This award will be made on the basis of the lowest evaluated price of the proposals meeting or exceeding the acceptability standards for **the 3 non-cost factors (experience, personnel and past performance)**. The Contracting Officer will award a firm fixed price contract to the responsible offeror whom the SSA determines conforms to the Request for Proposals and is technically acceptable, is fair and reasonable, and offers the lowest price to the Government.

STANDARDS FOR NON-COST FACTORS. SUBMITTALS**submission requirements****General**

Offerors submitting proposals for this project should limit submissions to data essential for evaluation of proposals so that a minimum of time and monies will have been expended in preparing information required herein. However, in order to be effectively and equitably evaluated, the proposals must include information sufficiently detailed to clearly describe the offeror's capabilities to successfully complete the project. Proposals should follow in the order of sequence set forth in the SOLICITATION. Information provided out of sequence may not be evaluated and may result in the offeror's disqualification from award. Requirements stated in this SOLICITATION are minimums.

BIDDER INQUIRIES

Electronic (as email) inquiries to this solicitation must be received by this office not later than ten **(8) calendar days** prior to the due date of proposals. Questions received less than eight days prior to the due date of proposals will not be entertained. Submit bidder inquiries to mark.t.jones@usace.army.mil and tas.contracting@usace.army.mil.

Proposals may be withdrawn by written or electronic (as email) notice at any time before award.

submission address

Proposals can be submitted by mail, FedEx/DHL/UPS or delivered in person.

Electronic submission of proposals will not be accepted.

Proposals submitted by FedEx/DHL/UPS shall be sent to:

Mark Jones

US Army Corps of Engineers
Kandahar, Afghanistan
USACE – AES
APO, AE 09355

Proposals submitted by mail shall be sent to: Mark Jones
USACE-AES
APO AE 09355

Bids delivered in person: Proposals can be delivered in person to FOB Lindsey. Contractors that choose this method of submitting their proposals that have a Kandahar Air Field (KAF) badge can access the base without an escort and deliver their proposal to the U.S. Army Corps of Engineers (USACE) Castle 1 Building. Contractors shall contact **Mr. Job Sayago at 079-986-3287** (roshan), or via email at job.sayago@usace.army.mil prior to arrival to coordinate delivery of their proposals since building access is restricted.

If the Contractor does not have a KAF badge, they shall contact Mr. Job Sayago and he will meet the individual at the FOB Lindsey front gate to pick up the proposal.

DIRECTIONS TO FOB LINDSEY FROM KAF

**Departing ECP 5 heading east from KAF; turn right.
Follow the hard surface road straight thru the market (approximately ½ k).
Bear left after the market staying on the hard surface road.
Then turn right to go over the bridge.
(The ANA Camp Hero will be directly in front of the bridge).
Turn left after the bridge and the entrance to Camp Lindsey will be directly in front.**

Transit time is approximately 15 minutes to the front gate at FOB Lindsey.

submittal format

ELECTRONIC FORMAT

Offerors are required to submit a proposal made up of the following two sections: Technical Proposal and a Price Proposal. All proposal materials shall be submitted with a table of contents. The sections should parallel the submission requirements identified in the below paragraphs.

Each page of the Technical Section shall be numbered sequentially.

Each proposal section shall not exceed **40** pages using a minimum font size of 11 and a minimum margin size of one half inch on all sides. Format restrictions and page limitations will be strictly adhered to and enforced. Information submitted which exceeds the specified limit will not be evaluated.

site visit/preproposal evaluation process

There will be no site visit or pre-proposal conference for this project. See site assessment report (Appendix C) for site information.

PROPOSAL EVALUATION PROCESS

A Source Selection Evaluation Board (SSEB) comprised of representatives of the Corps of Engineers, and other user/client required personnel, will evaluate the proposals. Offerors are advised that the technical evaluation and rating of proposals will be conducted in strict confidence in that technical/quality proposals are reviewed and rated without knowledge of the price offered. The number and identities of offerors are not revealed to anyone who is not involved in the evaluation and award process or to other offerors. Proposals will be evaluated based on the factors described herein, and the basis of award is Lowest Price Technically Acceptable.

proposal compliance review

This is an initial review to ensure that all required forms and certifications are complete and that both a technical and price proposal were received that address all requirements of the solicitation. Separate from this review, the Government will conduct a responsibility determination for the successful offeror prior to any award.

technical/quality evaluation

The SSEB will evaluate each responsive proposal. Proposals will be evaluation against the SOLICITATION requirements. Factors will be rated either 'Acceptable or 'Unacceptable'. If a proposal is determined "Unacceptable," further evaluation by the SSEB is not warranted.

price evaluation

The assigned Contract Specialist will evaluate the price proposals independent of the technical evaluation. The SSEB will not have access to price information until completion of the technical/quality evaluation.

PROPOSAL INFORMATION AND RELATED EVALUATION FACTORS

Proposals will be evaluated (in English) in accordance with the evaluation factors. Offerors are reminded to include their best technical and price terms in their initial offer and not to automatically assume that they will have an opportunity to participate in discussions or be asked to submit a revised offer. The Government intends on making award without discussions. The Government reserves the right to conduct discussions as determined necessary by the Contracting Officer.

Volume I - Technical:

- Factor 1 Experience
- Factor 2 Personnel
- Factor 3 Past Performance

Volume II - Price:

- Tab A Standard Form 1442
- Tab B Section 00010, Proposal Bid Schedule
- Tab C Joint Venture Agreement (if applicable)
- Tab D Reqs & Certs (Section 00600)

Volume 1 - technical and performance capability

FACTOR 1-EXPERIENCE

4.1.1.1 SUBMISSION REQUIREMENTS

The Government will evaluate the offeror's prior experience as a Prime Contractor. The offeror shall submit a minimum of two (2), but no more than five (5) 'Prime Contractor Experience' forms attached to the end of this section. The forms shall be used to provide descriptions of projects which show PRIME CONTRACTOR experience. **Experience as a Sub-Contractor or of a Sub-Contractor will be considered as meeting the above requirement for Experience for subfactor "e" in the list below.** The Contractor is not constrained to only using the "Prime Contractor Experience" forms. Additional information can be provided with the "Prime Contractor Experience" form to ensure that all evaluation criteria are specifically and adequately addressed for FACTOR 1.

- a. All projects submitted must currently be substantially complete (75% or more) or have been completed within the last five years;
- b. On all of the projects submitted, the Prime Contractor must have self-performed, on site, at least 25% of the direct contract labor, exclusive of other general condition or field overhead personnel, material, equipment, or subcontractors.
- c. At least one (1) of the projects provided must be for the U.S. Government or NATO, with work located in Afghanistan or Iraq.
- d. At least one (1) of the projects provided must have an Award Value of greater than \$5,000,000.00. Contractors cannot combine separate contracts or task orders to meet the \$5,000,000.00 requirement;
- e. At least one (1) of the projects provided must be a design/build related to hydraulic intake structures with gantry cranes, piezometers and other dam safety instrumentations. It is acceptable for the Prime Contractor to use a project performed as a subcontractor or by a subcontractor to demonstrate experience for this subfactor.

One project can be used to satisfy multiple features or activities. Each offer is required to submit at least two (2) but not more than five (5) 'Prime Contractor Experience' forms. Regardless of the number of forms submitted (not to exceed 5), the offeror must demonstrate all of the above features/activities (items a through e).

Failure to show evidence with ALL the above experience/activities will render the proposal technically unacceptable under this factor.

An IDIQ contract may be submitted only if a single task order could be considered similar to this project. Task orders may not be combined in order to satisfy the features/activities delineated above.

4.1.1.2 EVALUATION CRITERIA

"Acceptable" Rating:

The SSEB will evaluate experience submitted per Section 4.1.1.1. The proposal must clearly meet the minimum requirements identified in Section 4.1.1.1 to receive an "Acceptable" rating.

"Unacceptable" Rating

Proposals that do not clearly meet the minimum acceptable requirements identified in Section 4.1.1.1 will receive an "Unacceptable" rating.

4.1.2 FACTOR 2-PERSONNEL**4.1.2.1 SUBMISSION REQUIREMENTS**

Provide resumes for the following key personnel:

- a. Project Manager (Overall Manager of the Project)

- b. Construction Superintendent
- c. Quality Control Manager
- d. Senior Mechanical Engineer
- e. Senior Civil/Geotechnical Engineer

Project Manager, Construction Superintendent and Quality Control Manager shall have:

- a. Minimum of 5 years of relevant experience in their assigned job position;
- b. Provide documentation identifying each person is a current full-time employee of the Prime Contractor or a letter of intent signifying their employment for this project, and
- c. 4-year college degree from an accredited university;
- d. The Project Manager shall have an Construction Management or Engineering Degree.

The Senior Mechanical and Civil/Geotechnical Engineer shall have:

- a. Minimum 10 years experience;
- b. Licensed or accredited professional engineer with an active professional registration in their home of record (HOR); if the HOR country does not possess a professional registration practice, than 15 years of experience is the minimum.
- c. Provide documentation identifying each person is a current full-time employee of either the Prime Contractor or sub-contractor or a letter of intent signifying their employment for this project, and;
- d. 4-year College graduate with Bachelor of Science or Engineering Degree in their field of study from an accredited university.

Resumes must include the information on "Personnel Resume/Experience" form attached at the end of this section. The Contractor may submit its own self generated resume providing it adequately addresses all the required information contained on the "Personnel Resume/Experience" form. All information must be filled in and all data should be accurate, current, and complete.

Failure to satisfy items a through e above will render the proposal technically unacceptable under this factor.

Failure to provide current, accurate, and verifiable data will render the resume as unacceptable. The identified personnel must be used on the project. Any substitution of these persons will not be permitted without prior approval of the Contracting Officer. Identification of two individuals proposed for a single position will result in the evaluation of the least-qualified person.

The offeror must provide documentation identifying each person as a current full-time employee of the Prime Contractor or a Letter of Intent signifying their employment for this project. Documentation of full-time employment can be provided by a current paystub, employee hire form, or an affidavit signed by the Prime Contractor CEO, president, or owner attesting to the key person's employment status.

4.1.2.2 EVALUATION CRITERIA

“Acceptable” Rating:

The SSEB will evaluate experience submitted per Section 4.1.1.1. The proposal must clearly meet the minimum requirements identified in Section 4.1.1.1 to receive an “Acceptable” rating.

“Unacceptable” Rating

Proposals that do not clearly meet the minimum acceptable requirements identified in Section 4.1.1.1 will receive an “Unacceptable” rating.

4.1.3 FACTOR 3- PAST PERFORMANCE

4.1.3.1 SUBMISSION REQUIREMENTS

The offeror shall provide past performance information in one of two formats for each project provided under 4.1.1 Factor 1 - Experience.

(1) Copies of Contractor Performance Assessment Reports (CPARs – also commonly referred to as CCASS reports) for projects performed for the U.S. Government. If the project provided has a CPAR, it must be used by the offeror to demonstrate past performance. If CPAR submission is used to validate past performance, it will be the most recent evaluation in the system (i.e. for projects submitted as completed, the final 100% completed CPAR will be provided). If the offeror submits a CPAR, they are not required to submit a separate Past Performance Questionnaire for the specific project.

(2) If CPAR information is not available for a project provided for experience, a completed Past Performance Questionnaire (PPQ), attached at the end of this section (Form A-3) must be provided per the following guidance.

- a. The respondent must be familiar with the project, but not affiliated with the offeror.
- b. The respondent must be able to provide an independent evaluation of the offeror’s performance on the referenced project.
- c. The completed PPQ must be returned to the Government directly by the respondent to the email address identified in the Due Date & POC block of the PPQ. Completed PPQs submitted directly by the offeror or included in the offeror’s proposal will not be evaluated.

It is the offeror’s responsibility to ensure the Government will be able to contact the POCs using the contact information provided. Offerors are encouraged to send their request to the POC as soon as possible once a project is identified for experience under Factor 1.

4.1.3.2 EVALUATION CRITERIA

“Acceptable” Rating

- a. Based on the offeror’s performance record, the Government has a reasonable expectation that the offeror will successfully perform the required effort, or the offeror’s performance record is unknown. (See note below.)

“Unacceptable” Rating

- a. Based on the offeror’s performance record, the Government has no reasonable expectation that the offeror will be able to successfully perform the required effort.

Note: In the case of an offeror without a record of relevant past performance or for whom information on past performance is not available or so sparse that no meaningful past performance rating can be reasonably assigned, the offeror may not be evaluated favorably or unfavorably on past performance (see FAR 15.305 (a)(2)(iv)). Therefore, the offeror shall be determined to have unknown past performance. In the context of acceptability/unacceptability, “unknown” shall be considered “acceptable.”

If the CPAR is used, the Government reserves the right to check the Past Performance Information Retrieval System (PPIRS) to verify the accuracy of the CPAR submitted. CPARs submitted by the offeror which do not match those in the system, or for which there is a more current CPAR available, may cause the offeror to receive a “NO-GO” for this factor.

The Government reserves the right to use past performance information obtained from sources other than those identified by the offeror.

The Government may not obtain information from any or all of the listed contract references and/or may not contact all of the identified POCs

4.2 OVERALL TECHNICAL ACCEPTABILITY

If a proposal is found to be technically unacceptable in any one of the three evaluated areas (experience, personnel, past performance), this will render the proposal as technically unacceptable overall, and the offer will be removed from further consideration for award.

4.3 volume II price

4.3.1 Tab A, Standard form 1442

4.3.1.1 SUBMISSION REQUIREMENTS

Submit original via email or in a separate sealed envelope if hand-carried. The offeror shall submit Standard Form 1442. This form is included in Section 00010 of this SOLICITATION.

4.3.1.2 EVALUATION CRITERIA

Standard form 1442 is to be completed and duly executed with an original signature by an official authorized to bind the company in accordance with FAR 4.102.

4.3.2 Tab B: PROPOSAL BID SCHEDULE

4.3.2.1 SUBMISSION REQUIREMENTS

The Offeror shall complete and submit in its entirety the Proposal Bid Schedule. This form is included in Section 00010 of the SOLICITATION. The offeror shall propose prices for each of the proposal bid schedule elements resulting in a cumulative lump-sum price for the project.

4.3.2.2 EVALUATION CRITERIA

The price will be evaluated for reasonableness, fairness, and completeness and may undergo a price analysis. The price may also be evaluated to determine if it is properly balanced.

4.3.3 TAB C: JOINT VENTURE AGREEMENT (IF APPLICABLE)

4.3.3.1 SUBMISSION REQUIREMENTS

If the offeror is a Joint Venture (JV), include a copy of the JV Agreement. If a JV Agreement has not yet been finalized/approved, indicate its status. JV Agreement shall clearly indicate the percentages of the JV participants, in particular the percent of the controlling party, a clear delineation of responsibilities and authorities between the JV parties, and provide that each party is jointly and severally liable for the performance of all contract requirements.

The Government will not evaluate the capability of any Offerors that are not included in the Joint Venture Agreement. The Joint Venture must be translated into English, if the original agreement is in a language other than English.

Joint ventures shall submit the following additional documentation regarding their business entities:

a. A copy of their Joint Venture Agreement translated into English, if the original agreement is in a language other than English.

b. A Detailed statement outlining the following, in terms of percentages, where appropriate.

(1) The relationship of the Joint Venture parties, in terms of business ownership, capital contribution, and profit distribution or loss sharing.

(2) The management approach of the Joint Venture in terms of who will conduct, direct, supervise and control the project and have custody and control of the assets of the Joint Venture and perform the duties necessary to complete the work.

(3) The structure of the Joint Venture and decision-ranking responsibilities of the Joint Venture parties, in terms of who will control the manner and method of performance of the work.

(4) The bonding responsibilities of the Joint Venture parties.

(5) Identification of the key personnel having authority to legally bind the Joint Venture to subcontractors and state who will provide or contract for the labor and materials for the Joint Venture.

(6) Identification of party maintaining the Joint Venture bank accounts for payment of all expenses, deposits of all receipts, keeping the books and records, and payment for applicable taxes for the Joint Venture.

(7) Identification of party furnishing the facilities, such as office supplies and telephone service.

(8) Identification of the party having overall control of the Joint Venture.

Other sections of the proposal shall identify, where appropriate, whether key personnel are employees of the individual Joint Venture parties, identifying the party, or as hired employees of the Joint Venture.

If one of the Joint Venture parties possesses relevant experience and/or past performance, the experience and/or past performance of that firm will be considered as the experience and/or past performance of the Joint Venture.

A complete and legally binding document with all the information required under this section titled "Joint Ventures" shall be included.

4.4 SOURCE SELECTION DECISION

The Source Selection Authority (SSA) will make a final and independent source selection decision using the findings presented by the SSEB. The SSA is not necessarily bound by the evaluation findings of the SSEB and reserves the right to review other resources such as CPARS, CCASS, ACASS, PPIRS, Dun & Bradstreet, etc. to establish the overall acceptability of an offer using price and non-price factors prior to making award.

A1 CONTRACTOR EXPERIENCE FORM

1. Project name and location (City, State, Country)	
2. Project owners name (Government Agency, commercial firm or other organization)	
3. Project owners complete address	
4. Were you the Prime Contractor? YES NO Percentage of work that was self-performed? _____%	
5. Contract number of project	6. Date of contract
7. Date work began	8. Completion Dates: Initial: _____ Actual: _____
9. Project Completion Percentage (%)	
8. Contract Value at Time of Award	9. Final invoiced amount (or amount invoiced to date)
10a. English speaking Technical point of contact for the Project Owner (name, title, e-mail address, phone number)	10b. English speaking Contracting point of contact of the Project Owner (name, title, e-mail, phone number)
11. Description of Construction contract work -describe DETAILED nature and scope of work. Detail how project demonstrates experience requirements in Section 00113, Paragraph 4.1.1.1. Also include explanation of any performance problems or other conflicts with the customer. (Offerors will be evaluated for the ability to provide timely, complete work; be certain to explain any differences between the initial and actual completion dates in block 8.) Use continuation sheet for additional information, if necessary.	

12. Current status of the project (check one)

- Work continuing, on schedule
- Work continuing, behind schedule
- Work completed, no further action pending
- Work completed, routine administrative action pending
- Work completed, claims negotiation pending/underway
- Work completed, litigation pending/underway
- Terminated for convenience
- Terminated for default
- Other (Explain, use additional sheets as necessary)

PERSONNEL RESUME/EXPERIENCE FORM

Name and Title _____

Name of your firm

No. of years: Presently with this firm _____ With other firms _____

No. of years in field of work: _____

Education (School/Degree(s)/Year/Specialization):

-

Registration/Accreditation: _____ YES _____ NO*

License No. _____ Country/State _____ Year _____

***Note: If the HOR country does not possess a professional registration practice, the key personnel resume must demonstrate a minimum of 15 years of relevant experience in their assigned job position.**

Your Assignment on this project

-

Your specific experience and qualifications relevant to this project. Include a POC with phone number for the two most recent projects described:

Project Name and Location:

General Scope of Project:

-

-

-

-

-

-

-

-

-

-

Your Role in the Project and a Description of the Duties You Performed:

FORM A-3

Past Performance Questionnaire

Contractor Name:	
Project Title:	
Contract Number and Location:	
Period of Performance:	
Approximate Dollar Value:	
Name, Title, Email Address Of Person Completing This Evaluation	
Brief Description of Project	
Due Date & POC	Past Performance Questionnaire due NLT <u>AUG 2011 at 1600</u> (4pm)Local (Kandahar) time. Email: mark.t.jones@usace.army.mil & Tas.contracting@usace.army.mil

1. Overall, how would you rate the quality of work provided?

- Outstanding Marginal
 Good Unacceptable
 Satisfactory

2. Overall, how would you rate the timeliness of the work performed?

- Outstanding Marginal
 Good Unacceptable
 Satisfactory

3. How would you rate the cost effectiveness of work performed?

- Outstanding Marginal
 Good Unacceptable
 Satisfactory

4. How would you rate performance providing a safe working environment?

- Outstanding Marginal
 Good Unacceptable
 Satisfactory

5. How would you rate overall cooperation of the contractor?

- Outstanding
- Good
- Satisfactory
- Marginal
- Unacceptable

6. How would you rate overall commitment to customer satisfaction?

- Outstanding
- Good
- Satisfactory
- Marginal
- Unacceptable

7. If you had the opportunity would you hire or work with this contractor again?

- Yes
- No

8. Additional Comments (Please continue on a separate page if necessary):

Section 00100 - Bidding Schedule/Instructions to Bidders

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)

CLAUSES INCORPORATED BY FULL TEXT

52.216-1 TYPE OF CONTRACT (APR 1984)

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

(End of provision)

52.217-5 EVALUATION OF OPTIONS (JUL 1990)

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

(End of provision)

52.233-2 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 the:

US Army Corps of Engineers, Kandahar, Afghanistan, APO, AE 09355

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

(End of provision)

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

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

(b) An organized site visit has not been scheduled.

(c) Participants can visit the site, at their discretion.:

(End of provision)

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

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

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

(1) Lump sum price;

(2) Alternate prices;

(3) Units of construction; or

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

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

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

(End of provision)

52.252-1 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://farsite.hill.af.mil/>

<http://acquisition.gov/comp/far/index.html>

(End of provision)

52.252-5 AUTHORIZED DEVIATIONS IN PROVISIONS (APR 1984)

(a) The use in this solicitation of any Federal Acquisition Regulation (48 CFR Chapter 1) provision with an authorized deviation is indicated by the addition of "(DEVIATION)" after the date of the provision.

(b) The use in this solicitation of any Defense FAR supplement (48 CFR Chapter 2) provision with an authorized deviation is indicated by the addition of "(DEVIATION)" after the name of the regulation.

(End of provision)

DEFENSE BASE ACT INSUR RATES

DEFENSE BASE ACT INSURANCE RATES – LIMITATION – FIXED-PRICE (APRIL 2011)

(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, C-3 and the 408th CSB contractors and subcontractors at a contracted fixed rate. The fixed rates for this insurance are as follows:

Service	\$3.50	per \$100 of employee remuneration
Construction	\$4.25	per \$100 of employee remuneration
Security	\$10.00	per \$100 of employee remuneration
Aviation	\$17.00	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 include fee or profit) 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 \$3.50/\$100 or 3.5%

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

(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 Nikki Hounghmany, (703) 813-6571 usace@rutherford.com. The alternate POC is Sara Payne, Senior Vice President, (703) 813-6503 sara.payne@rutherford.com.

(e) Labor Category/Job Classification Definitions:

SERVICE: White-collar” workers providing IT, engineering/consulting services, and restaurant services. Security consultants are included in this category if they are only providing risk assessment services and no form of armed protection.

CONSTRUCTION: “Blue-collar” workers providing services such as carpentry, electrical, plumbing, mechanical, concrete/asphalt, de-mining, roofing, landscaping, janitorial, trash removal, Port-a-John/septic cleaning, pest exterminating, auto repair/dismantling, drivers/couriers, and heavy equipment operation and maintenance. Construction site supervisors/managers and life support service providers are included in this category as well as all Unskilled and Manual Labor Day Laborers. * *Most work will fall into this category**

SECURITY: Personal Security Detail (PSD) and Static or Convoy Guarding of property or personnel.

AVIATION: Pilot and Crew of any aircraft excluding ground personnel who provide maintenance or services and stay on the ground.

Section 00600 - Representations & Certifications

CLAUSES INCORPORATED BY FULL TEXT

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

(a) The offeror certifies that --

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

(i) Those prices,

(ii) The intention to submit an offer, or

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

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

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

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

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

(2) (i) Has been authorized, in writing, to act as agent for the following principals in certifying that those principals have not participated, and will not participate in any action contrary to subparagraphs (a)(1) through (a)(3) of this 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)

CLAUSES INCORPORATED BY FULL TEXT

52.203-11 CERTIFICATION AND DISCLOSURE REGARDING PAYMENTS TO INFLUENCE CERTAIN FEDERAL TRANSACTIONS (SEP 2007)

(a) Definitions. As used in this provision--"Lobbying contact" has the meaning provided at 2 U.S.C. 1602(8). The terms "agency," "influencing or attempting to influence," "officer or employee of an agency," "person," "reasonable compensation," and "regularly employed" are defined in the FAR clause of this solicitation entitled "Limitation on Payments to Influence Certain Federal Transactions" (52.203-12).

(b) Prohibition. The prohibition and exceptions contained in the FAR clause of this solicitation entitled "Limitation on Payments to Influence Certain Federal Transactions" (52.203-12) are hereby incorporated by reference in this provision.

(c) Certification. The offeror, by signing its offer, hereby certifies to the best of its knowledge and belief that no Federal appropriated funds have been paid or will be paid to any person for influencing or attempting to influence an officer or employee of any agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress on its behalf in connection with the awarding of this contract.

(d) Disclosure. If any registrants under the Lobbying Disclosure Act of 1995 have made a lobbying contact on behalf of the offeror with respect to this contract, the offeror shall complete and submit, with its offer, OMB Standard Form LLL, Disclosure of Lobbying Activities, to provide the name of the registrants. The offeror need not report regularly employed officers or employees of the offeror to whom payments of reasonable compensation were made.

(e) Penalty. Submission of this certification and disclosure is a prerequisite for making or entering into this contract imposed by 31 U.S.C. 1352. Any person who makes an expenditure prohibited under this provision or who fails to file or amend the disclosure required to be filed or amended by this provision, shall be subject to a civil penalty of not less than \$10,000, and not more than \$100,000, for each such failure.

(End of provision)

CLAUSES INCORPORATED BY FULL TEXT

52.209-2 PROHIBITION ON CONTRACTING WITH INVERTED DOMESTIC CORPORATIONS-- REPRESENTATION (MAY 2011)

(a) Definitions. Inverted domestic corporation and subsidiary have the meaning given in the clause of this contract entitled Prohibition on Contracting with Inverted Domestic Corporations (52.209-10).

(b) Relation to Internal Revenue Code. An inverted domestic corporation as herein defined does not meet the definition of an inverted domestic corporation as defined by the Internal Revenue Code at 26 U.S.C. 7874.

(c) Representation. By submission of its offer, the offeror represents that--

(1) It is not an inverted domestic corporation; and

(2) It is not a subsidiary of an inverted domestic corporation.

(End of provision)

CLAUSES INCORPORATED BY FULL TEXT

52.209-5 CERTIFICATION REGARDING RESPONSIBILITY MATTERS (APR 2010)

(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 (if offeror checks "have", the offeror shall also see 52.209-7, if included in this solicitation); 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 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)

CLAUSES INCORPORATED BY FULL TEXT

52.209-7 INFORMATION REGARDING RESPONSIBILITY MATTERS (JAN 2011)

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

Administrative proceeding means a non-judicial process that is adjudicatory in nature in order to make a determination of fault or liability (e.g., Securities and Exchange Commission Administrative Proceedings, Civilian Board of Contract Appeals Proceedings, and Armed Services Board of Contract Appeals Proceedings). This includes administrative proceedings at the Federal and State level but only in connection with performance of a Federal contract or grant. It does not include agency actions such as contract audits, site visits, corrective plans, or inspection of deliverables.

Federal contracts and grants with total value greater than \$10,000,000 means--

(1) The total value of all current, active contracts and grants, including all priced options; and

(2) The total value of all current, active orders including all priced options under indefinite-delivery, indefinite-quantity, 8(a), or requirements contracts (including task and delivery and multiple-award Schedules).

Principal 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 division or business segment; and similar positions).

(b) The offeror () has () does not have current active Federal contracts and grants with total value greater than \$10,000,000.

(c) If the offeror checked "has" in paragraph (b) of this provision, the offeror represents, by submission of this offer, that the information it has entered in the Federal Awardee Performance and Integrity Information System (FAPIS) is current, accurate, and complete as of the date of submission of this offer with regard to the following information:

(1) Whether the offeror, and/or any of its principals, has or has not, within the last five years, in connection with the award to or performance by the offeror of a Federal contract or grant, been the subject of a proceeding, at the Federal or State level that resulted in any of the following dispositions:

(i) In a criminal proceeding, a conviction.

(ii) In a civil proceeding, a finding of fault and liability that results in the payment of a monetary fine, penalty, reimbursement, restitution, or damages of \$5,000 or more.

(iii) In an administrative proceeding, a finding of fault and liability that results in--

(A) The payment of a monetary fine or penalty of \$5,000 or more; or

(B) The payment of a reimbursement, restitution, or damages in excess of \$100,000.

(iv) In a criminal, civil, or administrative proceeding, a disposition of the matter by consent or compromise with an acknowledgment of fault by the Contractor if the proceeding could have led to any of the outcomes specified in paragraphs (c)(1)(i), (c)(1)(ii), or (c)(1)(iii) of this provision.

(2) If the offeror has been involved in the last five years in any of the occurrences listed in (c)(1) of this provision, whether the offeror has provided the requested information with regard to each occurrence.

(d) The offeror shall post the information in paragraphs (c)(1)(i) through (c)(1)(iv) of this provision in FAPIS as required through maintaining an active registration in the Central Contractor Registration database at <http://www.ccr.gov> (see 52.204-7).

(End of provision)

CLAUSES INCORPORATED BY FULL TEXT

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

The offeror represents that --

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

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

(c) Representations indicating submission of required compliance reports, signed by proposed subcontractors, will

be obtained before subcontract awards.

(End of provision)

CLAUSES INCORPORATED BY FULL TEXT

52.222-38 COMPLIANCE WITH VETERANS' EMPLOYMENT REPORTING REQUIREMENTS (SEP 2010)

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

(End of provision)

CLAUSES INCORPORATED BY FULL TEXT

52.225-20 PROHIBITION ON CONDUCTING RESTRICTED BUSINESS OPERATIONS IN SUDAN-- CERTIFICATION (AUG 2009)

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

Business operations means engaging in commerce in any form, including by acquiring, developing, maintaining, owning, selling, possessing, leasing, or operating equipment, facilities, personnel, products, services, personal property, real property, or any other apparatus of business or commerce.

Marginalized populations of Sudan means--

(1) Adversely affected groups in regions authorized to receive assistance under section 8(c) of the Darfur Peace and Accountability Act (Pub. L. 109-344) (50 U.S.C. 1701 note); and

(2) Marginalized areas in Northern Sudan described in section 4(9) of such Act.

Restricted business operations means business operations in Sudan that include power production activities, mineral extraction activities, oil-related activities, or the production of military equipment, as those terms are defined in the Sudan Accountability and Divestment Act of 2007 (Pub. L. 110-174). Restricted business operations do not include business operations that the person (as that term is defined in Section 2 of the Sudan Accountability and Divestment Act of 2007) conducting the business can demonstrate--

(1) Are conducted under contract directly and exclusively with the regional government of southern Sudan;

(2) Are conducted pursuant to specific authorization from the Office of Foreign Assets Control in the Department of the Treasury, or are expressly exempted under Federal law from the requirement to be conducted under such authorization;

(3) Consist of providing goods or services to marginalized populations of Sudan;

(4) Consist of providing goods or services to an internationally recognized peacekeeping force or humanitarian organization;

(5) Consist of providing goods or services that are used only to promote health or education; or

(6) Have been voluntarily suspended.

(b) Certification. By submission of its offer, the offeror certifies that the offeror does not conduct any restricted business operations in Sudan.

(End of provision)

CLAUSES INCORPORATED BY FULL TEXT

52.225-25 PROHIBITION ON ENGAGING IN SANCTIONED ACTIVITIES RELATING TO IRAN-- CERTIFICATION (SEP 2010)

(a) Definition.

Person--

(1) Means--

(i) A natural person;

(ii) A corporation, business association, partnership, society, trust, financial institution, insurer, underwriter, guarantor, and any other business organization, any other nongovernmental entity, organization, or group, and any governmental entity operating as a business enterprise; and

(iii) Any successor to any entity described in paragraph (1)(ii) of this definition; and

(2) Does not include a government or governmental entity that is not operating as a business enterprise.

(b) Certification. Except as provided in paragraph (c) of this provision or if a waiver has been granted in accordance with FAR 25.703-2(d), by submission of its offer, the offeror certifies that the offeror, or any person owned or controlled by the offeror, does not engage in any activities for which sanctions may be imposed under section 5 of the Iran Sanctions Act of 1996. These sanctioned activities are in the areas of development of the petroleum resources of Iran, production of refined petroleum products in Iran, sale and provision of refined petroleum products to Iran, and contributing to Iran's ability to acquire or develop certain weapons.

(c) Exception for trade agreements. The certification requirement of paragraph (b) of this provision does not apply if--

(1) This solicitation includes a trade agreements certification (e.g., 52.225-4, 52.225-11 or comparable agency provision); and

(2) The offeror has certified that all the offered products to be supplied are designated country end products or designated country construction material.

(End of provision)

CLAUSES INCORPORATED BY FULL TEXT

252.209-7001 DISCLOSURE OF OWNERSHIP OR CONTROL BY THE GOVERNMENT OF A TERRORIST COUNTRY (JAN 2009)

(a) "Definitions."

As used in this provision --

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

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

(3) "Significant interest" means --

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

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

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

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

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

(b) "Prohibition on award."

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

(c) "Disclosure."

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

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

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

(End of provision)

252.225-7023 PREFERENCE FOR PRODUCTS OR SERVICES FROM IRAQ OR AFGHANISTAN (APR 2010)

(a) Definitions. Product from Iraq or Afghanistan and service from Iraq or Afghanistan, as used in this provision, are defined in the clause of this solicitation entitled "Requirement for Products or Services from Iraq or Afghanistan" (DFARS 252.225-7024).

(b) Representation. The offeror represents that all products or services to be delivered under a contract resulting from this solicitation are products from Iraq or Afghanistan or services from Iraq or Afghanistan, except those listed in--

(1) Paragraph (c) of this provision; or

(2) Paragraph (c)(2) of the provision entitled "Trade Agreements Certificate," or "Trade Agreements Certificate--Inclusion of Iraqi End Products," if included in this solicitation.

(c) Other products or services. The following offered products or services are not products from Iraq or Afghanistan or services from Iraq or Afghanistan:

(Country of Origin)

(Line Item Number)

(d) Evaluation. For the purpose of evaluating competitive offers, the Contracting Officer will increase by 50 percent the prices of offers of products or services that are not products or services from Iraq or Afghanistan.

(End of provision)

252.225-7031 SECONDARY ARAB BOYCOTT OF ISRAEL (JUN 2005)

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

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

(2) United States means the 50 States, the District of Columbia, outlying areas, and the outer Continental Shelf as defined in 43 U.S.C. 1331.

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

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

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

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

(b) Certification. If the offeror is a foreign person, the offeror certifies, by submission of an offer, that it--

(1) Does not comply with the Secondary Arab Boycott of Israel; and

(2) Is not taking or knowingly agreeing to take any action, with respect to the Secondary Boycott of Israel by Arab countries, which 50 U.S.C. App. 2407(a) prohibits a United States person from taking.

(End of provision)

252.225-7042 AUTHORIZATION TO PERFORM (APR 2003)

The offeror represents that it has been duly authorized to operate and to do business in the country or countries in which the contract is to be performed.

(End of provision)

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

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

(b) Representation. The Offeror represents that it:

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

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

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

(End of provision)

Section 00700 - Contract Clauses

CLAUSES INCORPORATED BY REFERENCE

52.202-1	Definitions	JUL 2004
52.203-3	Gratuities	APR 1984
52.203-5	Covenant Against Contingent Fees	APR 1984
52.203-7	Anti-Kickback Procedures	OCT 2010
52.203-8	Cancellation, Rescission, and Recovery of Funds for Illegal or Improper Activity	JAN 1997
52.203-10	Price Or Fee Adjustment For Illegal Or Improper Activity	JAN 1997
52.203-12	Limitation On Payments To Influence Certain Federal Transactions	OCT 2010
52.203-13	Contractor Code of Business Ethics and Conduct	APR 2010
52.204-9	Personal Identity Verification of Contractor Personnel	JAN 2011
52.204-10	Reporting Executive Compensation and First-Tier Subcontract Awards	JUL 2010
52.211-18	Variation in Estimated Quantity	APR 1984
52.215-2	Audit and Records--Negotiation	OCT 2010
52.215-8	Order of Precedence--Uniform Contract Format	OCT 1997
52.215-11	Price Reduction for Defective Certified Cost or Pricing Data--Modifications	OCT 2010
52.215-13	Subcontractor Certified Cost or Pricing Data--Modifications	OCT 2010
52.222-21	Prohibition Of Segregated Facilities	FEB 1999
52.222-26	Equal Opportunity	MAR 2007
52.222-27	Affirmative Action Compliance Requirements for Construction	FEB 1999
52.222-29	Notification Of Visa Denial	JUN 2003
52.222-35	Equal Opportunity for Veterans	SEP 2010
52.222-37	Employment Reports on Veterans	SEP 2010
52.222-50	Combating Trafficking in Persons	FEB 2009
52.225-13	Restrictions on Certain Foreign Purchases	JUN 2008
52.225-14	Inconsistency Between English Version And Translation Of Contract	FEB 2000
52.228-3	Worker's Compensation Insurance (Defense Base Act)	APR 1984
52.228-11	Pledges Of Assets	SEP 2009
52.228-12	Prospective Subcontractor Requests for Bonds	OCT 1995
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 2010
52.232-27	Prompt Payment for Construction Contracts	OCT 2008
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
52.236-6	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
52.236-15	Schedules for Construction Contracts	APR 1984
52.236-17	Layout of Work	APR 1984
52.236-21	Specifications and Drawings for Construction	FEB 1997
52.236-23	Responsibility of the Architect-Engineer Contractor	APR 1984
52.236-24	Work Oversight in Architect-Engineer Contracts	APR 1984
52.236-25	Requirements for Registration of Designers	JUN 2003
52.242-13	Bankruptcy	JUL 1995
52.243-5	Changes and Changed Conditions	APR 1984
52.244-6	Subcontracts for Commercial Items	DEC 2010
52.246-21	Warranty of Construction	MAR 1994
52.248-3	Value Engineering-Construction	OCT 2010
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- Contract-Related Felonies	DEC 2008
252.203-7002	Requirement to Inform Employees of Whistleblower Rights	JAN 2009
252.203-7003	Agency Office of the Inspector General	SEP 2010
252.204-7000	Disclosure Of Information	DEC 1991
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
252.222-7002	Compliance With Local Labor Laws (Overseas)	JUN 1997
252.225-7005	Identification Of Expenditures In The United States	JUN 2005
252.225-7041	Correspondence in English	JUN 1997
252.225-7044	Balance of Payments Program--Construction Material	DEC 2010
252.225-7045	Balance of Payments Program--Construction Material Under Trade Agreements	OCT 2010
252.225-7045 Alt I	Balance of Payments Program--Construction Material Under Trade Agreements (Oct 2010) Alternate I	DEC 2010
252.229-7000	Invoices Exclusive of Taxes or Duties	JUN 1997
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
252.236-7001	Contract Drawings, and Specifications	AUG 2000
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

CLAUSES INCORPORATED BY FULL TEXT

52.209-6 PROTECTING THE GOVERNMENT'S INTEREST WHEN SUBCONTRACTING WITH CONTRACTORS DEBARRED, SUSPENDED, OR PROPOSED FOR DEBARMENT (DEC 2010)

(a) Definition. Commercially available off-the-shelf (COTS) item, as used in this clause--

(1) Means any item of supply (including construction material) that is--

(i) A commercial item (as defined in paragraph (1) of the definition in FAR 2.101);

(ii) Sold in substantial quantities in the commercial marketplace; and

(iii) Offered to the Government, under a contract or subcontract at any tier, without modification, in the same form in which it is sold in the commercial marketplace; and

(2) Does not include bulk cargo, as defined in section 3 of the Shipping Act of 1984 (46 U.S.C. App. 1702), such as agricultural products and petroleum products.

(b) The Government suspends or debar Contractors to protect the Government's interests. Other than a subcontract for a commercially available off-the-shelf item, the Contractor shall not enter into any subcontract, in excess of \$30,000 with a Contractor that is debarred, suspended, or proposed for debarment by any executive agency unless there is a compelling reason to do so.

(c) The Contractor shall require each proposed subcontractor whose subcontract will exceed \$30,000, other than a subcontractor providing a commercially available off-the-shelf item, to disclose to the Contractor, in writing, whether as of the time of award of the subcontract, the subcontractor, or its principals, is or is not debarred, suspended, or proposed for debarment by the Federal Government.

(d) A corporate officer or a designee of the Contractor shall notify the Contracting Officer, in writing, before entering into a subcontract with a party (other than a subcontractor providing a commercially available off-the-shelf item) that is debarred, suspended, or proposed for debarment (see FAR 9.404 for information on the Excluded Parties List System). The notice must include the following:

(e) Subcontracts. Unless this is a contract for the acquisition of commercial items, the Contractor shall include the requirements of this clause, including this paragraph (e) (appropriately modified for the identification of the parties), in each subcontract that--

(1) Exceeds \$30,000 in value; and

(2) Is not a subcontract for commercially available off-the-shelf items.

(End of clause)

52.209-9 Updates of Publicly Available Information Regarding Responsibility Matters (JAN 2011)

(a) The Contractor shall update the information in the Federal Awardee Performance and Integrity Information System (FAPIS) on a semi-annual basis, throughout the life of the contract, by posting the required information in the Central Contractor Registration database at <http://www.ccr.gov>.

(b)(1) The Contractor will receive notification when the Government posts new information to the Contractor's record.

(2) The Contractor will have an opportunity to post comments regarding information that has been posted by the Government. The comments will be retained as long as the associated information is retained, i.e., for a total period of 6 years. Contractor comments will remain a part of the record unless the Contractor revises them.

(3)(i) Public requests for system information posted prior to April 15, 2011, will be handled under Freedom of Information Act procedures, including, where appropriate, procedures promulgated under E.O. 12600.

(ii) As required by section 3010 of Public Law 111-212, all information posted in FAPIIS on or after April 15, 2011, except past performance reviews, will be publicly available.

(End of clause)

CLAUSES INCORPORATED BY FULL TEXT

52.228-1 BID GUARANTEE (SEP 1996)

(a) Failure to furnish a bid guarantee in the proper form and amount, by the time set for opening of bids, may be cause for rejection of the bid.

(b) The bidder shall furnish a bid guarantee in the form of a firm commitment, e.g., bid bond supported by good and sufficient surety or sureties acceptable to the Government, postal money order, certified check, cashier's check, irrevocable letter of credit, or, under Treasury Department regulations, certain bonds or notes of the United States. The Contracting Officer will return bid guarantees, other than bid bonds, (1) to unsuccessful bidders as soon as practicable after the opening of bids, and (2) to the successful bidder upon execution of contractual documents and bonds (including any necessary coinsurance or reinsurance agreements), as required by the bid as accepted.-

(c) The amount of the bid guarantee shall be 20 percent of the bid price or \$ 3,000,000, whichever is less.-

(d) If the successful bidder, upon acceptance of its bid by the Government within the period specified for acceptance, fails to execute all contractual documents or furnish executed bond(s) within 10 days after receipt of the forms by the bidder, the Contracting Officer may terminate the contract for default.-

(e) In the event the contract is terminated for default, the bidder is liable for any cost of acquiring the work that exceeds the amount of its bid, and the bid guarantee is available to offset the difference.

(End of provision)

CLAUSES INCORPORATED BY FULL TEXT

52.228-2 ADDITIONAL BOND SECURITY (OCT 1997)

The Contractor shall promptly furnish additional security required to protect the Government and persons supplying labor or materials under this contract if--

(a) Any surety upon any bond, or issuing financial institution for other security, furnished with this contract becomes unacceptable to the Government.

(b) Any surety fails to furnish reports on its financial condition as required by the Government;

(c) The contract price is increased so that the penal sum of any bond becomes inadequate in the opinion of the Contracting Officer; or

(d) An irrevocable letter of credit (ILC) used as security will expire before the end of the period of required security. If the Contractor does not furnish an acceptable extension or replacement ILC, or other acceptable substitute, at least 30 days before an ILC's scheduled expiration, the Contracting officer has the right to immediately draw on the ILC.

(End of clause)

52.228-14 IRREVOCABLE LETTER OF CREDIT (DEC 1999)

(a) "Irrevocable letter of credit" (ILC), as used in this clause, means a written commitment by a federally insured financial institution to pay all or part of a stated amount of money, until the expiration date of the letter, upon presentation by the Government (the beneficiary) of a written demand therefor. Neither the financial institution nor the offeror/Contractor can revoke or condition the letter of credit.

(b) If the offeror intends to use an ILC in lieu of a bid bond, or to secure other types of bonds such as performance and payment bonds, the letter of credit and letter of confirmation formats in paragraphs (e) and (f) of this clause shall be used.

(c) The letter of credit shall be irrevocable, shall require presentation of no document other than a written demand and the ILC (including confirming letter, if any), shall be issued/confirmed by an acceptable federally insured financial institution as provided in paragraph (d) of this clause, and--

(1) If used as a bid guarantee, the ILC shall expire no earlier than 60 days after the close of the bid acceptance period;

(2) If used as an alternative to corporate or individual sureties as security for a performance or payment bond, the offeror/Contractor may submit an ILC with an initial expiration date estimated to cover the entire period for which financial security is required or may submit an ILC with an initial expiration date that is a minimum period of one year from the date of issuance. The ILC shall provide that, unless the issuer provides the beneficiary written notice of non-renewal at least 60 days in advance of the current expiration date, the ILC is automatically extended without amendment for one year from the expiration date, or any future expiration date, until the period of required coverage is completed and the Contracting Officer provides the financial institution with a written statement waiving the right to payment. The period of required coverage shall be:

(i) For contracts subject to the Miller Act, the later of--

(A) One year following the expected date of final payment;

(B) For performance bonds only, until completion of any warranty period; or

(C) For payment bonds only, until resolution of all claims filed against the payment bond during the one-year period following final payment.

(ii) For contracts not subject to the Miller Act, the later of--

(A) 90 days following final payment; or

(B) For performance bonds only, until completion of any warranty period.

(d) Only federally insured financial institutions rated investment grade or higher shall issue or confirm the ILC. The offeror/Contractor shall provide the Contracting Officer a credit rating that indicates the financial institution has the required rating(s) as of the date of issuance of the ILC. Unless the financial institution issuing the ILC had letter of

credit business of less than \$25 million in the past year, ILCs over \$5 million must be confirmed by another acceptable financial institution that had letter of credit business of less than \$25 million in the past year.

(e) The following format shall be used by the issuing financial institution to create an ILC:

[Issuing Financial Institution's Letterhead or Name and Address]

Issue Date _____

IRREVOCABLE LETTER OF CREDIT NO. _____

Account party's name _____

Account party's address _____

For Solicitation No. _____(for reference only)

TO: [U.S. Government agency]

[U.S. Government agency's address]

1. We hereby establish this irrevocable and transferable Letter of Credit in your favor for one or more drawings up to United States \$_____. This Letter of Credit is payable at [issuing financial institution's and, if any, confirming financial institution's] office at [issuing financial institution's address and, if any, confirming financial institution's address] and expires with our close of business on _____, or any automatically extended expiration date.

2. We hereby undertake to honor your or the transferee's sight draft(s) drawn on the issuing or, if any, the confirming financial institution, for all or any part of this credit if presented with this Letter of Credit and confirmation, if any, at the office specified in paragraph 1 of this Letter of Credit on or before the expiration date or any automatically extended expiration date.

3. [This paragraph is omitted if used as a bid guarantee, and subsequent paragraphs are renumbered.] It is a condition of this Letter of Credit that it is deemed to be automatically extended without amendment for one year from the expiration date hereof, or any future expiration date, unless at least 60 days prior to any expiration date, we notify you or the transferee by registered mail, or other receipted means of delivery, that we elect not to consider this Letter of Credit renewed for any such additional period. At the time we notify you, we also agree to notify the account party (and confirming financial institution, if any) by the same means of delivery.

4. This Letter of Credit is transferable. Transfers and assignments of proceeds are to be effected without charge to either the beneficiary or the transferee/assignee of proceeds. Such transfer or assignment shall be only at the written direction of the Government (the beneficiary) in a form satisfactory to the issuing financial institution and the confirming financial institution, if any.

5. This Letter of Credit is subject to the Uniform Customs and Practice (UCP) for Documentary Credits, 1993 Revision, International Chamber of Commerce Publication No. 500, and to the extent not inconsistent therewith, to the laws of _____ [state of confirming financial institution, if any, otherwise state of issuing financial institution].

6. If this credit expires during an interruption of business of this financial institution as described in Article 17 of the UCP, the financial institution specifically agrees to effect payment if this credit is drawn against within 30 days after the resumption of our business.

Sincerely,

[Issuing financial institution]

(f) The following format shall be used by the financial institution to confirm an ILC:

[Confirming Financial Institution's Letterhead or Name and Address]

(Date) _____

Our Letter of Credit Advice Number _____

Beneficiary: _____ [U.S. Government agency]

Issuing Financial Institution: _____

Issuing Financial Institution's LC No.: _____

Gentlemen:

1. We hereby confirm the above indicated Letter of Credit, the original of which is attached, issued by _____ [name of issuing financial institution] for drawings of up to United States dollars _____/U.S. \$ _____ and expiring with our close of business on _____ [the expiration date], or any automatically extended expiration date.

2. Draft(s) drawn under the Letter of Credit and this Confirmation are payable at our office located at _____.

3. We hereby undertake to honor sight draft(s) drawn under and presented with the Letter of Credit and this Confirmation at our offices as specified herein.

4. [This paragraph is omitted if used as a bid guarantee, and subsequent paragraphs are renumbered.] It is a condition of this confirmation that it be deemed automatically extended without amendment for one year from the expiration date hereof, or any automatically extended expiration date, unless:

(a) At least 60 days prior to any such expiration date, we shall notify the Contracting Officer, or the transferee and the issuing financial institution, by registered mail or other receipted means of delivery, that we elect not to consider this confirmation extended for any such additional period; or

(b) The issuing financial institution shall have exercised its right to notify you or the transferee, the account party, and ourselves, of its election not to extend the expiration date of the Letter of Credit.

5. This confirmation is subject to the Uniform Customs and Practice (UCP) for Documentary Credits, 1993 Revision, International Chamber of Commerce Publication No. 500, and to the extent not inconsistent therewith, to the laws of _____ [state of confirming financial institution].

6. If this confirmation expires during an interruption of business of this financial institution as described in Article 17 of the UCP, we specifically agree to effect payment if this credit is drawn against within 30 days after the resumption of our business.

Sincerely,

[Confirming financial institution]

(g) The following format shall be used by the Contracting Officer for a sight draft to draw on the Letter of Credit:

SIGHT DRAFT

[City, State]

(Date) _____

[Name and address of financial institution]

Pay to the order of _____ [Beneficiary Agency] _____ the sum of United States \$_____.
This draft is drawn under Irrevocable Letter of Credit No. _____.

[Beneficiary Agency]

By: _____

(End of clause)

52.232-34 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 no later than 15 days prior to submission of the first request for payment. 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 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)

52.236-13 ACCIDENT PREVENTION (NOV 1991)

(a) The Contractor shall provide and maintain work environments and procedures which will

(1) safeguard the public and Government personnel, property, materials, supplies, and equipment exposed to Contractor operations and activities;

(2) avoid interruptions of Government operations and delays in project completion dates; and

(3) control costs in the performance of this contract.

(b) For these purposes on contracts for construction or dismantling, demolition, or removal of improvements, the Contractor shall-

(1) Provide appropriate safety barricades, signs, and signal lights;

(2) Comply with the standards issued by the Secretary of Labor at 29 CFR Part 1926 and 29 CFR Part 1910; and

(3) Ensure that any additional measures the Contracting Officer determines to be reasonably necessary for the purposes are taken.

(c) If this contract is for construction or dismantling, demolition or removal of improvements with any Department of Defense agency or component, the Contractor shall comply with all pertinent provisions of the latest version of U.S. Army Corps of Engineers Safety and Health Requirements Manual, EM 385-1-1, in effect on the date of the solicitation.

(d) Whenever the Contracting Officer becomes aware of any noncompliance with these requirements or any condition which poses a serious or imminent danger to the health or safety of the public or Government personnel, the Contracting Officer shall notify the Contractor orally, with written confirmation, and request immediate initiation of corrective action. This notice, when delivered to the Contractor or the Contractor's representative at the work site, shall be deemed sufficient notice of the noncompliance and that corrective action is required. After receiving the notice, the Contractor shall immediately take corrective action. If the Contractor fails or refuses to promptly take corrective action, the Contracting Officer may issue an order stopping all or part of the work until satisfactory corrective action has been taken. The Contractor shall not be entitled to any equitable adjustment of the contract price or extension of the performance schedule on any stop work order issued under this clause.

(e) The Contractor shall insert this clause, including this paragraph (e), with appropriate changes in the designation of the parties, in subcontracts.

(End of clause)

52.243-4 CHANGES (JUN 2007)

(a) The Contracting Officer may, at any time, without notice to the sureties, if any, by written order designated or indicated to be a change order, make changes in the work within the general scope of the contract, including changes--

(1) In the specifications (including drawings and designs);

(2) In the method or manner of performance of the work;

(3) In the Government-furnished property or services; or

(4) Directing acceleration in the performance of the work.

(b) Any other written or oral order (which, as used in this paragraph (b), includes direction, instruction,

interpretation, or determination) from the Contracting Officer that causes a change shall be treated as a change order under this clause; provided, that the Contractor gives the Contracting Officer written notice stating

(1) the date, circumstances, and source of the order and

(2) that the Contractor regards the order as a change order.

(c) Except as provided in this clause, no order, statement, or conduct of the Contracting Officer shall be treated as a change under this clause or entitle the Contractor to an equitable adjustment.

(d) If any change under this clause causes an increase or decrease in the Contractor's cost of, or the time required for, the performance of any part of the work under this contract, whether or not changed by any such order, the Contracting Officer shall make an equitable adjustment and modify the contract in writing. However, except for an adjustment based on defective specifications, no adjustment for any change under paragraph (b) of this clause shall be made for any costs incurred more than 20 days before the Contractor gives written notice as required. In the case of defective specifications for which the Government is responsible, the equitable adjustment shall include any increased cost reasonably incurred by the Contractor in attempting to comply with the defective specifications.

(e) The Contractor must assert its right to an adjustment under this clause within 30 days after

(1) receipt of a written change order under paragraph (a) of this clause or (2) the furnishing of a written notice under paragraph (b) of this clause, by submitting to the Contracting Officer a written statement describing the general nature and amount of the proposal, unless this period is extended by the Government. The statement of proposal for adjustment may be included in the notice under paragraph (b) above.

(f) No proposal by the Contractor for an equitable adjustment shall be allowed if asserted after final payment under this contract.

(End of clause)

52.252-2 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://farsite.hill.af.mil](http://farsite.hill.af.mil)

<http://acquisition.gov/comp/far/index.html>

(End of clause)

52.252-6 AUTHORIZED DEVIATIONS IN CLAUSES (APR 1984)

(a) The use in this solicitation or contract of any Federal Acquisition Regulation (48 CFR Chapter 1) clause with an authorized deviation is indicated by the addition of "(DEVIATION)" after the date of the clause.

(b) The use in this solicitation or contract of any Defense FAR supplement (48 CFR Chapter 2) clause with an authorized deviation is indicated by the addition of "(DEVIATION)" after the name of the regulation.

(End of clause)

252.203-7000 REQUIREMENTS RELATING TO COMPENSATION OF FORMER DOD OFFICIALS (JAN 2009)

(a) Definition. Covered DoD official, as used in this clause, means an individual that--

(1) Leaves or left DoD service on or after January 28, 2008; and

(2)(i) Participated personally and substantially in an acquisition as defined in 41 U.S.C. 403(16) with a value in excess of \$10 million, and serves or served--

(A) In an Executive Schedule position under subchapter II of chapter 53 of Title 5, United States Code;

(B) In a position in the Senior Executive Service under subchapter VIII of chapter 53 of Title 5, United States Code; or

(C) In a general or flag officer position compensated at a rate of pay for grade O-7 or above under section 201 of Title 37, United States Code; or

(ii) Serves or served in DoD in one of the following positions: Program manager, deputy program manager, procuring contracting officer, administrative contracting officer, source selection authority, member of the source selection evaluation board, or chief of a financial or technical evaluation team for a contract in an amount in excess of \$10 million.

(b) The Contractor shall not knowingly provide compensation to a covered DoD official within 2 years after the official leaves DoD service, without first determining that the official has sought and received, or has not received after 30 days of seeking, a written opinion from the appropriate DoD ethics counselor regarding the applicability of post-employment restrictions to the activities that the official is expected to undertake on behalf of the Contractor.

(c) Failure by the Contractor to comply with paragraph (b) of this clause may subject the Contractor to rescission of this contract, suspension, or debarment in accordance with 41 U.S.C. 423(e)(3).

(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, Kabul, Afghanistan.

(End of clause)

252.225-7995 CONTRACTOR PERSONNEL PERFORMING IN THE UNITED STATES CENTRAL COMMAND AREA OF RESPONSIBILITY (DEVIATION 2011-O0004) (APR 2011)

(a) *Definition.* As used in this clause—

“Chief of mission” means the principal officer in charge of a diplomatic mission of the United States or of a United States office abroad which is designated by the Secretary of State as diplomatic in nature, including any individual assigned under section 502(c) of the Foreign Service Act of 1980 (Public Law 96-465) to be temporarily in charge of such a mission or office.

- (b) *General.* (1) This clause applies when contractor personnel are required to perform in the United States Central Command (USCENTCOM) Area of Responsibility (AOR) and are not covered by the clause at DFARS 252.225-7040, Contractor Personnel Authorized to Accompany U.S. Armed Forces Deployed Outside the United States.
- (2) Contract performance may require work in dangerous or austere conditions. Except as otherwise provided in the contract, the Contractor accepts the risks associated with required contract performance in such operations.
- (3) Contractor personnel are civilians.
- (i) Except as provided in paragraph (b)(3)(ii) of this clause, and in accordance with paragraph (i)(3) of this clause, contractor personnel are only authorized to use deadly force in self defense.
 - (ii) Contractor personnel performing security functions are also authorized to use deadly force when use of such force reasonably appears necessary to execute their security mission to protect assets/persons, consistent with the terms and conditions contained in the contract or with their job description and terms of employment.
- (4) Service performed by contractor personnel subject to this clause is not active duty or service under 38 U.S.C. 106.

(c) *Support.* Unless specified elsewhere in the contract, the Contractor is responsible for all logistical and security support required for contractor personnel engaged in this contract.

(d) *Compliance with laws and regulations.* The Contractor shall comply with, and shall ensure that its personnel in the USCENTCOM AOR are familiar with and comply with, all applicable—

- (1) United States, host country, and third country national laws;
- (2) Treaties and international agreements;
- (3) United States regulations, directives, instructions, policies, and procedures; and
- (4) Force protection, security, health, or safety orders, directives, and instructions issued by the USCENTCOM Commander; however, only the Contracting Officer is authorized to modify the terms and conditions of the contract.

(e) *Preliminary personnel requirements.* (1) Specific requirements for paragraphs (e)(2)(i) through (e)(2)(vi) of this clause will be set forth in the statement of work or elsewhere in the contract.

(2) Before contractor personnel depart from the United States or a third country, and before contractor personnel residing in the host country begin contract performance in the USCENTCOM AOR, the Contractor shall ensure the following:

- (i) All required security and background checks are complete and acceptable.
 - (ii) All personnel are medically and physically fit and have received all required vaccinations.
 - (iii) All personnel have all necessary passports, visas, entry permits, and other documents required for contractor personnel to enter and exit the foreign country, including those required for in-transit countries.
 - (iv) All personnel have received theater clearance, if required by the Combatant Commander.
 - (v) All personnel have received personal security training. The training must, at a minimum—
 - (A) Cover safety and security issues facing employees overseas;
 - (B) Identify safety and security contingency planning activities; and
 - (C) Identify ways to utilize safety and security personnel and other resources appropriately.
 - (vi) All personnel who are U.S. citizens are registered with the U.S. Embassy or Consulate with jurisdiction over the area of operations on-line at <http://www.travel.state.gov>.
- (3) The Contractor shall notify all personnel who are not a local national or ordinarily resident in the host country that—
- (i) Such employees, and dependents residing with such employees, who engage in conduct outside the United States that would constitute an offense punishable by imprisonment for more than one year if the conduct had been engaged in within the special maritime and territorial jurisdiction of the United States, may potentially be subject to the criminal jurisdiction of the United States (see the Military Extraterritorial Jurisdiction Act of 2000 (18 U.S.C. 3261 *et seq.*);
 - (ii) Pursuant to the War Crimes Act, 18 U.S.C. 2441, Federal criminal jurisdiction also extends to conduct that is determined to constitute a violation of the law of war when committed by a civilian national of the United States;

(iii) Other laws may provide for prosecution of U.S. nationals who commit offenses on the premises of United States diplomatic, consular, military, or other Government missions outside the United States (18 U.S.C. 7(9)).

(f) *Processing and departure points.* The Contractor shall require its personnel who are arriving from outside the area of performance to perform in the USCENCOM AOR to—

(1) Process through the departure center designated in the contract or complete another process as directed by the Contracting Officer;

(2) Use a specific point of departure and transportation mode as directed by the Contracting Officer; and

(3) Process through a reception center as designated by the Contracting Officer upon arrival at the place of performance.

(g) *Registration of Contractor personnel and private security contractor equipment.*

(1) The Contractor is required to register in the automated web-based Synchronized Predeployment and Operational Tracker (SPOT) following the procedures in paragraph (g)(4) of this clause.

(2) Prior to deployment of contractor employees, or, if already in the USCENCOM AOR, upon becoming an employee under this contract, the Contractor shall enter into SPOT, and maintain current data, including actual arrival date and departure date, for all contractor personnel, including U.S. citizens, U.S. legal aliens, third-country nationals, and local national contractor personnel, who are performing this contract in the USCENCOM AOR as follows:

(i) In all circumstances, this includes any personnel performing private security functions.

(ii) For personnel other than those performing private security functions, this requirement excludes anyone—

(A) Hired under contracts valued less than \$100,000;

(B) Who will be performing in the CENTCOM AOR less than 30 continuous days; or

(C) Who, while afloat, are tracked by the Diary message Reporting System

(3) Weapons, armored vehicles, helicopters, and other military vehicles used by personnel performing private security functions under this contract must be entered into SPOT, and the currency of such information must be maintained.

(4) Follow these steps to register in and use SPOT:

(i) SPOT registration requires one of the following login methods:

(A) A Common Access Card or a SPOT-approved digital certificate; or

(B) A Government-sponsored SPOT user ID and password or an Army Knowledge Online (AKO) account.

(ii) *To register in SPOT:*

(A) Contractor company administrators should register for a SPOT account at <https://spot.altess.army.mil>; and

(B) The customer support team must validate user need. This process may take two business days. Company supervisors will be contacted to validate Contractor company administrator account requests and determine the appropriate level of user access.

(iii) Upon approval, all users will access SPOT at <https://spot.altess.army.mil/>.

(iv) Refer SPOT application assistance questions to the Customer Support Team at 717-458-0747 or SPOT.helpdesk@us.army.mil. Refer to the SPOT Enterprise Suite Resource Center at <http://www.resource.spot-es.net/> for additional training resources and documentation regarding registration for and use of SPOT.

(5) The Contractor shall submit aggregate contractor personnel counts at a minimum quarterly or as directed by the Contracting Officer by category (i.e. U.S. third country national or local national) of those contractor personnel who are on contracts valued greater than \$100,000, but performing less than 30 days in the AOR (e.g. day laborers).

(6) The Contractor shall ensure that all contractor personnel in the database have a current DD Form 93, Record of Emergency Data Card, on file with both the Contractor and the designated Government official. The Contracting Officer will inform the Contractor of the Government official designated to receive the data card.

(h) *Contractor personnel.* The Contracting Officer may direct the Contractor, at its own expense, to remove and replace any contractor personnel who fail to comply with or violate applicable requirements of this contract. Such action may be taken at the Government's discretion without prejudice to its rights under any other provision of this contract, including termination for default or cause.

(i) *Weapons.*

(1) If the Contracting Officer, subject to the approval of the USCENTCOM Commander, authorizes the carrying of weapons—

(i) The Contracting Officer may authorize an approved Contractor to issue Contractor-owned weapons and ammunition to specified employees; or

(ii) **The USACE DOES NOT ISSUE WEAPONS TO CONTRACTORS.**

(2) The Contractor shall provide to the Contracting Officer a specific list of personnel for whom authorization to carry a weapon is requested.

(3) The Contractor shall ensure that its personnel who are authorized to carry weapons—

(i) Are adequately trained to carry and use them—

(A) Safely;

(B) With full understanding of, and adherence to, the rules of the use of force issued by the USCENTCOM Commander; and

(C) In compliance with applicable Department of Defense and agency policies, agreements, rules, regulations, and other applicable law;

(ii) Are not barred from possession of a firearm by 18 U.S.C. 922; and

(iii) Adhere to all guidance and orders issued by the USCENTCOM Commander regarding possession, use, safety, and accountability of weapons and ammunition.

(4) Upon revocation by the Contracting Officer of the Contractor's authorization to possess weapons, the Contractor shall ensure that all Government-furnished weapons and unexpended ammunition are returned as directed by the Contracting Officer.

(5) Whether or not weapons are Government-furnished, all liability for the use of any weapon by contractor personnel rests solely with the Contractor and the Contractor employee using such weapon.

(j) *Vehicle or equipment licenses.* Contractor personnel shall possess the required licenses to operate all vehicles or equipment necessary to perform the contract in the area of performance.

(k) *Military clothing and protective equipment.*

(1) Contractor personnel are prohibited from wearing military clothing unless specifically authorized by the USCENTCOM Commander. If authorized to wear military clothing, contractor personnel must wear distinctive patches, arm bands, nametags, or headgear, in order to be distinguishable from military personnel, consistent with force protection measures.

(2) Contractor personnel may wear specific items required for safety and security, such as ballistic, nuclear, biological, or chemical protective equipment.

(l) *Evacuation.*

(1) If the Chief of Mission or USCENTCOM Commander orders a mandatory evacuation of some or all personnel, the Government will provide to United States and designated third country national contractor personnel the level of assistance provided to private United States citizens.

(2) In the event of a non-mandatory evacuation order, the Contractor shall maintain personnel on location sufficient to meet contractual obligations unless instructed to evacuate by the Contracting Officer.

(m) *Notification and return of personal effects.*

(1) The Contractor shall be responsible for notification of the contractor personnel designated next of kin, and notification as soon as possible to the U.S. Consul responsible for the area in which the event occurred, if the individual—

(i) Dies;

(ii) Requires evacuation due to an injury; or

(iii) Is isolated, missing, detained, captured, or abducted.

(2) The Contractor shall also be responsible for the return of all personal effects of deceased or missing contractor personnel, if appropriate, to next of kin.

(n) *Mortuary affairs.* Mortuary affairs for contractor personnel who die in the area of performance will be handled in accordance with DoD Directive 1300.22, Mortuary Affairs Policy.

(o) *Changes.* In addition to the changes otherwise authorized by the Changes clause of this contract, the Contracting Officer may, at any time, by written order identified as a change order, make changes in place of performance or Government-furnished facilities, equipment, material, services, or site. Any change order issued in accordance with this paragraph shall be subject to the provisions of the Changes clause of this contract.

(p) *Subcontracts*. The Contractor shall incorporate the substance of this clause, including this paragraph (p), in all subcontracts that require subcontractor personnel to perform in the USCENTCOM AOR.

(End of clause)

252.225-7997 ADDITIONAL REQUIREMENTS AND RESPONSIBILITIES RELATING TO ALLEGED CRIMES BY OR AGAINST CONTRACTOR PERSONNEL IN IRAQ AND AFGHANISTAN (DEVIATION 2010-O0014)(AUGUST 2010)

(a) The Contractor shall report to the appropriate investigative authorities, identified in paragraph (c) below, any alleged offenses under—

(1) The Uniform Code of Military Justice (chapter 47 of title 10, United States code) (applicable to contractors serving with or accompanying an armed force in the field during a declared war or a contingency operation); or

(2) The Military Extraterritorial Jurisdiction Act (chapter 212 of title 18, United States Code).

(b) The Contractor shall provide to all contractor personnel who will perform work on a contract in Iraq or Afghanistan, before beginning such work, information on the following:

(1) How and where to report an alleged crime described in paragraph (a) of this clause.

(2) Where to seek victim and witness protection and assistance available to contractor personnel in connection with an alleged offense described in paragraph (a) of this clause.

(c) The appropriate investigative authorities to which suspected crimes shall be reported include the following officials--

(i) US Army Criminal Investigative Division at <http://www.cid.army.mil/reportacrime.html>;

(ii) Air Force Office of Special Investigations at <http://www.osi.andrews.af.mil/library/factsheets/factsheet.asp?id=14522>;

(iii) Navy Criminal Investigative Service at <http://www.ncis.navy.mil/Pages/publicdefault.aspx>;
or

(iv) To the command of any supported military element or the command of any base.

(d) Personnel seeking whistleblower protection from reprisals for reporting criminal acts shall seek guidance through the DoD Inspector General hotline at (800) 424-9098 or www.dodig.mil/HOTLINE/index.html. Personnel seeking other forms of victim or witness protections should contact the nearest military law enforcement office.

(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:

SECTION	TITLE
010140	Summary of Work
010150	Technical Requirements
011000	Contract Administration
011010	Contractor's Operations and Requirements
012200	Measurement and Payment
013201	Project Schedule
013315	Submittal Procedures for Design-Build Projects
013315A	Attachments
013315B	E-Submittal Format General
013316	Design After Award
013526	Safety and Occupational Health Requirements
013550	Environmental Protection- ANSF Version
014000	Security Plan
014150	Metric Measurements
014500	Quality Control with Design
014510	Quality control System (QCS)
016400	Start Up, Testing and Commissioning
016640	Training
017700	Closeout Procedures
017810	Operation and Maintenance Data
017839	Project Record Documents
	APPENDIX A – PHOTOS AND DRAWINGS

APPENDIX B – LIST OF APPLICABLE GUIDE SPECS
APPENDIX C – FINAL DESIGN REPORT
APPENDIX D – Alternative MS1-2-5

(End of clause)

52.228-15 FULL TEXT

52.228-15 PERFORMANCE AND PAYMENT BONDS--CONSTRUCTION (OCT 2010)

(a) Definitions. As used in this clause—

Original contract price means the award price of the contract; or, for requirements contracts, the price payable for the estimated total quantity; or, for indefinite-quantity contracts, the price payable for the specified minimum quantity. Original contract price does not include the price of any options, except those options exercised at the time of contract award.

(b) Amount of required bonds. Unless the resulting contract price is \$150,000 or less, the successful offeror shall furnish performance and payment bonds to the Contracting Officer as follows:

(1) Performance bonds (Standard Form 25). The penal amount of performance bonds at the time of contract award shall be **30 percent** of the original contract price.

(2) Payment Bonds (Standard Form 25-A). The penal amount of payment bonds at the time of contract award shall be **30 percent** of the original contract price.

(3) Additional bond protection. (i) The Government may require additional performance and payment bond protection if the contract price is increased. The increase in protection generally will equal **30 percent** of the increase in contract price.

(ii) The Government may secure the additional protection by directing the Contractor to increase the penal amount of the existing bond or to obtain an additional bond.

(c) Furnishing executed bonds. The Contractor shall furnish all executed bonds, including any necessary reinsurance agreements, to the Contracting Officer, within the time period specified in the Bid Guarantee provision of the solicitation, or otherwise specified by the Contracting Officer, but in any event, before starting work.

(d) Surety or other security for bonds. The bonds shall be in the form of firm commitment, supported by corporate sureties whose names appear on the list contained in Treasury Department Circular 570, individual sureties, or by other acceptable security such as postal money order, certified check, cashier's check, irrevocable letter of credit, or, in accordance with Treasury Department regulations, certain bonds or notes of the United States. Treasury Circular 570 is published in the Federal Register or may be obtained from the U.S. Department of the Treasury, Financial Management Service, Surety Bond Branch, 3700 East West Highway, Room 6F01, Hyattsville, MD 20782. Or via the internet at <http://www.fms.treas.gov/c570/>.

(e) Notice of subcontractor waiver of protection (40 U.S.C. 3133(c)). Any waiver of the right to sue on the payment bond is void unless it is in writing, signed by the person whose right is waived, and executed after such person has first furnished labor or material for use in the performance of the contract.

(End of clause)

Section 00800 - Special Contract Requirements

CLAUSES INCORPORATED BY REFERENCE

52.211-13	Time Extensions	SEP 2000
52.236-5	Material and Workmanship	APR 1984
52.242-14	Suspension of Work	APR 1984
52.246-12	Inspection of Construction	AUG 1996

CLAUSES INCORPORATED BY FULL TEXT

52.211-10 COMMENCEMENT, PROSECUTION, AND COMPLETION OF WORK (APR 1984)

The Contractor shall be required to (a) commence work under this contract within 10 calendar days after the date the Contractor receives the notice to proceed, (b) prosecute the work diligently, and (c) complete the entire work ready for use not later than 270 calendar days after receipt of notice to proceed. The time stated for completion shall include final cleanup of the premises.

(End of clause)

52.211-12 LIQUIDATED DAMAGES--CONSTRUCTION (SEP 2000)

(a) If the Contractor fails to complete the work within the time specified in the contract, the Contractor shall pay liquidated damages to the Government in the amount of \$4,059.00 for each calendar day of delay until the work is completed or accepted.

(b) If the Government terminates the Contractor's right to proceed, liquidated damages will continue to accrue until the work is completed. These liquidated damages are in addition to excess costs of repurchase under the Termination clause.

(End of clause)

252.236-7004 PAYMENT FOR MOBILIZATION AND DEMOBILIZATION (DEC 1991)

(a) The Government will pay all costs for the mobilization and demobilization of all of the Contractor's plant and equipment at the contract lump sum price for this item.

(1) 60 percent of the lump sum price upon completion of the contractor's mobilization at the work site.

(2) The remaining 40 percent upon completion of demobilization.

(b) The Contracting Officer may require the Contractor to furnish cost data to justify this portion of the bid if the Contracting Officer believes that the percentages in paragraphs (a) (1) and (2) of this clause do not bear a reasonable relation to the cost of the work in this contract.

(1) Failure to justify such price to the satisfaction of the Contracting Officer will result in payment, as determined

by the Contracting Officer, of --

- (i) Actual mobilization costs at completion of mobilization;
- (ii) Actual demobilization costs at completion of demobilization; and
- (iii) The remainder of this item in the final payment under this contract.

(2) The Contracting Officer's determination of the actual costs in paragraph (b)(1) of this clause is not subject to appeal.

C3 CLAUSES

952.222-0001 PROHIBITION AGAINST HUMAN TRAFFICKING, INHUMANE LIVING CONDITIONS, AND WITHHOLDING OF EMPLOYEE PASSPORTS (JUL 2010)

(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.

(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 and Host Nation laws regarding transit/exit/entry procedures, and the requirements for visas and work permits.

(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.

**952.223-0001 REPORTING KIDNAPPINGS, SERIOUS INJURIES AND DEATHS
(JUL 2010)**

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

**952.225-0001 ARMING REQUIREMENTS AND PROCEDURES FOR PERSONAL SECURITY
SERVICES CONTRACTORS AND FOR REQUESTS FOR PERSONAL PROTECTION
(AUG 2010)**

(a) **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, United States Forces – Iraq (USF-I) and United States Forces – Afghanistan (USFOR-A) Commander orders, instructions and directives. Contractors will ensure that all employees, including employees at any tier of subcontracting relationships, who will seek individual authorization to be armed under the provisions of this contract (requests for blanket authorization for groups or organizations will not be approved), comply with the contents of this clause and with the requirements set forth in the following:

- (1) DODI 3020.50, Private Security Contractors (PSCs) Operating in Contingency Operations;
- (2) DODI 3020.41, Program Management for Acquisition and Operational Contract Support in Contingency Operations;
- (3) DFARS 252.225-7040, Contractor Personnel Supporting a Force Deployed Outside the United States;
- (4) Class Deviation 2007-O0010, Contractor Personnel in the United States Central Command Area of Responsibility
- (5) USFOR-A, FRAGO 09-206, Outlines Management of Armed Contractors and Private Security Companies Operating in the Combined Joint Operating Area - Afghanistan (CJOA-A)

- (6) USF-I OPORD 10-01, Annex C, Appendix 13
- (7) U.S. CENTCOM Message, USCENTCOM Policy and Delegation of Authority for Personal Protection and Contract Security Service Arming of DoD Civilian Personnel and Contractors for Iraq and Afghanistan, dated 23 Dec 2005
- (8) U.S. CENTCOM Message, Modification to USCENTCOM Civilian and Contractor Arming Policy and Delegation of Authority for Iraq and Afghanistan, dated 07 Nov 2006
- (9) U.S. CENTCOM Message, Modification 3 to USCENTCOM Civilian and Contractor Arming Policy and Delegation of Authority in Iraq and Afghanistan, dated 09 Jun 2009

(b) **Required Government Documentation.** An O-6 or GS-15 (or above) from the unit requesting the contractor security shall provide a description of the following to the arming approval authority via the contracting officer representative (COR) in sponsoring each individual request for arming (under paragraph (c) below):

- (1) The specific location where the PSC employee will operate;
- (2) The persons and/or property that require protection;
- (3) The anticipated threat;
- (4) The requested weapon type(s), including serial number when possible;
- (5) The reason current security/police forces are unable to provide adequate protection; and
- (6) Verification, under paragraph (e) below, that background checks have been conducted and that no records were found of convictions or other acts that should be known to the arming authority.

(c) **Required Contractor Documentation.** Contractors and their subcontractors at all tiers that require arming approval shall provide to the arming approval authority via the COR consistent documentation (signed and dated by the employee and employer as applicable) for each of their employees who will seek authorization to be armed under the contract as follows:

(1) Weapons Qualification/Familiarization. All employees must meet the weapons qualification requirements on the requested weapon(s) 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.

(2) 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.

(3) Written acknowledgement by the individual of the fulfillment of training responsibilities and the conditions for the authorization to carry firearms. This document includes the acknowledgement of the distinctions between the ROE applicable to military forces and RUF that control the use of weapons by DoD civilians, DoD contractors and PSCs.

(4) Written acknowledgement signed by both the armed employee and by a representative of the employing company that use of weapons could subject both the individual and company to U.S. and host nation prosecution and civil liability.

(5) A copy of the contract between the contractor's company and the U.S. Government that verifies the individual's employment and addresses the need to be armed.

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

(7) One (1) copy of a license to operate as a PSC (or a temporary operating license) from the Ministry of Interior.

(d) The contractor will submit to the COR a communications plan that, at a minimum, sets forth the following:

- (1) The contractor's method of notifying military forces and requesting assistance where hostilities arise, combat action is needed or serious incidents have been observed;
 - (2) How relevant threat information will be shared between contractor security personnel and U.S. military forces; and
 - (3) How the contractor will coordinate transportation with appropriate military authorities.
- (e) Prior to requesting arming approval, the contractor will submit to the COR 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):
- (1) 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;
 - (2) Verify with USF-I or USFOR-A, as applicable, that no employee has been barred by any commander within Iraq or Afghanistan; and
 - (3) All local nationals and third country nationals will voluntarily submit to full biometric enrollment in accordance with theater biometric policies within 60 days of their arming request. While biometric collection and screening is voluntary, CORs will immediately notify the arming approval authority of any individuals who do not meet this requirement and any arming authorization will be revoked until all requirements are met.
- (f) ***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, training, arming authorization, and incident reporting requirements 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.
- (g) ***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 the civil and criminal jurisdiction of the U.S. and Host Nation. "Host Nation" refers to the nation or nations where services under this contract are performed.
- (h) ***Lapses in Training or Authorization.*** Failure to successfully retrain an employee who has been properly authorized to be 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 and authorization letter to the contractor and will remain unarmed until such time as they are retrained and newly approved by the arming authority. Additionally, the arming authority's authorization letter is valid for a maximum of twelve (12) months from the date of the prior letter (unless authorization is earlier invalidated by a lapse in training).
- (i) ***Authorized Weapon & Ammunition Types.*** Unless DCDRUSCENTCOM (or a designee) expressly 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. Notwithstanding Host Nation laws or regulations that would allow use of heavier weapons by contract security/PSC, all DoD security service / PSC contractors must have weapons approved by DCDRUSCENTCOM (or a designee) before use. 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:
- (1) The M9, M4, M16, or equivalent (e.g. .45 CAL, AK-47).

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

(3) U.S. government Ball ammunition is the standard approved ammunition.

(j) **Requirements for Individual Weapons Possession.** All employees of the contractor and its subcontractors at all tiers who are authorized to be armed under this contract must:

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

(2) Carry weapons only when on duty or at a specific post (according to their authorization);

(3) Not conceal any weapons, unless specifically authorized;

(4) 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

(5) 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 when they will be armed. There are no circumstances under which a person will be authorized to consume any alcoholic beverage when armed for personal protection.

(k) **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.

(l) **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 and/or otherwise trigger reporting requirements as serious incidents. 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:

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

(2) Failing to cooperate with Coalition and Host Nation forces;

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

(4) Failing to use a graduated force approach;

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

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

(m) **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.

(n) **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.

(o) **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:

- (1) The total number of armed civilians and contractors;
- (2) The names and contact information of its subcontractors at all tiers; and
- (3) 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 (d).

952.225-0002 ARMED PERSONNEL INCIDENT REPORTS (SEP 2010)

(a) All contractors and subcontractors in the United States Forces-Iraq (USF-I) or United States Forces-Afghanistan (USFOR-A) theater of operations shall comply with and shall ensure that their personnel supporting USF-I or USFOR-A forces are familiar with and comply with all applicable orders, directives, and instructions issued by the respective USF-I or USFOR-A Commanders relating to force protection and safety.

(b) **IRAQ:** Contractors shall provide an initial report of all weapons firing incidents or any other serious incidents they or their contractors are involved in to USF-I Contractor Operations Cell (CONOC) as soon as practical, but not later than 4 hours after the incident. The contractor and its subcontractors at all tiers shall submit a written report to CONOC, the Contracting Officer (KO) within 96 hours of the incident. Interim reports shall be submitted between the initial and final report, when necessary to the CONOC at usfic3conoc@iraq.centcom.mil

DSN 318-435-2369, UK# 0044 203 286 9851 or 0044 203 239 5894 or Skype: USFICONOC

(c) **AFGHANISTAN:** Contractors shall immediately report all incidents and use of weapons through their Contracting Officers Representative (CORs) who will notify the Contracting Officer. Contracting Officers are responsible to notify the SCO-A Chief of Operations and the SAR @ USFOR-A (SAR SHIFT DIRECTOR, DSN: 318-237-1761) 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 PARC-A Chief of Operations in coordination with the SAR 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/ SAR Watch.

952.225-0003 FITNESS FOR DUTY AND MEDICAL/DENTAL CARE LIMITATIONS (NOV 2010)

(a) 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. Contractor personnel who deploy for multiple tours, for more than 12 months total must be re-evaluated for fitness to deploy. An examination will remain valid for 15 months from the date of the physical. The contractor bears the responsibility for ensuring all employees are aware of the conditions and medical treatment available at the

performance location. The contractor shall include this information and requirement in all subcontracts with performance in the theater of operations

(b) 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 protective's 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 electrophysiological 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 (< 1year) 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 fixeter placement; requirement for medical devices using AC power; HIV antibody positivity; psychotic and bipolar disorders. (Reference: Mod 10 to USCENTCOM Individual Protection and Individual/Unit Deployment Policy, Tab A: Amplification of the Minimal Standards of Fitness for Deployment to the CENTCOM AOR).

(c) 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.

(d) 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.

(e) Notwithstanding any other provision of the contract, the contractor shall be liable for any and all medically-related services or transportation rendered. To view reimbursement rates that will be charged for services at all DoD deployed medical facilities please go to the following website: <http://comptroller.defense.gov/rates/fy2011.html> (change fiscal year as applicable).

952.225-0004 COMPLIANCE WITH LAWS AND REGULATIONS (JUL 2010)

(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 Responsibility (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.

952.225-0005 MONTHLY CONTRACTOR CENSUS REPORTING (JUL 2010)

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 Pre-deployment & Operational Tracker (SPOT) IAW DFARS

952.225-0009 - MEDICAL SCREENING AND VACCINATION REQUIREMENTS FOR THIRD COUNTRY NATIONALS OR LOCALLY HIRED EMPLOYEES OPERATING IN THE CENTCOM AREA OF RESPONSIBILITY (AOR) (NOV 2010)

(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 (TCN), and U.S. employees, working on bases have been screened for and do not currently have active tuberculosis (TB).

(1) Contractors may initially utilize a testing method of either a chest x-ray or TB skin test (TST), depending on the originating country a contracted employee.

(i) Chest x-rays (CXR's), symptom survey, and Body Mass Index (BMI) shall be taken, and TSTs administered within 12 months prior to the start of deployment/employment. Contractors are required to bring in a physical copy of the pre-employment CXR film as it is the only way to verify interval changes should an active case of TB occur.

(A) Third Country Nationals (TCNs) and Local Nationals (LNs) cannot be screened with the TST. They need the pre-employment screening with a quality CXR, Body Mass Index (BMI) and symptom survey

(B) Small-Risk Nationals (SRNs), those with less than 25 TB cases per 100,000 persons annually (mostly expats from Europe and US), can be screened via the TST.

(ii) Annual re-screening for TCNs, and LNs will be performed with a CXR conducted by the Contractors medical provider or local economy provider, who will look for interval changes from prior CXR's and review any changes in the symptom survey.

(iii) SRN's do not require annual TB re-screening. However, for a TB contact investigation, a TST or Interferon Gamma Release Assay (IGRA) is required.

(iv) For a contact investigation, all personnel with a positive TST or IGRA will be evaluated for potential active TB with a symptom screen, exposure history, BMI, and CXR. All cases of suspected or confirmed active TB must be reported to the theater Preventive Medicine (PM) physician and/or TB Consultant as soon as possible. TB reporting is required within 24 hours to the PM POC. Contact tracing, and medical coding have specific requirements. All Small-Risk National (SRN) contract personnel are required to be MEDEVAC'd out of theater, at the contractor's expense, for treatment of active TB, after consultation with the Theater PM or TB Consultant at the USF-I Surgeon's office. For SRN personnel, the contractor is responsible for management and compliance with all prescribed public health actions.

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

(2) TB screening and documentation is a requirement prior to receiving badges to work in the Iraq Joint Operations Area. A copy of the TB screening documentation shall be provided to the responsible Base Operations Center (BOC) prior to issuance of base access badges.

(b) Contractor employees, including subcontractors at any tier, who work in positions where they are working in food service, water and ice production facilities, shall have current Typhoid and Hepatitis "A" (full series) immunizations in accordance with the Centers for Disease Control and Prevention guidelines (e.g. typhoid vaccination booster is required every 2 years), in addition to the required TB tests. The contractor medical provider must complete a pre-placement examination to include a stool sample test for ova and parasites, and annual medical screening form or equivalent for food service, ice and water production workers.

(c) Proof of individual employee vaccinations shall be provided to the Contracting Officer and COR showing that their employees and their subcontractor employees at any tier have received the above vaccinations. The contractor shall maintain their employees' vaccination records for examination by the

Contracting Officer. The contractor shall ensure that their subcontractors at any tier maintain their respective employees' vaccination records for examination by the Contracting Officer.

(d) The contractor is responsible for management and compliance with all prescribed public health actions regarding TB in the contracted personnel. The contractor also bears the responsibility of ensuring that adequate health management for TB (screening / diagnosis / treatment / isolation) is available at the contractor's chosen health care provider for their contracted and subcontracted personnel.

NOTE: Contractors are reminded of the requirement to comply with their contract and all regulatory guidance (DoD Instructions/Regulations, Federal Acquisition Regulation/Defense Federal Acquisition Regulation Supplement, and FRAGO's) as applicable regarding Medical Screening and Vaccination Requirements.

952.225-0011 GOVERNMENT FURNISHED CONTRACTOR SUPPORT (JUL 2010)

The following is a summary of the type of support the Government will provide the contractor, on an "as-available" basis. In the event of any discrepancy between this summary and the description of services in the Statement of Work, this clause will take precedence.

U.S. Citizens Accompanying the Force

<input type="checkbox"/> APO/FPO/MPO/Postal Services	<input type="checkbox"/> DFACs	<input type="checkbox"/> Mil Issue Equip
<input type="checkbox"/> Authorized Weapon	<input type="checkbox"/> Excess Baggage	<input type="checkbox"/> MILAIR
<input type="checkbox"/> Billeting	<input type="checkbox"/> Fuel Authorized	<input type="checkbox"/> MWR
<input type="checkbox"/> CAAF	<input type="checkbox"/> Govt Furnished Meals	<input type="checkbox"/> Resuscitative Care
<input type="checkbox"/> Controlled Access (CAC)/ID Card	<input type="checkbox"/> Military Banking	<input type="checkbox"/> Transportation
<input type="checkbox"/> Commissary	<input type="checkbox"/> Military Clothing	<input type="checkbox"/> All
<input type="checkbox"/> Dependents Authorized	<input type="checkbox"/> Military Exchange	<input type="checkbox"/> None

Third-Country National (TCN) Employees

<input type="checkbox"/> APO/FPO/MPO/Postal Services	<input type="checkbox"/> DFACs	<input type="checkbox"/> Mil Issue Equip
<input type="checkbox"/> Authorized Weapon	<input type="checkbox"/> Excess Baggage	<input type="checkbox"/> MILAIR
<input type="checkbox"/> Billeting	<input type="checkbox"/> Fuel Authorized	<input type="checkbox"/> MWR
<input type="checkbox"/> CAAF	<input type="checkbox"/> Govt Furnished Meals	<input type="checkbox"/> Resuscitative Care
<input type="checkbox"/> Controlled Access (CAC)/ID Card	<input type="checkbox"/> Military Banking	<input type="checkbox"/> Transportation
<input type="checkbox"/> Commissary	<input type="checkbox"/> Military Clothing	<input type="checkbox"/> All
<input type="checkbox"/> Dependents Authorized	<input type="checkbox"/> Military Exchange	<input type="checkbox"/> None

Local National (LN) Employees

<input type="checkbox"/> APO/FPO/MPO/Postal Services	<input type="checkbox"/> DFACs	<input type="checkbox"/> Mil Issue Equip
<input type="checkbox"/> Authorized Weapon	<input type="checkbox"/> Excess Baggage	<input type="checkbox"/> MILAIR
<input type="checkbox"/> Billeting	<input type="checkbox"/> Fuel Authorized	<input type="checkbox"/> MWR
<input type="checkbox"/> CAAF	<input type="checkbox"/> Govt Furnished Meals	<input type="checkbox"/> Resuscitative Care
<input type="checkbox"/> Controlled Access (CAC)/ID Card	<input type="checkbox"/> Military Banking	<input type="checkbox"/> Transportation
<input type="checkbox"/> Commissary	<input type="checkbox"/> Military Clothing	<input type="checkbox"/> All
<input type="checkbox"/> Dependents Authorized	<input type="checkbox"/> Military Exchange	<input type="checkbox"/> None

952.225-0013 CONTRACTOR HEALTH AND SAFETY (NOV 2010)

(a) Contractors shall comply with all National Electrical Code (NEC 2008), Specifications as outlined, and MIL Standards and Regulations. All infrastructure to include, but not limited to, living quarters, showers, and restrooms shall be installed and maintained in compliance with these standards and must be properly supported and staffed to ensure perpetual Code compliance, prevent hazards and to quickly correct any hazards to maximize safety of those who use or work at the infrastructure (NEC Table 352.20). Specifically, the use of magnetic ballasts in lighting for new construction or replacement of existing magnetic ballasts during refurbishment, alterations or upgrades with new magnetic ballasts is prohibited. The government has the authority to enter and inspect contractor employee living quarters at any time to ensure the prime contractor is complying with safety compliance standards outlined in the 2008 National Electric Code (NEC).

(b) The contractor shall correct all deficiencies within a reasonable amount of time of contractor becoming aware of the deficiency either by notice from the government or a third party, or discovery by the contractor. Further guidance on mandatory compliance with NFPA 70: NEC 2008 can be found on the following link <http://www.nfpa.org>.

952.225-0016
CONTRACTOR DEMOBILIZATION (AFGHANISTAN)
(AUG 2011)

(a) Full demobilization of contractors and subcontractor(s) in the Afghanistan Combined Joint Operations Area (CJOA) is critical to Responsible Drawdown. The prime contractor is required to submit a demobilization plan to the Contracting Officer a minimum of 120 days prior to the end of the contract performance period or when requested by the Contracting Officer. The demobilization plan shall address, as a minimum, the following procedures detailed below. The procedures outline specific guidance to ensure a timely and responsible exit from theater. Prime contractors are responsible and accountable to ensure their subcontractor(s) at all tiers comply with responsible and timely exit from theater immediately following contract performance completion or termination.

(1) Exit from Afghanistan: The prime contractor shall follow the exit guidance issued by the United States (U.S.) Embassy and shall ensure subcontractor(s) at all tiers also follow the exit procedures. The prime contractor is responsible to remain cognizant of Afghan laws regarding exit from Afghanistan. It is the prime contractor's responsibility to ensure that the most recent exit procedures are followed and to ensure that subcontractor(s) at all tiers are in compliance with exit procedures.

(2) Letter of Authorization (LOA): The prime contractor is responsible for demobilizing its workforce, including subcontractor employees at all tiers, and all contractor owned and subcontractor owned equipment out of theater as part of the prime contractor's exit strategy. This exit strategy must include reasonable timeframes starting with the end of the contract performance period and not exceeding 30 days. The Contracting Officer has the authority to extend selected LOAs up to, but not exceeding 30 calendar days after the contract completion date to allow the prime contractor to complete demobilization of its workforce and contractor owned equipment, as well as subcontractor(s) workforce and owned equipment, out of the Afghanistan CJOA. The prime contractor shall notify the Contracting Officer a minimum of 30 days prior to the end of the contract period to request up to a 30-day extension of selected LOAs beyond the contract completion date to complete demobilization. The request shall include at a minimum:

- (i) the name of each individual requiring a new LOA;
- (ii) the number of days for the LOA (no more than 30 calendar days); and
- (iii) justification for the request (e.g., what function the individual(s) will be performing during the demobilization period).

The Contracting Officer may request additional information for an LOA extension. If approved by the contracting officer, this is a no cost extension of an employee's LOA due to demobilization and in no way is an extension of the contract performance period.

(3) Badging: The prime contractor is responsible to ensure all employee badges, including subcontractor employees at all tiers, are returned to the local Access Control Badging Office for de-activation and destruction. The prime contractor shall submit a Badge Termination Report to ensure each record is flagged and the badge is revoked. If a prime and/or subcontractor employee's badge is not returned, the prime contractor shall submit a Lost, Stolen or Unrecovered Badge Report to the appropriate Access Control Badging Office. Contractor employees in possession of a Common Access Card (CAC) shall be responsible for turning in the CAC upon re-deployment through a CONUS Replacement Center in the U.S. Failure to return employee badges in a timely manner may result in delay of final payment.

(4) Contractor Controlled Facility Space: If the prime contractor has entered into a Memorandum of Understanding with the Installation Mayor or Garrison for site space, buildings, facilities, and/or Containerized Housing Units (CHU) to house prime and/or subcontractor employees (at all tiers), the prime contractor is responsible to notify the Installation Mayor or Garrison Commander of intent to vacate at least 90 calendar days prior to the end of the contract performance period. The prime contractor shall provide notification to the Installation Mayor or Garrison Commander to perform an inspection of all facilities as soon as practicable, but no more than 30 days, after the end of the contract period. If damages are discovered, the prime contractor shall make the necessary repairs. The prime contractor shall notify the Installation Mayor or Garrison Commander for re-inspection of the facilities upon completion of the repairs. If the Installation Mayor or Garrison Commander inspects the property, site space, buildings, facilities, and/or CHUs and finds they have not been properly cleaned, cleared, and/or environmentally remediated, or if the prime contractor fails to repair any damages within 30 calendar days after the end of the contract performance period, the final contract payment shall be reduced by the amount of the specified damages/repairs or the expenses incurred by the USG to properly clean, clear, and/or environmentally remediate the premises.

(5) Government Furnished Equipment (GFE)/Materials (GFM): Federal Acquisition Regulation (FAR) clause 52.245-1 governs and applies to any issues regarding GFE/GFM or Government Furnished Property (GFP).

(6) Contractor Personal Property: The contractor is advised that all personal property left on the respective installation after the date of departure of said premises, shall be sold or otherwise disposed of, as follows:

- (i) A request for the return of the property will be honored, if feasible, and if received before the expiration of the period of time allowed to vacate the installation.
- (ii) If abandoned property is left on the respective installation, contractual remedies may be enforced against the contractor, (See paragraph (b) of this clause for potential contractual remedies). Additionally, even if the contractor waives its interest to all abandoned personal property, the contractor may still be liable for all costs incurred by the USG to remove or dispose of the abandoned property.
- (iii) The contractor hereby authorizes the USG authority to dispose of any and all abandoned personal property in any manner the USG may deem suitable and hereby releases and discharges the USG and its agents from any and all claims and demands whatsoever that could otherwise be asserted because of the disposition of said abandoned personal property.

(7) Synchronized Predeployment Operational Tracker (SPOT): The prime contractor is responsible to close out the deployment of personnel, including subcontractor employees at all tiers, at the end of the contract completion period and to release the personnel from the prime contractor's company in the SPOT database. The release of employee information must be accomplished no more than 30 calendar days after the end of the contract completion date.

(8) Accountability of Prime and Subcontractor Personnel: Whether specifically written into the contract or not, it is the expectation of the USG that for any persons brought into the Afghanistan CJOA for the sole purposes of performing work on USG contracts, contract employers will return employees to their point of origin/home country once the contract is completed or their employment is terminated for any reason. If the prime contractor fails to re-deploy an employee, or subcontractor employee at any tier, the USG shall notify the applicable U.S. Embassy to take appropriate action. Failure by the prime contractor to re-deploy its personnel, including subcontractor

personnel at any tier, at the end of the contract completion date, could result in the contractor being placed on the Excluded Parties List System (EPLS) and not be allowed to propose on future U.S. contracts anywhere in the world.

(9) Personnel Recovery: Any DoD contractor with unaccounted for employees shall follow the instructions in the “Contractor Accountability and Personnel Recovery” Clause 952.225-0020. The contractor may use the Contracting Fusion Cell as a resource to track or research employees last known location and/or to view LOA’s.

(b) CENTCOM - Joint Theater Support Contracting Command (C-JTSCC) and external agencies will utilize all available contracting remedies to guarantee compliance with demobilization requirements. Such actions include, but are not limited to withholding payment, issuing a cure notice, issuing a negative Contractor Performance Assessment Reporting System (CPARS) evaluation, reduction of award fee, debarment, reimbursement of U.S. Government expenses, and/or any other legal remedy available to a contracting officer. The USG reserves the right to **withhold payment** from the prime contractor not in compliance with the above procedures included herein. Additionally, the Contracting Officer shall document all unresolved contractor compliance issues in CPARS, which shall have an adverse past performance affect on future contracts with the USG, anywhere in the world.

952.225-0020

CONTRACTOR ACCOUNTABILITY AND PERSONNEL RECOVERY (AFGHANISTAN) (AUG 2011)

(a) Contract performance may require work in dangerous or austere conditions. Except as otherwise provided in the contract, the contractor accepts the risks associated with required contract performance in such operations.

(1) Unaccounted Personnel: It is the expectation of the USG that any contractor brought into Afghanistan for the sole purposes of performance of work on a USG contract must be accounted for at all times by their respective employers. Additionally, contractors who maintain living quarters on a USG base shall verify the location of each of its employees’ living quarters a minimum of once a month. If a DoD contracted employee becomes missing and evidence does not indicate foul play, a Personnel Recovery (PR) event is NOT automatically triggered. Such an event will be treated as an accountability battle drill by the employer’s chain of command or civilian equivalent.

(2) Contractor Responsibilities: The contractor is responsible to take all necessary steps to locate and investigate the unaccounted for employee(s) whereabouts to the maximum extent practicable. To assist in this process, contractors may use the Contracting Fusion Cell as a resource to track or research employee’s last known location and/or to view LOA’s. **All missing personnel will be immediately reported to the installation division Personnel Recovery Officer (PRO), Mayor’s cell, Military Police Station and/or the Criminal Investigative Division, and the Base Defense Operations Center (BDOC).**

(3) Contractor Provided Information: If it is determined that a potential criminal act has occurred, the USD PRO (or USFOR-A Personnel Recovery Division (PRD) with prior coordination) will attempt to validate the missing person’s identity through the employer. The contractor shall provide the information to PRD within 12 hours of request. The required information the contractor should keep on file includes but is not limited to: copy of the individuals Letter of Authorization generated by the Synchronized Pre-deployment and Operational Tracker System (SPOT), copy of passport and visas, housing information of where the individual resides such as room number and location, DD Form 93, Record of Emergency Data, copy of badging, and contact information for known friends or associates.

(b) If USFOR-A PRD determines through investigation that the unaccounted personnel have voluntarily left the installation either seeking employment with another contractor or other non-mission related reasons, PRD will notify the contractor. The contractor shall ensure that all government-related documents such as LOA’s, visas, etc. are terminated/reconciled appropriately within 24 hours of notification by PRD in accordance with subparagraph (a)(8) of C-JTSCC Clause 952.225-0016 entitled “Contractor Demobilization (Afghanistan)”. Contractors who fail to account for their personnel or whose employees create PR events will be held in breach of their contract and face all remedies available to the contracting officer.

(End of Clause)

C3 CLAUSE 952.236-0001 ELECTRICAL AND STRUCTURAL BUILDING STANDARDS FOR CONSTRUCTION PROJECTS (JUL 2010)

(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) 2008 National Electrical Code (NEC),
- (3) American National Standards Institute (ANSI) C2, and
- (4) 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 clause)

TRAVEL WARNINGS**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.

(End of clause)

APP OF CRIMINAL JURISDICTIONAPPLICATION 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.

(End of clause)

WORKERS COMP INSURANCE (DBA)**WORKERS COMPENSATION INSURANCE (DEFENSE BASE ACT) (APRIL 2011)**

(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 rates under the USACE, C3 and 408th CSB contract are as follows:

Service	\$3.50	per \$100 of employee remuneration
Construction	\$4.25	per \$100 of employee remuneration
Security	\$10.00	per \$100 of employee remuneration
Aviation	\$17.00	per \$100 of employee remuneration

(c) Labor Category/Job Classification Definitions:

SERVICE: White-collar" workers providing IT, engineering/consulting services, and restaurant services. Security consultants are included in this category if they are only providing risk assessment services and no form of armed protection.

CONSTRUCTION: "Blue-collar" workers providing services such as carpentry, electrical, plumbing, mechanical, concrete/asphalt, de-mining, roofing, landscaping, janitorial, trash removal, Port-a-John/septic cleaning, pest exterminating, auto repair/dismantling, drivers/couriers, and heavy equipment operation and maintenance. Construction site supervisors/managers and life support service providers are included in this category as well as all Unskilled and Manual Labor Day Laborers.

SECURITY: Personal Security Detail (PSD) and Static or Convoy Guarding of property or personnel.

AVIATION: Pilot and Crew of any aircraft excluding ground personnel who provide maintenance or services and stay on the ground.

NOTE: More than one rate may be applicable as more than one type of labor may be applicable for a particular contract.

(d) 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. Every subcontractor shall procure its own DBA Insurance coverage directly from CNA Insurance Co.

(e) 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.

(f) CNA's Broker (Rutherford International) shall provide proof of confirmation of coverage within 3 working days of receipt of a complete insurance application. This confirmation should be used by the Contracting Officer to issue notice to proceed with performance.

(g) 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.

(h) Claims Reporting - The Contractor shall make timely Defense Base Act insurance claims on behalf of each employee who is injured or killed in the course of their employment under this contract, and shall ensure that similar language is in each Subcontractor's contract. The Contractor's Safety Officer shall, in addition to any other duties required to be performed under the contract, perform the following:

(i) Make timely Defense Base Act insurance claims on behalf of each employee who is injured or killed in the course of their employment under this contract; and

(ii) Make monthly written reports to the Contracting Officer, Administrative Contracting Officer, and the District/Center Safety and Occupational Health Manager, providing the names of each such injured or deceased employee, the circumstances surrounding each injury or death, the dates of each injury or death, the date the insurance claim was made on behalf of each employee, and the current status of each claim.

The District/Center Safety and Occupational Health Manager POC is:

Susan R. Fox, Email: Susan.R.Fox@usace.army.mil

(i) The Insurance carrier/Broker will conduct periodic audits of actual contractor payroll amounts. When a return is due for over-payment of premium on a specific audit, such returned premium shall be returned to the U.S. Department of Treasury.

(j) 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.

(End of clause)

SUBSTITUTION OF PERSONNEL

SUBSTITUTION OF KEY PERSONNEL

The identified key personnel must be used on the project. Any substitution of these persons will not be permitted without prior approval of the Contracting Officer.

The offeror must provide documentation identifying each person as a current full-time employee of the Prime Contractor or a Letter of Intent signifying their employment for this project. Documentation of full-time employment can be provided by a current paystub, employee hire form, or an affidavit signed by the Prime Contractor CEO, president, or owner attesting to the key person's employment status.

KAJAKI IRRIGATION INTAKE STRUCTURE AND PIEZOMETERS REPAIRS

SECTION 01 01 40 SUMMARY OF WORK

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SECTION 01 01 40 SUMMARY OF WORK

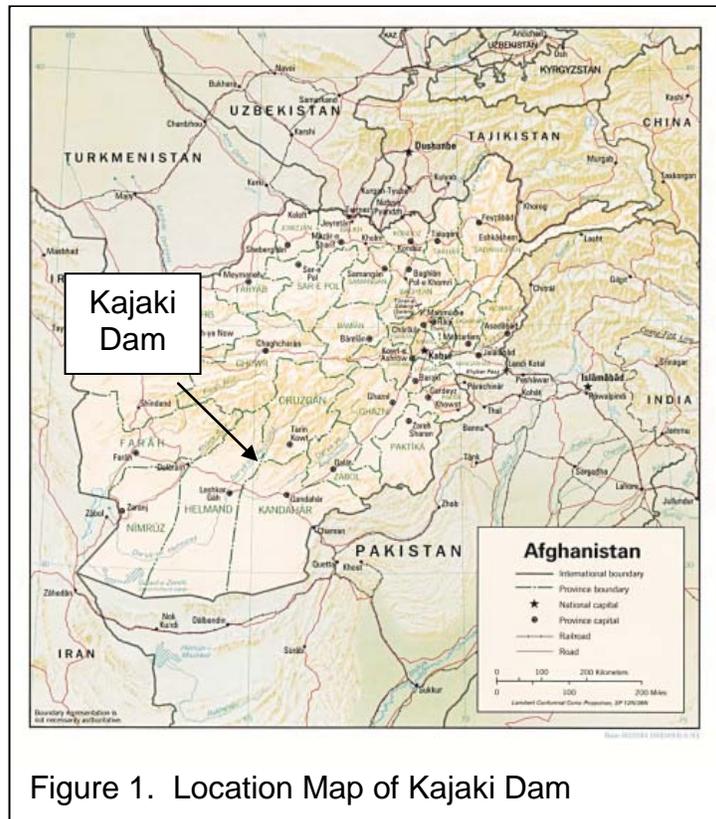
PART 1 GENERAL

1.1. SUMMARY

This section provides a summary of the various Contract work elements and their relationship to each other. This section shall be used in conjunction with all the other sections and the drawings to establish the total work requirements.

1.1.1. Project Background

Kajaki Dam serves a multi-purpose role in supplying hydropower, irrigation storage and at this time to a lesser extent flood control. Kajaki is the primary source of sustainable power for the Kandahar City and Lashkar Gah regions. Kajaki is an integral part of a larger irrigation scheme in Helmand and Kandahar Provinces and is regulated by the Helmand Arghandab Valley Authority under Ministry of Energy and Water (MEW). The project location and a plan of the reservoir are shown on Figures 1 and 2 respectively.



KAJAKI IRRIGATION INTAKE STRUCTURE AND PIEZOMETERS REPAIRS

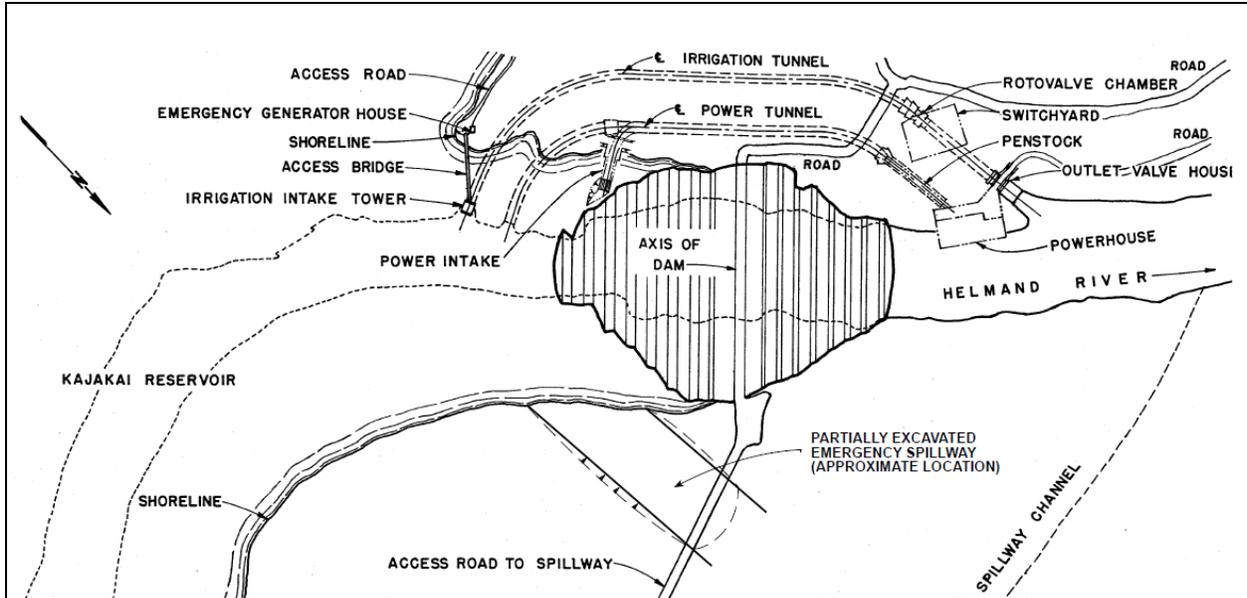


Figure 2. Vicinity Map of Kajaki Dam Complex.

Kajaki Dam was constructed in the early 1950s. A 33MW Power House project was added in 1975. However, during the Russian occupation, all work stopped and maintenance has since been inconsistent. Many components have become inoperable or their condition is unknown. Work to install Unit 2 in the powerhouse ongoing under separate contract.

The service and emergency spillways for the dam were never completed. As a result, the reservoir has been operating at a pool elevation that is significantly lower than intended. The emergency spillway has not been excavated below the dam crest, and therefore is entirely unusable. The service spillway was partially completed, with some concrete foundation existing. When the reservoir reaches this elevation, water flows freely over the partial structure and into the river below the dam. Future work by others may include the completion of the service and emergency spillways, and the subsequent raising of the pool elevation.

The Kajaki Irrigation Intake Structure system consists of an intake structure in the reservoir, tunnel, emergency closure valves, and outlet valves. The intake structure is shown in Figure 3.

KAJAKI IRRIGATION INTAKE STRUCTURE AND PIEZOMETERS REPAIRS



Reservoir water enters the system at the intake tower, which is located at the portal to one of the project diversion tunnels. A concrete bulkhead and a wheeled gate are suspended in slots which may be lowered with a hoist to close openings at the intake portal. Trash racks are located in slots upstream of the intake portals. Water flows through the diversion tunnel to a concrete plug where the water is distributed to the entrance of three steel pipe lines (penstocks). Each penstock line is equipped with a Roto Valve just downstream of the concrete plug and a Hollow Jet valve located at the end of the line. The existing Intake Structure Hoist is not functioning and does not have the capacity to lift the concrete bulkhead.

The dam has some instrumentation that has fallen into disrepair and is producing unreliable data. The existing instrumentation is documented in a report for USAID prepared by Advanced Engineering Associates International, Inc., Kajaki Project Geotechnical Work, August 2006.

1.2. WORK COVERED BY CONTRACT DOCUMENTS

1.2.1. Mandatory Work

Mandatory work to be completed in accordance with the Bid Schedule includes:

- a. mob/demob to and from this remote site and setup the required temporary structures for inspections and design of irrigation structure components, as well as installation of piezometers. (See CLN 0001 in SECTION 00010 BID SCHEDULE).

KAJAKI IRRIGATION INTAKE STRUCTURE AND PIEZOMETERS REPAIRS

- b. Contractor shall provide 35%, 65% and 100% design services for components of the Irrigation Intake Structure (excluding trash racks). (See CLN 0002 in SECTION 00010 BID SCHEDULE).
- c. Contractor shall construct (i.e., rehabilitate/repair or replace) all specified components of the Irrigation Intake Structure (excluding trash racks). (See CLN 0003 in SECTION 00010 BID SCHEDULE).
- d. Contractor shall provide a final design for all instrumentation. Final design shall be submitted for government approval. (See CLN 0004 in SECTION 00010 BID SCHEDULE).
- e. Contractor shall design and install piezometers on the left abutment of the dam, survey monuments, pillars and survey tools, and staff gauges. (See CLN 0005 in SECTION 00010 BID SCHEDULE).

1.2.2. Optional Work

Optional work to be completed in accordance with the Bid Schedule includes:

- a. Contractor shall inspect trash racks and trash rack guides as part of the Irrigation Intake Structure. (See CLN 0008AA in SECTION 00010 BID SCHEDULE).
- b. Contractor shall replace trash racks (excluding guides) according to original design. (See CLN 0009AA in SECTION 00010 BID SCHEDULE).
- c. Contractor shall repair trash rack guides according to original design. (See CLN 0010AA in SECTION 00010 BID SCHEDULE).

1.2.3. Description of Work

1.2.3.1. Mobilization and Demobilization

The work shall be located at the Kajaki Dam site and is located on the Helmand River approximately 90 kilometers northwest of Kandahar City, Afghanistan (32.323N, 65.119E). Based on recent construction activities near the subject site, the Contractor will likely require access to the site by air transport. The anticipated release point will likely be Bastion Air field. Contractor will be required to coordinate with USACE and Marine Expeditionary Forces. There is no commitment of military assistance for transportation assistance..

1.2.3.2. Irrigation Intake Structure Design & Construction

Work on the Irrigation Intake Structure involves rehabilitation and upgrade of the existing bridge crane and two closure bulkheads. The bridge crane is currently inoperable. Design changes include an up-rating of the crane from 75 TON to 100 TON. Up-rating the crane will require an inspection and analysis of the existing structural elements and reinforcement if necessary.

Work on the crane shall include: (1) inspection of the existing structure and crane, (2) design and construction of a replacement jib crane, (3) design and construction of bridge crane hoist and trolley, (4) design and construction of associated rigging, (5) design and construction of bridge and trolley traversing trucks (6) design and

KAJAKI IRRIGATION INTAKE STRUCTURE AND PIEZOMETERS REPAIRS

construction of all electrical crane controls, (7) inspect and repair lifting beams, (8) inspect and repair bulkhead dogs, (10) design and construction of all associated electrical system power. Work on the bulkheads will include rehabilitation of the wheeled bulkhead (WHEEL GATE on drawings) and perform necessary repairs to the Concrete Bulkhead Gate (STOP LOG on drawings).

Work will also require design and construction of an alternate method of watering the tunnel to reduce the lifting requirements on the gates. The current method simply involves lifting the gate 6 inches which generates a large lifting requirement on the crane.

Optional work includes an inspection of the trash racks and guides and replacement of trash racks (excluding guides) according to original design.

1.2.3.3. Instrumentation Design and Construction

Instrumentation for the embankment dam will include the installation of peizometers, survey monuments and pillars, and staff gages, along with surveying equipment to provide settlement and deflection readings for the dam.

1.3. CONTRACT DRAWINGS

The drawings that accompany these specifications are a part thereof.

Contract drawings, maps, and specifications will be furnished to the Contractor without charge per Section 007000, Contract Clause 252.236-7001, Contract Drawings and Specifications. A schedule of available drawings is attached in Appendix A. Several useful record drawings have been lost to history and not recovered for this project. Contractor will be required to prepare informational drawings where the existing set is incomplete but necessary to the project.

Contractor shall check furnished drawings and notify the Government of any discrepancies. Further, Contractor shall verify field conditions and informational drawings.

Reference publications will not be furnished.

1.4. DESIGN GUIDANCE AND SPECIFICATIONS

A list of applicable guidelines is provided in Appendix B.

1.5. HISTORICAL DOCUMENTS

A copy of the relevant historical documents is attached as Appendix C, including the Final Design Report on Kajaki Dam, Arghandab Dam, and Boghra Canal Projects.

1.6. OCCUPANCY OF PREMISES

Building(s) will be occupied during performance of work under this Contract. Occupancy notifications will be posted in a prominent location in the work area.

KAJAKI IRRIGATION INTAKE STRUCTURE AND PIEZOMETERS REPAIRS

Before work is started, the Contractor shall arrange with the Contracting Officer a sequence of procedure, means of access, space for storage of materials and equipment, and use of approaches, corridors, and stairways.

1.7. EXISTING WORK

In addition to Section 007000, Contract Clause 52.236-9, Protection of Existing Vegetation, Structures, Equipment, Utilities, and Improvements:

The Contractor shall not remove or alter existing work in such a manner that injures or damages any portion of the existing work to remain.

Upon completion of the work, the Contractor shall repair or replace portions of existing work, which have been damaged by Contractor's operations, to preconstruction conditions at the expense of the Contractor.

1.8. SECURITY

Security is critical to construction in Afghanistan, especially on roads and remote areas away from Coalition Force bases. The Contractor must have an appropriate amount of security/protection to match the threat in the project area, outside of the perimeter fence, and along the supply routes. A detailed security plan in accordance with Section 01 40 00 SECURITY shall be approved by the Government before construction notice to proceed.

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.

1.9. UXO REMOVAL AND CLEARANCE

The contractor shall search for, identify and clear all mines and unexploded ordnance (UXO) from all work areas. The contractor may only provide clearance/removal services via UN Mine Action Center for Afghanistan (UNMACA) accredited entities, and clearance shall be accomplished to the anticipated foundation depth as indicated in the contract. If sub-surface construction activities are to be performed on this site the minimum clearance depth will be 1 meter. Sub-surface clearance for construction activities in excess of 1 meter as defined by the contract parameters will also be the responsibility of the contractor. Clearance by definition is an investigation and clearance of all sub-surface metallic anomalies on the site. Clearance/removal may only be undertaken in accordance with International Mine Action Standards (IMAS), Afghanistan Mine Action Standards (AMAS), and applicable U.S. Army Corps of Engineer (USACE) Ordnance & Explosives (OE) safety standards. When mines and/or UXO's are identified, the Contractor shall place them in a location in accordance with IMAS/AMAS/USACE until destruction of the items can take place. Construction work shall not occur inside the safety exclusion zone based on the most probable munition (MPM) expected on the site. Construction will not commence in any area that has not been cleared to the specified depth.

KAJAKI IRRIGATION INTAKE STRUCTURE AND PIEZOMETERS REPAIRS

The contractor will provide a standard UXO/Demining safety work plan to the US Army Corps of Engineers UXO / Demining COR for review prior to commencement of all UXO clearance / demining activities on the project sites. Once the UXO/ Demining clearance has concluded, the contractor shall provide the US Army Corps of Engineers UXO / Demining COR a clearance certificate for review and approval before any construction activities are to commence.

NOTE 1: The USACE does not need written clearance certificate approval from the UNMACA to approve the construction start activities. However, the contractor is responsible for providing a copy of the clearance certificate to the UNMACA for entry into their country wide database. A final signed copy of the UNMACE certificate must then be provided to the USACE UXO/Demining COR.

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 under the IMAS/AMAS from the UNMACA.

If after the entire site has been cleared of UXO/mines per the International Mine Action Standards (IMAS) and clearance is done to the anticipated foundation depth, the Contractor becomes aware of or encounters UXO or potential UXO during construction, the Contractor shall immediately stop work at the site of the encounter, move to a safe location, notify the COR and Demining Contractor/ Demining Sub-Contractor, and mitigate any delays to scheduled or unscheduled contract work. The Demining Contractor/ Demining Sub-Contractor shall remove and dispose of UXO's per the International Mine Action Standards (IMAS). These standards can be found at <http://www.mineactionstandards.org>. The Contractor assumes the risk of any and all personal injury, property damage or other liability, arising out of and resulting from any Contractor action hereunder. In these cases the contractor shall be required to identify and dispose of the ordnance.

NOTE 2: Point of Contact for UXO/Demining Safety Work Plan review and approval shall be directed to the US Army Corps of Engineers Demining Safety/COR:

UXO Safety/ Mine clearance COR, USACE
tas.uxo-deminingsafety@usace.army.mil,

Jeffrey Helmick USACE OESS/COR Mine Clearance AES
jeffrey.a.helmick2@usace.army.mil
Roshan: 079-403-1452
Comm: 540-723-6129

Marty Holmes USACE OESS/ACOR Mine Clearance AES
Roshan: 079-752-9684

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Comm: 540-667-6359

PART 2 PRODUCTS
Not used.

PART 3 EXECUTION
Not used.

– END OF SECTION –

KAJAKI IRRIGATION INTAKE STRUCTURE AND PIEZOMETERS REPAIRS

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SECTION 010150 TECHNICAL REQUIREMENTS

PART 1 GENERAL

1.1. COMPLIANCE

The Contractor's design and construction shall 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. Criteria for proposal evaluation is in SECTION 00113, PROCEDURES FOR SUBMITTAL OF OFFERS AND PROPOSAL EVALUATION CRITERIA.

1.2. MINIMUM & ALTERNATE REQUIREMENTS

These design and product requirements are minimum requirements.

1.3. ASBESTOS-CONTAINING MATERIALS

Asbestos-containing material (ACM) shall not be used in the design and construction of this project. ACM is defined as a material composed of 1% or more asbestos by weight.

1.4. SAFETY

Designs and finished products shall conform to EM 385-1-1.

1.5. MANDATORY AND OPTIONAL ITEMS

All items in this section are considered mandatory work items to be performed by the Contractor, unless the paragraph title is indicated to be (OPTIONAL). For those items listed as optional, only the portion of work under that specific paragraph title and related subparagraphs shall be considered as optional.

1.6. SITE SPECIFIC LIMITATIONS OF WORKING SPACE AND CONSTRAINTS

The Contractor shall become familiar with the nature of the work to be done and identify constraints which must be considered for design and construction. A list of notable items is included below. This list is not inclusive, and failure to identify additional site constraints does not relieve the Contractor from the responsibility to become familiar with all aspects of work.

1.6.1. Intake Structure

- a. The intake structure bridge crane hoist is currently inoperable. The design drawings conservatively rate the existing hoist at 75 tons which is for the center of the bridge, not the lift points at the columns.

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- b. Access to the intake structure is via a pedestrian footbridge. The original O&M Manual specified a weight restriction limited to “hand carry only”. The design documents indicate 93 psf. The footbridge loading shall be limited to hand transport or small cart not to exceed 1,000 lbs total. Deviation from this weight limitation is not acceptable unless the Contractor performs an inspection of the condition of the bridge and submits a report along with a structural analysis by a licensed structural engineer showing the structural system is adequate to support the proposed loading.
- c. The concrete bulkhead is supported at its current elevation and cannot be moved with the existing hoist.
- d. The O&M manual specifies that the gates must not be closed unless one of the downstream valves is still open.
- e. The pressure diagram for the wheel gate design is on drawing 15-F-11 (R1).
- f. The operational requirements of the intake structure are extremely important to the appropriate rehabilitation of the Irrigation Intake Structure. The government has performed a review of the design documents and O&M manual to facilitate developing this request for proposal. A copy of this government review is attached – See Engineering Alternative MS1-2-5. The Contractor’s engineer must perform an independent review of the design documents and the O&M manual as part of this contract.

1.6.2. Piezometers and Instrumentation Installation

- a. The Contractor shall determine detailed access requirements for installation of all instrumentation during a site inspection and submit a report.
- b. The reservoir pool is currently limited to a lower elevation than originally designed, due to the incomplete service and emergency spillways. The current reservoir has never been impounded to a level higher than about Elevation 1037m. All new designs and equipment shall be based on the potential maximum pool at Elevation 1050m as if these spillways were complete.

1.7. 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.

1.8. SUBCONTRACTORS

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

1.9. APPLICABLE CODES, GUIDE SPECIFICATIONS AND TECHNICAL CRITERIA

The codes and guide specifications found in Appendix B shall be required for this project. This list is not comprehensive. Additional codes and specific technical standards are referenced in other sections and paragraphs below that will also be required.

1.9.1. Equivalent Codes and References

Any Code or Reference that can be determined to be substantially equivalent to those specified in this document may be used, but it is the Contractor's responsibility to show the equivalency of the alternate Code or Reference and the Contracting Officer must approve its use prior to implementation. A partial listing of references is included within the Request for Proposal.

1.10. SITE DEVELOPMENT

1.10.1. Environmental Protection

1.10.1.1. 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 regulations with the contracting officer prior to design and discharge of any liquid wastes into natural streams or manmade channels.

1.10.1.2. 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 he (she) is satisfied 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.

1.10.1.3. 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.

1.10.1.4. Disposal

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

1.11. PROJECT: IRRIGATION INTAKE STRUCTURE

1.11.1. Mechanical Work

1.11.1.1. Bridge Crane

Rehabilitate the irrigation intake structure bridge crane. The new hoist and trolley are estimated to weigh approximately 10,000 lbs. Contractor may upsize the proposed jib crane for the purpose of lifting rehabilitation components if it keeps the cost down and is an overall benefit to the government. The actual weight of the hoist and trolley shall be determined prior to installation. All weights shall be coordinated with the appropriate agency to ensure that it is within the capacity of the proposed hoisting method. The rehabilitated bridge crane shall meet the following requirements:

- a. The crane shall be able to be operated by one individual.
- b. The crane shall be up-rated from the current capacity of 75 tons up to 100 tons (200,000 pounds-force, lbf). The Contractor shall perform a full analysis of the bridge crane and determine the modifications required. Contractor may assume an alternate method of watering the tunnel thus reducing the maximum load on the gate that would otherwise be required. The Contractor shall prepare new lifting diagrams. The intake tower structure, crane structure, and hoist components shall have a capacity adequate for all live and dead loads resulting from the rated load.
- c. The crane shall be able to completely lower and raise each of the two closure bulkheads (i.e., both WHEEL GATE and STOP LOG) under static conditions.
- d. The hoist block shall travel at least four feet per minute up or down at rated load. The hoist shall be electrically powered and push-button operated.
- e. The designers shall determine if stainless steel or galvanized wire rope is required for withstanding the environmental conditions, and provide design criteria accordingly.
- f. The trolley traverse mechanism shall be able to traverse the trolley at rated load.
- g. The trolley traverse may either be electrically powered and push-button operated, or manually operated with a maximum of 20 lbf manual input at rated load. If electrically powered, the trolley traverse shall operate at a minimum of five feet per minute.

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- h. The bridge traverse mechanism shall be able to traverse the bridge at least twenty feet per minute at rated load.
- i. All hoist and bridge traverse components shall be rated for and capable of continuous operation. The bridge traverse shall be electrically powered and push-button operated.
- j. Crane hoist, trolley, and bridge traverse mechanisms each shall be equipped with a brake capable of preventing movement that is not commanded.
- k. All crane components shall be protected from damage due to corrosion, dust and debris, sun, weather, and lightning.
- l. All crane components shall be capable of forgoing maintenance for five years with no adverse affects on operation.
- m. The crane shall be outfitted with a pendant control to allow operation from the intake structure deck.
- n. Motor starters shall be rated for plugging duty.
- o. Motor functions shall be protected from over travel by limit switches or other means.
- p. The bulkheads (i.e., both WHEEL GATE and STOP LOG) shall be protected from gate skew by slack cable switches or other means.

1.11.1.2. Jib Crane

Replace the jib crane located on the bridge crane. The jib crane is intended solely for crane service items, such as lubricants, hand tools, and small replacement pieces.

The jib crane shall meet the following requirements:

- a. The jib crane shall be able to lift objects between the bridge crane deck and the intake structure deck.
- b. The jib crane boom shall be high enough off the deck that normal service items will be fully suspended in the air over the crane deck at the upper limit of travel.
- c. The jib crane shall be able to be operated by one individual.
- d. The jib crane shall have a rated capacity of ¼ ton (500 lbf). If outfitted with a manual hoist, the operator shall be able to lift the rated load with a maximum of 20 lbf effort.

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- e. The jib crane hoist shall be outfitted with a brake capable of holding the rated load. The brake shall be operated from the operator station.
- f. The jib crane shall be able to smoothly swing 360 degrees about the upright member at rated load. The crane shall have a provision to swing the boom from the operator station. All crane components shall be protected from damage due to corrosion, dust and debris, sun, weather, and lightning.

The jib crane may be upsized to assist with lifting components required for rehabilitation of the Bridge Crane.

1.11.1.3. Lifting Beams

Rehabilitate the two lifting beams for the intake bulkheads (i.e., both WHEEL GATE and STOP LOG). The lifting beams shall meet the following requirements for their respective bulkheads:

- a. Each lifting beam shall be able to interface with the bulkhead.
- b. Each lifting beam shall be able to fully lower the bulkhead, disengage, and be hoisted back to the intake structure deck with operation by a single person and without fouling or binding in the guide slots.
- c. Each lifting beam shall be able to travel to the bottom of the guide slot, engage a bulkhead, and fully raise the bulkhead to the dogging position at the intake structure deck.
- d. The lifting beam shall engage and disengage the bulkhead with the pull of a rope, at no more than 40 lbf.
- e. The lifting beam shall have a mechanism or design that prevents the beam from being oriented in a manner which would prevent engagement or disengagement from the bulkhead.
- f. The lifting beam shall have a mechanism that prevents inadvertent release of the bulkhead.
- g. All lifting beam components shall be protected from damage due to corrosion, dust and debris, sun, and weather.

1.11.1.4. Bulkhead Dogs

Rehabilitate or replace the dogs for both bulkhead types (i.e., both WHEEL GATE and STOP LOG). Perform design analysis to ensure that the dogs have an adequate capacity as described below. New or existing dogs shall meet the following requirements:

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- a. Stops shall have a capacity of twice the weight of the held bulkhead.
- b. Stops shall be operated/placed/installed with a maximum of 40 lbf manual input.
- c. All dog/stop components shall be protected from damage due to corrosion, dust and debris, sun, and weather.

Rehabilitation of the dogs shall include:

- a. Complete removal of the existing paint system.
- b. 100% visual inspection of the dogs for structural deficiencies, and correction of any findings. Submit a report on the condition of existing equipment including recommendations for correcting deficiencies.
- c. Repainting with an approved vinyl-based paint system. The system shall include primer, intermediate, and top coats and in thicknesses as specified by the paint manufacturer for the application.

If necessary, replacement of the dogs shall include:

- a. Design, fabrication, and installation of new dogs. Dogs shall meet the performance requirements listed above.

1.11.1.5. Site Inspection

All inspections should be performed by a qualified mechanical engineer. Perform visual inspection of crane structure, welds, rails, and paint system. Submit a report on the condition of existing equipment and structures, including recommendations for correcting deficiencies.

1.11.1.6. Design/Manufacture

Use ASME B30.2-2005 and Unified Facilities Criteria UFC 3-320-07N for the development of technical specifications for the design, construction, and installation of all crane components. In the event of a conflict or an overlap in governance between the two standards, the most stringent requirements shall apply.

1.11.1.7. Installation and Site Work

- a. Shop-fit and assemble components to the fullest extent possible prior to transportation to the site, to ensure proper fit. Match mark individual components for ease of field assembly. Disassemble as required for shipping.
- b. Replace end truck wheel bearings on the bridge crane.
- c. Replace all bridge crane drive components.

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- d. Replace entire jib crane.
- e. Replace entire bridge crane trolley, hoist, and all hoisting equipment.
- f. Replace all power/control wire and equipment. See paragraph 1.11.2. ELECTRICAL WORK.
- g. Remove any existing rust, corrosion, or failed paint system. Repaint exposed surfaces.
- h. Install grease distribution system.
- i. Lubricate all components requiring lubrication.
- j. Test bridge drive mechanism at no load. Correct any deficiencies. Test at rated load. Correct any deficiencies.
- k. Test hoist and trolley mechanisms at no load. Correct any deficiencies. Test at rated load. Correct any deficiencies.

1.11.2. Electrical Work

1.11.2.1. General

Prepare construction plans & specifications, as well as perform construction, testing and commissioning for the irrigation intake crane, emergency diesel generator and associated power distribution system. Design and installation shall conform to requirements of NFPA 70 and IEEE C2.

1.11.2.2. Site Inspection

Original As-constructed drawings required to facilitate design under this contract are not available. The available drawings are considered "Informational" since they are not certified "As-Constructed". Therefore, the Contractor shall conduct site inspections to gather the required information for preparation of informational drawings required to complete design. Site inspections will also be necessary to determine condition of existing electrical systems where indicated below. All inspections shall be performed by a qualified electrical engineer. A list of drawings required to be as-constructed is provided below:

Single-Line Diagram (17-F-8)
Aerial Distribution Line – Plan and Details (17-F-6)
Intake Tower Access Bridge – Bent and Girder (15-F-65)

These drawings can be found in Appendix A.

1.11.2.3. Design

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Design shall utilize guide specifications and industry standards referenced within this Section. Controls shall not use any solid-state devices unless similar electro-mechanical type devices are not available or will not provide the required function. Electrical materials shall be dust-tight, corrosion-resistant and have an operating temperature suitable for the harsh conditions found at this site. Existing electrical distribution system characteristics can be found on the Informational Drawings. See Appendix A for list of Informational Drawings.

1.11.2.3.1 Studies

- a. Conduct load study and voltage drop study (and fault study if required) on the aerial distribution line (or optional buried line) to verify it has adequate capacity to service the existing connected loads plus the intake crane structure loads. Contractor shall notify the Contracting Officer of any un-authorized connections.

1.11.2.3.2 Irrigation Intake Structure

- a. Replacement of electrical equipment for irrigation intake crane. Equipment includes, but not limited to: lighting fixtures/switches, crane control devices, motor starters, transformers, power distribution panels. Motor starters shall be reduced voltage, non-solid state type; wye-delta, primary impedance, partial-winding, or primary resistive Use Technical Specification 412213.13, BRIDGE CRANES for guidance. Controls shall conform to the requirements of NEMA ICS 1, ICS 2, ICS 5 and ICS 8. Lighting shall utilize HID fixtures capable of producing a minimum level of illumination at the structure's main platform in accordance with IES Lighting Handbook guidance.
- b. Replacement of power/control conductors for the irrigation intake crane (existing conduits may be used if undamaged, adequately sized, and conform to applicable standards).
- c. Replace crane rail electrification systems for damage. Perform continuity tests on runway conductors and current collectors. See informational drawings 9698D20 and 9798D8.
- d. Restore power to the Intake Structure by replacement of conductors between irrigation intake structure and overhead line. Design of aerial distribution components shall conform to requirements of TM 5-811-1.

1.11.2.4. Products

Power and control conductors shall be stranded copper with cross-linked thermosetting polyethylene insulation and non-PVC jacket conforming to NEMA WC 70. Enclosures shall be constructed of steel and conform to NEMA 250. Enclosures indoors shall be Type 12 and enclosures outdoors or in damp locations shall be Type 4X. Indicating (pilot) lights shall be push-to-test type. All exposed conduit shall be rigid galvanized steel

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conform to UL 6. All buried conduit shall be PVC-coated rigid galvanized steel conforming to NEMA RN 1.

1.11.2.5. Installation

Remove all unused electrical equipment & materials (control panels, conduit, wire, etc.) prior to installation of new equipment. Removed equipment and materials are the property of the Contractor and shall be removed from site. Installation of new equipment shall conform to applicable codes and standards, as well as manufacturer's recommendations.

1.11.2.6. Testing

Field and operating testing shall be conducted in accordance with SECTION 016400 START UP TESTING AND COMMISSIONING. The emergency diesel generator shall be tested in accordance with Technical Specification 263214.00. As well, all new and reused wire shall be given insulation resistance (Meggar) and continuity tests.

1.11.2.7. Operation & Maintenance

O&M Manual covering all equipment shall be prepared in accordance with SECTION 017810 OPERATIONS AND MAINTENANCE DATA. O&M data for the emergency diesel generator shall include instructions on manual exercising in accordance with manufacturer's recommendations

1.11.3. Structural Work

1.11.3.1. Access Bridge

The access bridge will require an inspection and structural analysis by a qualified engineer if used for moving heavy loads beyond the Site Specific Limitations in paragraph 1.6.

1.11.3.1.1. Structural Elements of Intake Structure

Contractor shall inspect the structural elements of the intake structure and prepare a reinforcement design if necessary to account for the rehabilitated Bridge Crane. A government review of the history of operations and the original design drawings indicates the proposed loads for the rehabilitated Bridge Crane will not exceed the original designs. Contractor's engineer shall verify the loading by performing an independent review designs and operational history of the intake structure.

1.11.3.2. Trash Racks and Guides (Optional)

1.11.3.2.1. Inspection

Inspect the existing trash racks and associated guide slots. Submit a report on the condition of existing equipment and structures, including recommendations for correcting deficiencies.

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1.11.3.2.2. Trash Rack Replacement (OPTIONAL)

Replace trash racks according to original design. Trash racks shall exhibit corrosion-resistance, through an approved paint system, or bitumen coating according to original design. Galvanization is not required.

1.11.3.2.3. Trash Rack Guide Repair (OPTIONAL)

The government assumes the guides will have experienced less corrosion than the exterior racks due to their partial encasement in concrete. Contractor shall verify the corrosion with the results of the inspection. The trash racks and associated guide slots shall be repaired according to original design.

1.11.3.3. Irrigation Tunnel Closure Wheeled Bulkhead

This paragraph covers the smaller of the two intake tunnel closure bulkheads. It is listed on drawings as the WHEEL GATE. Analyze the design of the existing wheeled bulkhead to ensure an adequate design and capacity. Rehabilitate the wheeled bulkhead. Rehabilitation shall include:

- d. Complete removal of existing paint or coating system to bright metal.
- e. 100% visual inspection of welds and structural steel. Repair of defects or cracks discovered.
- f. Complete replacement of wheels, bearings, and shafts.
- g. Complete replacement of seals.
- h. Modification of lifting points or rigging as necessary to interface with new lifting equipment.
- i. Repainting with an approved vinyl-based paint system. The system shall include primer, intermediate, and top coats and in thicknesses as specified by the paint manufacturer for the application.
- j. Functional testing to ensure the bulkhead meets the performance requirements set forth below and as outlined in SECTION 016400 START UP TESTING and COMMISSIONING.

The wheeled bulkhead shall meet the following performance requirements:

- a. The bulkhead shall interface with existing dogs.
- b. Bulkhead travel shall be smooth throughout the entire range of travel up and down, without hesitation or binding on guide slots.
- c. The bulkhead shall fully seat against the irrigation tunnel intake and prevent leakage, permitting the tunnel to be dewatered. Acceptable leakage is fifteen gallons per minute.

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- d. The bulkhead shall be designed in accordance with EM 1110-2-2105 and EM 1110-2-2701 for the reservoir at maximum pool.
- e. Depending on Contractor design, install valve in the face of the bulkhead to provide an alternate method of watering the tunnel. See Paragraph 1.11.5.

1.11.4. Irrigation Tunnel Closure Concrete Bulkhead

This paragraph covers the larger of the two intake tunnel closure bulkheads. It is listed on the informational drawings as the STOP LOG.

The existing concrete bulkhead shall be rehabilitated by lifting the bulkhead up clear of the structural elements and replacing the seals. The contractor shall provide the necessary scaffolding, and other temporary features. The contractor shall provide protection as necessary to assure that the existing intake tower and inlet structure is not damaged during the repair. The contractor shall repair any damage at no cost to the government.

Design, fabricate, and install a new steel bulkhead system. The new bulkhead shall meet the following requirements:

- a. The bulkhead seals shall be replaced according to the original design.
- b. Bulkhead travel shall be smooth throughout the entire range of travel up and down, without hesitation or binding on guide slots.
- c. The bulkhead shall fully seat against the irrigation tunnel intake and prevent leakage, permitting the tunnel to be dewatered. Acceptable leakage is fifteen gallons per minute.

1.11.5. Alternate Tunnel Watering System

Contractor shall design and install an alternate tunnel watering system to ultimately reduce the load on the hoist while lifting the wheeled bulkhead. The Government presumes that a valve system may be installed on the Wheeled Bulkhead. The Contractor may develop alternate designs. The O&M manual currently states that the time required to water the tunnel under current operations (6-inch lift on wheel gate) takes 3-4 hours. The Contractor shall design a system that takes no longer than 8 hours to water the tunnel.

1.12. PROJECT: INSTRUMENTATION

1.12.1. Civil/Geotechnical Work

1.12.1.1. General

Instrumentation type, location, depth (as applies), installation, and completion (finish) shall be in accordance with the Instrumentation Plan and applicable USACE and ASTM standards for embankment dam instrumentation for design, stability, and operation. The Instrumentation Plan and Elevation View are included Appendix A and should be used as a guide to required type and locations.

1.12.1.2. Site Inspection

Perform visual inspection of the embankment dam crest, abutment areas, Powerhouse grounds and walls, and Irrigation Intake Tower for proposed instrumentation installation locations. Location of instrument sites, access for installation, and site required work for access and disposal of cuttings from drilling shall be determined from the site inspection and coordination with the Government. All personnel and equipment needed to perform a thorough analysis shall be included in this inspection. Upon completion of the inspection, the contractor shall submit a formal Inspection Report at 65% design phase. (additional detail found in SECTION 013315 SUBMITTAL PROCEDURES). At a minimum, the report shall provide additional detail, pictures, and findings of every location or component as found in the Bid Schedule, SECTION 011100 and SECTION 010150 TECHNICAL REQUIREMENTS.

1.12.1.3. Design/Manufacture

Instrumentation type shall be in accordance with applicable standards for materials, assembly, installation, and testing so that it will be complete and acceptable for use.

Designs and catalogue sheets for all equipment shall make reference to and be appended to the Site Inspection Report.

1.12.1.4. Installation and Site Work

Locks for all instruments shall be keyed alike where possible. Provide approved locks and keys. Use the following references for design.

- a. Piezometers - reference for design include ASTM D5092, ER 1110-2-110, ER 1110-1-1807, and EM 1110-2-1908.
- b. Survey monuments and pillars – reference for design includes EM 1110-2-1009, EM 1110-2-1908, EM 1110-2-4300, and associated references.

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1.12.1.4.1. Piezometers

Install piezometers in the downstream Transition Zone and the Rock Fill Zone as illustrated in the Proposed Instrumentation plan drawings in Appendix A. Install the same number of open tube piezometers and corresponding sensing zone(s) as shown in the Proposed Instrumentation plan drawings or as specified in accordance with ASTM D5092 and USACE guidance as applicable, complete and ready for use including locking cover or caps over each piezometer. Provide three (3) portable battery operated water level meter sensing units with light and sounding buzzer to indicate water with markings in meters and millimeters. Two sensing units shall have 100 meter length cables and one unit shall have a 50 meter cable. Sensing units shall be Stevens Water Monitoring Systems, In. Contact Meter or the Durham Geo Slope Indicator Water Level Indicator (230 mm reel – 100 m cable and 180 mm reel – 50 m cable), or equivalent.

1.12.1.4.2. Survey Monuments and Pillars

Install permanent survey monuments and survey pillars for the alignment lines shown as approved on the drawings in Appendix A (See CLN 0005). All monument points and pillars shall include covers or caps to provide secure installations, complete and ready for use. Work to be designed and installed in accordance with EM 1110-2-1009, EM 1110-2-1908, EM 1110-2-4300, and associated references. Typical installation designs drawings are included in Appendix A. Existing survey reference elevations and survey monuments will be provided by the Government. Pillar types and monument point installations are shown in the drawings to provide a design basis.

1.12.1.4.3. Survey Instrumentation

The Contractor shall provide the necessary survey instrumentation and training to project staff (See CLN 0005). The intent is to allow project staff to detect movement and once detected the standard operating procedure would be to obtain the services of a qualified land surveyor capable of a deformational survey. Reference EM1110-2-1009 Structural Deformation Surveying – Embankment Structures Earth-Rockfill Dams and Levees. The deflection tolerances for measurement is ± 20 -30mm for slope/crest stability and alignment, and ± 10 mm for settlement.

Contractor shall provide a low technology system for measuring movement of the monuments. Survey system examples include an optical transit, or line laser used in tandem with simple staff gauges. The proposed low tech system and monument design should not preclude the use of future systems that include higher precision.

1.12.1.4.4. Staff Gages

Install staff gages for visual reference of pool elevation and tailrace elevation (See CLN 0005). Porcelain enameled staff gages similar to Stevens Water Monitoring Systems Style M metric measurement staff gages shall be installed with figure plates to denote pool elevation from elevation 1007 m to 1050 m and for tailrace elevation from elevation 962 m to 974 m. Staff gages panel or board and mounting to be Contractor designed. Equipment to be supplied shall include an optical spotting scope or binocular

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of sufficient magnification to read the pool elevation staff gage from a distance of 200m, or the distance from the Power Intake to the Irrigation Intake Structure where the pool staff gage will be mounted on the northwest leg of the intake structure. The tailrace staff gage shall be mounted on the upstream wall of the Powerhouse facility near the elevation reference point.

1.13. SPARE PARTS

1.13.1. Bridge Crane

- a. Furnish two (2) replacement bearings and couplings of each size for the bridge drive, trolley drive, and hoist.
- b. Furnish one (1) complete set of standard replacement parts and wear items for all motors, speed reducers, bearings, and couplings.
- c. Furnish one (1) complete set of special tools specific to crane components.
- d. Furnish five (5) years worth of consumables for servicing, based on the manufacturer's recommended service intervals.

1.13.6. Electrical Controls

- a. Furnish four (4) indicating light assemblies of each type used
- b. Furnish four (4) indicating light lens of each color used
- c. Furnish two (2) control relays of each type used
- d. Furnish five (5) fuses of each type and rating used
- e. Furnish two (2) control transformers of each type and rating used
- f. Furnish two (2) control (selector) switches of each type used
- g. Furnish two (2) pushbutton assemblies of each type used
- h. Furnish a minimum of two (2) for any other replaceable control component used.

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1.14. OPERATIONS AND MAINTENANCE (O&M) -

See SECTION 017810 OPERATION AND MAINTENANCE DATA for shop, assembly, and operations and maintenance drawing and data requirements.

PART 2 PRODUCTS (Not used)

PART 3 EXECUTION (Not used)

-- END OF SECTION --

**SECTION 00 80 00
SPECIAL CLAUSES**

REVISED 29 JUL 2011

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:

- a. The Contractor's Quality Control (CQC) Program,
- b. The Contractors Accident Prevention Program,
- c. Submittals,
- d. Correspondence,
- e. Schedule,
- f. Access to the work site,
- g. Security requirements,
- h. Interface requirements,
- i. Temporary facilities and services,
- j. Hazards and risks,
- k. Working after normal hours or on weekends or holidays,
- l. Assignment of inspectors,
- m. Representations,
- n. Special requirements,
- o. Phasing,
- p. 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 notice to proceed 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:

- a. The proposed location and dimensions of any area to be fenced and used by the Contractor;
- b. Construction plant and building installations/the number of trailers and facilities to be used;
- c. Avenues of ingress/egress to the fenced areas and details of the fence installation;
- d. Drawings showing temporary electrical installations;
- e. Temporary water and sewage disposal installations;
- f. Material storage areas;
- g. Hazardous storage areas.
- h. Any areas that may have to be graveled shall also be identified.
- i. The plan shall also include a narrative description of the building structural system, the site utility system and the office or administration facilities.
- j. 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 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 provided by the Contractor and made available for use by Government personnel as requested.

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. The 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 in accordance with Contract Section 01040.

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 any applicable 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 any applicable 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. Contractor shall be responsible for fencing off individual project sites within the total contract limits to control safe access to individual project areas and to control movement of personnel and materials.

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/borrow pit 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 meet the requirements of Contract Section 01040 SECURITY and 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 CONNECTIONS TO EXISTING UTILITIES

1.6.1 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.

1.6.2 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.

1.6.3 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.

1.6.4 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.

1.6.5 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.

1.7 TEMPORARY OUTAGES OF EXISTING SERVICES

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.

1.8 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 ELECTRICITY

Electrical service is not available for use under this contract; therefore all electric current required by the Contractor shall be the responsibility of the Contractor, furnished at his own expense. The Contractor shall provide diesel generators to meet his demand requirements. 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.

1.10 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".

1.10.1 EXTERIOR NIGHT LIGHTING

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

1.11 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.

1.12 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.

1.13 CERTIFICATES OF COMPLIANCE

Any certificates required for demonstrating proof of compliance of materials with specification requirements shall be executed in accordance with Section 01 33 15 SUBMITTAL PROCEDURES. 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.

1.14 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 South at Kandahar, Afghanistan.

1.14.1 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. The

Contractor shall provide a copy of company policy statement of Accident Prevention and any other guidance as required by EM 385-1-1, Appendix A.

1.14.2 GROUND FAULT CIRCUIT INTERRUPTER (GFCI) REQUIREMENT – OVERSEAS CONSTRUCTION

The Corps of Engineers Health and Safety Manual, EM 385-1-1, section 11.D.05.b. 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.

1.14.3 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.

1.15 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.

1.16 SPARE PARTS

1.16.1 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 Section 01 01 50 TECHNICAL REQUIREMENTS. The Contractor shall furnish spare parts 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.

1.16.2 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.

1.16.2.1 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.

1.16.2.2 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.

1.16.2.3 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.

1.16.2.4 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.

1.16.3 WARRANTY

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

1.16.4 PAYMENTS FOR SPARE PARTS

Payments for spare parts specifically required in this contract shall be considered as part of those equipment costs and shall be included in bid items as appropriate. 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 bid items of this contract. Payment for the spare parts portion of the appropriate bid items will be made after the spare parts have been accepted at the site by the

Contracting Officer. Payments for equipment costs 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 bid items of this contract and no additional cost except as provided herein will be allowed.

1.17 OPERATION AND MAINTENANCE (O&M) DATA

1.17.1 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.

1.17.2 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 01 33 15 SUBMITTAL PROCEDURES of the specifications.

1.17.3 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 "tri-lingual" in Dari, Pashto and English. 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 01 33 15 SUBMITTAL PROCEDURES.

1.17.4 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.

1.17.5 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.

1.17.6 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.

1.17.7 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 re-submittals 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.

1.18 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.

1.19 TIME EXTENSIONS

1.19.1 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.

Helmand Province

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	
14	7	4	6	1	0	1	1	0	1	6	12	53

1.19.2 WEATHER DELAYS

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.

1.19.3 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.

1.20 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.

1.21 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.

1.21.1 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.

1.22 EMPLOYEE ACCESS TO PROJECT SITE

1.22.1 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.

1.22.1.1 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.

1.22.1.2 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.
- m. Registration, insurance company, policy number and expiration date for each vehicle.

1.22.2 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 Afghan Law.

1.23 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.

1.24 PUBLIC RELEASE OF INFORMATION

1.24.1 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.

1.24.2 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.

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 South, neither controls nor is responsible for any such installation access procedures, requirements or changes thereto.

-- END OF SECTION --

KAJAKI IRRIGATION INTAKE STRUCTURE AND PIEZOMETERS REPAIRS

SECTION 01 10 10 CONTRACTOR'S OPERATIONS AND REQUIREMENTS

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SECTION 01 10 10 CONTRACTOR'S OPERATIONS AND REQUIREMENTS

PART 1 GENERAL

1.1. DESCRIPTION OF WORK

This section covers general requirements applicable to specific Contractor's operations or equipment.

1.2. REFERENCES

The publications listed below form a part of this specification to the extent referenced. The publications are referred to in the text by basic designation only.

U.S. ARMY CORPS OF ENGINEERS (USACE)

EM 385-1-1	(2008) Safety and Health Requirements Manual
EP 310-1-6A	(2006) Sign Standards Manual, Vol 1
NWPR 385-1-93	Engineering Regulation, Diving Operation by Contract

U.S. NATIONAL ARCHIVES AND RECORDS ADMINISTRATION (NARA)

29 CFR 1910.94	Ventilation
29 CFR 1910.95	Occupational Noise Exposure
29 CFR 1910.1000	Air Contaminants
29 CFR 1926.52	Occupational Noise Exposure
29 CFR 1926.55	Gases, Vapors, Fumes, Dusts, and Mists
29 CFR 1926.57	Ventilation
29 CFR 1926.62	Lead
29 CFR 1926.101	Hearing Protection

1.3. SUBMITTALS

Government approval is required for submittals with a "G" designation; submittals not having a "G" designation are for information only. When used, a designation following

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the "G" designation identifies the office that will review the submittal for the **Government**. Submit the following in accordance with SECTION 013315, SUBMITTAL PROCEDURES, and 013526, GOVERNMENTAL SAFETY REQUIREMENTS.

SD-01 Preconstruction Submittals

Schedule for Construction; G

Utility Outage Request

Utility Connection Request

Access Agreements and Work Areas; G

Project Security Procedures; G

Personnel Risk Assessment; G

Quarterly Security Awareness Program; G

Temporary Electrical Wiring Plan; G

Contractor's Planned Equipment Methods; G

Plant and Equipment List; G

Loading Diagram; G

Lifting Diagram; G

Loading Plan for Cranes and Heavy Equipment; G

Gas, Vapor, Fume, Dust, and Mist Control Program; G

Disposal Plan; G

SD-06 Test Reports

Survey Field Notebooks

Data Storage

1.4. SCHEDULE FOR CONSTRUCTION

In accordance with Section 00700, Contract Clause 52.236-15, SCHEDULES FOR CONSTRUCTION CONTRACTS, the Contractor shall submit a detailed bar chart schedule for accomplishing the work in this Contract (per SECTION 013201, PROJECT SCHEDULE. The schedule shall be consistent with the completion dates as specified in SECTION 00800, Contract Clause 52.211-10, COMMENCEMENT, PROSECUTION, AND COMPLETION OF WORK. Other Contractor's work shall also be coordinated.

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The Contractor shall submit an updated schedule for **Government** approval on a monthly basis. The updated schedule will be used as a basis to evaluate the Contractor's progress for purposes of payment. Lack of an updated schedule will result in an inability of the Contracting Officer to perform a full evaluation of the Contractor's progress and will result in the Contracting Officer withholding payment until an updated schedule has been submitted and approved.

1.5. PERMITS AND RESPONSIBILITIES

It will be the responsibility of the Contractor to obtain all permits and licenses required for this project as required under Section 00700, Contract Clause 52.236-7, PERMITS AND RESPONSIBILITIES (NOV 1991).

1.6. INCLEMENT WEATHER CONSTRUCTION

The Contractor's schedule shall reflect adverse weather days in all weather dependent activities as defined in Contract Clause 52.236-4, PHYSICAL DATA. The Contractor shall protect work areas from inclement weather, wind damage, and precipitation so that no delay in the prosecution of critical work items, or damage to USACE property occurs. No time extensions will be authorized for materials, work in place, or equipment damaged due to negligence during periods of inclement weather.

1.7. NOTIFICATION OF EQUIPMENT OUTAGE

When required to work in the Intake Structure at the Kajaki Dam, the Contractor shall notify the Government 14 days in advance of the work. This will allow the Government to coordinate with MEW for Contractor access. The Government will make every effort to have the equipment on-line when practical.

1.8. UTILITY OUTAGE REQUEST AND UTILITY CONNECTION REQUEST

Obtain digging permits prior to start of excavation. Notify the Contracting Officer at least 72 hours prior to starting excavation work. Contractor is responsible for marking and verifying all utilities not marked.

The Contractor shall verify the elevations of existing piping, utilities, and any type of underground [or encased] obstruction not indicated or specified to be removed but indicated in locations to be traversed by piping, ducts, and other work to be conducted or installed. Verify elevations before installing new work closer than nearest manhole or other structure at which an adjustment in grade can be made.

Work shall be scheduled to hold outages to a minimum.

Utility outages and connections required during the prosecution of work that affect existing systems shall be arranged for at the convenience of the Government and shall be scheduled outside the regular working hours or on weekends.

Contracting Officer may permit utility outages at his discretion.

Contractor shall not be entitled to additional payment for utility outages and connections required to be performed outside the regular work hours.

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Requests for utility outages and connections shall be made in writing to the Contracting Officer at least 14 calendar days in advance of the time required. Each request shall state the system involved, area involved, approximate duration of outage, and the nature of work involved.

1.9. WORK BY THE GOVERNMENT CONCURRENT WITH CONTRACTOR WORK

The **Government** will limit interference with the Contractor's work to the maximum reasonable extent and the **Government** and Contractor shall coordinate as necessary.

1.9.1. WEEKLY COORDINATION MEETINGS

Weekly coordination meetings will be held between the Contractor and the **Government**. This meeting will be used to discuss the Contractor's safety, submittals, schedule, actual progress in the last week, and work planned in the upcoming two weeks. The Contractor shall make particular note of any work requiring Project support or potential impacts to Project operations or maintenance. A meeting time and place shall be mutually agreed upon for the same time each week. The Contractor shall distribute the coordination meeting notes with changes to the **Government** no later than the close of business the first workday following the weekly meeting.

1.10. PARTNERING

The **Government** intends to encourage the foundation of a cohesive partnership with the Contractor and its subcontractors. This partnership will be structured to draw on the strengths of each organization to identify and achieve reciprocal goals. Among the objectives are effective and efficient Contract performance and are intended to achieve completion within budget, on schedule, and in accordance with the plans and specifications; and to develop a single cooperative management team focused on the success of the project to mutual benefit of all stakeholders. This partnership will be bilateral in makeup, and participation will be totally voluntary. Any cost associated with effectuating this partnership will be agreed to by both parties, and will be shared equally with no change to the Contract price. An integral aspect of partnering is the resolution of disputes in a timely, professional, and non-adversarial manner through the use of issue clarification and problem solving. Alternate Dispute Resolution (ADR) methodologies will be encouraged in place of the more formal dispute resolution procedures. ADR will assist in promoting and maintaining an amicable working relationship to preserve the partnership. ADR is a voluntary, non-binding procedure available for use by the parties to this Contract to resolve any dispute that may arise during performance.

1.11. CONTRACTOR EMPLOYEES

The Contractor shall insure that all employees are capable of demonstrating adequate knowledge of tools, supplies, equipment and techniques necessary to competently perform the work. All personnel employed by the Contractor shall be fully qualified in their respective fields to render the services necessary. The **Government** may require the Contractor to discontinue using any employee in the performance of the work specified in this Contract determined by the **Government** to be unsatisfactory.

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Contractor employees will not be permitted to bring guests, family members or non-employees to the job site at any time.

1.12. ACCESS AGREEMENTS AND WORK AREAS

1.12.1. Access Agreements

Access procedures to and from the work site shall be submitted after the Contractor, the Contract Officer's Representative and the Project's Representative have coordinated and determined the most advantageous access to, and staging of, the Contractor's assets deployed to the work site.

The right-of-way for the work (or delivery site) and access thereto will be furnished as stated in this paragraph subject to mutual agreement between the Contractor and the **Government** concerning the specific route the Contractor is to use. Such mutual agreement must be reached prior to initiation, construction, or delivery.

The existing access roadway and any associated access roads on the Project, shall not be closed as a result of construction or delivery activities associated with this Contract unless previously coordinated and approved by the **Government**. Traffic delays will only be permitted in accordance with the provisions of this section.

When necessary to operate on or to cross existing highways or roads, all necessary permits shall be obtained from the appropriate private or public authority.

In accordance with Section 00700, Contract Clause 52.236-13 Alt I, ACCIDENT PREVENTION - ALTERNATE I and the referenced EM 385-1-1, when necessary for equipment to operate on or to cross access roads, arterial roads or highways, flaggers, signs, lights, and/or other necessary safeguards shall be furnished to safely control and direct the flow of traffic.

Spillage on the Project roads and State or County roads will not be permitted, and the spillage shall be immediately cleaned up at the expense of the Contractor.

No cleated or crawler-type equipment shall be operated on paved surfaces.

Damage to all roads caused by the Contractor's operations shall be repaired to preexisting conditions at the expense of the Contractor.

1.12.2. Work Areas

Drawings showing the layout of the area proposed for use shall be submitted for review and approval and comply with Contract Clause 52.236-10, OPERATIONS AND STORAGE AREAS. The drawing(s) shall show the location of the principal components: offices, access roads, parking, storage facilities and disposal areas, which the Contractor proposes to construct within the designated limits.

Only Contractor and subcontractor parts trailers and lunch trailers may be allowed in the Contractor work areas and these shall be subject to COR and Project approval. All

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Contractor and subcontractor trailers shall be required to be adequately physically anchored to prevent overturning due to high winds.

Should additional working space or lands within the **Government** right-of-way be required for material yards, job offices, or other purposes they can be obtained through agreement with the **Government** approved in writing. When directed at any time during the progress of the work when space is needed within the right-of-way for other purposes, any part of the grounds that have been in use shall be promptly vacated and cleaned up. However, it is not the intent to require the Contractor's plant or material to be removed from an area while such plant, material, or area is still being actively used.

The Project staff will brief the Contractor on security procedures. Any such procedures will not be the basis for claims for additional money or time. The Project areas off limits to Contractor personnel will also be designated.

Salespersons or personnel seeking employment will not be permitted inside the Project security fences without prior **Government** approval.

1.12.3. Employee Access and Parking

The Contractor's employee private vehicle parking areas shall be restricted to the area as agreed upon before construction or delivery. The Contractor shall keep the parking areas free of litter and debris. An adequate number and size of trash receptacles shall be placed in the parking areas and emptied, as necessary to avoid overflowing. Trash receptacles shall be adequately secured to provide protection from the wind and animals.

1.12.4. Public Access

The public shall have permanent access to their residences all located within the security fence. Barricades or temporary fencing shall be provided to prevent the public from entering the Contractor's work areas as applicable.

1.13. PROJECT SECURITY PROCEDURES

1.13.1. Project Security

The Project is [not] open to the public during daylight hours. After dusk the security gates are locked and unmanned. A procedure shall be submitted for approval for identification and control of employees entering or leaving the Project during the hours of closure.

Arrangement and scheduling of working hours and crews shall be coordinated through the COR with the Project Staff. The working hours of the Project Staff are Saturdays through Thursdays from 6:30 a.m. until 5:00 p.m. Fridays are non-working days. Working hours that extend past 5:00 p.m. weekdays or on weekends and holidays shall be coordinated through the COR and approved by the Project Staff. The Contractor shall submit the intended working hours of his staff on site and identify any employees working for him in any capacity in accordance with the subparagraphs entitled Contractor's General Personnel and Identification of Employees.

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The security of the Contractor's property and items furnished under this Contract, until the **Government** accepts items, are the Contractor's responsibility whether stored inside or outside.

All Contractor personnel, subcontractor personnel, suppliers, etc. shall comply with the Project's security policies. Salespersons or personnel seeking employment will not be permitted inside the Project. Costs associated with Contractor failure to comply with the Project security policies shall be at the expense of the Contractor.

Signs may be erected outside the project containing instructions for personnel seeking the Contractor. The content and location of the signs shall be approved by the COR prior to erection. Posts or other means of support, if required, shall be furnished by the Contractor and removed when the Contract is completed. Any open post holes shall be suitably backfilled prior to the end of the shift that posts are removed and any other damage shall be repaired to preconstruction conditions.

1.13.2. Identification of Employees

The Contractor shall submit a complete, dated and signed, list of all personnel and their titles who will be working on the project at the Weekly Coordination Meeting. This listing shall be revised, resubmitted, and Government-prescribed cards/keys returned when personnel changes occur. The Contractor shall obtain the Government-prescribed cards/keys from the Project Security Office prior to engaging in work on the project. The Contractor shall furnish a written request containing the following minimum information to the COR at least one week in advance of receiving the cards/keys:

Name of Contractor

Name of employee

Employee's birth date

Employee's place of birth

Employee's recent identification with photo

Other employee information as needed based on security level

Within 24 hours of the release of any employee and within seven days of the end of construction, the Contractor shall collect and return all Government-prescribed cards/keys to the Project Security Office. Failure to return any Government-prescribed cards or keys will result in a \$250 per item charge to the Contractor. These fees will be deducted from the Contractor's monthly payment at no additional cost to the Government.

1.13.3. Foreign Born Employees (DOES NOT APPLY)

1.13.4. Identification of Contractor Vehicles

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All Contractor's vehicles shall have Government Furnished Project Parking Tags displayed at all times while the vehicles are on the project. The Contractor shall obtain the Parking Tags from the Project Administration Officer. The Contractor shall be responsible for obtaining Parking Tags for each vehicle prior to the vehicle's work on site, and for requiring each vehicle engaged on the work to display such identification. All prescribed identification shall immediately be delivered to the Government for cancellation upon removal of the vehicle from the project. Failure to return the parking tag upon the dismissal or release of an employee will result in a \$250/item charge to the Contractor. This fee will be deducted from the Contractor's monthly payment at no additional cost to the Government. All Contractor vehicles used for prosecuting the work shall have a Contractor sign or other permanent identification and must carry the required insurance. Private vehicles not owned by the Prime Contractor or Subcontractors shall not be used for prosecuting the work.

1.13.5. Use of Private Vehicles

Private vehicles of the Contractor and his employees shall enter and leave the project as directed. Parking shall be restricted to approved areas.

1.14. SUPPLEMENTAL SECURITY REQUIREMENTS

This contract requires the Contractor employee to have authorized unescorted access to the project site. A Project Specific ID Badge will be issued per subparagraph entitled Identification of Employees. All prescribed identification badges shall immediately be returned to the Project Administration Office for cancellation upon the release of the employee or termination of the Contract.

1.14.1.1. Criminal Check

The Contractor shall obtain a criminal background check, completed within the last seven-years, on all Contractor personnel that require authorized unescorted access to the Powerhouse. A minimum of a seven-year criminal background check with the state patrol office shall be performed from all states of residence and employment, for the past seven years. The Project Security Officer through the Contacting Officer's Representative will approve, disapprove, or revoke authorized unescorted access to the Powerhouse as a result of the seven-year background check

1.14.1.2. Identity Verification

Contractor employees shall provide positive verification of individual identity prior to authorize unescorted access to the Powerhouse. Acceptable forms of identity verification are documents issued by a federal **Government** agency that include: the individual's photograph, name, and date of birth, such as a passport or military identification (ID) card. Additionally, a state issued driver's license or ID card is acceptable for identity verification.

The Criminal Check and Identity Verification shall be updated at least every seven years for each employee requiring authorized unescorted access to the Powerhouse.

1.14.1.3. Escort Requirements

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Contractor personnel not cleared for authorized access to the Powerhouse may be escorted by **Government** or Contractor personnel that have authorized unescorted access to the Powerhouse. All costs related to the escorting of non-cleared personnel shall be at the expense of the Contractor. Additional burden shall not be placed upon the **Government** to provide these escorts. Prior to access, coordination with the Project Security Officer is required, including but not limited to:

Verification of identity via picture identification

Name of escorting individual and verification of unescorted status

Time of entry into the Powerhouse

Time exiting the Powerhouse

1.14.2. Security Programs

1.14.2.1. Quarterly Security Awareness Program

The Contractor shall submit and maintain a quarterly security awareness program for employees requiring authorized unescorted access to the Powerhouse. Security awareness documents will be provided by the Project Security Officer and shall be distributed to Contractor personnel by the Contractor. Costs associated with the distribution of the security awareness documents shall be at the expense of the Contractor. These documents shall be distributed using direct (email, memos, computer training, etc) and indirect (posters, brochures, etc) communications.

1.15. PROJECT SAFE CLEARANCE PROCEDURE

See SECTION 013526, **GOVERNMENTAL** SAFETY REQUIREMENTS, for Project Safe Clearance Procedure requirements.

1.16. PROJECT SIGN

One project sign shall be fabricated, erected, and painted in accordance with the details shown in Attachment A3, (EP 310-1-6A), located at back of specifications package. The sign shall be prepared and installed within three days of beginning site work.

1.17. UTILITIES

1.17.1. General

The Contractor shall furnish utilities required for the performance of work under this Contract, except **Government**-furnished electrical power, water, as described below. Contractor shall also reference the requirements in SECTION 00 80 00 Special Clauses.

1.17.2. Sanitary Facilities

Project sanitation facilities will not be available. Contractor shall provide portable temporary sanitary in accordance with EM 385-1-1.

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1.17.3. Electrical Power

1.17.3.1. General

Contractor should assume that power is not available in the immediate vicinity of the Irrigation Intake Structure. Contractor should import and set up the emergency generator (Optional item) to provide power for construction.

Use of existing 120V and 480V electrical outlets is allowed. Contractor shall take special care not to overload receptacle circuits. Contractor shall be responsible for all accessories, such as extension cords, adapters, and raceways for road crossings. Extension cords shall not be allowed to cross crane rails. Government-furnished or public utility electrical power is available for the Contractor's use.

1.17.3.2. Temporary Electrical Wiring

The Contractor shall submit a Temporary Electrical Wiring Plan for temporary electrical wiring. All temporary electrical wiring shall be installed in accordance with EM 385-1-1 and as approved. All temporary electrical wiring shall be removed prior to completion of the Contract.

1.17.4. Telephone

Telephone will not be available for Contractor use.

1.17.5. Water

All reasonable amounts of water for domestic use (not for concrete curing or construction purposes) will be made available from existing outlets and supplies. No charge will be made for the water.

1.18. CONTRACTOR'S EQUIPMENT

1.18.1. Contractor's Planned Equipment Methods

The proposed methods of transportation and operation of cranes and other heavy equipment shall be submitted by the Contractor to the **Government** and approved by the **Government** before commencement of those operations. Submittals shall include the type, size, and loadings of equipment, and the proposed transportation routes and work areas to be used on the project. Operation of heavy equipment adjacent to existing structures shall be avoided when possible. Testing requirements and operation of cranes and other heavy equipment shall be in accordance with EM 385-1-1. All cranes, rigging, lifts, operators, and other necessary means to move equipment or items shall be Contractor-furnished and shall comply with EM 385-1-1.

1.18.2. Plant and Equipment List

The Contractor shall provide a complete list of all plant and equipment, exclusive of shop equipment, to be used on the project within seven days prior to commencing site operations. An up to date plant and equipment list shall be submitted with the end of the month request for payment, throughout the life of the Contract. The lists shall include rented equipment as well as lease purchase or sale leaseback equipment. The

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initial list and the revised monthly lists shall indicate dates equipment is assigned to or removed from the project, dates deadlined for repairs and returned for use, dates of the most recent and planned inspections, and adequate identification or description of each item of equipment including manufacturer's name (abbreviated), model number, manufacturer's serial number, year of manufacture, and Contractor's assigned serial or record number.

1.18.3. Movement of Equipment by the Contractor

All cranes, rigging, lifts, operators, vehicles, and other necessary means to move equipment or items shall be Contractor-furnished as required to pursue and complete the work. A Loading Diagram showing wheel loads and wheel spacing shall be submitted and approved prior to operating any equipment or vehicles in excess HS-20. Prior **Government** coordination and approval for such loads shall be obtained before proceeding.

1.19. CONTRACTOR USE OF CRANES

The Contractor will be allowed to use Project cranes for any work or access. The Contractor shall use Contractor provided equipment to facilitate installation or handling of items and equipment for this Contract.

1.20. CRANES AND HEAVY EQUIPMENT

1.20.1. Contractor Crane Safety

Contractor's cranes and equipment furnished for this work shall conform with all applicable OSHA requirements, EM 385-1-1, and with SECTION 00700, Contract Clause 52.236-13 Alt I, ACCIDENT PREVENTION - ALTERNATE I. Contractor shall submit a Lifting Diagram addressing such issues as lift, trim, maximum load, maximum wind speed, lifting radius and all other applicable information required by EM 385-1-1 and OSHA. The lifting diagram shall be submitted 30 days prior to site work. **A Lifting Diagram including deck protection shall be submitted and approved prior to using any cranes on Irrigation Intake Structure.**

1.20.2. Contractor Crane Testing

All Contractor cranes shall be tested in accordance with EM 385-1-1 prior to use on the project and the tests shall be witnessed by the COR. Forty-eight hours notice of the test, excluding weekends and federal holidays, shall be given by the Contractor.

1.20.3. Contractor's Cranes and Heavy Equipment

The planned method of transportation and operation of Contractor provided cranes and other heavy equipment to be used in the performance of this Contract shall be submitted for **Government** approval and coordinated with the COR. This loading plan for cranes and heavy equipment shall include the type, size, loading, and placement of outriggers of all cranes or heavy equipment and the proposed transportation routes and work areas to be used on the project. Operation of heavy equipment adjacent to existing structures shall be avoided when possible.

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1.20.4. Air Cranes

If air cranes are used the following additional requirements apply:

a. Mobilization and Demobilization. The Contractor shall mobilize to the site in the vicinity of the dam. Contractor shall accompany Corps representative on inspection of staging areas prior to construction for inspection and observation of existing conditions. Contractor shall return access routes and staging areas to pre-construction conditions after completion of project to the satisfaction of the COR.

b. Helicopter/Rotorcraft Safety. Pursuant to rotorcraft operations required by the contract, EM 385-1-1 shall be followed with specific attention given to Section 16.P, Handling Loads Suspended from Rotorcraft and Section 32, Aircraft and Aircraft Operations. As a minimum and not all-inclusive, the following items shall be addressed in the safety plans for rotorcraft operations:

1. Notice to Airmen
2. AHA for the following
 - No lifting over personnel
 - Fire protection
 - Hearing protection
 - Hard Hats
 - Goggles for ground crew
 - Static of rigging line
 - Placing the bags
 - Removing debris
 - Locating and or picking equipment
3. Fire Protection procedures to include the SOP for hot fueling
 - Fueling procedures and containment
 - Fire protection on site (Fire extinguisher)
 - Grounding procedures
 - Site security
4. Rigger qualifications
5. Radio communication
6. Emergency operations if Helicopter has mechanical problems
7. Landing location
8. Helicopter and Rigging information on the line and hook to ensure adequate strength for the loads to be lifted

1.21. DAMAGED EQUIPMENT OR ABNORMAL CONDITIONS

The COR shall be informed immediately upon finding any damaged equipment or other abnormal conditions involving additional work in which the Contractor believes it has no responsibility. The failure or abnormality shall not be disturbed until witnessed by the COR. Prior to proceeding further with work on the unit, the Contractor and the **Government** shall agree in writing as to the responsibility for the damage or abnormality. Any damage or abnormal conditions not reported as specified above shall also be corrected.

1.22. DUST CONTROL

All necessary measures shall be taken to effect maximum control of all dust and welding fumes created by operations under this Contract. To the maximum extent possible, all dust and dirt shall be removed by vacuum cleaning. Gasoline or diesel engine

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equipment may not be used inside the Irrigation Intake Tunnel. Air, electrical, propane, or battery-driven equipment may be used inside the Powerhouse.

1.23. NOISE CONTROL

1.23.1. General

Noise control and noise levels shall conform to requirements set forth in the appropriate regulations, including EM 385-1-1, Section 05.C, 29 CFR 1910.95, 29 CFR 1926.52 and 29 CFR 1926.101. The most conservative requirement shall govern.

1.23.2. Nighttime Noise Limitations

During construction, the noise levels, as measured from the nearest dwelling, shall not exceed 50decibels during the hours from 2200 hours to 0700 hours.

1.24. USE OF EXPLOSIVES

The use of explosives will not be permitted.

1.25. UNEXPLODED ORDNANCE (UXO)

1.25.1. UXO REMOVAL AND CLEARANCE

The area is known as the Kajaki Dam, Afghanistan. From the data provided for this project an assessment has been made that the area located within the boundaries of grid coordinates:

41SPR9973278079

41SPR9972078289

41SPR9929878363

41SPR9915578213

41SPR9954277772

can be classified as a LOW probability in regards to a UXO/Mine threat. This area may have been cleared prior to USACE record keeping by Coalition military forces or United Nations Mine Clearance Personnel in which a clearance certificate may not have been generated.

The developed portions of the land are occupied by **U.S. and Afghanistan Forces**. This site has seen numerous construction and grading projects and road and foot traffic in the past.

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When an assessment of LOW probability is applied to this site it only delineates that the site appeared to be free of UXO/Mines from the data provided and encountering UXO or Mines is unlikely. If ANY UXO/Mines are located on a site deemed LOW probability, all work in the immediate area must cease until further assessment can be conducted by the UN Mine Action Coordination Center. Also please notify the AES project construction representative for further guidance.

It is the responsibility of the Contractor to be aware of the risk of encountering UXO or 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 or mine, unless they have appropriate accreditations from the UNMACA MAC.

If a UXO or mine is encountered after a MAC-approved clearance certificate is provided to the **Government**, UXO or mine disposal shall be handled in accordance with SECTION 010150, TECHNICAL REQUIREMENTS.

1.26. DISPOSITION OF MATERIALS

1.26.1. General

The location of the Contractor's off-site disposal area and a plan for safe disposal of material shall be submitted in the Disposal Plan. All demolished material and miscellaneous materials shall be disposed of off-site in conjunction with **SECTION 0157 20.00 25, ENVIRONMENTAL PROTECTION**, and in accordance with all local, State, and Federal rules and regulations.

1.26.2. Daily Cleanup and Disposal

Work areas shall be kept reasonably neat on a daily basis. All debris resulting from the work, such as waste metalwork, packing cases, scrap lumber, and other debris shall be collected, removed, and disposed of off-site at least once per week. The **Government's** trash cans, dump boxes and other containers shall not be used. Liquid waste shall not be disposed of in Project drains. All costs of removing debris shall be incidental to the work, and therefore, no separate payment shall be made.

1.26.3. Disposal and Salvage of Equipment and Miscellaneous Materials

Title to all materials and equipment to be disposed of, excepting materials salvaged for the **Government** will be vested in the Contractor when beginning disassembly work or when such materials and equipment are designated as scrap. The **Government** will not be responsible for the condition, loss, or damage to such property after title transfer. The Contractor may retain these items in usable form and take possession of them providing that there is no subsequent cost or inconvenience to the **Government**. The **Government** does not guarantee that these items are complete or in working order and the Contractor shall assume responsibility for any damages caused by their use immediately upon taking possession of them.

1.27. SALVAGE

Some items will remain the property of the **Government** during the Contract and after completion. Salvage shall include removal of the material, equipment, etc., from its present location and transporting, bundling, protecting, cleaning, and storing it on-site as directed. Salvage items will be those specified. Adequate property control records shall be maintained for all materials or equipment specified to be salvaged. These records may be in accordance with the Contractor's system of property control. The Contractor shall be responsible for the adequate storage and protection of all salvaged materials and equipment and shall replace all salvage materials and equipment which are stolen, broken, or damaged during the salvage operations as the result of the Contractor's negligence, or while in the Contractor's care.

1.28. CARE OF DRAINS

Existing intake structure floor drains including the de-watering drains, transformer cell drains, roadway deck, and crane rail drains shall not be used for disposal of any solid material and or any liquids other than clear water. The Contractor shall demonstrate that the pipes and drains are unobstructed when so directed and shall clean and remove materials from drains when obstructed.

1.29. LEAD BASED PAINT

Lead paint is suspected to be present on the metal works at the intake structure. Any paint removed from the guides for drilling for reinforcing shall be completed with a chemical paint stripping compound and contained for proper disposal. The Contractor shall take care to minimize the amount of hazardous waste generated. Only local areas subject to drilling must have the lead based paint removed prior to drilling. Paint strippers shall not be allowed to be used below the water surface or come in contact with water. Rags used to remove paint may be disposed with the Project's hazardous waste stream. Generated waste shall be placed into approved DOT drums (1A1/1A2). The Project Environmental Compliance Coordinator shall be notified when drums are full and ready for disposal. The Contractor is responsible for following all EPA, OSHA, and EM 385-1-1 standards, as well as 29 CFR 1926.62, all State, and Local ordinances pertaining to the proper removal, handling, and disposal of hazardous waste. Chemical paint strippers shall contain no methylene chloride. The removal, handling, and disposal of LBP shall be considered incidental to the work and no separate payment will be made therefore.

1.30. PROTECTION OF MATERIAL AND WORK

All materials, supplies, tools, equipment and **Government** property (including all tools, equipment, and special devices supplied by the Contractor and to be turned over to the **Government** at the end of the Contract) shall at all times be protected and preserved in an approved manner. If material, equipment, supplies, and work performed are not adequately protected, such property may be protected by the **Government** and the cost thereof will be charged to the Contractor or deducted from any payment due.

1.31. PROTECTION OF EXISTING UTILITIES

The existing utilities shall be protected in accordance with Contract Clause 52.236-9, PROTECTION OF EXISTING VEGETATION, STRUCTURES, EQUIPMENT, UTILITIES, AND IMPROVEMENTS. Repairs shall be made immediately and at Contractor's expense.

1.32. PROTECTION AND RESTORATION OF EXISTING FACILITIES

All existing facilities shall be protected whether or not shown on the drawings or referenced in the specifications. Upon completion of the work, all the existing facilities, not included as a portion of the work, shall be left in a condition equal to the original condition prior to the Contract. Costs for repair and restoration of any facilities shall be considered to be incidental to and included in the Contract price.

1.33. RESTORATION OF PROJECT ROADS

Project roads used for construction access will be evaluated and restored to their original condition by the Contractor as required.

1.34. CONTRACTOR SURVEY DATA

1.34.1. General

In addition to Contract Clause 52.236-17, LAYOUT OF WORK, A land surveyor with a minimum of 10 years experience shall perform Contractor surveys. Waterproof Survey Field Notebooks shall be submitted and shall be written in a legible, sequential manner. No erasures are to be made. Field notes shall be reduced and checked with each page initialed by the reviewer. Initial reductions shall be made in black pencil; corrections by reviewing personnel shall be in red pencil. An electronic data collection device may be used, provided that the resulting field data is submitted on 8 1/2- by 11-inch paper. Written data collector information shall contain the offset distance from the location line/preliminary line/base line; the elevation reading; the station; and a brief feature description. Information submitted shall be labeled to indicate each facet of work and include all computations and coordinates. Each notebook submitted shall bear the signature and seal of a registered land surveyor following the statement: "I certify that the data in this field notebook has been reviewed and checked and is true and correct."

1.34.2. Data Storage

In addition to field notes a CD shall be submitted using the current version of Microsoft Windows© Operating System. The file shall contain coordinates, elevations, and station values relating to control points on the location line/preliminary line/base line and cross sections along the line. The information shall be IBM PC compatible, and presented in the American Standard for Information (ASCII) format. Data on the disk shall conform to the following format:

An 80-column format with 15 columns devoted to Northing coordinates, Easting coordinates, elevations, and location line/preliminary line/base line station values. The remainder of the 80 columns is reserved for additional designations.

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The Northing (Y) and Easting (X) coordinates and elevation values shall be shown to three places to the right of the decimal and be right justified.

A point identification abbreviation shall be entered in the field immediately right of the station value. Typical points and identifications are: angle point (AP); back tangent (BK TAN); forward tangent (FWD TAN); angle split (A SPLT); point of curve (PC); point of tangent (PT); and other significant features such as top of rock, centerline of road, railroad bridge, edge of pavement, corner of building, etc.

PART 2 PRODUCTS
Not used.

PART 3 EXECUTION
Not used.

– SECTION END –

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SECTION 01 22 00 MEASUREMENT AND PAYMENT

PART 1 GENERAL

1.1. GENERAL INFORMATION

The price and payment shall constitute full compensation for all work relating to each contract line item number (CLIN) as herein specified, as shown, or as otherwise approved. The contract price and payment will also constitute completion of the item, unless such work is otherwise specifically mentioned for separate payment under another item. In the event any work is required by the specification sections or by the drawings and not specifically mentioned in the measurement and payment paragraphs, separate or direct payment shall not be made, and all costs thereof are incidental to, and included in, the prices and payment for all items listed in the Bid Schedule.

1.2. MEASUREMENT

1.2.1. Lump Sum Price Payment Items

Payment items for the work of this contract for which contract payments shall be made lump sum are listed in the BID SCHEDULE and described below. The lump sum price and payment made for each item listed shall constitute full compensation for the specific details that are stated in each item to include furnishing all plant, labor, materials, and equipment, and performing any associated or incidental Contractor quality control, environmental protection, meeting safety requirements, tests, analyses, computer files and reports, submittals and for performing all work required for which separate payment is not otherwise provided.

1.2.2. Optional Items

The Government may require the delivery of the line item(s) identified in the Price Schedule as an "(OPTIONAL)" item. The quantities for these items may be increased or decreased or the item(s) may not be used at all, at the discretion of the Government. The unit price or amount of optional items will remain unchanged whether the quantities are increased or decreased. The Government may use optional items by written notice to the Contractor commencing from the date of contract award through the date the contract is closed, unless otherwise specified herein.

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1.3. PAYMENT

Payment for all work specified, shown or incidental to complete the work will be made as follows:

1.3.1. SCHEDULE OF CLNS

A schedule of individual CLN #s is provided below.

CLINS	Description	Quantity	Unit	Unit Price	Total
0001	GENERAL				
0001	Mobilization & Demobilization	1	LS		
0002	Irrigation Intake Structure Design	1	LS		
0003	Irrigation Intake Structure Construction	1	LS		
0004	Instrumentation Design	1	LS		
0005	Instrumentation Installation	1	LS		
0006	Security	1	LS		
0007	DBA Insurance	1	LS		
0008	Performance and Payment Bond	1	LS		
	TOTAL BASE BID ITEMS:				
0009	OPTION BID ITEM	1	LS		
0009AA	Inspection of Trash Racks and Guides	1	LS		
0009AB	DBA Insurance				
0010	OPTION BID ITEM				
0010AA	Replacement of Trash Racks	1	LS		
0010AB	DBA Insurance	1	LS		
00011	OPTION BID ITEM				
00011AA	Repair of Trash Rack Guides	1	LS		
00011AB	DBA Insurance	1	LS		
	TOTAL OPTION BID ITEMS:				
	TOTAL BASE BID AND OPTION BID ITEMS:				

1.3.2. MOBILIZATION AND DEMOBILIZATION

Moving of all equipment and final demobilization will be measured for payment as a lump sum pay item (LS). Payment will be made at the lump sum price for Item No. 0001, "Mobilization and Demobilization." Price and payment for Item No. 0001 shall be full compensation for all work required to transport all necessary plant, equipment, instrumentation, supplies, and personnel materials to and from the project as specified. This bid item also contains all costs associated with a documented comprehensive quality control plan.

1.3.3. IRRIGATION INTAKE STRUCTURE

1.3.3.1. Irrigation Intake Structure – Design

All Contractor activities required to design Irrigation Intake Structure improvements, including a detailed site inspection, design report, and completed plans and specifications, will be measured for payment as a lump sum pay item (LS). Payment will be made at the lump sum price for Item No. 0002, "Irrigation Intake Structure – Design". Price and payment for Item No. 0002 shall be full compensation for the site investigation, planning, and design for the rehabilitation (or replacement if necessary) of: bridge crane hoist; jib crane; concrete bulkhead gate seals and incidentals; steel wheeled bulkhead gate seals and incidentals; trash rack guides; and all electrical design required to make equipment fully functional. Additional detailed requirements are specified in SECTION 01 01 50.00 00 TECHNICAL REQUIREMENTS.

1.3.3.2. Irrigation Intake Structure – Construction

All contractor activities required for the fabrication; installation; testing and commissioning; training; and other site work associated with executing improvements to the Irrigation Intake Structure, will be measured for payment as a lump sum pay item (LS). Payment will be made at the lump sum price for Item No. 0003, "Irrigation Intake Structure – Construction". Price and payment for Item No. 0003 shall be full compensation for the rehabilitation (or replacement if necessary) of: bridge crane; jib crane; lifting beam or beams; concrete bulkhead gate seals and incidentals; steel wheeled bulkhead gate seals and incidentals; bulkhead dogs; electrical components; and all equipment and services required to make equipment fully functional. Additional detailed requirements are specified in SECTION 01 01 50.00 00 TECHNICAL REQUIREMENTS.

1.3.4. INSTRUMENTATION

1.3.4.1. Instrumentation – Design

Instrumentation design and planning will be measured for payment as a lump sum pay item (LS). Payment will be made at the lump sum price for Item No. 0004, "Instrumentation – Design". Price and payment for Item No. 0004 shall be full compensation for all work required for the site investigation, planning, and design of: piezometers; survey monuments and locking covers; survey pillars; staff gage boards for pool and tailrace; and preparation of Site Inspection Report. Additional detailed requirements are specified in SECTION 01 01 50.00 00 TECHNICAL REQUIREMENTS.

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1.3.4.2. Instrumentation – Installation (Mandatory)

Piezometer installations in the left abutment and water level meters; low tech survey system, along with all survey monuments and pillars and associated equipment; pool and tailrace staff gages installed; will be measured for payment as a lump sum pay item (LS). Payment will be made at the lump sum price for Item No. 0005, "Instrumentation – Installation". Price and payment for Item No. 0005 shall be full compensation for all work required for installing piezometers, survey monument and pillars, staff gages, providing working water level meters, the complete surveying instrumentation, optical equipment for staff gage readings, and all labor, material, equipment, and transportation required. Additionally included are drill logs from each piezometer location, complete as-built information for each piezometer. All piezometers, survey monuments, survey pillars shall have complete survey location and elevation information for each. Additional detailed requirements are specified in SECTION 01 01 50.00 00 TECHNICAL REQUIREMENTS.

1.3.4.3. Inspection of Trash Racks and Guides (Optional)

All Contractor activities required for the inspection of trash racks and guides including subsurface video will be measured as a lump sum pay item (LS). Payment will be made at the lump sum price for Item No. 0009AA "Inspection of Trash Racks and Guides".

1.3.4.4. Replacement of Trash Racks (Optional)

All Contractor activities required for fabrication and installation, and other site work associated with replacing the irrigation intake structure trash racks will be measured as a lump sum pay item (LS). Payment will be made at the lump sum price for Item No. 0010AA "Replacement of Trash Racks".

1.3.4.5. Repair of Trash Rack Guides (Optional)

All Contractor activities required for repair of the trash rack guides according to original design, and other subsurface work associated with repair will be measured as a lump sum pay item (LS). Payment will be made at the lump sum price for Item No. 00011AA, "Repair of Trash Rack Guides".

Additional detailed requirements are specified in SECTION 01 01 50.00 00 TECHNICAL REQUIREMENTS.

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1.3.5. SECURITY

Security will be measured for payment as a lump sum pay item (LS). Payment will be made at the lump sum price for Item No. 0006, "Security." Price and payment for Item No. 0006 shall be full compensation 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. Price and payment also includes preparation of a detailed security plan.

PART 2 PRODUCTS (Not used)

PART 3 EXECUTION (Not used)

- END OF SECTION -

**SECTION 01 32 01
PROJECT SCHEDULE**

Revised 30 JULY 2011

PART 1 GENERAL

1.1 REFERENCES

The publications listed below form a part of the specification to the extent referenced. The publications are referenced in the text by basic designation only.

U.S. ARMY CORPS OF ENGINEERS (USACE) ER 1-1-11 (1995) Progress, Schedules, and Network Analysis Systems

1.2 QUALIFICATIONS

The Contractor shall designate an authorized representative who shall be responsible for the preparation of all required project schedule reports.

PART 2 PRODUCTS (Not Applicable)

PART 3 EXECUTION

3.1 GENERAL REQUIREMENTS

Pursuant to the Contract Clause, SCHEDULE FOR CONSTRUCTION CONTRACTS, a Project Schedule as described below shall be prepared. The scheduling of Construction design and construction shall be the responsibility of the Contractor. Contractor management personnel shall actively participate in its development. Designers, Subcontractors and suppliers working on the project shall also contribute in developing and maintaining an accurate Project Schedule. The Contractor is responsible for scheduling the construction contract work to include procurement of critical materials and equipment, Contractor quality control and construction, acceptance testing and training. The approved Project Schedule shall be used to measure the progress of the work, to aid in evaluating time extensions, and to provide the basis of all progress payments.

3.2 BASIS FOR PAYMENT

The schedule shall be the basis for measuring Contractor progress. Lack of an approved schedule or scheduling personnel will result in an inability of the Contracting Officer to evaluate Contractor's progress for the purposes of payment. Failure of the Contractor to provide all information, as specified below, shall result in the disapproval of the entire Project Schedule submission and the inability of the Contracting Officer to evaluate Contractor progress for payment purposes. In the case where Project Schedule revisions have been directed by the Contracting Officer and those revisions have not been included in the Project Schedule, the Contracting Officer may hold, retain up to the maximum allowed by contract, each payment period, until revisions to the Project Schedule have been made. Resource loading of cost is required and will be used as the cost breakdown for progress payments.

3.3 PROJECT SCHEDULE

The computer software system utilized by the Contractor to produce the Project Schedule shall be capable of providing all requirements of this specification. Failure of the Contractor to meet the requirements of this specification shall result in the disapproval of the schedule. Manual methods used to produce any required information shall require approval by the Contracting Officer. Project schedules must be prepared and maintained in a software compatible with current versions of the government's systems RMS and Primavera Project Manager. Contracts with price value over \$500,000 will use Primavera SureTrak,

Primavera Project Manager P6, or current version of government's systems. The Licensed copy of scheduling software shall be submitted for acceptance to the Contracting Officer within two weeks after Contract Award.

3.3.1 Use of the Critical Path Method

The Critical Path Method (CPM) of network calculation shall be used to generate the Project Schedule. The Contractor shall provide the Project Schedule in the Precedence Diagram Method (PDM).

3.3.2 Level of Detail Required

The Project Schedule shall include an appropriate level of detail. Failure to develop or update the Project Schedule or provide data to the Contracting Officer at the appropriate level of detail, as specified by the Contracting Officer, shall result in the disapproval of the schedule.

The Network Analysis System (NAS) shall identify all Government, Construction Quality Management (CQM) Construction activities planned for the project and all other activities that could impact project completion if delayed. Refer to 3.5.5.4 Banding for further detail in grouping activities.

With the exception of the Contract Award and Contract Completion Date (CCD) milestone activities, no activity shall be open-ended; each activity shall have predecessor and successor ties. Once an activity exists on the schedule it may not be deleted or renamed to change the scope of the activity and shall not be removed from the schedule logic without approval from the Contracting Officer. The ID number for a deleted activity shall not be re-used for another activity. No more than 20 percent of the activities shall be critical or near critical. Critical is defined as having zero days of Total Float. "Near Critical" is defined as having Total Float of 1 to 14 days. Contractor activities shall be driven by calendars that reflect Saturdays, Sundays and all Federal Holidays as non-work days.

The Contracting Officer will use, but is not limited to, the following conditions to determine the appropriate level of detail to be used in the Project Schedule:

3.3.2.1 Activity Durations

Contractor submissions shall follow the direction of the Contracting Officer regarding reasonable activity durations. Reasonable durations are those that allow the progress of activities to be accurately determined between payment periods (usually less than 2 percent of all non-procurement activities' Original Durations are greater than 20 days).

3.3.2.2 Design and Permit Activities

Design and permitting activities, including necessary conferences and follow up actions and design package submission dates, shall be integrated into the schedule.

3.3.2.3 Procurement Activities

Tasks related to the procurement of long lead materials or equipment shall be included as separate activities in the project schedule. Long lead materials and equipment are those materials that have a procurement cycle of over 90 days. Examples of procurement process activities include, but are not limited to: submittals, approvals, procurement, fabrication, and delivery. The Contractor shall show each delivery with relationship tie to the Construction Activity specifically for the delivery. For rejected material/equipment not in compliance with approved submittals a new procurement activity shall be inserted in the schedule.

3.3.2.4 Critical Activities

The following activities, as applicable, shall be listed as separate line activities on the Contractor's project schedule:

- a. Submission and approval of mechanical/electrical layout drawings.
- b. Submission and approval of O & M manuals.
- c. Submission and approval of as-built drawings.
- d. Submission and approval of 1354 data and installed equipment lists.
- e. Submission and approval of testing and air balance (TAB).
- f. Submission of TAB specialist design review report.
- g. Submission and approval of fire protection specialist.
- h. Submission and approval of testing and balancing of HVAC plus commissioning plans and data.
- i. Air and water balance dates.
- j. HVAC commissioning dates.
- k. Controls testing plan.
- l. Controls testing.
- m. Performance Verification testing.
- n. Other systems testing, if required.
- o. Pre-final inspection.
- p. Correction of punch list from pre-final inspection.
- q. Final inspection.

3.3.2.5 Government Activities

Government and other agency activities germane to the contract shall be shown. These activities include, but are not limited to: design reviews, environmental permit approvals by State regulators, inspections, proposals and pay estimates reviews, and utility tie in.

3.3.2.6 Responsibility

All activities shall be identified in the project schedule by the party responsible to perform the work. Responsibility includes, but is not limited to, the subcontracting firm, contractor work force, or government agency performing a given task. Activities shall not belong to more than one responsible party. The responsible party for each activity shall be identified by the Responsibility Code.

3.3.2.7 Work Areas

All activities shall be identified in the project schedule by the work area in which the activity occurs. Activities shall not be allowed to cover more than one work area. The work area of each activity shall be identified by the Work Area Code.

3.3.2.8 Modification or Claim Number

Any activity that is added or changed by contract modification or used to justify claimed time shall be identified by a mod or claim code that changed the activity. Activities shall not belong to more than one modification or claim item. The modification or claim number of each activity shall be identified by the Mod or Claim Number. Whenever possible, changes shall be added to the schedule by adding new activities. Existing activities shall not normally be changed to reflect modifications. A new current approved baseline shall be created to reflect the changes to the previous approved baseline (see item 3.5.5.6 Baseline Network Analysis Schedule.)

3.3.2.9 Work Item

All activities shall be identified in the project schedule by the Work Item to which the activity belongs. An activity shall not contain work in more than one work item. The work item for each appropriate activity shall be identified by the Work Item Code.

3.3.2.10 Phase of Work

All activities shall be identified in the project schedule by the phases of work in which the activity occurs. Activities shall not contain work in more than one phase of work. The project phase of each activity shall be by the unique Phase of Work Code.

3.3.2.11 Category of Work

All Activities shall be identified in the project schedule according to the category of work which best describes the activity. Category of work refers, but is not limited, to the procurement chain of activities including such items as designs, design package submissions design reviews, review conferences, permits, submittals, approvals, procurement, fabrication, delivery, installation, start-up, and testing. The category of work for each activity shall be identified by the Category of Work Code.

3.3.2.12 Feature of Work

All activities shall be identified in the project schedule according to the feature of work to which the activity belongs. Feature of work refers, but is not limited to, a work breakdown structure for the project. The feature of work for each activity shall be identified by the Feature of Work Code.

3.3.3 Scheduled Project Completion

The schedule interval shall extend from award of contract to the contract completion date.

3.3.3.1 Project Start Date

The schedule shall start no earlier than the date on which award of contract was acknowledged. The Contractor shall include as the first activity in the project schedule an activity called "Start Project". The "Start Project" activity shall have an "ES" constraint date equal to the date that the award of task order was acknowledged, and a zero day duration.

3.3.3.2 Constraint of Last Activity

Completion of the last activity in the schedule shall be constrained by the contract completion date. Calculation on project updates shall be such that if the early finish of the last activity falls after the contract completion date, then the float calculation shall reflect a negative float on the critical path. The Contractor shall include as the last activity in the project schedule an activity called "End Project". The "End Project" activity shall have an "LF" constraint date equal to the completion date for the project, and a zero day duration.

3.3.3.3 Early Project Completion

In the event the project schedule shows completion of the project prior to the contract completion date, the Contractor shall identify those activities that have been accelerated and/or those activities that are scheduled in parallel to support the Contractor's "early" completion. Contractor shall specifically address each of the activities noted in the narrative report at every project schedule update period to assist the Contracting Officer in evaluating the Contractor's ability to actually complete prior to the contract period.

3.3.4 Interim Completion Dates

Contractually specified interim completion dates shall also be constrained to show negative float if the early finish date of the last activity in that phase falls after the interim completion date.

3.3.4.1 Start Phase

The Contractor shall include as the first activity for a project phase an activity called "Start Phase X" where "X" refers to the phase of work. The "Start Phase X" activity shall have an "ES" constraint date equal to the date on which the award of task order was acknowledged, and a zero day duration.

3.3.4.2 End Phase

The Contractor shall include as the last activity in a project phase an activity called "End Phase X" where "X" refers to the phase of work. The "End Phase X" activity shall have an "LF" constraint date equal to the completion date for the project, and a zero day duration.

3.3.4.3 Phase X

The Contractor shall include a hammock type activity for each project phase called "Phase X" where "X" refers to the phase of work. The "Phase X" activity shall be logically tied to the earliest and latest activities in the phase.

3.3.5 Default Progress Data Disallowed

Actual Start and Finish dates shall not be automatically updated by default mechanisms that may be included in CPM scheduling software systems. Actual Start and Finish dates on the CPM schedule shall match those dates provided from Contractor Quality Control Reports. Failure of the Contractor to document the Actual Start and Finish dates on the Daily Quality Control report for every in-progress or completed activity, and failure to ensure that the data contained on the Daily Quality Control reports is the sole basis for schedule updating shall result in the disapproval of the Contractor's schedule and the inability of the Contracting Officer to evaluate Contractor progress for payment purposes. Updating of the percent complete and the remaining duration of any activity shall be independent functions. Program features which calculate one of these parameters from the other shall be disabled.

3.3.6 Out-of-Sequence Progress

Activities that have posted progress without all preceding logic being satisfied (Out-of-Sequence Progress) will be allowed only on a case-by-case approval of the Contracting Officer. The Contractor shall propose logic corrections to eliminate all out of sequence progress or justify not changing the sequencing for approval prior to submitting an updated project schedule.

3.3.7 Negative Lags

Lag durations contained in the project schedule shall not have a negative value.

3.4 PROJECT SCHEDULE SUBMISSIONS

The Contractor shall provide the submissions as described below. The data disk, reports, and network diagrams required for each submission are contained in paragraph SUBMISSION REQUIREMENTS.

3.4.1 Initial Project Schedule Submission

The Initial Project Schedule shall be submitted for approval within 30 calendar days after award of contract. The schedule shall provide a reasonable sequence of activities which represent work through the entire project and shall be at a reasonable level of detail. The baseline schedule shall be reviewed and deemed acceptable prior to the contractor entering (manually or electronically via SDEF file) in QCS.

3.4.2 Periodic Schedule Updates

Based on the result of progress meetings, specified in "Periodic Progress Meetings," the Contractor shall submit periodic schedule updates. These submissions shall enable the Contracting Officer to assess Contractor's progress. If the Contractor fails or refuses to furnish the information and project schedule data, which in the judgment of the Contracting Officer or authorized representative is necessary for verifying the Contractor's progress, the Contractor shall be deemed not to have provided an estimate upon which progress payment may be made.

3.4.3 Standard Activity Coding Dictionary

The Contractor shall use the activity coding structure defined in the Standard Data Exchange Format (SDEF) in ER 1-1-11, Appendix A. This exact structure is mandatory, even if some fields are not used. The contractor shall assure the schedule contains the holidays, fiscal year starting month, work day start and finish shift and preferences for units of time, observed by the government.

3.5 SUBMISSION REQUIREMENTS

The following items shall be submitted by the Contractor for the preliminary submission, initial submission, and every periodic project schedule update throughout the life of the project:

3.5.1 Data Disks

Two (2) Data Compact Disks containing the project schedule shall be provided. Data on the disks shall adhere to the SDEF format specified in ER 1-1-11, Appendix A.

3.5.1.1 File Medium

Required data shall be submitted on Compact Disk, formatted to hold 700 MB of data, under the MS-DOS Version 5. or 6.x, unless otherwise approved by the Contracting Officer.

3.5.1.2 Disk Label

A permanent exterior label shall be affixed to each disk submitted. The label shall indicate the type of schedule (Preliminary, Initial, Update, or Change), full contract number, project name, project location, data date, name and telephone number of person responsible for the schedule, and the MSDOS version used to format the disk.

1. Two (2) Data Compact Disks containing the project schedule shall be provided. Data on the disks shall adhere to the SDEF format specified in ER 1-1-11, Appendix A.
2. File Medium - Required data shall be submitted on Compact Disk, formatted to hold 700 MB of data, under the MS-DOS Version 5. or 6.x, unless otherwise approved by the Contracting Officer.
3. Disk Label - A permanent exterior label shall be affixed to each disk submitted. The label shall indicate the type of schedule (Preliminary, Initial, Update, or Change), full contract number, project name, project location, data date, name and telephone number of person responsible for the schedule, and the MSDOS version used to format the disk.
4. File Name - Each file submitted shall have a name related to either the schedule data date, project name, or contract number. The Contractor shall develop a naming convention that will ensure that the names of the files submitted are unique. The Contractor shall submit the file naming convention to the Contracting Officer for approval.

3.5.1.3 File Name

Each file submitted shall have a name related to the schedule data date, project name, or contract number. The Contractor shall develop a naming convention that will ensure that the names of the files submitted are unique. The Contractor shall submit the file naming convention to the Contracting Officer for approval.

3.5.2 Narrative Report

A Narrative Report shall be provided with the preliminary, initial, and each update of the project schedule. This report shall be provided as the basis of the Contractor's progress payment request. The Narrative Report shall include: a description of activities along the 2 most critical paths, a description of current and anticipated problem areas or delaying factors and their impact, and an explanation of corrective actions taken or required to be taken. The narrative report is expected to relay to the Government, the Contractor's thorough analysis of the schedule output and its plans to compensate for any problems, either current or potential, which are revealed through that analysis.

3.5.3 Approved Changes Verification

Only project schedule changes that have been previously approved by the Contracting Officer shall be included in the schedule submission. The Narrative Report shall specifically reference, on an activity by activity basis, all changes made since the previous period and relate each change to documented, approved schedule changes.

3.5.4 Schedule Reports

The format for each activity for the schedule reports listed below shall contain: Activity Numbers, Activity Description, Original Duration, Remaining Duration, Early Start Date, Early Finish Date, Late Start Date, Late Finish Date, and Total Float. Actual Start and Actual Finish Dates shall be printed for those activities in progress or completed.

3.5.4.1 Activity Report

A list of all activities sorted according to activity number.

3.5.4.2 Logic Report

A Logic Report is a list of Preceding and Succeeding activities for every activity in ascending order by activity number. Preceding and succeeding activities shall include all information listed above in paragraph Schedule Reports. A blank line shall be left between each activity grouping.

3.5.4.3 Total Float Report

A list of all incomplete activities sorted in ascending order of total float. Activities which have the same amount of total float shall be listed in ascending order of Early Start Dates. Completed activities shall not be shown on this report.

3.5.4.4 Earnings Report

An Earnings Report is a compilation of the Contractor's Total Earnings on the project from award of contract until the most recent Monthly Progress Meeting. This report shall reflect the Earnings of specific activities based on the agreements made in the field and approved between the Contractor and Contracting Officer at the most recent Monthly Progress Meeting. Provided that the Contractor has provided a complete schedule update, this report shall serve as the basis of determining Contractor Payment. Activities shall be grouped by work item and sorted by activity numbers. This report shall: sum all activities in a work item and provide a work item percent; and complete and sum all work items to provide a total project percent complete. The printed report shall contain, for each activity: the Activity Number, Activity Description, Original Budgeted Amount, Total Quantity, Quantity to Date, Percent Complete (based on cost), and Earnings to Date.

3.5.5 Network Diagram

The network diagram shall be required on the initial schedule submission and on monthly schedule update submissions. The network diagram shall depict and display the order and interdependence of activities and

the sequence in which the work is to be accomplished. The Contracting Officer will use, but is not limited to, the following conditions to review compliance with this paragraph:

3.5.5.1 Continuous Flow

Diagrams shall show a continuous flow from left to right with no arrows from right to left. The activity number, description, duration, and estimated earned value shall be shown on the diagram.

3.5.5.2 Project Milestone Dates

Dates shall be shown on the diagram for start of project, any contract required interim completion dates, and contract completion dates.

3.5.5.3 Critical Path

The critical path shall be clearly shown.

3.5.5.4 Banding

Activities shall be grouped to assist in the understanding of the activity sequence. Typically, this flow will group activities by category of work, work area and/or responsibility. Separate activities shall be created for each Phase, Area, Floor Level and Location in which the activity is occurring. Each set of activities identified as a separate group shall be included in a Work Breakdown Structure to avoid confusion with similar activities repeated in other phases, floors, or locations.

3.5.5.5 S-Curves

Earnings curves showing projected early and late earnings and earnings to date.

3.5.5.6 Baseline Network Analysis Schedule

The original approved baseline shall not change through the duration of the contract. The original baseline naming convention is B/L – Contract Name – (Date created). A second revised baseline shall be maintained to reflect approved time extensions, and/or changes to the contract; this could be named as Current Approved Baseline and follow the naming convention: C/A - Contract Name – (Date changed). A third monthly baseline shall be maintained to reflect the monthly updates submitted by the contractor for payment. Naming convention is Mmm- Contract Name-(Date created). Submittal of the Baseline Network Analysis Schedule, and subsequent schedule updates, shall be understood to be the Contractor's certification that the submitted schedule meets all of the requirements of the Contract Documents, represents the Contractor's plan on how the work shall be accomplished, and accurately reflects the work that has been accomplished and how it was sequenced (as-built logic).

Samples of baselines naming conventions:

Field Description in Primavera	Baseline Type	Naming Convention
Project Baseline	Current Approved Baseline	CA – Cerrillos Dam – (12-Jan-1992)
Primary	Monthly Baseline	M02 – Cerillos Dam – (1-Feb-1992)
Secondary	Original Baseline	BL – Cerrillos Dam – (12-Jan-1992)

3.6 PERIODIC PROGRESS MEETINGS

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

3.6.1 Meeting Attendance

The Contractor's Project Manager and Scheduler shall attend the regular progress meeting.

3.6.2 Update Submission Following Progress Meeting

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

3.6.3 Progress Meeting Contents

Update information, including Actual Start Dates, Actual Finish Dates, Remaining Durations, and Cost-to-Date shall be subject to the approval of the Contracting Officer. As a minimum, the Contractor shall address the following items on an activity by activity basis during each progress meeting.

3.6.3.1 Start and Finish Dates

The Actual Start and Actual Finish date for each activity currently in progress or completed.

3.6.3.2 Time Completion

The estimated Remaining Duration for each activity in-progress. Time-based progress calculations shall be based on Remaining Duration for each activity.

3.6.3.3 Cost Completion

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

3.6.3.4 Logic Changes

All logic changes pertaining to change orders, change orders to be incorporated into the schedule, contractor proposed changes in work sequence, corrections to schedule logic for out-of-sequence progress, lag durations, and other changes that have been made pursuant to contract provisions shall be specifically identified and discussed.

3.6.3.5 Other Changes

Other changes required due to delays in completion of any activity or group of activities include:

- a. Delays beyond the Contractor's control, such as strikes and unusual weather.
- b. Delays encountered due to submittals, Government Activities, deliveries or work stoppages which make re-planning the work necessary.
- c. Changes required in order to correct a schedule which does not represent the actual or planned prosecution and progress of the work.

3.7 REQUESTS FOR TIME EXTENSIONS

In the event the Contractor requests an extension of the contract completion date, or any interim milestone date, the Contractor shall furnish the following for a determination as to whether or not the Contractor is entitled to an extension of time under the provisions of the contract: justification, project schedule data, and supporting evidence as the Contracting Officer may deem necessary. Submission of proof of delay, based on revised activity logic, duration, and costs (updated to the specific date that the delay occurred) is obligatory to any approvals.

3.7.1 Justification of Delay

The project schedule shall clearly display that the Contractor has used, in full, all the float time available for the work involved with this request. The Contracting Officer's determination as to the number of allowable days of contract extension shall be based upon the project schedule updates in effect for the time period in question, and other factual information. Actual delays that are found to be caused by the Contractor's own actions, which result in the extension of the schedule, will not be a cause for a time extension to the contract completion date.

3.7.2 Submission Requirements

The Contractor shall submit a justification for each request for a change in the contract completion date of less than 2 weeks based upon the most recent schedule update at the time of the constructive direction issued for the change. Such a request shall be in accordance with the requirements of other appropriate Contract Clauses and shall include, as a minimum:

- a. A list of affected activities, with their associated project schedule activity number.
- b. A brief explanation of the causes of the change.
- c. An analysis of the overall impact of the changes proposed.
- d. A sub-network of the affected area.

Activities impacted in each justification for change shall be identified by a unique activity code contained in the required data file.

3.7.3 Additional Submission Requirements

For any requested time extension greater than 2 weeks, the Contracting Officer may request an interim update with revised activities for a specific change request. The Contractor shall provide this disk within 4 days of the Contracting Officer's request.

3.8 DIRECTED CHANGES

If changes are issued prior to settlement of price and/or time, the Contractor shall submit proposed schedule revisions to the Contracting Officer within 2 weeks of this task order being issued. The proposed revisions to the schedule will be approved by the Contracting Officer prior to inclusion of those changes within the project schedule. If the Contractor fails to submit the proposed revisions, the Contracting Officer may furnish the Contractor with suggested revisions to the project schedule. The Contractor shall include these revisions in the project schedule until revisions are submitted, and final changes and impacts have been negotiated. If the Contractor has any objections to the revisions furnished by the Contracting Officer, the Contractor shall advise the Contracting Officer within 2 weeks of receipt of the revisions. Regardless of the objections, the Contractor shall continue to update the schedule with the Contracting Officer's revisions until a mutual agreement in the revisions is reached. If the Contractor fails to submit alternative revisions within 2 weeks of receipt of the Contracting Officer's proposed revisions, the Contractor will be deemed to have concurred with the Contracting Officer's proposed revisions. The proposed revisions will then be the basis for an equitable adjustment for performance of the work.

3.9 OWNERSHIP OF FLOAT

Float available in the schedule, at any time, shall not be considered for the exclusive use of either the Government or the Contractor.

-- End of Section --

ADDENDUM

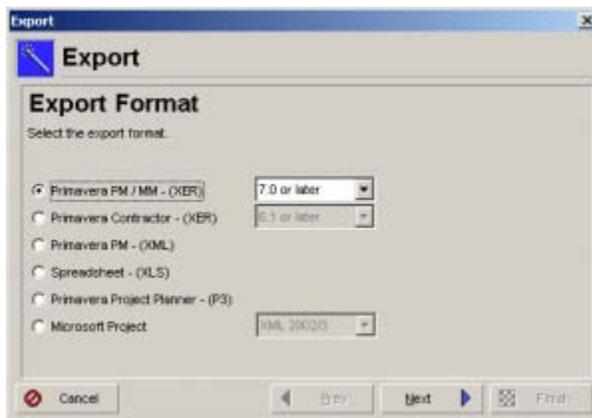
[Exporting and Importing Project Information](#) October 25th, 2009 [Activities](#), [EPS primaverarena](#)

As you know Primavera P6 is not a File based system, you need to export Project files if you wish to share your project with someone not in your network via email or other electronic delivery system. Export a Project file is simple and the exported file is a compressed file of all you project

As you know Primavera P6 is not a *File based system*, you need to export Project files if you wish to share your project with someone not in your network via email or other electronic delivery system. Export a Project file is simple and the exported file is a compressed file of all you project information which the other party needs to import in order to see it.

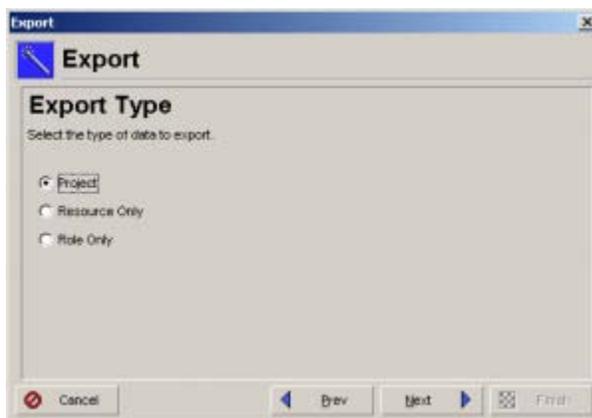
Export

To export a project file, you can go to File menu and click on Export.

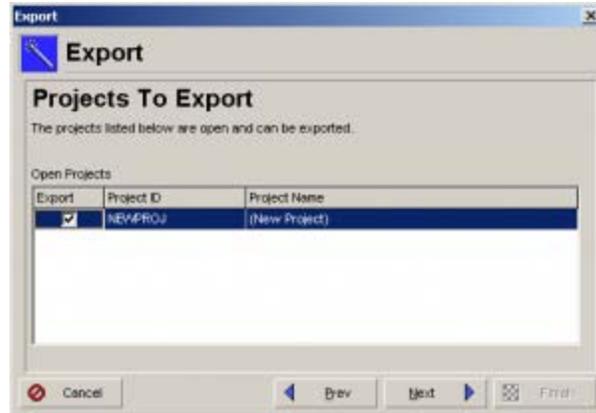


Select Primavera PM/MM format.

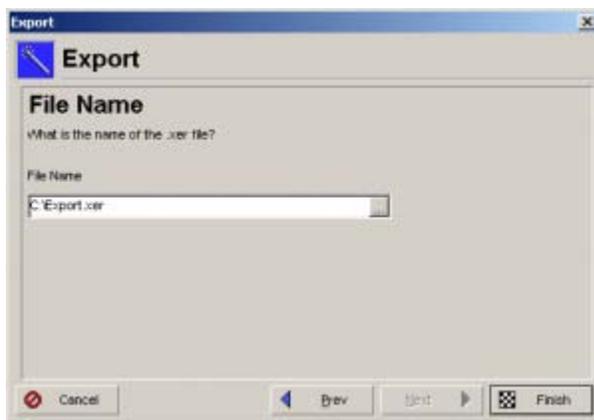
Choose which type of data you wish to export.



Select the Project.



Select the location of the exported file to be placed in.



Click Finish and Ta'daa



And you will find the*.XER file on your desktop (or the location you chose).

Import

To Import the file just double clicking the *.xer file would take you through the same steps and help you successfully update or create a new Project in your EPS.

Key definitions

1. Earned value is a technique for measuring project performance according to both project cost and schedule. This technique compares the budgeted or planned cost of the work to the actual cost. While earned value analyses are typically performed for WBS elements, you can also perform an earned value analysis for activities and groups of activities.
 - a. In order to perform an earned value analysis, you must specify two calculation techniques. These techniques apply to activities that are currently in progress. The first technique is used to calculate an activity's percent complete. The second technique is used to calculate an activity's Estimate To Complete (ETC). A set of options is provided for both of these techniques, and you can set these options for each WBS element.
 - b. The fundamental earned value parameters used to calculate an activity's Estimate to Complete are: Earned Value Cost; Budget at Completion; Planned Value Cost; and, Actual Cost. You can derive an activity's Estimate to Complete and other earned value indexes from these parameters.
 - c. If you are the administrator for your organization, you can specify default earned value techniques for WBS elements.
2. Critical path: The critical path is a series of activities that determines a project's completion time. The duration of the activities on the critical path controls the duration of the entire project; a delay to any of these activities will delay the finish date of the entire project. Critical activities are defined by either the total float or the longest path in the project network.
3. Critical Path Method (CPM) scheduling: The method by which activity durations and the relationships between activities are used to mathematically calculate a schedule for the entire project. CPM focuses your attention on the critical path of activities that affect the completion date for the project or an intermediate deadline.

Early dates, the earliest possible dates each activity can start and finish, and late dates, the latest possible dates each activity can start and finish without delaying the project finish or an intermediate deadline (constraint) are also calculated.

**SECTION 01 33 15
SUBMITTAL PROCEDURES**

REVISED 29 JULY 2011

1.0 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.

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

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 each design submittal, the contractor shall submit all non-administrative modifications issued for the contract as part of the Design Submittal package to enable AES 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 Contractor shall not begin construction work until the Government has reviewed and approved the work presented in each Design Submittal, including complete resolution of all DrChecks comments, and the Contracting Officer has cleared work 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 Contractor.

The sole responsibility of ensuring that the design submittals comply with contract documents remains with the Contractor, in accordance with this section of the contract. The Government retains the right to comment on the design at any design stage, and the lack of Government comments at a given review cannot be used as a basis for the Contractor to fail to address the Government's comments on subsequent reviews, regardless of design stage.

Furthermore, approval of incomplete designs will not relieve the Contractor of the responsibility for any error which may exist, and which may require rework or other appropriate adjustment to the contract terms, as determined at the sole discretion of the Government. 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. Government review, clearance for construction, or approval of post design 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.

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

General Design review - 65%

Final Design review - 99%

Cleared For Construction review - 100%

1.2.1.1 GENERAL DESIGN (65%)

It is crucial that the submittal is complete and includes all components noted below and any other pertinent information not listed which the Contractor requires to enable construction to begin as soon as possible. As a minimum, for each Contract project location the submittal shall contain:

Results of the site topographic survey which shall include highlighting of significant features (wadis, adjacent properties and structures, roads, etc.) to provide a detailed, overall understanding of the project site and surrounding area; demolition plan for existing site features; complete grading and drainage plan with existing grades, proposed grades, and building finished floor elevations based on Contract technical requirements;

Complete design analysis, plans and specifications for any contract feature(s) not already provided in the Contract that the Contractor would like Partial Clearance for Construction on once the Design Submittal has been approved, including project components with long ordering, fabrication and delivery times.

Outline of Construction Specification Sections to be used for other work yet to be submitted at the 99% Final Design Review submittal, and those Specification items requiring Government Approval (GA), unless 100% Technical Specifications were provided with the Contract.

Draft Design Analysis.

Design drawings

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 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:

Draft Construction Specifications complete - all anticipated sections, edited to include only applicable requirements, if not provided as part of the Contract.

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.

The review of this submittal is primarily to insure that the contract documents and design analysis are complete and that the Contract requirements and design criteria are being correctly understood and adhered to. It is crucial that the submittal is complete and includes all components noted below and any other pertinent information not listed which the Contractor requires to enable construction to begin as soon as possible. As a minimum, for each Contract project location the submittal shall contain:

Geotechnical Report, indicating appropriate information for various site characteristics, soil parameters as determined by certified lab tests, allowable soil bearing capacities, correlation with foundation design parameters, and any changes in foundation design of structures furnished in the Contract; estimated settlement for building foundation loads; and all other project feature changes due to the Geotechnical Report conclusions.

Design Analysis complete.

Construction Specifications complete - all anticipated sections, edited to include only applicable requirements.

Construction Drawings complete. 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. The drawings shall contain all the details necessary to assure a clear understanding of the work throughout construction.

1.2.1.3 “CLEARED FOR CONSTRUCTION” SUBMITTAL (100%):

The review of this submittal is to insure that the design is in accordance with directions provided the Contractor during the design process. 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:

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.

Construction Specifications, complete.

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 CAD format As-Built required as part of this contract. The Designer of Record shall document its professional concurrence on the As-Built 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.

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

a. MECHANICAL FEATURES

EQUIPMENT SUBMITTALS: Manufacturer's standard catalog data, installation, Operation and Maintenance (O&M) manuals and construction details for mechanical systems.

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.

b. 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.

c. 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).

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 variation shall be considered by the Government.

1.2.4.4 ADDITIONAL SHOP DRAWINGS AND SUBMITTALS

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

1.2.4.5 INCOMPLETE DESIGN

The Site-Adapt 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 post design 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.

1.3.3 SUBSTITUTIONS

No submittals for the purpose of substituting materials or equipment specified in the contract drawings, specifications, and reference documents shall be considered by the Government.

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.

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 41 North. 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 AES 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.

2.0 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 Sections 01010 and 01015 (and any additional sections that are appropriate). The Section 01010 and 01015 shall be the latest version. Any subsequent changes to the contract 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

It shall be written in the English language with SI units of measure. 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 this document.

2.4 DESIGN CALCULATIONS

All design calculations shall be presented such that they are easily understood, correlated with the 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

If the Contractor determines that features of this contract design by the Contractor require additional specifications, they shall be submitted for review and approval. Specifications shall be prepared in accordance with the UFGS (Uniform Facilities Guide Specifications) format. The Contractor-prepared specifications shall include as a minimum, all applicable specification sections referenced by the UFGS. Where the UFGS does not reference a specification section for specific work to be performed by this contract, the Contractor shall be responsible for creating the required specification in the UFGS format.

2.5.1 USE OF UNIFIED FACILITIES GUIDE SPECIFICATIONS (UFGS)

If additional specifications are deemed necessary by the Contractor, UFGS (Uniform Federal Guide Specifications) are required when U.S. products and systems are required or used. 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

Any additional specifications deemed necessary by the Contractor 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, or as indicated in Section 01015. 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 (AFCESA), 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.

2.5.5 AED DESIGN REQUIREMENTS DOCUMENTS

AED Design Requirements (latest version) documents listed in section 01015, shall be adhered to in this contract. These documents are available from the COR. These documents shall be used as the basis for design and construction, and for selecting options within the United Facilities Guide Specifications (UFGS). It is the Contractor's option to use specifications contained in the AED Design Requirements Documents, when provided, or to adapt the UFGS specifications to match the requirements provided in the AED Design Documents and specifications. Site or project specific data and requirements in the AED Design Requirements documents shall supersede UFGS language where there are differing criteria which must be evaluated and selected.

2.6 DRAWINGS

2.6.1 COMPUTER ASSISTED DESIGN AND DRAFTING (CAD)

Computer Assisted Design and Drafting (CAD) is required for all Afghanistan Engineer District South contracts. Only personnel proficient in the preparation of CAD drawings shall be employed to modify the contract drawings or prepare new drawings. The CAD deliverables shall meet the requirements of the A/E/C CAD Standards (V 3.0 or newer). The A/E/C CAD 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> or the website <http://www.aed.usace.army.mil/engineeringtop2010.asp> under the “Government Provided CAD Files” link.

The Contractor shall furnish all softcopy design submittals (and As-Builts) using software applications in either DWG format (Auto Desk, AutoCad Release 2009 or newer) or DGN format (Bentley Systems, MicroStation, version 8.0 or newer). Use of unregistered or student copies of software applications to prepare design drawings **IS NOT PERMITTED**. In addition, the Contractor is required to submit the softcopy design submittals in PDF (Adobe Acrobat) format.

CD media submitted containing the softcopy design submittals shall be organized per the instructions below and the diagram in Section 1335a:

CD Title:

Project Name and Location:

Project Number:

Submittal Number:

Date:

Contractor Name, Address, Telephone Number and email

Folders and Folder Contents/Structure:

Main Folder Name	Subfolders, Files and File Format	Description
Administrative	Multiple PDF files	Files shall include the contract, task order, approved modifications, approved BCDs, approved variations and non-administrative modifications (do not provide time extensions, COR appointments, and Requests for Information/responses, etc).
Design Analysis	One pdf file with identical contents as the printed document of the submittal.	All data, discussion, calculations and information presented in the printed Design analysis.
Specifications	One folder specifications in word format. One folder with specifications in pdf format.	All specification sections including table of contents edited as appropriate for the submittal stage of the project ² .
Geotechnical Report	One file in pdf format	All data, graphs, charts and tables generated during the geotechnical investigation.
PDF Drawings	One Binder of pdf files.	PDF Drawings. Files will be saved in a Binder and organized in the same order as indicated on the sheet index
CAD Drawings	DGN or DWG files organized in the	CAD Drawings.

	<p>following folders. Each folder shall contain only drawings pertaining to that discipline.</p> <p>General (Cover Sheet/ Index of Drawings, Vicinity Maps)</p> <p>Civil</p> <p>Architectural</p> <p>Structural</p> <p>Mechanical</p> <p>Plumbing</p> <p>Electrical</p> <p>Telecommunications</p>	<p>All referenced files are to be attached without drive or directories and placed in the same folder it is referencing. Do not save or use paths. Do not use live nesting when attaching reference files.</p>
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Notes:

1. The administrative folder shall provide documents submitted by the contractor and received from the COR related to the contract. These documents shall include Requests for Information related to design issues, Variation Requests, Modifications to the Contract. In addition, the folder shall contain a copy of the signed contract, relevant task orders and change orders.
2. DO NOT INCLUDE standard drawings or specifications provided to the Contractor as part of this document or as part of the contract.

2.6.2 DRAWINGS

Drawings shall be prepared in the English language with metric (SI) units of measure. All drawings and details of the working drawings shall be labeled and cross-referenced, thoroughly checked and coordinated with other engineering disciplines. 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. Prior to submitting the 100% Final Design drawings, the Contractor shall follow the procedures as described in Section 3 of the AED Design Requirements for CAD Design Guide.

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", 297 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 CAD Standard 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

CAD files shall be organized in folder names as 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

CAD files will be organized in what is described as “**Option 1a**” (page 9 in the A/E/C CAD Standards Drawing Sheet Assembly manual), normally referred to as “Model Space and Paper Space” in Autodesk Autocad applications and “Design Model and Sheet Model” in Bentley Microstation applications. All files will be drawn consistently in the same manner using this option throughout the entire project.

2.6.7 MODEL FILES

Model files represent the building’s physical layout and components such as floor plans, elevations and details. Model files shall be drawn to full size (1:1) in metric units in the default model view. Floor Plan Model files represent one floor. Example: do not use one model drawing file to draw several floor plan drawings with several border files. One paper space layout shall be provided per plotted sheet. Model files being referenced into another shall have insertion coordinates (x,y,z) of 0,0,0 in model space. The exception for model files with insertion coordinates other than 0,0,0 shall be the civil site plans (using Georeferencing and real-world coordinates.) Dimensioning shall be in millimeters unless noted otherwise, drawn associatively, and not be “forced”. Example: if a wall is drawn 1:1, as 150 mm but the dimensioned number is modified to 200, this is unacceptable.

2.6.8 BORDER SHEET FILES

Border sheet files are referenced into drawing files (in Paper Space) for plotting and viewing purposes. Every border sheet file has a drawing area, Title Block information and sheet trim border. The Afghanistan Engineer District – South uses a common Title Block sheet border for each project. The project Title Block sheet border with "sheet independent" data is referenced into each drawing. When a drawing file is created, "sheet dependent" Title Block

data, such as the Sheet Identification and Title, is added to the specific drawing file and located in Paper Space where the Title Block is referenced and viewed. AED-S Title Block drawings may be downloaded at : <http://www.aed.usace.army.mil/engineeringtop2010.asp> under the “Government Provided CAD Files” link.

2.6.9 LAYER/LEVEL NAMES

Layer or level files names shall follow the guidelines of the A/E/C CAD Standards V4.0. For AutoCAD, [discipline].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. Templates to be used are found on the CAD/BIM Technology Center at the following link: <https://cadbim.usace.army.mil/default.aspx?p=s&t=13&i=4>, or at the website: <http://www.aed.usace.army.mil/engineeringtop2010.asp> under the “Government Provided CAD Files” link.

2.6.10 DRAWING FILE NAMING CONVENTION

The sheet identifier will consist of the discipline designator, the sheet type designator and the sheet sequence number as referenced in the A/E/C CAD Standards V4.0.

2.6.11 SHEET IDENTIFICATION BLOCK

The sheet identifier will follow the format of the border sheet file. This will consist of the discipline designator, the sheet type designator and the sheet sequence number as referenced in the A/E/C CAD Standards Manual.

2.6.12 DRAWING SCALES

The scales indicated on the following list shall be the guide in determining the scale for all drawings. Bar scales shall be provided on drawings as printed copies may lose their plotted scale through generational copying.

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
FLOOR PLAN	1:20000
	1:50
	1:100

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 Standards V 3.0 or newer (see Appendix D of the A/E/C CAD Standards). The approved symbols, line styles, and patterns associated with AutoCAD software maybe downloaded at the following link:

<https://tsc.wes.army.mil/products/standards/aec/aecstdsym.asp>

2.6.14 PLOTTER PREPARED ORIGINAL DRAWINGS AND PDF FILES

Design files shall be developed in anticipation of plotting on a monochrome, vector plotter. 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. (Please refer to the A/E/C CAD Standards). **Drawings plotted in color are not acceptable.** Manual changes to plotted originals are not acceptable. A separate Adobe PDF file shall be made of each drawing file oriented in “Landscape”. Each PDF drawing file shall then be compiled into one “binder” PDF file for each set of drawings following the order of the Sheet Index.

2.6.15 TITLE AND REVISION BLOCK

Only AED-S Title and Revision Blocks are allowed. These are available at the website for download at: <http://www.aed.usace.army.mil/engineeringtop2010.asp> under the “Government Provided CAD Files” link.

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/COLUMN 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 overall plan (key plan) shall be placed on one sheet at a smaller scale to accommodate entire building/site. Key plans shall be used not only to relate large scale plans to total floor plans but also to relate individual buildings to large complexes of buildings. This key plan with match lines shall be referenced on all segmented drawings and shall be placed in a convenient location to 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 CAD files. A revision history (located in the Title Block) 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

All CAD related files provided by the Government to the Contractor (AutoCad and MicroStation Afghanistan Engineering District-South Title Block and Cover/Index sheet files, AutoCAD template files) may be downloaded through the following website:

<http://www.aed.usace.army.mil/engineeringtop2010.asp> under the "Government Provided CAD Files" link.

If Contractor is unable to access this site, a CD will be provided upon request to the Project Manager.

3.0 EXECUTION

3.1 GENERAL

3.1.1 DESIGN CONCEPT COORDINATION MEETING

Shortly after Notice To Proceed (NTP) the Government may require 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 AES review and comment in DrChecks_{SM}. **This time period starts on the next full day after delivery of the Design Submittal to both AES and the Area Office. If a Design Review is received by AES or the Area Office but not the other, the design review does not start until both AES and the Area Office have full design submittals.** 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 1.2.5 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 AES 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 SOUTH (AES)

One (1) half-size hard copy and two (2) soft copies (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 SOUTH (AES)

(1) DHL, FEDEX, UPS or any other courier service:

U.S. Army Corps of Engineers
Afghanistan Engineer District-South
Kandahar Air Field
USACE-TAS
APO AE 09355
Attention: Chief, Engineering Branch

The soft copy (electronic version) and CD case shall both be clearly labeled (hand written information is not acceptable – typed labels are required) with contract information (contract #, title, contractor name, specific design submittal stage including if it is a Resubmittal, date of submission, components of the submittal – design analysis, plans, specifications, and if more than one CD then state 1 of “X”, 2 of “X”, etc., anti-virus information below, etc.)

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 AES. 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 these submittals are delivered to the AES address in Para. 3.6.1.1. At the Pre-Construction meeting, the Contractor will be furnished the Area and/or Resident Office address to which these submittals shall be provided along with the number and size of hard and soft (electronic version) copies required for these offices. 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 CAD FORMAT AS-BUILTS

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 CAD 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 SOUTH (AES)

(1) DHL, FEDEX, UPS or any other courier service:

U.S. Army Corps of Engineers
Afghanistan Engineer District-south
Kandahar Air Field
USACE-TAS
APO AE 09355
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:

List is prepared according to contract specifications and drawings, picking up all items involved in the project.

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	"Sub-drainage 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 65% 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 65% 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 re-submittal, "-2" for the second re-submittal, "-3" for the third re-submittal, 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 Re-submittal #1 would be "Transmittal 01335-9.1". Should a re-submittal again be necessary, it would be Design Re-submittal #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-AES.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 due to site conditions, 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 shall be considered.

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 shall 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

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 AES.

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.

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.

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 AES 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, resubmission required
- E - NOT Cleared for Construction, see attached comments, resubmission 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

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.

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.

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.

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 AES review and subsequent Contractor response for each design submittal. The review conference will be held at the Corps District Office in Kandahar, 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 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.

3.8.3 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.

3.8.4 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.

3.8.5 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

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 survey monuments shall be based on UTM WGS 1984 coordinate system. The horizontal and vertical control established on site shall be a closed loop with third order accuracy and procedures. 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.

3.9.7 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.

3.9.8 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.

3.9.8.1 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.

3.9.8.2 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 ATTACHMENTS

The following attachments form an integral part of this specification:

ENG FORM 4025-R, 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 – AES Title Block

Figure 2 – AES Management Block

Figure 3 – AES Issue Block & Required Notations

Figure 4 – Border Sheet Size

-- END OF SECTION -

INSTRUCTIONS

1. Section I will be initiated by the Contractor in the required number of copies.
2. Each transmittal shall be numbered consecutively in the space provided for "Transmittal No.". This number, in addition to the contract number, will form a serial number for identifying each submittal. For new submittals or resubmittals mark the appropriate box; on resubmittals, insert transmittal number of last submission as well as the new submittal number.
3. The "Item No." will be the same "Item No." as indicated on ENG FORM 4288-R for each entry on this form.
4. Submittals requiring expeditious handling will be submitted on a separate form.
5. Separate transmittal form will be used for submittals under separate sections of the specifications.
6. A check shall be placed in the "Variation" column when a submittal is not in accordance with the plans and specifications--also, a written statement to that effect shall be included in the space provided for "Remarks".
7. Form is self-transmittal, letter of transmittal is not required.
8. When a sample of material or Manufacturer's Certificate of Compliance is transmitted, indicate "Sample" or "Certificate" in column c, Section I.
9. U.S. Army Corps of Engineers approving authority will assign action codes as indicated below in space provided in Section I, column i to each item submitted. In addition they will ensure enclosures are indicated and attached to the form prior to return to the contractor. The Contractor will assign action codes as indicated below in Section I, column g, to each item submitted.

THE FOLLOWING ACTION CODES ARE GIVEN TO ITEMS SUBMITTED

- | | |
|---|---|
| A -- Approved as submitted. | E -- Disapproved (See attached). |
| B -- Approved, except as noted on drawings. | F -- Receipt acknowledged. |
| C -- Approved, except as noted on drawings.
Refer to attached sheet resubmission required. | FX -- Receipt acknowledged, does not comply
as noted with contract requirements. |
| D -- Will be returned by separate correspondence. | G -- Other (Specify) |
10. Approval of items does not relieve the contractor from complying with all the requirements of the contract plans and specifications.

(Reverse of ENG Form 4025-R)

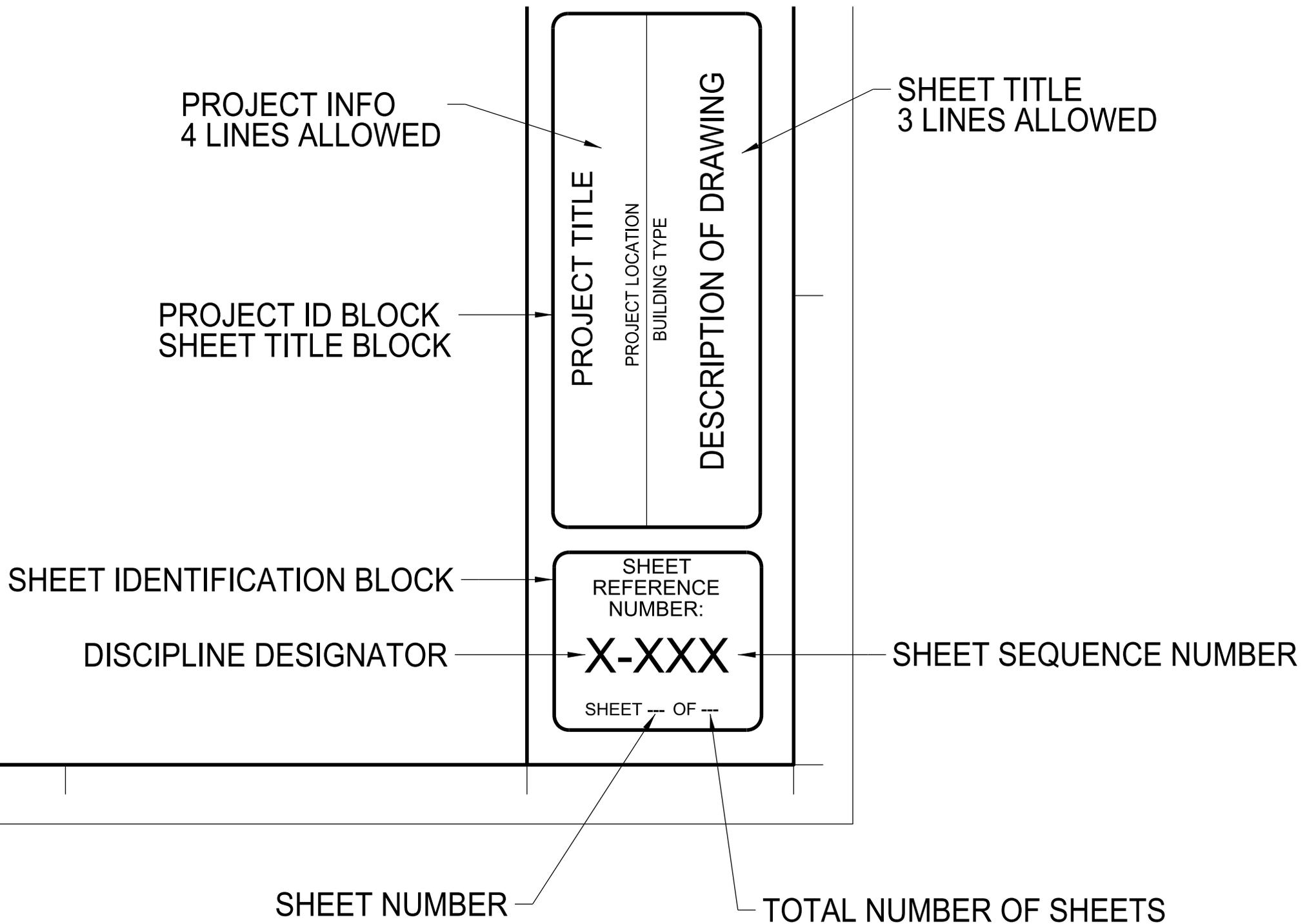


Figure 1: AED-S Title Block

MANAGEMENT BLOCK

U.S. ARMY CORPS OF ENGINEERS AFGHANISTAN ENGINEER DISTRICT - SOUTH APO AE 09355 KANDAHAR, AFGHANISTAN	DESIGNED BY:		DATE:	REV.
	DWN BY:	CKD BY:	xx-xx-xx	DESIGN FILE NO.
	REVIEWED BY:		DRAWING CODE:	
	SUBMITTED BY:		FILE NAME:	PLOT SCALE:
ENGINEERING AND CONSTRUCTION DIVISION			PLOT DATE:	xx-xx-xx

AE DESIGN FIRM
COMPANY LOGO
COMPANY INFORMATION

Figure 2: AED-S Management Block

G

H

DESIGNER IDENTIFICATION
BLOCK (DO NOT ALTER)



ISSUE BLOCK

SYMBOL	DESCRIPTION	DATE	APPR.	SYMBOL	DESCRIPTION	DATE	APPR.
	AS-BUILT SUBMITTAL	15 DEC 10			REVISED AS-BUILT	29 DEC 10	
	100% DESIGN SUBMITTAL	15 APR 10		⚠			
	99% DESIGN RESUBMITTAL NO. 1	1 APR 10					
	98% DESIGN SUBMITTAL	15 MAR 10					
	65% DESIGN RESUBMITTAL NO. 1	1 MAR 10		⚠	MOD P0003	8 MAR 10	
	65% DESIGN SUBMITTAL	1 FEB 10		⚠	MOD P0002	27 FEB 10	
	35% DESIGN SUBMITTAL	1 JAN 10		⚠	AMMENDMENT P0001	13 JAN 10	

Figure 3: AED-S Issue Block

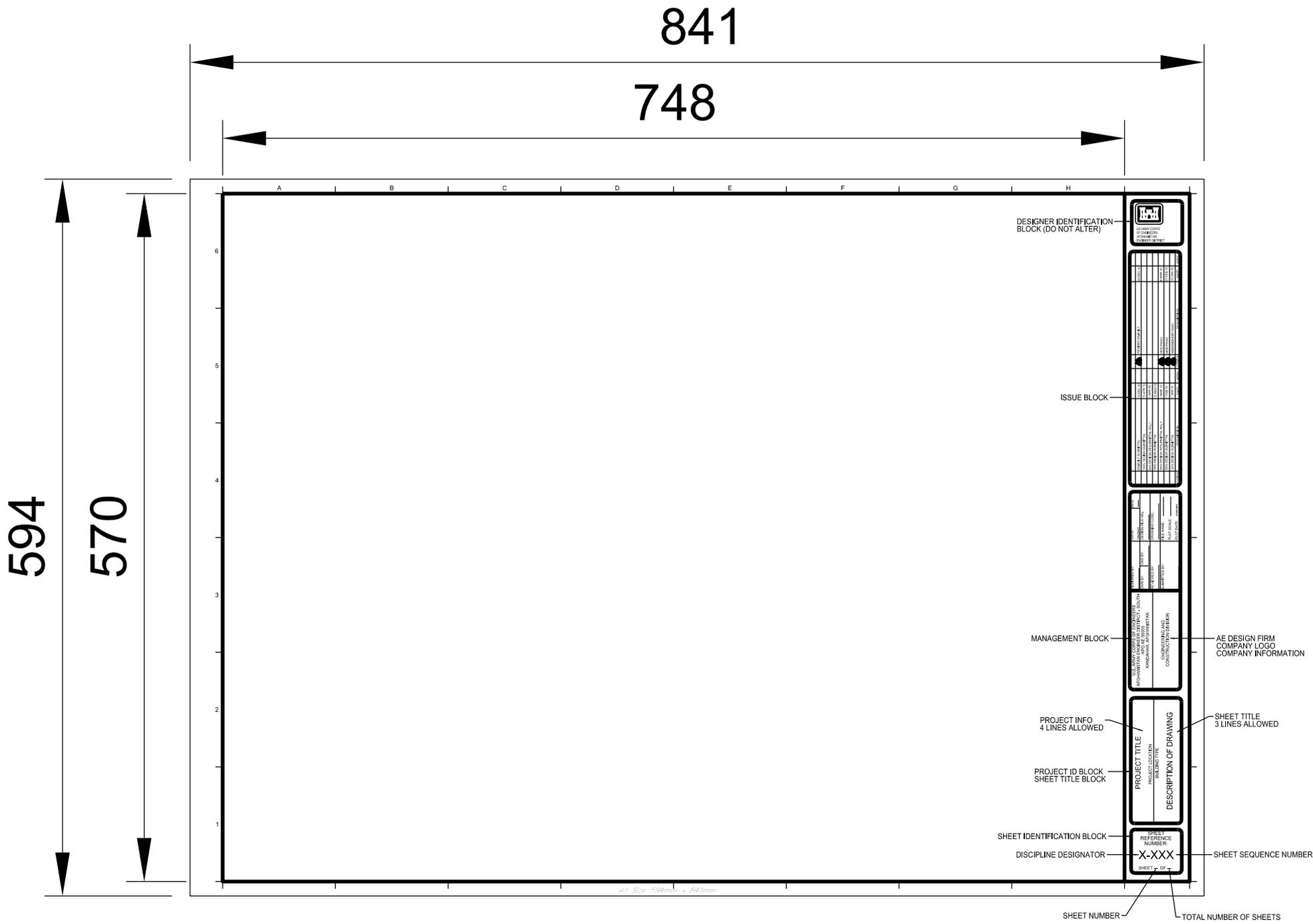


Figure 4: AED-S Sheet Dimensions

ELECTRONIC SUBMITTAL DOCUMENT FORMAT

PART 1 - GENERAL: Throughout the design process, the DB Contractor shall submit electronic packages for review at each Design Phase identified in the Request for Proposals. To facilitate reviews, submittal packages shall conform to the following file structure and format.

1.1. File Structure: Submittal packages that can be contained on a single disc shall use the file structure shown in Figure 1.

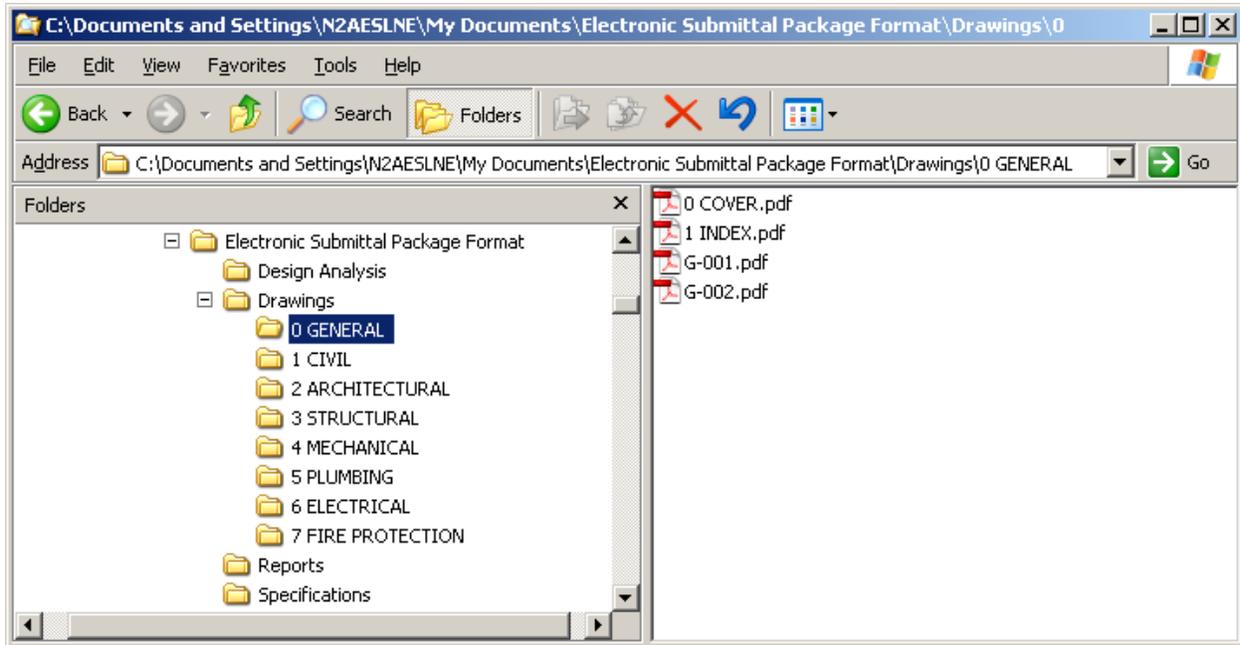


Figure 1: Submittal package file structure

1.2. Design Analysis: The design analysis directory shall contain all design analysis and calculation documents necessary for the current design stage. All design analysis and calculations shall be compiled into a single document containing a table of contents and page numbers. As additional analysis and calculation documents are created in progressive design phases, insert these documents into their appropriate section of the Design Analysis. Avoid lengthy appendices except in the case where numerical output sheets from analysis software are included. All documentation shall be organized by discipline: Civil, Architectural, Structural, Mechanical and Electrical.

1.2.A. Some projects requiring complex plumbing, communications and fire protection systems may require additional sections covering these specific systems. Note that water supply and sanitary sewer systems beyond 1.5 meters of the building envelope are Civil systems, not Plumbing systems.

1.2.B. If the project involves a compound comprised of several structures, clearly identify which building is being analyzed. In these cases, the major divisions of the Design Analysis shall be by discipline with subdivisions by building such that all

calculations for a particular discipline will be found in one section of the document. For example, a compound containing three separate buildings would have three separate seismic loading analysis calculations in the structural section.

1.3. Drawings: Drawings shall be arranged by discipline. Subdirectories shall be made corresponding to discipline only. Folders labeled for specific disciplines as shown in Figure 1 shall contain all drawings in the project applicable to that discipline. Note that these discipline specific folders are to contain only drawings and no other type of document. Drawings must be submitted in pdf form at a minimum. Files shall be named by reference number (i.e. C-101). If multiple file types for submittal drawings are provided, place all file types for each discipline in the same folder; do not subdivide the discipline specific folders for separate file types. Also, include a single pdf file containing all drawings in the project in this folder. The sheets in this file should follow the order indicated in the index sheet. This file should be named to indicate the contract number and submittal stage.

1.3.A. GENERAL: A folder labeled “0 GENERAL” shall contain the cover sheet, index sheet, list of legends and abbreviations sheet, project location and vicinity sheet, and site survey sheets.

1.3.B. CIVIL: A folder labeled “1 CIVIL” shall contain all site survey drawings and all civil drawings for the project. Note that the pipe networks for water supply systems, sanitary sewer systems and storm drainage systems are civil drawings, not plumbing drawings. Also note that gates, fences and small site structures are typically part of the civil discipline.

1.3.C. ARCHITECTURAL: A folder labeled “2 ARCHITECTURAL” shall contain all architectural drawings for the project. Note that life safety drawings denote architectural features and belong in this folder.

1.3.D. STRUCTURAL: A folder labeled “3 STRUCTURAL” shall contain all structural drawings for the project.

1.3.E. MECHANICAL: A folder labeled “4 MECHANICAL” shall contain all HVAC drawings for the project.

1.3.F. PLUMBING: A folder labeled “5 PLUMBING” shall contain all indoor plumbing systems (i.e. domestic water, waste & vent, LPG or propane, compressed air, diesel or fuel oil, etc.) for the project. Note that water supply and sanitary sewer systems beyond 1.5 meters of the building envelope are Civil systems, not Plumbing systems.

1.3.G. ELECTRICAL: A folder labeled “6 ELECTRICAL” shall contain all electrical drawings for the project. Note that communication and fire alarm systems are electrical systems and belong in this folder for most projects.

1.3.H. FIRE PROTECTION: A folder labeled “7 FIRE PROTECTION” shall contain all indoor fire protection systems (i.e. sprinklers, fire pumps, etc.) for the project.

1.4. Reports: The reports folder shall contain all certified reports required in the contract, including the Geotechnical Report, Water Quality Report and any other reports specifically called for in the contract. No subdirectories shall be created in this folder.

1.5. Specifications: All project specifications shall be contained in this folder. Include the project table of contents and name it so that it is easily identifiable (naming it "00000 Project Table of Contents" should ensure that it is at the top of the list). Specification sections should be named by number only so that they sort in ascending order as indicated on the project table of contents, or all project specifications shall be collated into a single file indexed at each section. No subdirectories shall be created in this folder.

PART 2 - PRODUCTS: (NOT APPLICABLE)

PART 3 - EXECUTION: (NOT APPLICABLE)

- - END SECTION - -

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SECTION 01 331 6 DESIGN-BUILD: DESIGN AFTER AWARD

PART 1 GENERAL

1.1. GENERAL INFORMATION

The information contained in this section applies to the design required after award. After award, the Contractor shall develop the accepted proposal into the completed design, as described herein.

1.2. SUBMITTALS

Government review is required for submittals listed below for this section and shall be furnished in accordance with SECTIONS 013315, SUBMITTAL PROCEDURES FOR DESIGN-BUILD PROJECTS, and 013526, **GOVERNMENTAL SAFETY REQUIREMENTS**. **Government** approval is required for submittals with a "G" designation and Designer of Record (DOR) approval is required for submittals with a "DA" designation:

SD-01 Preconstruction Submittals

Design Quality Control Plan; G

Interim Design Submittals; DA

Final Design Submittals; DA

Design Complete Submittals; DA

Design and Code Checklists; DA

1.3. SEPARATE DESIGN PACKAGES

The Contractor may proceed with the construction work included in a separate design package after the **Government** has reviewed the final (100 percent) design submission for that package, review comments have been addressed and resolved to the **Government's** satisfaction and the Contracting Officer (or the Administrative Contracting Officer) has agreed that the design package may be released for construction. See paragraph 3.2, STAGES OF DESIGN SUBMITTALS.

1.4. DESIGNER OF RECORD

The Design-Build Contractor (Design-Builder, D-B, or simply Contractor) shall identify, for approval, the Designer of Record (DOR) who will be responsible for each area of design. One DOR may be responsible for more than one area. All areas of design disciplines shall be accounted for by a listed, Professional Registered, DOR. The DOR(s) shall stamp, sign, and date each design drawing and other design deliverables under their responsible discipline at each design submittal stage (see Section, Contract Clause 52.236-25, REQUIREMENTS FOR REGISTRATION OF DESIGNERS). If the deliverables are not ready for release for construction, they should be identified as "preliminary" or "not for release for construction" or by using some other appropriate

designation. The DOR(s) shall also be responsible for maintaining the integrity of the design and for compliance with the contract requirements through construction and documentation of the as-constructed condition by coordination, review and approval of extensions of design, material, equipment and other construction submittals, review and approval or disapproval of requested deviations to the accepted design or to the contract, coordination with the **Government** of the above activities, and by performing other typical professional designer responsibilities.

PART 2 PRODUCTS

Contractor shall provide design drawings and reports for all mandatory and optional work items awarded.

PART 3 EXECUTION

3.1. PRE-WORK ACTIVITIES AND CONFERENCES

3.1.1. Design Quality Control Plan

The D-B Contractor shall submit for **Government** Approval, a Design Quality Control Plan in accordance with SECTION 014500, QUALITY CONTROL, before design may proceed.

3.1.2. Post Award Conference

The **Government** will conduct a post award contract administration conference at the project site, as soon as possible after contract award. This will be coordinated with issuance of the contract notice to proceed (NTP). The Contractor and major sub-contractor representatives shall participate. All designers need not attend this first meeting. **Government** representatives will include USACE project delivery team members, facility users, facility command representatives, and installation representatives. The **Government** will provide an agenda, meeting goals, meeting place, and meeting time to participants prior to the meeting.

3.1.2.1. Personnel Coordination

The post award conference shall include determination and introduction of contact persons, their authorities, contract administration requirements, discussion of expected project progress processes, and coordination of subsequent meetings for quality control. See SECTION 014500, QUALITY CONTROL, and the initial design conference (paragraph 3.1.4, Initial Design Conference).

3.1.2.2. USACE Product Delivery Team

The **Government** will introduce USACE Product delivery team members, facility users, facility command representatives, and installation representatives. The D-B Contractor shall introduce major subcontractors, and other needed staff. Expectations and duties of each person shall be defined for all participants. A meeting roster shall be developed and distributed by the **Government** with complete contact information including name, office, project role, phone, mailing and physical address, and email address.

3.1.3. Project Progress Processes

3.1.3.1. Design Development

The **Government** and Contractor shall establish comprehensive design development processes including conduct of conferences, expectations of design development at conferences, design acceptance, Structural Interior Design (SID, Fixtures and Equipment (FF&E) design approval, and project closeout. The **Government** will explain contract requirements and the D-B Contractor shall review their proposed project schedule and suggest ways to streamline processes.

3.1.4. Design Conference

The initial design conference may be scheduled and conducted **at the project installation within 60 days of contract award**, although it is recommended that the partnering process be initiated with or before the initial design conference. Any design work conducted after award and prior to this conference should be limited to site and is discouraged for other items. All Designers of Record shall participate in the conference. The purpose of the meeting is to introduce everyone, to make sure any needs the Contractor has are assigned, establish schedule dates and critical milestones, and determine the informational requirements of all parties. The D-B Contractor shall conduct the initial design conference.

3.1.5. Pre-Construction Conference

Before starting construction activities, the Contractor and **Government** will jointly conduct a pre-construction administrative conference to discuss any outstanding requirements and to review local installation requirements for start of construction. It is possible there will be multiple Pre-Construction Conferences based on the content of the design packages selected by the Contractor. The **Government** will provide minutes of this meeting to all participants.

3.2. STAGES OF DESIGN SUBMITTALS

3.2.1. General

The stages of design submittals described below define **Government** requirements with respect to process and content. The Contractor shall determine how to best plan and execute the design and review process for this project, within the parameters listed below. As a minimum, the Contractor shall submit at least one of each of the following submittals:

- a. Interim Design Submittal.
- b. Final Design Submittal before construction of a design package may proceed.
- c. Design Complete Submittal documenting the accepted design.

The Contractor may sub-divide the design into separate packages for each stage of design (see paragraph 1.3, SEPARATE DESIGN PACKAGES).

3.2.2. Interim Design Submittals

The Contractor shall submit a single interim design for review, representing a complete package with all design disciplines. As required in SECTION 013201, PROJECT SCHEDULE, the Contractor shall schedule its design and construction packaging plan to meet the contract completion period. This submittal is the Government's primary opportunity to review the design for conformance to the solicitation and to the accepted contract proposal and to the Building Codes at a point where required revisions may be still made, while minimizing lost design effort to keep the design on track with the contract requirements. The requirements for the interim design review submittals and review conferences are described in paragraph 3.4, INTERIM DESIGN REQUIREMENTS. This is not necessarily a hold point for the design process; the Contractor may designate the interim design submittal(s) as a snapshot and proceed with design development at its own risk.

3.2.3. Over-the-Shoulder Progress Reviews

To facilitate a streamlined design-build process, the Government and the Contractor may agree to one-on-one reviewer or small group reviews, electronically, on-line (if available within the Contractor's standard design practices) or at the Contractor's design offices or other agreed location, when practicable to the parties. The Government and Contractor will coordinate such reviews to minimize or eliminate disruptions to the design process. Any data required for these reviews shall be provided in electronic format, rather than in hard copy. Virtual teaming methods such as electronic file sharing, interactive software with on-line or telephonic conferencing, or televideo conferencing shall be used. The Government must still perform its Code and Contract conformance reviews, so the Contractor shall partner with the reviewers to find ways to facilitate this process and to facilitate meeting or bettering the design-build schedule. The Contractor shall maintain a fully functional configuration management system as described in paragraph 3.3.1, Procedures, to track design revisions regardless of whether or not there is a need for a formal intermediate design review. The formal intermediate review procedures shall form the contractual basis for the official schedule, in the event that the partnering process determines that the formal intermediate review process to be best suited for efficient project execution. However, the Government pledges to support and promote the partnering process to work with the Contractor to find ways to better the design schedule.

3.2.4. Final Design Submittals

Final Design Submittals are required for each design package prior to Government acceptance of that design package for construction. The requirements for the final design submittal review conferences and the Government's acceptance for start of construction are described in paragraph 3.5, FINAL DESIGN REQUIREMENTS.

3.2.5. Design Complete Submittals

After the final design submission and review conference for a design package, the Contractor shall revise the design package to incorporate the comments generated and resolved in the final review conferences, perform and document a back-check review and submit the final, design complete documents, which shall represent released for construction documents. The requirements for the design complete submittals are

described in paragraph 3.7, DESIGN COMPLETE CONSTRUCTION REQUIREMENTS.

3.2.6. Holiday Periods for Government Review or Actions

The Contractor shall not schedule meetings, Government reviews or responses during the last two weeks of December or other designated Government Holidays (including Friday after Thanksgiving) and shall exclude such dates and periods from any durations specified herein for Government actions.

3.2.7. Late Submittals and Reviews

If the Contractor cannot meet its scheduled submittal date for a design package, it must revise the proposed submittal date and notify the Government in writing, at least two weeks prior to the submittal due date, in order to accommodate the Government reviewers' other scheduled activities. If a design submittal is over one (1) day late in accordance with the latest revised design schedule, or if notification of a proposed design schedule change is less than seven (7) days from the anticipated design submittal receipt date, the Government review period may be extended up to seven (7) days due to reviewers' schedule conflicts. If the Government is late in meeting its review commitment and the delay increases the Contractor's cost or delays completion of the project, SECTION , Contract Clauses 52.242-14, SUSPENSION OF WORK, and 52.249-10, DEFAULT, provide the respective remedy or relief for the delay.

3.2.8. Government Review And Acceptance Of Design Submittals

Government review and acceptance of design submittals is for contract conformance only and shall not relieve the Contractor from responsibility to fully adhere to the requirements of the contract, including the Contractor's accepted contract proposal, or limit the Contractor's responsibility of design as prescribed under Section , Contract Clause 52.236-23, RESPONSIBILITY OF THE ARCHITECT-ENGINEER CONTRACTOR, or limit the Government's rights under the terms of the contract. The Government reserves the right to rescind inadvertent acceptance of design submittals containing contract deviations not separately and expressly identified in the submittal for Government consideration and approval.

3.3. DESIGN CONFIGURATION MANAGEMENT

3.3.1. Procedures

The Contractor shall develop and maintain effective, acceptable design configuration management (DCM) procedures to control and track all revisions to the design documents after the Interim Design submittal through submission of the As-Constructed documents. During the design process, this will facilitate and help streamline the design and review schedule. After the final design is accepted, this process provides control of and documents revisions to the accepted design. The system shall include appropriate authorities and concurrences to authorize revisions, including documentation as to why the revision must be made. The DCM data shall be available to the Government reviewers at all times. The Contractor may use its own internal system with interactive

Government concurrences, where necessary or may use the **Government's** "DrChecks Design Review and Checking System."

3.3.2. Tracking Design Review Comments

Although the Contractor may use its own internal system for overall design configuration management, the **Government** and the Contractor shall use the DrChecks Design Review and Checking System to initiate, respond to, resolve and track **Government** design compliance review comments. This system may be useful for other data which needs to be interactive or otherwise available for shared use and retrieval. See paragraph 3.10, TRACKING COMMENTS IN DRCHECKS, for details on how to establish an account and set-up the DrChecks system for use on the project.

3.3.3. Design and Code Checklists

The Contractor shall develop and complete various discipline-specific checklists to be used during the design and quality control of each submittal. These completed checklists shall be submitted with each design submittal, as applicable, as part of the project documentation. See SECTION 014500, QUALITY CONTROL.

3.4. INTERIM DESIGN REQUIREMENTS

3.4.1. General

At least one interim design submittal, review and review conference is required for each design package. The D-B Contractor may include additional interim design conferences or over-the-shoulder reviews, as needed, to assure continued **Government** concurrence with the design work. The interim submittal review periods and conferences shall be included in the project schedule and shall indicate what part of the design work is at what percentage of completion, per SECTION 013201, PROJECT SCHEDULE, subparagraph entitled Design and Permit Activities. The required interim design conferences shall be held when interim design requirements are reached per paragraph entitled Interim Design Deliverables.

3.4.2. Interim Design Deliverables

Interim design deliverables shall include drawings, specifications, submittal register, and design analysis for the part of design that the D-B Contractor considers ready for review.

3.4.2.1. Design Analysis

The designers of record shall prepare and present design analyses with calculations necessary to substantiate and support all design documents submitted. For parts including sitework, site specific civil calculations shall be included. For parts including structural work, structural calculations shall be included. For parts including architectural work, life safety and building code analysis and building floor area analysis shall be included. For parts including electrical work, lighting calculations to determine maintained foot-candle levels, electrical load analysis and calculations, electrical short circuit and protective device coordination analysis and calculations and arc fault calculations shall be included. The Contractor shall submit the geotechnical evaluation

report, reports of soil and rock borings and logs, as well as any other foundation investigations performed in support of design of sitework, utilities, and foundations with the appropriate design package(s).

3.4.2.2. Specifications

Specifications may be any one of the major, well known master guide specification sources (use only one source) such as MASTERSPEC from the American Institute of Architects, SPECTEXT from Construction Specification Institute or Unified Facility Guide Specifications (UFGS), etc. (including specifications from these sources). The designers of record shall edit and expand the appropriate Specifications to insure that all project design requirements, current code requirements, and regulatory requirements are met.

3.4.3. Procedures

- a. After receipt of an Interim Design submittal, the **Government** will be allowed up to fourteen (14) calendar days after receipt of the submittal to review and comment on the interim design submittal. For smaller design packages, especially those that involve only one or a few separate design disciplines, the parties may agree on a shorter review period or alternative review methods (e.g., over-the-shoulder or electronic file sharing). For each interim design review submittal, the COR will furnish to the Contractor, a single consolidated, validated listing of all comments from the various design sections and from other concerned agencies involved in the review process using the DrChecks Design Review and Checking System. The review will be for conformance with the technical requirements of the solicitation and the Contractor's RFP proposal. The Contractor shall furnish disposition of all comments, in writing, through DrChecks. If the Contractor disagrees technically with any comment or comments and does not intend to comply with the comment, the Contractor shall clearly outline, with ample justification, the reasons for noncompliance prior to the closure of the review period in order to provide ample time for the comment to be resolved. The Contractor is cautioned that if it believes the action required by any comment exceeds the requirements of this contract, that it should take no action and notify the COR in writing immediately.
- b. In order to facilitate and accelerate the **Government** code and contract conformance reviews, the Contractor shall identify, track resolution of and maintain all comments and action items generated during the design process and make this available to the designers and reviewers prior to the Interim and subsequent design reviews.
- c. The Interim Review Conference will be held for each design submittal at the installation. The Contractor shall bring the personnel that developed the design submittal to the review conference. The conference will take place the week after the Contractor receives the **Government**'s comments. For smaller fast-track packages that involve only a few reviewers, the

parties may agree to alternative conferencing methods, such as teleconferencing or televideo.

3.4.4. Interim Review Conference Documentation

The D-B Contractor shall prepare meeting minutes and shall enter final resolution of all comments into DrChecks. Copies of comments, annotated with comment action agreed on, will be made available to all parties before the conference adjourns. Unresolved problems will be resolved by immediate follow-up action at the end of conferences. Valid comments shall be incorporated. The **Government** reserves the right to reject design document submittals if comments are significant. Participants shall determine if any comments are critical enough to require further design development prior to **Government** concurrence. Participants shall also determine how to proceed in order to obtain **Government** concurrence with the design work presented.

3.5. FINAL DESIGN REQUIREMENTS

3.5.1. General

A final design review and review conference will be held upon completion of final design at the project installation, or - where equipment is available - by video teleconference or a combination thereof, for any design package to receive **Government** acceptance to allow release of the design package for construction. For smaller separate design packages, the parties may agree on alternative reviews and conferences (e.g., conference calls and electronic file sharing, etc.). The Contractor shall include the final design conference in the project schedule and shall indicate what part of the design work is at 100 percent completion. The final design conference will be held after the **Government** has had up to fourteen (14) calendar days, after receipt of the submittal, to review the final design package and supporting data. For smaller packages, especially those involving only one or a few design disciplines the parties may agree on a shorter review period.

3.5.2. Final Design Review Conference Documentation

The D-B Contractor shall prepare meeting minutes and shall enter final resolution of all comments into DrChecks. Copies of comments, annotated with comment action agreed on, will be made available to all parties before the conference adjourns. Unresolved problems will be resolved by immediate follow-up action at the end of conferences. Valid comments shall be incorporated. The **Government** reserves the right to reject design document submittals if comments are significant. Participants shall determine if any comments are critical enough to require further design development prior to **Government** concurrence.

3.6. FINAL DESIGN DELIVERABLES

3.6.1. General

Final design deliverables of a design package for **Government** review and acceptance shall consist of: 100-percent complete drawings, 100-percent Division 02-49 specifications, submittal register, design analysis, and any permits required by the

contract for each package submitted. Prior to the final design conference, the Contractor shall ensure that the DCM data and all review comment resolutions are up-to-date. The Contractor shall also have performed independent technical reviews (ITR) and back-checks of previous comment resolutions, as required by SECTION 014500 QUALITY CONTROL, paragraph Additional Requirements for Design Quality Control (DQC) Plan. The Contractor shall include the 100 percent SID and 100 percent FF&E binders for **Government** approval (see paragraph 3.1.3.2, Design Development).

3.6.2. Drawings

- a. Submit drawings complete with all contract requirements incorporated into the documents to provide a 100 percent design for each package submitted. Prepare all drawings with the Computer-Aided Design and Drafting (CADD) system, organized and easily referenced electronically, presenting complete construction information (see paragraph 3.6.3, CADD System).
- b. The design documents shall be in compliance with SECTION 01 33 15, SUBMITTAL PROCEDURES FOR DESIGN-BUILD PROJECTS. The D-B Contractor shall use approved vertical Corps of Engineers title blocks and borders on all drawings with the appropriate firm name included within the title block area.
 - a. The Contractor shall provide complete, detailed drawings that illustrate conformance with the contract. The Contractor is encouraged to utilize graphics, views, notes, and details which make the drawings easier to review or to construct but is also encouraged to keep such materials to those that are necessary.

3.6.3. CADD System

Use of CADD is mandatory. A complete set of computerized drawing files shall be submitted. Additionally, all plans and shop drawings shall be published to Adobe PDF. All computerized drawing files shall be submitted in MicroStation file format in the same model and sheet space as the design drawings. If the drawing files are to be created in other than MicroStation (versions 8 or newer), then the proposed CADD software and the conversion software shall be submitted for approval. All conversions shall be made prior to delivery. A list of firms capable of performing this work is available on the American Council of Engineering Companies of Oregon website at <http://www.acecoregon.org/acec/> under the link entitled, "List of AutoCad-Microstation Firms."

3.6.3.1. Paper Copies

A complete set of paper copies of the drawings, printed as standard full-size drawings, per SECTION 013315, SUBMITTAL PROCEDURES FOR DESIGN-BUILD CONTRACTS shall be submitted. The Designers of Record shall stamp and sign original hard copy sheets as Released For Construction, and provide copies for distribution from this set.

3.6.4. Design Analysis

The designers of record shall prepare a design analysis with calculations necessary to validate and support all design work submitted. The responsible DOR shall stamp, sign and date the design analysis. Identify the software used where applicable (name, version, vendor). Generally, provide design analyses individually, in an original (file copy) and one copy for the assigned **Government** reviewer. Do not combine multi-disciplined volumes of design-analysis, unless multiple copies are provided to facilitate multiple reviewers (one copy per each separate design analysis included in a volume).

3.6.5. Specifications

Specifications shall be 100 percent complete and in final form. Prepare and submit specification sections (Division 02-49) as required to define project design requirements, materials, and workmanship; to coordinate with design drawings; to obtain accurate subcontractor bids; and to permit construction of the project features.

3.6.6. Submittal Register

The D-B Contractor shall prepare and update the Submittal Register and submit it with the 100-percent Division 02-49 specification sections (see Specification SECTION 013315, SUBMITTAL PROCEDURES FOR DESIGN-BUILD PROJECTS). Include the required submittals for each specification section in a design package in the submittal register. The Contracting Officer or Contracting Officer's Representative may request submittals in addition to those specified when deemed necessary to adequately describe the work covered in the respective sections.

3.6.7. Acceptance and Release for Construction

At the conclusion of the Final Design Review (after resolutions to the comments have been agreed upon between DOR and **Government** reviewers), the Contracting Officer or the ACO will accept the Final Design submittal for the design package in writing and allow construction to start for that design package. The **Government** may withhold acceptance until all major corrections have been made or if the final design submittal requires so many corrections, even though minor, that it isn't considered acceptably complete.

3.6.8. Geo-Referenced Coordinates

When applicable and identified in a Task Order, during the design development the Contractor shall capture geo-referenced coordinates of all changes made to the existing site as a result of this contract. There is no mandatory methodology for how the geo-referenced coordinates will be captured Engineering and Construction Bulletin No. ECB 2006-15, Subject: Standardizing Computer Aided Design (CAD) and Geographic Information Systems (GIS) Deliverables for all Military Design and Construction Projects identifies the format for final as-constructed drawings and data sets to be delivered to the **Government**. Close-out requirements at the as-constructed stage, require final geo-referenced GIS Database of the new facility along with all exterior modifications. The **Government** will incorporate this data set into the Installation's GIS Masterplan or Enterprise GIS System. See also, SECTION 017839 PROJECT RECORD DOCUMENTS.

3.7. DESIGN COMPLETE CONSTRUCTION DOCUMENT REQUIREMENTS

After the Final Design submittal and Review Conference and after **Government** acceptance of the Final Design, the Contractor shall revise the design documents for the design package to incorporate the comments generated and resolved in the final review conference, perform and document a back-check review and submit the final design complete documents. The following deliverables are required for distribution and field use: All documentation and supporting design analysis in final form, as well as the final review comments, disposition, and the back-check. As part of the quality assurance process, the **Government** may perform a back-check of the released for construction documentation. The Contractor shall promptly correct any errors or omissions found during the **Government** back-check. The **Government** may withhold retainage from progress payments for work or materials associated with a final design package until this submittal has been received and the **Government** determines that it is complete.

3.8. TRANSMITTAL FORM (ENG FORM 4025)

The sample transmittal form (ENG Form 4025 - Attachment A2) shall be used for submitting both **Government** approved and information only submittals in accordance with the instructions on the reverse side of the form per SECTION 013315, SUBMITTAL PROCEDURES FOR DESIGN-BUILD PROJECTS.

3.9. TRACKING COMMENTS IN DRCHECKS

3.9.1. General

When identified, throughout the design process, the D-B Contractor shall enter, track, and back-check comments. Designers of Record shall annotate comments timely and specifically to indicate exactly what action will be taken or why the action is not required. Comments considered critical by the conference participants shall be flagged as such.

3.9.2. DrChecks Review Comments

- a. The D-B Contractor shall monitor DrChecks to assure all comments are annotated and agreed to by the designers and reviewers prior to the next submittal. The DrChecks comments and responses shall be printed and included in the design analysis for record.
- b. Conference participants (reviewers) will expect coordination between Design Analysis calculations and the submitted design. Reviewers will also focus on the design submittal's satisfaction of the contract requirements.
- c. The Designers of Record shall answer each comment in DrChecks with a formal response prior to the next submittal, clearly indicating what action will be taken and what drawing/spec will change. Designers of Record are encouraged to directly contact reviewers to discuss and agree to the formal comment responses rather than relying only on DrChecks and review meetings to discuss comments. With the next design conference, reviewers will back-check answers to the comments against the submittal, in addition to reviewing additional design work.

- d. Comments that, in the D-B Contractor's opinion, require effort outside the scope of the contract shall be clearly indicated as such in DrChecks. The D-B Contractor shall not proceed with work outside the contract until a modification to the contract is properly executed, if one is necessary.

3.9.3. DrChecks Initial Account Set-Up

- a. To initialize an office's use of DrChecks, choose a contact person within the office to call the DrChecks Help Desk at 800-428-HELP, weekdays from 8AM-5PM, United States Central time (Coordinated Universal Time - 06). This POC will be given an office password to distribute to others in the office. Individuals can then go to the hyperlink at {<http://www.projnet.org>} and register as a first time user. Upon registration, each user will be given a personal password to the DrChecks system.
- b. Once the office and individuals are registered, the COE's project manager or lead reviewer will assign the individuals and/or offices to the specific project for review. At this point, persons assigned can make comments, annotate comments, and close comments, depending on their particular assignment.

3.9.4. DrChecks Reviewer Role

The D-B Contractor shall take the role of the reviewer to enter comments into the DrChecks system that result from each design conference. To enter comments:

- a. Log into DrChecks.
- b. Click on the appropriate project.
- c. Click on the appropriate review conference. An Add comment screen will appear.
- d. Select or fill out the appropriate sections (particularly comment discipline and type of document for sorting) of the comment form and enter the comment in the space provided.
- e. Click the Add Comment button. The comment will be added to the database and a fresh screen will appear for the next comment you have.
- f. Once comments are all entered, exit DrChecks by choosing "My Account" and then Logout.

3.9.5. DrChecks Comment Evaluation

The role of the designers of record is to evaluate and respond to the comments entered by the D-B Contractor. To respond to comments:

- a. Log into DrChecks.
- b. Click on the appropriate project.
- c. Under "Evaluate" click on the number under "Pending."
- d. Locate the comments that require your evaluation. (Note: If you know the comment number you can use the Quick Pick window on your home page in DrChecks; enter the number and click on go.)

- e. Select the appropriate evaluation (concur, non-concur, for information only, or check and resolve) and add the response.
- f. Click on the Add button. The evaluation will be added to the database and a fresh screen will appear with the next comment.
- g. Once evaluations are all entered, exit DrChecks by choosing "My Account" and then Logout.

3.9.6. DrChecks Back-check

At the following design conference, participants will back-check comment annotations against newly presented documents to verify that the designers' responses are acceptable and completed. The D-B Contractor and **Government** reviewers shall enter additional back-check comments, as necessary or close those that are resolved as a result of the design conferences:

- a. Log into DrChecks.
- b. Click on the appropriate project.
- c. Under "My Backcheck" click on the number under "Pending."
- d. If you agree with the designer's response select "Close Comment" and add a closing response if desired.
- e. If you do not agree with the designer's response or the submittal does not reflect the response given, select "Issue Open," enter additional information.
- f. Click on the Add button. The back-check will be added to the database and a fresh screen will appear with the next comment.
- g. Once back-checks are all entered, exit DrChecks by choosing "My Account" and then Logout. The design is completed and final when there are no pending comments to be evaluated and there are no pending or open comments under back-check.

3.9.7. DrChecks Comment Clarification

If any review comment requires clarification and/or amplification to assure understanding, the Contractor shall notify the Contracting Officer. The Contractor is cautioned in that if he believes the action required by any comment exceeds the requirements of this contract, that he should take no action and notify the COR in writing immediately.

– SECTION END –

SECTION 01 35 26
SAFETY AND OCCUPATIONAL HEALTH REQUIREMENTS

REVISED 30 JULY 2011

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 Afghanistan and;

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 (2010)	Safety Requirements for Personal Fall Arrest Systems
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(2011)	National Electrical Code
NFPA 70E(2010)	Electrical Safety in the Workplace

U.S. ARMY CORPS OF ENGINEERS (USACE)

EM 385-1-1(2008)	Safety and Health Requirements
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U.S. NATIONAL ARCHIVES AND RECORDS ADMINISTRATION (NARA)

29 CFR 1910	Occupational Safety and Health Standards (OSHA)
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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

1.1 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 SUBMITTAL PROCEDURES:

SD-01 Preconstruction Submittals

Accident Prevention Plan (APP); G, District Safety Office

Activity Hazard Analysis (AHA); G, District Safety Office

Crane Critical Lift Plan; G, District Safety Office

Proof of qualification for Crane Operators; G, District Safety Office

UXO/Demining Safety Work Plan; G, District Safety Office

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, District Safety Office

UXO/Demining Clearance Certificate; G, District Safety Office

Submit one copy of each permit/certificate attached to each Daily Quality Control Report.

Certification of UXO clearance. Where excavations are to be performed in areas known or suspected to contain explosives, unexploded munitions, or military ordnance, surface and subsurface clearance by qualified explosive ordnance disposal (EOD) personnel shall be accomplished prior to excavation work. Clearance certificates must be forwarded to the AED-N UXO QA Safety specialist, prior to the start of construction. If the site does not have an

associated clearance certificate, the site will require an UXO/mine clearance conducted to meet the certification of UXO clearance requirements EM 385-1-1 section 25.A.01.m.

Before initiation of work at the job site, all Accident Prevention Plans, Demining plans, and any other safety related plans shall be reviewed by the AED-N Safety Office.

1.2 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.

1.3 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.

1.4 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.

1.5 SITE QUALIFICATIONS, DUTIES AND MEETINGS

1.5.1 PERSONNEL QUALIFICATIONS

1.5.1.1 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 cannot be the SSHO on this project.

The SSHO shall meet the following requirements: Certification card for 30-hour OSHA construction safety class or equivalent within the last 3 years. SSHO must be fluent in English and the local language for communication with the GDA. Competent person training as needed.

Site Safety and Health Officer(SSHO)shall meet the requirements of EM 385-1-1

1. The SSHO is also required to have five (5) years of construction industry safety experience or three (3) years if he/she possesses a Certified Safety Professional (CSP) or safety and health degree. (For complex or high hazard projects, the SSHO shall have a minimum of ten (10) years of safety-related work with at least five (5) years experience on similar type projects.

2. The SSHO(s), as a minimum, must have completed the 30-hour OSHA Construction safety class or as an equivalent, 30 hours of formal construction safety and health training covering the subjects of the OSHA 30-hour course (see Appendix A, paragraph 4.b. in EM385-1-1 applicable to the work to be performed and given by qualified instructors.

3. SSHOs shall maintain this competency through 24 hours of formal safety and health related coursework every four (4) years.

The SSHO shall have the following level of experience:

1. A minimum of 5 years safety work on similar projects.
2. 30-hour OSHA construction safety class or equivalent within the last 5 years.
3. An average of at least 24 hours of formal safety training each year for the past 5 years.
4. Competent person training as needed.

1.5.1.2 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. Assess hazardous conditions including atmospheric hazards in confined space and adjacent spaces and specify the necessary protection and precautions to be taken;
- d. Determine ventilation requirements for confined space entries and operations;
- e. Assess hazards associated with hot work in confined and adjacent space and determine fire watch requirements; and,
- f. Maintain records required.

1.5.1.3 CRANE OPERATORS

Crane operators shall meet the requirements in USACE EM 385-1-1, Section 16.B.

1.5.1.4 DIVERS

All divers shall meet the requirements of EM385-1-1 (2008) Section 30 and Appendix O. Failure to meet these requirements will be cause for rejection or cessation of operations.

1.5.2 PERSONNEL DUTIES

1.5.2.1 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. Be on site at all times while work is being performed.
- 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.

1.5.3 MEETINGS

1.5.3.1 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.

1.5.3.2 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.

1.6 TRAINING

1.6.1 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.

1.6.2 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.

1.6.3 TRAINING ON ACTIVITY HAZARD ANALYSIS (AHA)

Prior to beginning a new phase, training will be provided to all affected

1.7 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. An AED Minimum Basic Outline for Contractor APP Template is provided at the end of this section. 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.

In addition to following the requirements defined by EM 385-1-1, the Contractor shall submit for approval as part of the APP a DBA Insurance Plan describing how the requirements in Section 00 80 00 Special Clauses paragraph 2.11 will be met including: (1) properly and promptly submit an injury claim within seven days of the incident, (2) provide Resident/Area Engineer with copies of submitted claim(3) gathering contact information of workers and their family, (4) follow-up on claim's status, (5) provided weekly claims report status to the Resident/Area Engineer,(6) providing prompt payment to an injured worker, or the family of a deceased worker, and (7) provide Resident/Area Engineer confirmation that payment has been provided from DBA insurance provider.

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.

1.7.1 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 34, 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.H. and the following:
 - (1) For lifts of personnel, the plan shall demonstrate compliance with the requirements of EM 385-1-1, Section 16.T.
 - (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).

1.8 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.

1.9 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.

1.10 SITE SAFETY REFERENCE MATERIALS

Maintain safety-related references applicable to the project. Maintain applicable equipment manufacturer's manuals.

1.11 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.

1.12 REPORTS

1.12.1 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.

1.12.2 ACCIDENT NOTIFICATION

Notify the Contracting Officer as soon as practical, but not later than eight 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.). For all accidents involving a fatality, permanent total disability, hospitalization of three or more persons, or property damage of \$200,000 or more, the Contractor shall promptly suspend all operations at the scene of the accident and notify the Resident Engineer of the occurrence.

The Contractor shall immediately provide for the rescue and/or care of the injured. Except in situations where safety may be compromised, access to the area shall be restricted and the scene left undisturbed until investigated by a Government appointed board of investigation and until the Contractor is authorized to resume operations.

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.

1.12.3 CRANE REPORTS

Submit crane inspection reports required in accordance with USACE EM 385-1-1, Appendix I and as specified herein with Daily Reports of Inspections.

1.13 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.**

2. EXECUTION

2.1 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.13 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.
5. Eye protection

Eye and face protection equipment shall meet the requirements of ANSI/ American Society of Safety Engineers (ASSE) Z87.1, and bear a legible and permanent "Z87" logo to indicate compliance with the standard. Eye and face protection equipment shall be distinctly marked to facilitate identification of the manufacturer and provides side protection.

Persons involved in activities that subject the hands to injury (for example, cuts, abrasions, punctures, burns, chemical irritants, toxins, vibration, and forces that can restrict blood flow) shall select and use hand protection appropriate for the hazard in accordance with ANSI/International Safety Equipment Association (ISEA) 105.

Protective equipment shall be of heat, fire, chemical, and/or electrical-resistive material when conditions require protection against such hazards.

2.1.1 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.

2.1.2 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.

2.1.3 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.

2.1.4 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."

2.2 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.

2.2.1 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.B.

2.2.2 FALL PROTECTION EQUIPMENT

The Contractor shall enforce use of the fall protection equipment designated for each specific work activity in the Fall Protection and Prevention Plan and/or AHA at all times when an employee is on a surface 1.8 m (6 feet) or more

above lower levels. Fall protection systems such as guardrails, personnel fall arrest system, safety nets, etc., are required when working within 1.8m (6 feet) of any leading edge. Personal fall arrest systems are required when working from an articulating or extendible boom, swing stages, or suspended platform. In addition, Elevating Work Platforms/Scissors Lifts: Scissors lifts shall be equipped with standard guardrails. In addition to the guardrail provided, if the scissor lift is equipped with a manufactured anchorage, a restraint system shall be used in addition to guardrails. Lanyards used with the restraint system shall be sufficiently short to prohibit workers from climbing out of, or being ejected from, the platform.

2.2.2.1 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.

2.2.3 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.

2.2.4 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. Existing horizontal lifeline anchorages shall be certified (or re-certified) by a registered professional engineer with experience in designing horizontal lifeline systems.

2.2.5 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.

2.2.6 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.

2.2.7 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).

2.3 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.

2.4 EQUIPMENT

2.4.1 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.

2.4.2 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.

2.5 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. All excavations shall conform with the requirements of Section 25 of EM 385-1-1.

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 the excavation, the adjacent areas, and protective systems daily; before each work shift; throughout the work shifts as dictated by the work being done; after every rainstorm; after other events that could increase hazards, e.g., snowstorm, windstorm, thaw, earthquake, etc.; when fissures, tension cracks, sloughing, undercutting, water seepage, bulging at the bottom or other similar conditions occur; when there is a change in size, location or placement of the spoil pile; and where there is any indication or change in adjacent structures. The competent person shall be able to demonstrate the following: training, experience, and knowledge of, soil analysis, use of protective systems; and requirements of EM 385-1-1 and 29 CFR 1926 Subpart P. They also need the ability to detect conditions that could result in cave-ins, failures in protective systems, hazardous atmospheres, and other hazards including those associated with confined spaces. They shall have the authority to take prompt corrective measures to eliminate existing and predictable hazards and stop work when required.

2.5.1 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.

2.5.2 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.

2.5.3 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.

2.5.4 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.

2.6 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.

2.7 ELECTRICAL

2.7.1 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. Energized work may never be performed without prior authorization. An energized work permit shall be submitted to GDA for acceptance in accordance with 385-1-1, Section 11.A02.c. 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.

2.7.2 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.

2.8 WORK IN CONFINED SPACES

The Contractor shall comply with the requirements in Section 34 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. 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. Ventilation shall conform with the requirements of Section 06.G of 385-1-1.
- c. Ensure the use of rescue and retrieval devices in confined spaces greater than 1.5 m (5 feet) in depth. Conform to Section 34 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 34 of USACE EM 385-1-1.
- f. Daily Entry Permit. Post the permit in a conspicuous place close to the confined space entrance.

2.9 CRYSTALLINE SILICA

Grinding, abrasive blasting, and foundry operations of construction materials containing crystalline silica, shall comply with USACE EM 385-1-1, Appendix 06.H. 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.

2.10 DEMOLITION

2.10.1 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.

2.10.2 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.

2.10.3 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.

2.11 DIVE OPERATIONS

All dive operations shall meet be performed in accordance with EM385-1-1 (2008), specifically Section 30 and Appendix O. Failure to meet these requirements shall be cause for rejection or cessation of operations.

2.12 BARGE OPERATIONS

All barge or water operations shall be performed in accordance with EM385-1-1 (2008), specifically Section 19 and Section 16.L.

2.13 HOUSEKEEPING

2.13.1 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.

-- END OF SECTION --

**SECTION 01 35 50
ENVIRONMENTAL PROTECTION**

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ENVIRONMENTAL PROTECTION**

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1 GENERAL

1.1 REFERENCES

The publications listed below form a part of this specification to the extent referenced. The publications are referred to in the text by basic designation only.

	ISLAMIC REPUBLIC OF AFGHANISTAN
Official Gazette No. 912	Environmental Law (2007)
	U.S. DEPARTMENT OF DEFENSE (DoD)
DoD 4715.05-G	Overseas Environmental Baseline Guidance Document (OEBGD) (2007)
	U.S. ARMY (DA)
AR 200-1	Environmental Protection and Enhancement (2007)
	U.S. ARMY CORPS OF ENGINEERS (USACE)
EM 385-1-1	Safety and Health Requirements Manual (2009)

1.2 DEFINITIONS

1.2.1 Environmental Pollution

The condition resulting from the presence of chemical, mineral, radioactive, or biological substances that:

- a. Alter the natural environment.
- b. Adversely affect human health or the quality of life, biosystems, the environment, in structures and equipment, recreational opportunities, aesthetics, and/or natural beauty.

1.2.2 Environmental Protection

Environmental protection is the prevention/control of pollution.

1.2.3 Hazardous Material (HM)

A hazardous material is a useful product that requires special management because it has hazardous characteristics (ignitability, corrosivity, reactivity, or toxicity) that could pose dangers to human health or the environment. A HM becomes a Hazardous Waste when it can no longer be used for its intended purpose.

1.2.4 Hazardous Waste (HW)

A hazardous waste is a discarded material with hazardous characteristics that could pose dangers to human health or the environment.

1.2.5 Contractor Generated Hazardous Waste

Hazardous wastes generated or discarded by the Contractor. This includes materials not fully consumed during the course of construction - for example, paint thinners (i.e. methyl ethyl ketone, toluene etc.), waste thinners, excess paints, excess solvents, waste solvents, and fuel/oils/lubricants.

1.3 GENERAL REQUIREMENTS

The Contractor shall minimize environmental pollution and damage that may occur as the result of construction operations. The Contractor shall be responsible for delays resulting from failure to comply with environmental laws and regulations.

1.4 SUBCONTRACTORS

The Contractor shall ensure compliance with this section by all subcontractors, suppliers, and vendors.

1.5 LAWS AND REGULATIONS

The Contractor shall comply with all applicable Afghanistan environmental, natural and cultural resources, and historic preservation laws and regulations.

1.6 SUBMITTALS

1.6.1 Environmental Protection Plan

The Contractor shall submit an Environmental Protection Plan as part of the 65% design submittal for review and approval by the Contracting Officer. The purpose of the Environmental Protection Plan is to present an overview of known or potential environmental (natural and cultural) issues which the Contractor must address during construction. The Environmental Protection Plan shall be current and maintained onsite by the Contractor. The Environmental Protection Plan shall, at a minimum, contain the following:

1.6.1.1 Contents

The environmental protection plan shall include, but shall not be limited to, the following:

1. Name(s) of the on-site Environmental Manager who is responsible for ensuring adherence to the Environmental Protection Plan and monitoring and documenting environmental procedures.
2. An erosion and sediment control plan which identifies the type and location of the erosion and sediment controls to be provided. The plan shall include monitoring and reporting requirements to assure that the control measures are effective.
3. Work area plan showing the areas of limited use or nonuse. Plan should include measures for marking the limits of use areas including methods for protection of features to be preserved within authorized work areas.
4. Spill Control plan shall include the procedures, instructions, and reports to be used in the event of an unforeseen spill of a hazardous material. This plan shall include as a minimum:
 - a. The name of the individual who will immediately notify the Contracting Officer and report any spills or hazardous substance releases. The plan shall contain a list of the required reporting channels and telephone numbers.
 - b. A list of materials and equipment contained in the job site spill kit (see Appendix for minimum requirements).
 - c. The names and locations of suppliers of containment materials and locations of additional fuel oil recovery, cleanup, restoration, and material-placement equipment available in case of an unforeseen spill emergency.
 - d. The methods and procedures to be used for expeditious contaminant cleanup.
5. An air pollution control plan detailing how trash is disposed of without debris burning.
6. A non-hazardous solid waste disposal plan identifying methods and locations for solid waste disposal including clearing debris.
7. A contaminant prevention plan that identifies potentially hazardous substances to be used on the job site and identifies the intended actions to prevent introduction of such materials into the air, water, or ground. As new hazardous materials are brought on site or removed from the site, the plan shall be updated.
8. A hazardous waste plan that identifies potentially hazardous waste that may be generated by the project.
9. A waste water management plan that identifies the methods and procedures for management and/or discharge of waste waters which are directly derived from construction activities.
10. A plan that defines procedures for identifying and protecting historical, archaeological, cultural resources known to be on the project site. The plan shall identify lines of communication between Contractor personnel and the Contracting Officer.

1.6.1.2 Unidentified issues

During Construction, the Contractor shall be responsible for identifying, implementing, and submitting, for approval, any additional requirements to be included in the Environmental Protection Plan.

1.7 PROTECTION FEATURES

The Contractor shall prepare a brief report including a plan describing the features requiring protection under the provisions of the Contract Clauses. This survey report shall be signed by both the Contractor and the Contracting Officer upon mutual agreement as to its accuracy and completeness.

1.8 ENVIRONMENTAL ASSESSMENT OF CONTRACT DEVIATIONS

Any deviations, requested by the Contractor, from the drawings, plans and specifications which may have an environmental impact will be subject to approval by the Contracting Officer.

1.9 NOTIFICATION

The Contracting Officer will notify the Contractor in writing of any observed noncompliance with elements of the Contractor's Environmental Protection plan. Upon notification or discovery of noncompliance, the Contractor shall propose corrective action to the COR and take such action when approved by the COR. The Contracting Officer may issue an order stopping all or part of the work until satisfactory corrective action has been taken. No time extensions shall be granted or equitable adjustments allowed to the Contractor for any such suspensions.

2 PRODUCTS (NOT USED)

3 EXECUTION

3.1 ENVIRONMENTAL PERMITS AND COMMITMENTS

The Contractor shall be responsible for obtaining and complying with all permits and commitments required by Afghanistan environmental, natural and cultural resources, and historic preservation laws and regulations.

3.2 LAND RESOURCES

The Contractor shall confine all activities to areas defined by the drawings and specifications. No ropes, cables, or guys shall be fastened to or attached to any trees for anchorage unless specifically authorized. The Contractor shall provide effective protection for land and vegetation resources at all times as defined in the following subparagraphs. Stone, soil, or other materials displaced into uncleared areas shall be removed by the Contractor.

3.2.1 Work Area Limits

Prior to commencing construction activities, the Contractor shall mark the areas that need not be disturbed under this contract. Where construction operations are to be conducted during darkness, any markers shall be visible in the dark. The Contractor's personnel shall be knowledgeable of the purpose for marking and/or protecting particular objects.

3.2.2 Landscape

Features indicated to be preserved shall be clearly identified by marking, fencing, or wrapping with boards, or any other approved techniques. The Contractor shall restore landscape features damaged or destroyed during construction operations outside the limits of the approved work area.

3.2.3 Erosion and Sediment Controls

The Contractor shall be responsible for providing erosion and sediment control measures. The COR shall approve erosion and sediment controls prior to installation. Any temporary measures shall be removed after the area has been stabilized.

3.2.4 Contractor Facilities and Work Areas

The Contractor's field offices, staging areas, stockpile storage, and temporary buildings shall be placed in areas designated on the drawings or as directed by the Contracting Officer. Temporary movement or relocation of Contractor facilities shall be made only when approved. Erosion and sediment controls shall be provided for on-site borrow and spoil areas to prevent sediment from entering nearby waters. Temporary excavation and embankments for plant and/or work areas shall be controlled to protect adjacent areas.

3.2.5 Tree Protection

All costs associated with tree protection requirements required by specifications and drawings are the full responsibility of the Contractor. The Contractor shall exercise care when excavating trenches in the vicinity of trees.

3.3 WATER RESOURCES

The Contractor shall monitor construction activities to prevent pollution of surface and ground waters. Toxic or hazardous chemicals shall not be applied to soil or vegetation unless otherwise indicated. All water areas affected by construction activities shall be monitored by the Contractor.

3.3.1 Cofferdams, Diversions, and Dewatering Operations

Construction operations surface waters shall be controlled at all times to maintain compliance with designated uses of the surface water body.

3.3.2 Stream Crossings

Constructed stream crossings (wet or dry) shall not block the natural flow of water when present.

3.4 AIR RESOURCES

3.4.1 Burning

All areas within facility perimeter fence line are designated as no burn areas.

3.5 CHEMICAL MATERIALS MANAGEMENT AND WASTE DISPOSAL

3.5.1 Chemicals and Chemical Wastes

Chemicals shall not be spilled on the ground or water. Dispensing areas shall be clean and not subject to repetitive spills. Corrective action shall be quickly performed and documented. This documentation will be periodically reviewed by the Government. Chemical waste shall be collected in corrosion resistant, compatible containers. Wastes shall be classified, managed, stored, and disposed at an appropriate disposal site.

3.5.2 Contractor Hazardous Material / Generated Hazardous Wastes / Excess Hazardous Materials

The Contractor shall be responsible for storage, describing, packaging, labeling, and marking hazardous waste and hazardous material. The Contractor shall manage and store hazardous material and waste in a designated area designed to segregate and prevent mixing of incompatible chemicals. The area will be dry, securable and have warning signs appropriate for the wastes being accumulated. Facilities or areas shall provide adequate ventilation, containment, and protection from the elements. Contractor vehicles are not considered a proper storage facility. No HM or HW shall be stored in vehicles overnight or for any length of time. The Spills of hazardous or toxic materials shall be immediately reported to the Contracting Officer. Cleanup and cleanup costs due to spills shall be the Contractor's responsibility.

3.5.3 Fuel and Lubricants

Equipment and motor vehicle fueling, lubrication and storage shall be conducted on containment surfaces to minimize spills evaporation.

3.5.4 Waste Water

Disposal of waste water shall be as specified below.

- a. Waste water from construction activities shall not be discharged prior to being treated to remove pollutants. The Contractor shall dispose of the construction related waste water off site, unless on-site disposal is approved by the Contracting Officers Representative.
- b. Water generated from the flushing of lines after decontamination or decontamination in conjunction with hydrostatic testing or only hydrostatic testing shall be discharged into areas where the liquids will percolate into the ground.

3.6 HISTORICAL, ARCHAEOLOGICAL, AND CULTURAL RESOURCES

If during construction activities any historical, archaeological, and cultural resources are discovered or found, all activities that may damage or alter such resources shall be temporarily suspended. Resources include but are not limited to: any human skeletal remains or burials; artifacts; shell, midden, bone, charcoal, or other deposits; rock or coral alignments, pavings, wall, or other constructed features; and any indication of agricultural or other human activities. Upon such discovery or find, the Contractor shall immediately notify the Contracting Officer so that the appropriate authorities may be notified and a determination made as to their significance and what, if any, special disposition of the finds should be made. The Contractor shall secure the area and prevent employees or other persons from trespassing on, removing, or otherwise disturbing such resources.

3.7 BIOLOGICAL RESOURCES

The Contractor shall minimize interference with, disturbance to, and damage to fish, wildlife, and plants including their habitat. The Contractor shall protect animal and plant species including their habitat in accordance with Afghanistan regulations.

3.8 MAINTENANCE OF POLLUTION CONTROL

The Contractor shall maintain permanent and temporary pollution control facilities and devices for the duration of the contract or for that length of time construction activities create the particular pollutant.

3.9 POST CONSTRUCTION CLEANUP

The Contractor shall clean up all areas used for construction in accordance with Contract Clause: "Cleaning Up". The Contractor shall, unless otherwise instructed in writing by the Contracting Officer, obliterate all signs of temporary construction facilities such as haul roads, work area, structures, foundations of temporary structures, stockpiles of excess or waste materials, and other vestiges of construction prior to final acceptance of the work. The disturbed area shall be graded, filled and the entire area restored to its original condition.

-- End of Section --

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**SECTION 01 40 00
SECURITY**

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**SECTION 01 40 00
SECURITY**

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1.0 SPECIFIC CONTRACT SECURITY ASSESSMENT

The Contractor shall construct the Project in an active war zone where International Security Assistance Forces (ISAF) may conduct offensive and defensive operations against a variety of hostile forces, to include members of the Taliban. The Contractor understands that it may not receive any support whatsoever in securing the Project site and in securing the transportation of materials to the Project site. Neither U.S. Government nor other ISAF forces are available to provide exclusive security for the Project. The Contractor is responsible for securing the Project site and in securing the transportation of materials to the Project site. The Contracting Officer possesses no ability to control the operations of either ISAF or hostile forces. The Government, acting in its sovereign capacity in its prosecution of its operations, may take actions which directly or indirectly affect the Contractor. These kinds of acts are general in application, not specifically directed at the Contractor. The Contractor recognizes that such actions may be taken, and that they will not entitle the Contractor to make claims for excusable or compensable delays. The Contractor possesses sufficient information about the specific security situation at the site to enable it to formulate an appropriate security plan. The Contractor understands that the security situation at the Project is subject to significant transformation in a short time span based on the changing operational picture in the region. The Contractor's security plan will take this factor into account.

2.0 GOVERNMENT PREREQUISITES TO CONTRACTOR DEPLOYMENT OF SITE SECURITY PERSONNEL

The following regulations and policies apply to Contractor Provided Site Security Personnel:

- a. DODI 3020.41; **Contractor Personnel Authorized to Accompany the U.S. Armed Forces**; 3 OCT 2005 (available at www.dtic.mil/whs/directives/corres/pdf/302041p.pdf).
- b. DODI 3020.50; **Private Security Contractors (PSCs) Operating in Contingency Operations**; 22 JUL 2009 (available at www.dtic.mil/whs/directives/corres/pdf/302050p.pdf).
- c. USCENTCOM Contracting Command, **Acquisition Instruction**; 5 NOV 2010 (available at <http://c3-training.net/policy.html>).
- d. DFARS Subpart 225.74, Defense Contractors Outside the United States.

The Contractor understands its responsibilities under these regulations, policies, and standard contract clauses, as well as its responsibilities under Afghan law, with regard to its contracts for and employment of security personnel. The Contractor is not authorized to deploy any site security personnel until it complies with all prerequisites identified in these references. The Contractor acknowledges that its repeated failure to comply with these regulations, policies, and standard contract clauses constitute grounds for the Government to terminate the Contractor for default.

3.0 GOVERNMENT REPRESENTATIVES

During the Project, USACE may disseminate essential security information to the Contractor and will attempt to assist with any Contractor's questions and concerns. The USACE Area Office OIC/NCOIC will serve as the Area Office Security Officer and the Resident Office OIC/NCOIC will serve as the Resident Office Security Officer (collectively "the Security Officers").

4.0 SECURITY COORDINATION

Contractor will be required to coordinate construction site security with any Afghan or Coalition Forces and Local Governments that are available, if any, to assist the Contractor on a case-by-case basis. Coordination does **not** include nor imply making any unauthorized or illegal payments to the local ANA/ANP or Local/Provincial Government Officials for permission or protection to construct the project. The Contractor will immediately inform

the Government if asked to make any such payments, and the Government will provide further direction to the Contractor. Corruption will not be tolerated at any level, under any circumstances. Conducting business in this manner will be grounds for termination of the contract.

5.0 SECURITY PLAN

The Security Officers will review and approve all current and future Contractor security plans prior to submittal approval by the authorized representative of the Contracting Officer. The Security Officers shall ensure that all Contractor security plans are in accordance with the Contract requirements. The security plans shall address movement of Contractor labor, material, and equipment. The Security Officers will lead the quality assurance program to ensure Contractors are executing their approved security plans. The Government will not allow the Contractor to start work on the Project site without an approved security plan.

5.1 SECURITY RATING

Each contract or task order will be assigned a rating by the Area Office Security Officer. This rating will determine the level of approval for the security plan. Assistance from the District's J2/J3 may be required to assess the rating. Ratings and approval levels are below:

- a. Extremely High Risk: District Commander
- b. High Risk: Deputy CDR, Chief of E&C, Area OIC, J2 OIC, or J3 OIC
- c. Moderate Risk: Chief of Construction, Area OIC/NCOIC, or Area Engineer
- d. Low Risk: Resident OIC/NCIOC, Resident Engineer

The rating assigned is in no way an indication that the security situation at the site will remain at a constant level throughout the Project.

5.2 SITE SECURITY FOR PROJECTS OUTSIDE OF ACTIVE COALITION FORCE BASES

The Contractor shall develop a site security plan and program to provide 24 hr/7 days a week security for the Project throughout its performance. The security plan must consider all construction-related sites; batch plants, material sources, stockpiles, worker camps and any other location where there is a major construction effort. The plan must also address security as it relates to the transportation of materials, equipment, personnel, and other items and individuals to the site. The Contractor is expected to perform all required actions to protect the construction site compound from theft and vandalism and personnel from physical harm. These measures are strictly for the protection and defense of the on-site people and property; Contractors are not authorized to conduct any type of offensive operations. For security of road construction, transportation of supplies, and equipment convoys, see the appropriate section below.

5.3 ESTIMATED THREAT ASSESSMENT

The Contractor shall develop a site security plan to cover a range of security operations from low to high threat. Included in this security plan shall be the capability for a surge of manpower and equipment required during high threat conditions. The Contractor shall notify all on-site personnel of increased threats and protective action to take.

5.4 ADDITIONAL CIVILIAN ARMING REQUIREMENTS

The Contractor shall include in its security plan, and must continue to maintain throughout the Project, current information on the following items for all its armed civilian personnel:

- a. MOI license number,
- b. AISA license,
- c. Armed Contractor & subcontractor company names,
- d. Contract number/title,
- e. Contracting agency (USACE-AES),
- f. Type of work,
- g. Number/type of weapons authorized,
- h. POC for company with contact details,
- i. Government Contracting Officer and COR with contact details,
- j. Number of security personnel by type (U.S., Afghan, Other),
- k. Company's country of registration/origin, names,

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- l. Photos
- m. Tazkira numbers of security personnel as well as those personnel with access to weapons/ammo and those persons who will be handling or transporting explosives

In addition the Contractor shall immediately update any change to the coordinates of the Contractor's base camps, quarries, and current work locations. The Contractor shall submit, prior to the commencement of construction, a plan for security protection, with a list of the chain of command. Perimeter security shall prevent unauthorized site access and provide safety protection to the Contractor workforce and government personnel for the duration of the project.

6.0 SECURITY PLAN SUBMITTAL REQUIREMENTS

Contractors will submit all security plans in accordance with contract Section 01335 – Submittal Procedures for Projects.

7.0 COMMUNICATION

The Contractor shall operate a 24/7 security operations center with communication capability to each guard on duty and the ability to notify all on-site personnel of increased threats and protective actions to take. The operations center shall also have 24/7 communication with the local Coalition, ANA, or ANP security forces. The Contractor shall have communication with the Resident Office Security Officer at all times for rapid emergency response; the Resident Office Security Officer will give the Contractor the District J2/J3 contact information. Communication can be via cell phone, email, satellite phones, VHF, HF, CODAN, text, or other communication technologies compatible with the Government's capabilities. The Contractor will provide the Government with their contact information (names, numbers, frequencies, email addresses, transponder IDs, etc.) for the site encompassing all available communication means.

8.0 CONTRACTOR PROVIDED EQUIPMENT

The Contractor will provide the operational security equipment including but not limited to weapons, radios, uniforms, vehicles, vehicle fuel, phones, and other equipment as proposed by the Contractor to provide complete site security.

9.0 KEY CONTROL

The Contractor shall establish and implement methods in writing to ensure that all keys issued by the Contractor are not lost or misplaced and are not used by unauthorized persons. The Contractor shall develop procedures covering key control that will be included in their quality control system (See Section 01451). The project managers will keep a master log of all keys and provide a copy to the contracting officer's representative (COR) for verification. If a key is lost or stolen, the Contractor shall pay to have all impacted locks changed/rekeyed immediately.

10.0 CRITICAL INFORMATION TO REPORT

The Government is responsible for the management and oversight of DOD Contracted AC/PSCs delivering services throughout Afghanistan. Given the impact of either Contractor misbehavior or catastrophic attacks against Contractors, it is critical that information regarding AC/PSC incidents is communicated quickly and accurately to the Government for purposes of management, fact-finding, and mitigation where necessary. The Government must receive the information addressed below. The Contractor shall report any of these information requirements immediately to the Resident Office Security Officer:

- a. AC/PSC Escalation of Force to include the use of weapons resulting in the death or injury of an Afghan citizen, coalition, or U.S. service member, other government official, or Contractor
- b. AC/PSC accidents, traffic, or otherwise, resulting in the death or injury of an Afghan citizen, coalition, or U.S. service member, governmental official, or Contractor.
- c. Attacks against AC/PSC activities by Anti-Afghan Forces resulting in the death or injury of an Afghan citizen, coalition or US service member, governmental official, or Contractor.
- d. Reports of "lost convoys." These are AC/PSC escort or independent activities which have lost contact with their companies.
- e. AC/PSC Escalation of Force, accidents, or other activities that result in significant damage to Afghan or USG vehicles, materials or facilities.

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- f. Anti-Afghan Force actions including small arms fires (SAF), RPG fire, indirect fire (IDF), improvised explosive devices (IEDs), and/or complex attacks against AC/PSC activities.
Contractor accidental or negligent discharge of a weapon.

--End of Section--

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SECTION 01 41 50 METRIC MEASUREMENTS

PART 1 GENERAL

1.1. REFERENCES

The publications listed below form a part of this specification to the extent referenced. The publications are referred to in the text by basic designation only.

ASTM INTERNATIONAL (ASTM)

ASTM E 621 (1994e1; R 1999) Use of Metric (SI) Units in Building Design and Construction (Committee E-6 Supplement to E380)

IEEE/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 expressed as a soft metric, unless 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

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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 15-5/8 inches)).

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 IEEE/ASTM SI 10 and ASTM E 621 as the basis for establishing metric measurements required to be used in submittals.

1.5.1. Paper Copies

1.5.1.1. Drawings

A final, complete set of paper copies, printed as standard full-size drawings, per SECTION 013315 SUBMITTAL PROCEDURES, shall be submitted 30 days from final approval of the preliminary as-built drawings.

1.5.1.2. Shop Drawings

Submit final approved project shop drawings, per SECTION 013315 SUBMITTAL PROCEDURES, 30 days from final approval of the preliminary as-built shop drawings.

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1.5.2. Electronic Copies

Thirty days from final approval of the preliminary as-built electronic files, a complete set of electronic CADD files shall be submitted. These final record drawings shall be fully compatible with the Portland District Computer-Aided Design System. All electronic drawing (.dgn) files shall be in MicroStation (most current version) file format, in the same model and sheet space as the contract drawings, and submitted on CD-ROMs[or DVDs]. A list of firms capable of performing this work is available on the American Council of Engineering Companies of Oregon website at <http://www.acecoregon.org/acec/> under the link entitled, "List of AutoCad-Microstation Firms." The Government will furnish the cell and font libraries and the standard border for use in preparing the drawings. Electronic copies of existing contract drawings contained in this Contract will be made available to the Contractor. As-built changes shall be made to these Government furnished drawings. Additionally, all final approved as-built drawings and shop drawings shall be published to Adobe PDF and included in the as-built drawing package on a CD-ROM.

1.5.3. Drafting Standards

- a. General Drafting Standards. The drafting standards used in the provided CADD electronic files shall be conformed to. Additions and corrections to the Contract drawings shall be equal in quality and detail to that of the originals. Upon request, the Government will provide documentation and specific drafting requirements.
- b. As-Built Drafting Standards:
 - (1) All record of revisions shall remain in the title block; revision triangles are to be removed from the rest of the drawings.
 - (2) Add the final revision notation to the title block of "Record Drawings/As-Built Conditions" or "Revised Record Drawings/As-Built Conditions."
 - (3) Add as-built block to all drawings with information complete. A sample will be provided.

PART 2 PRODUCTS
Not used.

PART 3 EXECUTION
Not used.

– END OF SECTION –

**SECTION 01 45 00
CONTRACTO QUALITY CONTROL**

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**SECTION 01 45 00
CONTRACTOR QUALITY CONTROL**

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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.

2. EXECUTION

2.1 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.

2.2 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 (USACE) Construction Quality Management (CQM) course, or equivalent. The CQM course will be offered periodically by the Afghanistan Engineer District (AED), USACE. Additional approved CQM courses include those offered by the Commercial Technical Training Center (in Jalalabad) and the Champion Technical Training Center (in Kabul). 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

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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.

2.3 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.

2.3.1 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.

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- 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 feature under a particular section. This list will be agreed upon during the coordination meeting.

2.3.2 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.

2.3.3 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.

2.3.4 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.

2.4 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.

2.5 QUALITY CONTROL ORGANIZATION

2.5.1 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.

2.5.2 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.

2.5.3 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.

2.5.4 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.

2.6 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.

2.7 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:

2.7.1 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.

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- 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.

2.7.2 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.

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- 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.

2.7.3 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.

2.7.4 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.

2.8 TESTS

2.8.1 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

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to the Contracting Officer. Failure to submit timely test reports, as stated, may result in nonpayment for related work performed and disapproval of the test facility for this contract.

2.9 COMPLETION INSPECTION

2.9.1 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.

3.9.2 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.

2.9.2 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. 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.

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- 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.

3.1 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 contractors Quality Control Plan.

3.2 NOTIFICATION OF NONCOMPLIANCE

The Contracting Officer will notify the Contractor of any detected noncompliance with the foregoing requirements. The Contractor shall take immediate corrective action after receipt of such notice. Such notice, when delivered to the Contractor at the work site, shall be deemed sufficient for the purpose of notification. If the Contractor fails or refuses to comply promptly, the Contracting Officer may issue an order stopping all or part of the work until satisfactory corrective action has been taken. No part of the time lost due to such stop orders shall be made the subject of claim for extension of time or for excess costs or damages by the Contractor.

-- END OF SECTION --

**SECTION 01 45 10
QUALITY CONTROL SYSTEM (QCS)**

REVISED 29 JULY 2011

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**SECTION 01 45 10
QUALITY CONTROL SYSTEM (QCS)**

REVISED 29 JULY 2011

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	Submittal Monitoring
Finances	Scheduling
Quality Control	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 --

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DIVISION I – GENERAL REQUIREMENTS

SECTION 016400

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SECTION 01 64 00 START UP, TESTING AND COMMISSIONING

PART 1 GENERAL

1.1. SUMMARY

This Section includes the requirements for integrated services to start-up, test, commission, and turnover all Contractor furnished equipment and related work. The purpose of this Section is to define the Contractor requirements for bringing individual equipment, systems, and facilities online and for proving proper operation and performance of that work. Contractor is required to develop, submit, and maintain detailed plans for these activities as specified elsewhere in this Section or other Sections of the RFP.

1.1.1. General Requirements

The Contractor shall furnish all labor, tools, instruments, and consumable materials required to perform all testing activities specified. The Contractor shall be responsible for costs associated with outside subcontractors or testing agencies required to perform or certify the work.

Any consumables or expendables consumed during testing shall be replaced following testing so that equipment is ready for operation by the owner.

1.1.2. Related Sections

- a. SECTION 016640 TRAINING
- b. SECTION 017700 CLOSEOUT PROCEDURES
- c. SECTION 017810 OPERATION AND MAINTENANCE DATA

1.2. CONSTRAINTS

The Contractor shall be responsible for developing a comprehensive startup, testing, and commissioning plan to meet the project requirements and to fully coordinate with related existing systems and local stakeholder needs.

1.3. DEFINITIONS

1.3.1. Commissioning

Commissioning generally refers to all field activities on equipment or systems between the time that equipment (or system) is turned over from the construction team and the time that the equipment (or system) is ready for functional and performance testing. All commissioning activities shall be managed by a designated Commissioning Manager directly employed by the Contractor.

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1.3.2. Commissioning Manager

An employee of the Contractor responsible for coordinating and managing all commissioning activities and related documentation.

1.3.3. Control System Functional Acceptance Test (CSFAT)

The control systems functional acceptance testing demonstrates the proper interaction of the individual facility and overall control system components and the related equipment individual control systems. The Systems Integrator will be responsible for this test. The Testing Coordinator shall coordinate tests and activities to support the CSFAT.

1.3.4. Field Tests

Denotes all field testing including installation testing, functional, performance, and start-up tests.

1.3.5. Functional Test

The field testing is required to determine whether the installed equipment or system will operate in a satisfactory manner and as specified. The functional test is a point-by-point test to confirm that all components associated with the equipment or systems are operating properly. All non-operating adjustments, cold alignment checks, cleaning shall be completed prior to functional tests.

1.3.6. Installation Checks and Testing

Field testing performed by the Contractor or equipment manufacturers to ensure that all installation work has been performed satisfactorily and in compliance with manufacturer's requirements. Equipment suppliers or manufacturers must sign-off on the installation checks and testing before further commissioning work can proceed.

1.3.7. Operational Testing

Field testing shall demonstrate sustained operation of the facilities in actual operating conditions.

1.3.8. Performance Test

The field testing required demonstrating the individual equipment or system meets all of the contract performance requirements.

1.3.9. Start-Up Test

A field test of all systems operating together to demonstrate satisfactory performance of the facilities as a whole, for the specified start-up test period without failure and to the satisfaction of the Contractor and the Contracting Officer. Successful completion of start-up testing is a pre-requisite for substantial completion.

1.3.10. Start-Up Re-test

At Contracting Officer's discretion minor issues that are observed during Start-up Testing may be noted and re-tested following substantial completion. The Start-up Re-

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Test will repeat those portions of the Startup Test that are required to close-out those minor issues.

1.3.11. System Integrator (SI)

SI is the party responsible for interfacing the facility control systems. The SI duties include, but are not limited to, performing all work necessary to design, select, furnish, customize, debug, supervise installation, connect, calibrate, field modify existing control and instrumentation wirings and place into operation all hardware, communication lines and equipment, and provide all programming of all software. The SI shall provide all field commissioning services required to properly commission the control system. The System Integrator shall coordinate scheduling of work, testing, training of Government personnel, and documentation with the Contractor's Commissioning Manager.

1.4. SUBMITTALS

1.4.1. General

Unless otherwise indicated, delivery of all test plans required for the systematic factory and field tests for all equipment and systems installed or provided for field use under this contract shall be made at least eight weeks in advance of the date the Contractor wishes to begin such testing. Once the Government has reviewed and taken no exception to the Contractor's test plans, the Contractor shall reproduce the plans in sufficient number for the Contractor's purposes and an additional ten copies for delivery to the Government. No test work shall begin until the Contractor has delivered the specified number of final test plans to the Government. Submittals shall be made as required in Section 013315. In addition, the following specific commissioning related submittal information shall be provided:

1.4.2. 120 Day Submittals

1.4.2.1. Submit the following a minimum of one hundred and twenty (120) calendar days prior to the first factory or field test:

- a. A list of all factory and field tests with reference to appropriate specification sections and submittal dates.
- b. Commissioning Manager's qualifications & past project experience including contact names, addresses, and current telephone numbers that can be used to verify the accuracy of the provided information.
- c. Manufacturer's representatives' resumes demonstrating their qualifications and ability to perform the specified services.
- d. Details and descriptions of the record keeping plan and systems to be employed by Contractor for retention of all start-up, testing, and commissioning documentation.

1.4.3. 90 Day Submittals

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1.4.3.1. Submit the following a minimum of ninety (90) calendar days prior to the first functional test:

- a. Test Plan and Procedures for All Tests:
 - i. All test procedures shall be comprehensive, neatly organized, type written, and numbered step-by-step.
 - ii. Equipment and system test documentation shall include the date of test, equipment number or system name, nature of test, test objectives, test results, test instruments employed for the test and signature spaces for the **Government**'s witness and the Contractor's Quality Assurance Manager. Documentation shall be provided for the following tests as a minimum:
 - Metallurgical tests
 - Factory tests
 - Field calibration work and tests
 - Field pressure and leak tests
 - Field functional tests
 - Field performance tests
 - Field start-up tests
 - Field operational tests

1.4.3.2. Provide a detailed plan of all testing activities describing the tests to be performed, the staff or organization responsible for the tests, and documentation processes necessary to record the results of all tests. The Contractor shall develop test plans detailing the coordinated, sequential testing of each item of equipment and system installed or provided for field use under this contract. Each test plan shall be specific to the item of equipment or system to be tested. Test plans shall identify by specific equipment or tag number each device or control station to be manipulated or observed during the test procedure and the specific results to be observed or obtained. Test plans shall also be specific as to support systems required to complete the test work, subcontractors' and manufacturers' representatives to be present and expected test duration. As a minimum, the test plans shall include the following information:

- a. Step-by-step proving procedure for all control and electrical circuits by imposing low voltage currents and using appropriate indicators to affirm that the circuit is properly identified and connected to the proper device.
- b. Calibration of all instruments and control sensors.
- c. Testing of each individual item of mechanical, electrical, and instrumentation equipment. Tests shall be selected to duplicate the operating conditions.
- d. Operational tests designed to duplicate, as closely as possible, operating conditions described in other Sections:
 - i. Detailed test methods, including sample calculations and reference to standards as required or applicable.

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- ii. Comprehensive schedule of all factory and field tests. The schedule shall be in bar chart form, plotted against calendar time, shall detail the equipment and systems to be tested, and shall be coordinated with the Contractor's construction schedule. The schedule shall show the contemplated start date, duration of the test and completion of each test. No testing activity shall take place until the Contractor has submitted a schedule to which the **Government** takes no exception. The test schedule shall be updated weekly, showing actual dates of test work, indicating systems and equipment testing completed satisfactorily and meeting the requirements of this project manual. List all equipment testing by specification section number and name. Include the following for each equipment/system:
- Specification section and paragraph number
 - Test type (factory, functional, performance, start-up)
 - Test procedure submittal dates
 - Testing and start-up dates
 - Test report submittal dates

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After initial submittal, update and provide test schedules on a weekly basis at project progress meetings and/or test coordination meetings. All data for testing schedules shall be full coordinated with the overall project schedule.

All communication systems and systems designed for control through the facility control system will require testing and coordination with the project Systems Integrator (SI). The Contractor shall make scheduling allowances for these tests and incorporate this information into the construction schedule.

Pre-test checklist to ensure readiness and any safety measures are in-place.

Pre-operational checklists or procedures from each equipment manufacturer showing all installation checks or tests that must be completed prior to operation of the equipment.

Safety turnover procedures for all equipment and systems clearly demonstrating the safety processes to be followed as equipment or systems are turned-over from construction to commissioning.

Descriptions and drawings showing any temporary systems or facilities that will be installed to facilitate testing. Temporary systems for testing shall be incorporated into the testing schedule to indicate the installation and removal sequences for the temporary components.

Details of all necessary adjustments, balancing, required equipment isolation or configuration, test equipment and instruments, calibration, and personnel needed.

List of all installation checks and testing work that will be performed for mechanical, electrical, and instrumentation equipment.

- i. Specific calibration program for all instruments, meters, monitors, gages, and other instrumentation provided under this Contract.
- ii. Specific calibration program for all testing instruments that will be used for performing tests of equipment and systems installed under this Contract. Include the credentials and certification of any testing laboratories required by the Contractor for calibration of test equipment.
- iii. Acceptance Criteria: For each test phase, specifically indicate what is considered an acceptable test result.
- iv. Data Forms: Include the test name, equipment (with tag numbers as applicable) or system name, specification section and paragraph number, test instrument tag numbers, test date, space for testing personnel names, test data names, and units, reference equations for all calculated values, and signature lines for manufacturer's representative, Contractor and Contracting Officer witness.

1.4.4. Start-up Plan

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In addition to submitting test procedures, the Contractor shall develop and submit a start-up plan. The start-up plan shall systematically describe the details of preparing for and starting each system at all facilities at the beginning of the start-up tests. The start-up plan shall also include detail procedures for the systematic shutdown of all systems at the facility.

- 1.4.4.1. At a minimum, the start-up plan shall include the proposed chronological sequence of activities and detailed procedures for starting or shutting down facilities and systems. In addition, provide the following detailed information:
- a. A list of new and existing facilities, equipment, and systems with applicable references to device name and **Government** tag number that must be in operation before the startup test can begin
 - b. CAD drawings and schematics highlighting the facilities, systems, and equipment included in the start-up testing
 - c. Expendables required for the start-up test
 - d. The chronological sequence of activities clearly divided into activities to be completed in preparation for start-up test versus activities completed during the start-up test
 - e. Expected durations of each test activity

1.4.5. Final Test Reports

Upon successful completion of testing for each equipment item or system, the Contractor shall submit complete typewritten test reports including data forms.

Upon substantial completion, all factory, functional and performance test reports shall be inserted by the Contractor into the applicable O&M data packages.

1.4.6. Device Settings

Submit all final device settings for all field adjustable devices. These settings shall be incorporated into the final O&M manuals for each piece of equipment supplied.

1.4.7. Factory and Field Test Manuals

When all factory and field testing is complete, submit all test documents in bound form and electronic copy (on DVD). This consolidated submittal is in addition to the individual submittal of test procedures and test results. Format requirement for this field testing manual shall be the same as for the final closeout submittals specified in SECTION 017700 CLOSEOUT PROCEDURES, including section dividers by system or equipment. Note: Electrical Equipment data shall be provided on approved NETA forms and Instrumentation and Control data shall be provided on ISA forms.

1.5. QUALITY CONTROL

All startup, testing, and commissioning activities, work, and personnel shall be subject to the general Project Quality Control Systems requirements specified in SECTION

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014510 QUALITY CONTROL SYSTEM (QCS). All documentation created for or generated by testing activities shall be considered part of the project quality documentation.

For the purposes of this Section, a system shall include all items of equipment, devices and appurtenances connected in such a fashion as their operation or function complements, protects or controls the operation or function of the others. The Contractor shall coordinate the activities of all subcontractors and suppliers to implement the requirements of this Section.

All testing will be witnessed by the **Government**. All test plans and reports shall include signoff by the **Government** witness.

1.6. TESTING REQUIREMENTS

1.6.1. Factory Testing

Factory testing of equipment or systems shall be provided as necessary. All factory testing for a system or individual equipment item shall be complete, with results approved by the Contracting Officer, prior to shipment of that system or equipment to the job site.

1.6.1.1. Minimum requirements for factory tests shall be as given below and as indicated in the individual equipment or system specifications:

- a. Complete test plans and schedules for all factory tests.
- b. Contractor shall plan for all factory tests to be witnessed by the **Government**. At the **Government**'s discretion certain factory tests may not be witnessed by the **Government**. The **Government** will issue a waiver for un-witnessed factory tests that the Contractor shall include in their final documentation. Results from all tests, whether witnessed or un-witnessed, shall be submitted to the Contracting Officer.
- c. Factory test conditions shall be made as close to field conditions as is practical and shall be approved by the Contracting Officer prior to commencing factory tests.
- d. Factory tests shall be conducted to prove that the equipment or system performs in accordance with the specifications and is ready for shipment to the job site.

1.6.2. Functional Testing

1.6.2.1. Functional tests shall not proceed until the Contracting Officer has received and approved the items listed below:

- a. Interconnection and Loop diagrams
- b. All factory test reports

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- c. Manufacturer's Certificate of Proper Installation (where required)
- d. Equipment or system functional test submittal
- e. All specified spare parts and special tools
- f. Draft O&M Manuals

1.6.2.2. Each functional test shall include:

Device Calibrations, Loop Checks, and Electrical Commissioning:

- a. Calibration Check: Verify that all devices have been properly field calibrated and that field calibration tags have been completed and installed.
- b. Loop Checks if not performed as part of pre-operational testing.
- c. Electrical Commissioning of related wiring and equipment.

1.6.2.3. All device calibrations, loop checks and electrical systems commissioning shall be completed and accepted by the **Government** prior to starting the remaining functional test elements specified hereinafter.

- a. Installation Check: Check for proper rotation, adjustment, alignment, balancing, mechanical and electrical connections, proper lubrication, and any other conditions that may damage or impair equipment from functioning properly.
- b. Operations Check: Check for proper operation of all system components.
- c. Controls Check: Demonstrate proper function of all local and remote controls, instrumentation, and other equipment functions.
- d. Alarms Check: Simulate alarm conditions and verify the proper operation of each alarm at the specified set point. Simulations shall be by means of direct element stimulation whenever possible or by other means when direct element stimulation is not practical as determined by the **Government**.
- e. Run Check: Each system or equipment item shall be operated continuously for a minimum of one (1)-hour or three complete operating cycles, unless noted otherwise.
- f. Additional Test Requirements: The individual technical specifications or the equipment manufacturer may specify additional functional test requirements for each component or system.

1.6.3. Performance Testing

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1.6.3.1. Performance tests shall demonstrate that the equipment or systems meets all specified performance requirements described in the individual technical specifications.

1.6.3.2. Where previous functional testing has been configured to prove performance of individual components or systems, the Contractor may request waiving performance testing of that equipment. Such requests must be approved by the Contracting Officer before the performance tests can be waived. All baseline data shall be available from the functional testing if performance testing is to be waived.

1.6.3.3. Performance Tests

Once all affected equipment has been subjected to the required preoperational check-out procedures and functional testing and the Contracting Officer has witnessed and has not found deficiencies in that portion of the work, individual items of equipment and systems may be started and operated under simulated operating conditions to determine as nearly as possible whether the equipment and systems meet the requirements of these specifications.

The equipment shall be operated to determine machine operating characteristics, including noise, temperatures and vibration; to observe performance characteristics; and to permit initial adjustment of operating controls.

When testing requires the availability of auxiliary systems such as looped piping, electrical power, compressed air, control air, or instrumentation which have not yet been placed in service, the Contractor shall provide acceptable substitute sources, capable of meeting the requirements of the machine, device, or system at no additional cost to the **Government**. Disposal methods for test media shall be subject to review by the **Government**.

During the functional test period, the Contractor shall obtain baseline operating data on all equipment with motors greater than 1 horsepower to include amperage, bearing temperatures, and vibration. The baseline data shall be collected for the **Government** to enter in a preventive maintenance system.

Test results shall be within the tolerances set forth in the detailed technical criteria sections of SECTION 010150 TECHNICAL REQUIREMENTS and in the specifications provided by the Contractor. If no tolerances have been specified, test results shall conform to tolerances established by recognized industry practice. Where, in the case of an otherwise satisfactory functional test, any doubt, dispute, or difference should arise between the **Government** and the Contractor regarding the test results or the methods or equipment used in the performance of such test, then the Contracting Officer may order the test to be repeated.

If the repeat test, using such modified methods or equipment as the Contracting Officer may require, confirms the previous test, then all costs in connection with the repeat test will be paid by the **Government**. Otherwise, the costs shall be borne by the Contractor. Where the results of any functional test fail to comply with the contract requirements for

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such test, then such repeat tests as may be necessary to achieve the contract requirements shall be made by the Contractor at his expense. The Contractor shall provide, at no expense to the **Government**, all power, fuel, compressed air supplies, water, chemicals, and any other necessary consumable item, all labor, temporary piping, heating, ventilating, and air conditioning for any areas where permanent facilities are not complete and operable at the time of functional tests, and all other items and work, required to complete the functional tests. Temporary facilities shall be maintained until permanent systems are in service.

1.7. COMMISSIONING REQUIREMENTS

1.7.1. Calibration

All test equipment (gages, meters, thermometers, analysis instruments, and other equipment) used for calibrating or verifying the performance of equipment installed under this contract shall be calibrated as specified in cited test codes, standards or procedures. In no case shall the calibration be less than plus or minus 2 percent of actual value at full scale. Test equipment employed for individual test runs shall be selected so that expected values as indicated by the detailed performance specifications will fall between 60 and 85 percent of full scale. Pressure gages shall be calibrated in accordance with **ANSI/ASME B40.1**. Thermometers shall be calibrated in accordance with **ASTM E77** and shall be furnished with a certified calibration curve.

Calibration of analysis instruments, sensors, gages, and meters installed under this contract shall proceed on a system-by-system basis. No equipment or system performance acceptance tests shall be performed until instruments, gages, and meters to be installed in that particular system have been calibrated and the calibration work has been witnessed by the **Government**.

1.7.2. Manufacturer Field Service Testing and Inspection

A manufacturer's authorized representative shall perform all services when manufacturer's services are specified in this section or are specified in any other technical section of the RFP. The authorized representative shall be factory trained and experienced in the technical applications, installation, operation and maintenance of the equipment, subsystem or system. Additional qualifications may be specified elsewhere.

Manufacturer's representatives shall be subject to the acceptance of the Contracting Officer. No substitute representatives will be allowed without prior written approval by the Contracting Officer.

Manufacturer's representatives shall be qualified for the work to be performed and different representatives may be required for specific tasks (installation assistance, testing, start-up, training, etc.).

Where required, the Manufacturer's or Supplier's field personnel shall perform the following:

- a. Observe the erection, installation, start-up and testing of equipment.

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- b. Instruct and guide Contractor in proper procedures.
- c. Supervise the initial start-up, operational check, and any required adjustments of equipment.
- d. Training as required by SECTION 016640 TRAINING.
- e. Furnish a written report to Contracting Officer covering all Work done at least once each week and when Work on each item of equipment or system is completed.

Contractor shall provide five (5) day's notice prior to the arrival of any Manufacturer's and Supplier's field personnel at the site.

1.7.3. Dynamic Balancing of Equipment

Perform dynamic balancing of rotating equipment.

- a. Record initial dynamic balance analysis data, including vibration velocity and vibration displacement at the rated speed of equipment.
- b. Identify and quantify unbalance and make corrections as necessary to meet manufacturer specifications.
- c. Record final dynamic balance analysis data, including vibration velocity and vibration displacement at the rated speed of equipment.

Submit dynamic balancing report. The dynamic balancing report shall be included in the Operations and Maintenance Manual. Equipment vibration testing is considered part of installation checks and testing and shall be completed before any functional testing of equipment begins.

1.7.4. Installation Checks and Pre-Operational Testing

An installation check and pre-operations testing shall be performed on the equipment prior to operation of the equipment and prior to any functional testing.

A Certificate of Proper Installation shall be provided for valve and hoist installation. A qualified representative from the manufacturer shall visit the site, inspect the installed equipment, and observe any installation testing required. The manufacturer's representative shall sign the Certificate of Proper Installation certifying that the equipment is properly installed and ready for functional testing.

1.7.4.1. Placing Equipment in Operation:

Place all Equipment and Materials installed under this Contract into successful operation according to instructions of the Supplier, Manufacturer, or field representative, including making all required adjustments, tests, operation checks, and the following:

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- a. Cleaning, sounding, blowing-out, and flushing of lubricating oil and water systems, and other pipelines.
- b. Lubrication, fuels, supplies, power, consumables, water, and labor to be supplied by the Contractor for the duration of start up and testing, and until substantial completion of the work.
- c. Tests of lubrication system safety interlocks and system performance.

Final alignment checks and measurements made under observation of **Government** staff or designated agent. Alignment checks shall include opening connections, if required, to ensure there are no abnormal stresses on equipment from pipes, ducts, or other attachments. Alignment shall be within tolerances specified by the Manufacturer, and measurements shall be recorded and furnished to Contracting Officer.

1.7.4.2. Motor rotation checks

Before connecting couplings, verify that motor rotors rotate freely. Verify that the motors rotate in the correct direction to corresponding control inputs.

1.7.4.3. Anchor-bolt tensions, grout and shims

Tighten anchor bolts with calibrated torque wrenches using care not to over stress bolts. Check condition of grout and shims to ensure proper contact and installation.

1.7.4.4. Pressure and leakage tests

Pressure and leakage tests shall be conducted in accordance with applicable portions of the Specifications. All acceptance tests shall be witnessed by the **Government**. Evidence of successful completion of the pressure and leakage tests shall be the Contracting Officer's signature on the test forms prepared by the Contractor.

1.7.4.5. Final Installation

- a. After acceptance of alignment and installation, and where specified, affix major equipment in place using standard tapered dowels with jack-out nuts at head end to facilitate removal.
- b. Record all above operations on forms acceptable to the Contracting Officer, including Certificate of Proper Installation, where required.
- c. Furnish all necessary personnel as part of the Work to accomplish the above operations until such time as individual items, systems, equipment, or sections of the plant are acceptable for operation by the Owner.

1.8. STARTUP REQUIREMENTS

1.8.1. Startup Testing

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The start-up testing procedure shall verify that all facilities are completely installed, that all systems are correctly set up and that the facilities will reliably function over time in real world conditions.

The start-up test shall not proceed until all of the following have been completed:

- a. All factory, functional and performance test record have been approved by **Government**. Copies of these test records shall be available on-site as well.
- b. All draft O&M manuals have been approved by the **Government**.
- c. Owner's personnel have been trained in accordance with the individual technical specifications.
- d. All tagging and labeling including but not limited to piping, conduit, panels, and equipment, have been completed.
- e. All near final as-built drawings (not CAD set) that are still subject to further updating for incomplete work, have been approved by the **Government**.
- f. Start-up test procedures have been approved by the **Government**. The Contractor shall coordinate with the **Government** to start-up the facility equipment and systems as outlined in the Contractor's start-up plan.

Only Contractor's personnel approved by the **Government** shall operate the equipment and systems during the startup test. It is the intent of this section that the performance of any and all: turbine equipment, valves, compressed air systems, mechanical systems, electrical sub-systems and systems, and controls be tested as a complete, operational, and integrated system conforming to the performance and design parameters outlined in this Contract. The entire facility shall be tested in the normal operational sequence in all control modes.

The system start-up test procedure is intended to demonstrate satisfactory operation and integration of the control system and all the mechanical and electrical sub-systems and systems, and accessory equipment including but not be limited to:

- a. Demonstrate all control sequences at a prescribed operating range defined by head, flow rate, and power demand under normal operating conditions.
- b. Repeat control sequences as required in order to test each subsystem. Check and record all system flows, levels and pressures.

The start-up test requires that all new work of this Contract shall operate as designed and function in an uninterrupted and trouble-free manner with no mechanical or electrical failures for an extended time period.

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During the test periods, the Facilities shall operate without failure, with exceptions to demonstrate non-normal functioning.

The start-up test shall be conducted at a time and date to be mutually agreed upon by the Contractor and the Government.

The Contractor shall provide the services of all-technical and craft personnel required to support the work covered under the Contract during the entire start-up testing. Additionally, the Contractor shall arrange for on-call services of these personnel as needed to respond to emergencies.

Contractor shall maintain the appropriate staff (either on site or on call) to be able to respond immediately (24-hours per day) to system or equipment related questions and to correct deficiencies until Startup Testing is complete.

The Contractor shall install any temporary connections, bulkheads, intake gates, and make other provisions necessary for the anticipated operating conditions. During the operational testing period, the Contractor's Commissioning Manager and testing team shall monitor the characteristics of each machine and system and report any unusual conditions to the Contracting Officer.

At the satisfactory conclusion of the start-up test, dismantle and remove all temporary valving, hoses and other equipment used during the test.

All deficiencies found during start-up testing, and subsequent correction thereof must be inspected by the **Government**.

1.8.2. Operational Testing

Following successful completion of start-up testing and any re-testing requirements, Contractor shall initiate operational testing of the facilities.

During operational testing Contractor shall be available to correct any deficiencies or problems which are encountered during the testing period.

Contractor shall correct all deficiencies noted during the operational testing prior to final completion.

1.9. START-UP, TESTING, AND COMMISSIONING SUMMARY REQUIREMENTS

1.9.1. Startup, Testing, and Commissioning Coordination Meetings

Weekly meetings shall be held to discuss overall scheduling, procedures, strategy, and preparations for the forthcoming startup, testing, or commissioning activities. The first meeting shall be conducted no later than 30 calendar days prior to the first scheduled activities.

These weekly planning meetings shall continue until all field tests are completed and approved by the **Government**.

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The Contractor shall attend all meetings, and the Contractor shall provide suitable representation from each subcontractor having testing responsibilities so that informed decisions can be made during the meetings.

1.9.2. Re-Testing

If any portion of any test does not pass, the Contractor shall correct the problem in a timely manner and repeat the test until it passes to the satisfaction of the **Government**.

If any failure of any component or system occurs during the start-up testing, then the entire test shall be restarted. If the Contractor determines that the failure is minor and recommends continuation of the test rather re-starting, then the Contracting Officer may permit continuation of testing at their sole discretion.

If a failure of any component should occur during the start-up test, the Contractor shall be responsible for the actual cost of any idle time due to such failure. Such costs of idle time shall include personnel costs of **Government** personnel who are assigned to coordinate, assist and witness the start-up test, personnel costs of the **Government's** duly authorized representatives, rental of equipment and any other incidental costs of the delay.

1.9.3. Pre-Turnover (Post-Testing Period)

Once testing has been completed, all equipment shall be made ready for turnover to the **Government**. All machines shall be rechecked for proper alignment, realigned, if necessary, and dowelled in place. All equipment shall be checked for loose connections, unusual movement, or other indications of improper operating characteristics. Any deficiencies shall be corrected to the satisfaction of the **Government**. All machines or devices which exhibit unusual or unacceptable operating characteristics shall be disassembled and inspected. They shall then be repaired or removed from the site and replaced at no cost to the **Government**.

Prior to turnover, Contractor shall perform the following minimum activities to restore equipment and systems to turnover-ready conditions:

- a. Drain and flush all cooling and lubrication systems and refill as recommended by the equipment manufacturer.
- b. Fill all fuel tanks.
- c. Replace any spare parts, test equipment, batteries, or similar expendables that were consumed or damaged during the testing procedures.

1.10. PAYMENT

Separate payment will be not be made for compliance with this section. All costs for Start Up, Commissioning and Testing are to be included in the contract prices of the various items. Final payment will not be made until the final Start Up, Commissioning

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and Testing have been completed. Failure to complete these requirements is justification to hold or adjust the retained percentage in accordance with SECTION 007000, Clause 52.232-5, PAYMENTS UNDER FIXED PRICE CONSTRUCTION CONTRACTS and will result in a final unsatisfactory overall performance rating, despite the nature of all other ratings.

– END OF SECTION –

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SECTION 01 66 40 TRAINING

PART 1 GENERAL

1.1. Description

This section contains requirements for training the Owner/Operator's personnel, by persons retained by the Contractor specifically for the purpose, in the proper operation and maintenance of the equipment and systems installed and/or rehabilitated under this contract and how that equipment is integrated with the rest of the equipment in the Irrigation System and Instrumentation Improvements.

- A. Related work specified elsewhere:
 - 1. SECTION 01 64 00 Start-up, Testing and Commissioning
 - 2. SECTION 01 77 00 Closeout Procedures
 - 3. SECTION 01 78 10 Operation and Maintenance Data
- B. The following general categories of training shall be provided:
 - 1. Equipment specific operations and maintenance training, conducted by qualified staff from the equipment or system supplier in conjunction with the O&M Data Package.
 - 2. Overall facility operations and maintenance training, conducted by qualified staff employed by Design- Builder.

1.2. Quality Control

- A. All training shall be scheduled and coordinated by Contractor's Commissioning Manager or other designated staff that report directly to the Commissioning Manager.
- B. All training materials and documentation shall be controlled by the project quality control plans and policies.

1.3. Submittals

The following information shall be submitted to the Contracting Officer in accordance with the provisions of SECTION 01 33 15, SUBMITTAL PROCEDURES. This information shall be submitted **not less than 3 weeks prior** to the first scheduled training session and shall include:

- A. Lesson plans for each training session to be conducted by the manufacturer's representatives or Contractor. In addition, training manuals, handouts, visual aids, and other reference materials shall be included.
- B. Subject of each training session, identity and qualifications of individuals to be conducting the training, and tentative date and time of each training session.

PART 2 PRODUCTS

2.1. General:

The Contractor shall provide operational and maintenance training for all systems furnished and/or rehabilitated under this contract in accordance with this section. The training shall not take place until the operation and maintenance data packages are submitted and approved in accordance with SECTION 01 66 40, TRAINING. Training will be given to personnel responsible for the operation and maintenance of the system at the installation. 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 video record the training session and provide the recordings in DVD format to the **Government**.

All errors or deficiencies in the O&M Data Packages identified by contractor, site, or **government** personnel shall be identified, tracked and resolved as required in SECTION 017810, OPERATION AND MAINTENCANCE DATA.

2.2. Location

Training sessions shall take place on site in Afghanistan.

2.3. Lesson Plans:

Formal written lesson plans shall be prepared for each training session. The lesson plans shall be "tri-lingual" in Dari, Pashto and English. Lesson plans shall contain an outline of the material to be presented along with a description of visual aids to be utilized during the session. Each plan shall contain a time allocation for each subject. One complete set of originals, in each language, of the lesson plans, training manuals, handouts, visual aids, and reference material shall be the property of the **Government** and shall be suitably bound for proper organization and easy reproduction. The Contractor shall furnish 5 copies of necessary training manuals, handouts, visual aids and reference materials in each language at least 1 week prior to each training session.

2.4. Format and Content

Each training session shall be comprised of time spent both in the classroom and at the specific location of the subject equipment or system, or at the specific dam instrument locations or sites with the field instrument. As a minimum, the training session shall cover the following subjects for each item of equipment, monitoring instrument, or system:

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- 2.4.1. Equipment Specific Training
 - 2.4.1.1. Familiarization
 - a. Review catalog, parts lists, drawings, etc., which have been previously provided for the plant files and operation and maintenance manuals.
 - b. Observe the installation of the specific equipment items.
 - c. Demonstrate the unit and indicate how all parts of the specifications are met.
 - d. Answer questions.
 - 2.4.1.2. Safety
 - a. Using material previously provided, review safety references.
 - b. Discuss proper precautions around equipment and safety for access to embankment instrumentation locations or sites for both personnel and transport of equipment in the field.
 - 2.4.1.3. Operation
 - a. Using material previously provided, review reference literature.
 - b. Explain all modes of operation (including emergency).
 - c. Supervise **Government** or Operator's personnel on proper use of the equipment and handling of equipment in the field for instrument readings and surveys.
 - 2.4.1.4. Preventive Maintenance
 - a. Using material previously provided, review preventive maintenance (PM) lists including:
 - b. Reference material.
 - c. Daily, weekly, monthly, quarterly, semiannual, and annual Pm requirements.
 - d. Show how to perform PM requirements.
 - e. Show Operator's personnel what to look for as indicators of equipment problems.
 - f. Perform battery checks and charging of field instruments' batteries prior to use and rotation of fresh batteries in fixed instruments.
 - g. Perform cleaning of instruments or equipment prior and after field use.
 - 2.4.1.5. Corrective Maintenance
 - a. List possible problems.
 - b. Discuss repairs--point out special problems.
 - c. Open up equipment and demonstrate procedures, where practical.
 - 2.4.1.6. Parts
 - a. Show how to use previously provided parts list and order parts.

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- b. Check over spare parts on hand. Make recommendations regarding additional parts that should be available.
- 2.4.1.7. Equipment Representatives
 - a. Where to order parts: Name, address, telephone.
 - b. Service problems:
 - c. Who to call.
 - d. How to get emergency help.
- 2.4.1.8. Operation and Maintenance Manuals
 - a. Review any other material submitted.
 - b. Update material, as required.
- 2.4.2. Overall Facility and Embankment Dam Instrumentation Training
 - 2.4.2.1. Familiarization
 - a. Review major components of the facilities and discuss their intended interaction and operation.
 - b. Review the facility control descriptions and normal operating procedures from the operations and maintenance manuals.
 - c. Answer questions.
 - 2.4.2.2. Safety
 - a. Discuss overall facility safety issues and safety measures incorporated into facility design.
 - b. Review safety shutdown, alarming, and other automatic safety features.
 - 2.4.2.3. Operation
 - a. Describe general operation of each major sub-system and the overall facility.
 - b. Explain all modes of operation (including emergency).
 - c. Explain all features of the facility control systems including:
 - i. Available control modes and methods to switch from one mode to another.
 - ii. Setpoint adjustment for any systems.
 - iii. Emergency and process interlocks.
 - iv. Alarm displays and reset/acknowledgement functions.
 - v. Any reporting functions implemented for the control system.
 - vi. Local control overrides
 - 2.4.2.4. Site Operation and Maintenance Data Package
 - a. Review any other material submitted.
 - b. Review process for field data reduction for each instrument or system and interpretation of results.

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2.4.2.5. Update material, as required

2.5. Video Recording

The Contractor shall record each training session. The Contractor shall advise all manufacturers providing training sessions that the material will be recorded. Contractor shall make available to the **Government** and/or Operator such utility services and accommodation as may be required to facilitate the production of the video record.

PART 3 EXECUTION

3.1. Training

Training shall be conducted in conjunction with the testing periods. Classes shall be scheduled such that classroom sessions are interspersed with field instruction in logical sequence. The Contractor shall arrange to have the training conducted on consecutive days, with no more than 6 hours of classes scheduled for any one day. Concurrent classes shall not be allowed.

3.2. Operation and Maintenance Data

Acceptable operation and maintenance data for the specific equipment shall be provided to the **Government** prior to the start of any training. Video recording shall take place concurrently with all training sessions.

3.3. Services

The following services shall be provided for each item of equipment or system as required in individual specification sections. Additional services shall be provided, where specifically required in individual specification sections.

- A. As a minimum classroom equipment training for operations personnel will include:
 - 1. Using slides and drawings, discuss the equipment's specific location in the plant and an operational overview.
 - 2. Purpose and plant function of the equipment.
 - 3. A working knowledge of the operating theory of the equipment.
 - 4. Start-up, shutdown, normal operation, and emergency operating procedures, including a discussion on system integration and electrical interlocks, if any.
 - 5. Identify and discuss safety items and procedures.
 - 6. Routine preventative maintenance, including specific details on lubrication and maintenance of corrosion protection of the equipment and ancillary components.
 - 7. Operator detection, without test instruments, of specific equipment trouble symptoms.
 - 8. Required equipment exercise procedures and intervals.
 - 9. Routine disassembly and assembly of equipment if applicable for purposes such as operator inspection of equipment.
- B. As a minimum, hands-on equipment training for operations personnel will include:
 - 1. Identify location of equipment and review the purpose.

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2. Identifying piping and flow options.
 3. Identifying valves and their purpose.
 4. Identifying instrumentation:
 - a. Location of primary element.
 - b. Location of instrument readout.
 - c. Discuss purpose, basic operation, and information interpretation.
 5. Discuss, demonstrate, and perform standard operating procedures and round checks.
 6. Discuss and perform the preventative maintenance activities.
 7. Discuss and perform start-up and shutdown procedures.
 8. Perform the required equipment exercise procedures.
 9. Perform routine disassembly and assembly of equipment if applicable.
 10. Identify and review safety items and perform safety procedures, if feasible.
- C. Classroom equipment training for the maintenance and repair personnel will include:
1. Theory of operation.
 2. Description and function of equipment.
 3. Start-up and shutdown procedures.
 4. Normal and major repair procedures.
 5. Equipment inspection and troubleshooting procedures including the use of applicable test instruments and the "pass" and "no pass" test instrument readings.
 6. Routine and long-term calibration procedures.
 7. Safety procedures.
 8. Preventative maintenance such as lubrication; normal maintenance such as belt, seal, and bearing replacement; and up to major repairs such as replacement of major equipment part(s) with the use of special tools, bridge cranes, welding jigs, etc.
- D. Hands-on equipment training for maintenance and repair personnel shall include:
1. Locate and identify equipment components.
 2. Review the equipment function and theory of operation.
 3. Review normal repair procedures.
 4. Perform start-up and shutdown procedures.
 5. Review and perform the safety procedures.
 6. Perform Operator approved practice maintenance and repair job(s), including mechanical and electrical adjustments and calibration and troubleshooting equipment problems.

-- END OF SECTION --

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SECTION 01 77 00 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 013315 SUBMITTAL PROCEDURES:

SD-10 Operation and Maintenance Data
Equipment/Product Warranty Plan; G

Submit Data Package for each site in accordance with Section 01 78 10
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 01 78 39, PROJECT RECORD DOCUMENTS

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.

1.3. EQUIPMENT/PRODUCT WARRANTIES

1.3.1. Equipment/Product Warranty 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

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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.
- c. A "tri-lingual" (Dari, Pashto and English) 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 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

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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 _____

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- 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 --

**SECTION 01 77 00
CLOSEOUT PROCEDURES**

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**SECTION 01 77 00
CLOSEOUT PROCEDURES**

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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 01 33 15 SUBMITTAL PROCEDURES:

SD-10 Operation and Maintenance Data

Equipment/Product Warranty List; G

Submit Data Package 1 in accordance with Section 01 78 10 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 01 78 10A 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

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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

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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.

-- END OF SECTION --

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3.6. PAYMENT 7

SECTION 01 78 10 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. The O&M data shall be "tri-lingual" in **Dari, Pashto and English**. 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 013315 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 complete as shown in the paragraph titled "Types of Information Required in O&M 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.

1.1.4. Testing and Training Evaluation and Revision of the O&M Data Package Submittal

The approved pre-commissioning data package with manufacturer-originated changes or revisions shall be used for the testing and training identified in SECTION 016400 START UP, TESTING AND COMMISSIONING and SECTION 016640 TRAINING. . During the execution of the requirements of Sections 01 64 00 and 01 66 40 any errors or deficiencies identified by the contractor, site or **government** personnel shall be formally identified, tracked (a resolution log), and incorporated into the O&M data package. The resolution log shall include a description of the issue, the source of the issue's identification, and a description of how the issue what addressed including reference to the location in the data package. The contractor shall submit both the revised O&M data package and resolution log for **government** approval at least 30 days prior to Site Closeout.

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1.1.5. Final O&M Data Package Submittal

After all comments and revisions have been incorporated into the O&M data package, and the **government** has approved the O&M Data Package, the contractor shall submit the Final O&M data package for that site in accordance with SECTION 017700 CLOSE OUT PROCEDURES and the requirements listed below.

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.

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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 manufacturers 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 requires 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.

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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 all spare parts and supplies requiring long lead-time to obtain.

1.2.3.6. Exploded View, Section, and Assembly Drawings

Include drawings clearly indicating the position of parts in each final assembly, as well as detailed indications or descriptions of how parts or sub-assemblies fit into the greater assembly. Note critical assembly procedures or steps, as well as requirements for assembly with consumables, such as anti-galling or threadlocking compounds. Include torque values for fasteners in both foot-pounds and Newton-meters on the drawings.

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

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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.

1.2.7. Personnel Training Requirements

Provide information available from the manufacturer that is needed for use in training designated personnel to properly operate and maintain the equipment and systems.

1.2.8. 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.

1.2.9. Contractor Information

Provide a list that includes the name, address, and telephone number of the General Contractor and each Subcontractor who installed the product or equipment, or system. For each item, also provide the name address and telephone number of the manufacturer's representative and service organization most convenient to the project site. Provide the name, address, and telephone number of the product, equipment, and system manufacturers.

1.3. O&M DATA PACKAGE FORMAT

All O&M Data Packages shall be submitted in accordance with the requirements of SECTION 013315 SUBMITTAL PROCEDURE FOR DESIGN BUILD PROJECTS.

1.3.1. Initial O&M Data Packages

All Non-Final O&M data packages shall be submitted in both unbound hard copy format and electronic format in Adobe-Acrobat (.pdf) file format. Each submittal shall include a minimum of three (3) copies in both formats.

1.3.2. Final O&M Data Package

The Final O&M Data package for each site shall be submitted in both a hard bound copy and electronic format after all final revisions have be incorporated and formal **government** comments addressed, including those identified during the testing required in SECTION 016400 START UP, TESTING AND COMMISSIONING and SECTION 016640 TRAINING.

1.3.2.1. Hard Bound Format

The contractor shall provide a minimum of 6 (six) hard bound copies of the O&M data package. Each data package cover shall be clearly titled in all three languages listed above, detailing at a minimum the site and date. The copies shall be sectioned by language.

1.3.2.2. Electronic Format

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The electronic format shall be Adobe-Acrobat (.pdf) and fit on a single DVD/CD. The contractor shall provide a minimum of 6 (six) electronic copies of the O&M data package. The data package shall be divided into three files, one for each of the three languages listed above. Each file shall have each chapter and/or section bookmarked with title.

PART 2 PRODUCTS

2.1. BINDER REQUIREMENTS

Data for equipment shall be assembled in a binder for 8 1/2- by 11-inch sheets with slide binding or screwpost fastening for replacement. Loose-leaf ring binders are not acceptable. A title on the cover shall show the project name, equipment or system, contract, and bid item numbers.

PART 3 EXECUTION

3.1. SPECIFIC REQUIREMENTS

Shop assembly or special drawings for manuals or parts catalogs shall be of a size that requires folding only in left to right coordinate. A permanent reproducible, conforming to SECTION 01 33 00, shall be furnished for all drawings. This reproducible shall be in addition to the five copies specified. Each sheet shall be numbered and an index shall be provided. All standard catalog cuts, manufacturer's data, parts sheets, or illustrations shall be originals. One copy of such manual shall contain all original copies. Non-permanent copies are not acceptable. All nonapplicable data such as description of other models, optional equipment not included, etc. shall be marked out. If reference is made to other drawings or data they shall be included. The manual shall list equipment covered; the manufacturer; and name, address, and telephone number of the local representative.

3.2. PARTS CATALOGS

Parts catalogs shall include identification, nomenclature, part numbers, required parts, recommended spare parts stocked, and spare parts supplied. Data shall match equipment furnished. Standard catalog data will not be acceptable unless irrelevant parts are marked out and relevant parts are clearly identified.

3.3. OPERATIONS DATA

Operations data in the Operation and Maintenance Manual shall include operating instructions, procedures, sequences, and precautions; and description of parts. Subcontractors, suppliers, and manufacturers shall be coordinated to assure complete submittals on interrelated components. Instructions shall be included for all systems designed or furnished.

3.4. MAINTENANCE DATA

Maintenance data in the Operation and Maintenance Manual shall include instructions for lubrication, dismantling, assembly, repair and adjustment; parts catalogs; electric schematic and connection diagrams; hydraulic circuit diagrams with control and relief valve settings; control and interlock system diagrams; and lists of special tools required. Lubrication instructions shall be for service intended and shall include tables indicating items, frequencies, grades, and types of lubricants. Instructions shall include clearances, bolt torques, pressure settings, and other data.

3.5. FAILURE TO SUBMIT OPERATIONS AND MAINTENANCE DATA

Where operations and maintenance (O&M) data are required, failure to furnish the data is justification to hold or adjust the retained percentage in accordance with **SECTION 00700, Clause 52.232-5, PAYMENTS UNDER FIXED PRICE CONSTRUCTION CONTRACTS**. Final payment will not be made until all six copies of the O&M manuals have been accepted. Moreover, failure to provide O&M Manuals as required in this section will result in a final unsatisfactory overall performance rating, despite the nature of all other ratings.

3.6. PAYMENT

Separate payment will be not be made for compliance with this section. All costs for Operations and Maintenance Data are to be included in the contract prices of the various items. The Operations and Maintenance Data will be jointly inspected for accuracy and completeness by a GQAR and a responsible representative of the Contractor prior to submission. Final payment will not be made until the final Operations and Maintenance Data as required in this section will result in a final unsatisfactory overall performance rating, despite the nature of all other ratings.

-- END OF SECTION --

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SECTION 01 78 39 PROJECT RECORD DOCUMENTS

PART 1 GENERAL

1.1. GENERAL INFORMATION

This section covers record drawings complete, as a requirement of the Contract. The terms "as-built", "drawings", "contract drawings", "drawing files", "working record drawings", and "final record drawings" refer to contract drawings which are revised to be used for final record drawings showing as-built conditions. The as-built drawings shall be an accurate Contractor-record of the construction as installed and completed. This record shall be kept current by recording, on a copy of the contract drawings, as they occur, all deviations, modifications, or changes, however minor, which were incorporated in the final work. All as-built details or features shown on the contract drawing prints shall be added in red. These marked up drawings and any additional drawings or sketches which may be required to thoroughly describe all deviations or additions to the contract drawings shall be used by the Contractor to revise a copy of original Computer-Aided Drafting and Design (CADD) drawings. All Contractor produced final record drawings shall be CADD generated in Microstation (most current version).

1.2. CADD STANDARDS

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, symbols, title block, and drawing border shall be the same as that used on the original Contract drawings. A copy of the CADD standards is available upon request.

1.3. SUBMITTALS

Government approval is required for submittals with a "G" designation; submittals not having a "G" designation are for information only. When used, a designation following the "G" designation identifies the office that will review the submittal for the **Government**. The following shall be submitted in accordance with Section 01 33 15, SUBMITTAL PROCEDURES:

SD-10 Operation and Maintenance Data

Preliminary As-Built Drawings; G

Final As-Built Drawings; G

1.4. AS-BUILT WORKING DRAWINGS

1.4.1. General

One set of Contract size paper prints or full-size prints per SECTION 01 33 15, SUBMITTAL PROCEDURES, subparagraph entitled Drawings, shall be marked up to show the as-built conditions during the prosecution of the project. These working as-

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built marked prints shall be kept current and available on the job site at all times. All changes from the Contract drawings that are made in the work or additional information that might be uncovered in the course of construction shall be accurately and neatly recorded, as they occur, by means of details and notes.

1.4.2. Drawing Preparation

Modify the record drawings 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**.

1.5. PRELIMINARY AS-BUILT DRAWINGS

1.5.1. Requirements

The preliminary and final as-built drawings shall show, but not be limited to, the following information:

- a. The actual location, kinds and sizes of all sub-surface utility lines. In order that the location of these lines and appurtenances may be determined in the event the surface openings or indicators become covered over or obscured, show by offset dimensions to two permanently fixed surface features the end of each run including each change in direction on the record drawings. Locate valves, splice boxes and similar appurtenances by dimensioning along the utility run from a reference point. Also record the average depth below the surface of each run.
- b. Correct grade, elevations, cross section, or alignment of roads, earthwork, structures, or utilities if any changes were made from Contract drawings.
- c. 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, and dimensions of equipment foundations, etc.
- d. The location, topography, invert elevations, and grades of all permanent ditches and outlets installed or affected as a part of the project construction.
- e. Changes or modifications which result from the final inspection.
- f. Where Contract drawings or specifications present options, show only the option selected for construction.
- g. Modifications (include within change order price the cost to change working and final record drawings to reflect modifications).

1.5.2. Review and Approval

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1.5.2.1. Monthly Review

A responsible representative of the Contractor and the **Government** Quality Assurance Representative (GQAR) shall meet on a monthly basis to review the preliminary as-builts for accuracy and completeness. The cover sheet shall be signed and dated by the COR and the Contractor's representative to document the review. Revisions shall be made accordingly by the next month's as-built review. If the Contractor fails to maintain the working and final record drawings as specified herein, the Contracting Officer will deduct from the monthly progress payment an amount representing the estimated cost of maintaining the record drawings.

1.5.2.2. Review at Final Inspection

A complete, full-size set of all as-built drawing redlines, shall be submitted at the time of final inspection for review and approval. The COR will review final preliminary record drawings for accuracy and completeness and return them to the Contractor for required corrections, changes, additions, and deletions. Within 10 days revise the drawings accordingly and submit one set of final prints to the **Government** for review and approval.

1.6. FINAL AS-BUILT DRAWINGS

1.6.1. General

All paper prints and electronic CADD files of the final as-built drawings and shop drawings shall become the property of the **Government** upon final approval.

1.6.2. Paper Copies

1.6.2.1. Drawings

A final, complete set of paper copies, printed as standard full-size drawings, per SECTION 013315 SUBMITTAL PROCEDURES, shall be submitted 30 days from final approval of the preliminary as-built drawings.

1.6.2.2. Shop Drawings

Submit final approved project shop drawings, per SECTION 013315 SUBMITTAL PROCEDURES, 30 days from final approval of the preliminary as-built shop drawings.

1.6.3. Electronic Copies

Thirty days from final approval of the preliminary as-built electronic files, a complete set of electronic CADD files shall be submitted. These final record drawings shall be fully compatible with the Portland District Computer-Aided Design System. All electronic drawing (.dgn) files shall be in MicroStation (most current version) file format, in the same model and sheet space as the contract drawings, and submitted on CD-ROMs[or DVDs]. A list of firms capable of performing this work is available on the American Council of Engineering Companies of Oregon website at <http://www.acecoregon.org/acec/> under the link entitled, "List of AutoCad-Microstation Firms." The **Government** will furnish the cell and font libraries and the standard border for use in preparing the drawings. Electronic copies of existing contract drawings

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contained in this Contract will be made available to the Contractor. As-built changes shall be made to these **Government** furnished drawings. Additionally, all final approved as-built drawings and shop drawings shall be published to Adobe PDF and included in the as-built drawing package on a CD-ROM.

1.6.4. Drafting Standards

- a. General Drafting Standards. The drafting standards used in the provided CADD electronic files shall be conformed to. Additions and corrections to the Contract drawings shall be equal in quality and detail to that of the originals. Upon request, the **Government** will provide documentation and specific drafting requirements.
- b. As-Built Drafting Standards:
 - (1) All record of revisions shall remain in the title block; revision triangles are to be removed from the rest of the drawings.
 - (2) Add the final revision notation to the title block of "Record Drawings/As-Built Conditions" or "Revised Record Drawings/As-Built Conditions."
 - (3) Add as-built block to all drawings with information complete. A sample will be provided.

1.7. PAYMENT BASIS FOR AS-BUILT DRAWINGS

Separate payment will not be made for compliance with this section. All costs for as-built hard copy and electronic drawing files are to be included in the Contract prices of the various items. The as-built marked prints will be jointly inspected for accuracy and completeness by the GQAR and a responsible representative of the Contractor prior to submission of the monthly pay estimate. Failure to keep the as-built marked prints on a current basis shall be sufficient justification to withhold a percentage of the monthly pay estimate. Approval and acceptance of final record drawings will be accomplished before final payment is made to the Contractor. Failure to furnish the as-built drawings is justification to hold or adjust the retained percentage in accordance with **SECTION 00700, Clause 52.232-5, PAYMENTS UNDER FIXED PRICE CONSTRUCTION CONTRACTS**. Moreover, failure to provide as-built drawings as required in this section will result in a final unsatisfactory overall performance rating, despite the nature of all other ratings, and shall be sufficient justification to withhold contract dollars to cover the cost of producing the as-constructed drawings.

PART 2 PRODUCTS

Not used.

PART 3 EXECUTION

Not used.

– END OF SECTION –